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PRIMARY CARE PHYSICIANS' KNOWLEDGE OF, ATTITUDES TOWARDS, AND
PRACTICES IN SEXUAL HEALTHCARE FOR PATIENTS OF MIDDLE AND OLD
AGE IN TRINIDAD & TOBAGO

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'I, Patrice A. Rabathaly, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.'



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ABSTRACT

Background: Our understanding of Primary Care Physicians' (PCPs) knowledge about sex in later life, attitudes towards addressing sexual health concerns and sexual history, and taking practices with patients in middle and old age is lacking. This thesis is a mixed-methods study that examines PCPs' knowledge, attitudes, and sexual health care practices with patients who are in the middle and old age in Trinidad and Tobago. It offers PCP's accounts of what shapes their attitudes about sexuality in later life and provides details regarding PCPs' characteristics associated with their existing knowledge, attitudes, and influences on their current sexual health care practices.

Method: A 2-pronged sequential mixed-method (qualitative & quantitative) approach followed by methodological triangulation had been employed.

Results: The findings of this thesis are presented in the form of four (4) research papers: Paper 1: Rabathaly PA, Chattu VK. Emphasizing the importance of sexual healthcare among middle and old age groups: A high time to re-think. *Journal of Natural Science, Biology & Medicine*, 2018. DOI: 10.4103/jnsbm.JNSBM_128_18; Paper 2: Rabathaly PA, Chattu V. An exploratory study to assess Primary care physicians' attitudes towards talking about sexual health with older patients in Trinidad and Tobago. *Journal of Family Medicine and Primary Care* 2019. DOI: 10.4103/jfmpc.jfmpc_325_18; Paper 3: Rabathaly PA, Chattu V. Sexual Healthcare Knowledge, Attitudes and Practices amongst primary care physicians in Trinidad and Tobago. *Journal of Family Medicine and Primary Care* 2019. DOI: 10.4103/jfmpc.jfmpc_322_18; and Paper 4: Rabathaly PA, Chattu V, (2019). What primary care physician characteristics are associated with the sexual health care management of middle aged and older patients and how different clinical scenarios influence these? [Accepted].

Conclusion: PCPs in Trinidad and Tobago have an evasive attitude regarding sexuality and sexual health care for middle-aged and older patients. They have inferred a low level of knowledge about sexual health in later life, and they have an inconsistent diagnostic sexual history taking practices with them. Findings underscore the need for improved PCP sexual health care medical education and communication training in sexual history and taking and revising sexual healthcare policies to accommodate both middle-aged and older patients.

Keywords: Primary care, sexual health, sexual history taking, middle-aged, old-aged, Knowledge, Attitudes, Practices, (KAP), Trinidad & Tobago, Caribbean.

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To my son, Ethan

this thesis and its experiences are dedicated to you.

I hope you that one day you can appreciate the sacrifices I (and your dad) have made on this journey for me to attain this PhD. This experience forced me to adapt in ongoing cycles of change and thus I had to reinvent myself, over and over. We did this with the hope that our newer redefined selves would be equipped to make your life experiences better than our own.

Son, the key lessons that I learned from this experience that I wish for you to carry with you all the days of your beautiful life are to:

Be patient as some things just take time, be humble and show gratitude for the smallest courtesies bestowed onto you because no one owes you anything, and regardless of the obstacles life puts in your way, stay focused on the end goal and rely on your own self-motivation and inner happiness to make sure you succeed no matter what.

List of Acronyms

AIDS	Acquired Immunodeficiency Syndrome
AIDS	Acquired Immune Deficiency Syndrome
AMI	Acute Myocardial Infarction
ANC	Antenatal clinic
ART	Antiretroviral Treatment
ARV	Antiretroviral therapy
ASAP	AIDS Strategy and Action Plan
ASAPS	American Society for Aesthetic Plastic Surgery
BASSH	British Association of Sexual Health and HIV
BMI	Body Mass Index
BSO	Bilateral Salpingo-Oophorectomy
CAREC	Caribbean Epidemiology Centre
CARICOM	Caribbean Community Common Market
CARPHA	Caribbean Public Health Agency
CDAP	Chronic Disease Assistance Plan
CD	Compact Disc
CDC	Centres for Disease Control
CHD	Chronic Heart Disease
CHRC	Caribbean Health Research Council
CME	Continuing Medical Education
CPD	Continuing Professional Development
CRP	C-Reactive Protein
CSO	Central Statistical Office
CT	Counselling and Testing
CVD	Cardiovascular Disease
DHF	District Health Facility
DMO	District Medical Officer
DSM-5	Diagnostic and Statistical Manual of Mental Disorders
DVD	Digital Versatile Disc
EAP	Employee Assistance Programme
ED	Erectile Dysfunction
ERHA	Eastern Regional Health Authority
EWMSC	Eric Williams Medical Sciences Complex

F	Female
FBO	Faith Based Organization
FPA	Family Planning Association
FPATT	Family Planning Association of Trinidad and Tobago
GORTT	Government of the Republic of Trinidad and Tobago
GER	Gerontology
GP	General Practitioner
GPTT	General Practitioner board of Trinidad and Tobago
GUM	Genitourinary Medicine
HACU	HIV and AIDS Coordinating Unit
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
(HR)QOL	(Health-related) Quality of Life
HSDD	Hypoactive Sexual Desire Disorder
IEC	Information, Education and Communication
LGBT(QIA)	Lesbian, Gay, Bisexual, Transgender, (Queer, Intersex, Asexual)
LSHTM	London School of Hygiene and Tropical Medicine
LSI	Last Sexual Intercourse
KAP(B)	Knowledge Attitudes Practices (Behaviour)
M	Male
MARPs	Most at Risk Populations
MBTT	Medical Board of Trinidad and Tobago
MetS	Metabolic Syndrome
MI	Myocardial Infarction
MoE	Ministry of Education
MoH	Ministry of Health
MPI	Multidimensional Poverty Index
MRF	Medical Research Foundation
NAC	North American Countries
NATSAL	National Survey of Sexual Attitudes and Lifestyles
NCD	Non-Communicable Disease
NCRHA	North Central Regional Health Authority
NGO	Non-Governmental Organization
NHS	National Health Service

NO	Nitric Oxide
NSHAP	National Social Life, Health and Ageing Project (NSHAP)
NSP	National Strategic Plan
NSU	National Surveillance Unit
NWRHA	North West Regional Health Authority
OECD	Organisation of Eastern Caribbean Development
PAHO	Pan American Health Organization
PANCAP	Pan American Partnership
PB	Physician working in the public sector
PC	Primary Care
PCP	Primary Care Physician
PhD	Doctor of Philosophy
PLHIV	People Living with HIV/AIDS
PMTCT	Prevention of Mother-to-Child Transmission
PNC	Postnatal clinic
POSGH	Port of Spain General Hospital
PPU	Population Programme Unit
PSI/C	Population Service International / Caribbean
PV	Physician working in the private sector
Q&A	Questions and Answers
QOL	Quality of Life
QPCC&C	Queen's Park Counselling Centre and Clinic
RHA	Regional Health Authority
SD	Sexual Dysfunction
SDG	Sustainable Development Goals
SES	Socioeconomic Status
SFGH	San Fernando General Hospital
SRH	Sexual and Reproductive Health
SSRI	Selective Serotonin Reuptake Inhibitor
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
SWRHA	South West Regional Health Authority
TB	Tuberculosis
T&T	Trinidad and Tobago

TRHA	Tobago Regional Health Authority
UK	United Kingdom
UN	United Nations
UNAIDS	United Nations Joint HIV and AIDS Programme
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
USMLE	United States Medical Licensing Examination
US	United States
UWI	University of the West Indies
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation
YLL	Years of Life Lost
3D	Three Dimensional

Glossary of Terms

‘Cougar’ Syndrome: A cougar is stereotypically defined as an older woman who is attracted to and may have a sexual relationship with significantly younger men. Although precise ages vary, the woman is 35 years or older and the man is on average more than eight years her junior. *Pre-cougar syndrome:* A woman in her late 20's to early 30's who is starting to be attracted to younger men, 18 to 23 years of age.

Developed Country: A developed country is generally considered to be an industrialised country (*where the level of industrialization and the amount of widespread infrastructure and general standard of living is relatively higher than other less industrialised countries*); it has a more developed economy categorised by gross national income and advanced technological infrastructure relative to other nations; and their service sector provides more wealth than the industrial sector.

Discrimination: Unjust and unfair treatment of an individual based on their (HIV) status, perceived (HIV) status or sexual orientation, including discrimination practiced by an organisation or other workers.

Elder Abuse: Elder abuse is an umbrella term for any harmful act that is perpetrated against a person’s will, based on their age usually being over 60 years and older.

Gender: The social relations and cultural differences (rather than biological ones) that denote men and women.

General Practitioner (GP): A non-specialist medical doctor who works in the private sector that manages a private general medical practice in the community and charges a fee for medical services rendered.

High Income Country (HIC): In 2018, HIC is defined by the World Bank’s economic indicators as a country with a gross national income per capita US\$12,376 or more.¹

Middle-aged: The period of life beyond young adulthood but before the onset of old age (debatably whether it begins at 40, 45, or 50 years and ends at 55, 60, or 65 years). Based on the UN's provisional guidelines on standard international age classifications, the age group 45–64 years is referred to as 'older adulthood' as opposed to young adulthood. Young Adulthood draws to its close with 'the Midlife Transition,' from roughly age 40 to 45 years. **For this research, the terminology 'middle-aged' will be used to refer to anyone that is in the period of life from age 45–64 years. Exceptions apply only to terminology being cited from another source referring to the same population.*

Old-aged: The proposed working definition of an older person is 60+ years. Based on the UN's provisional guidelines on standard international age classifications, 65+ years is the average retirement age. Although there are commonly used definitions of old age, there is no research or definition in general agreement on the age at which a person becomes old. **For this research, the terminology 'older' or "old-aged" will be used to refer to anyone that is 65+ years. Exceptions apply only to terminology being cited from another source referring to the same population.*

Primary Care (PC): Health care provided in the community, funded by the government in the public sector, for people making an initial approach to a medical practitioner or clinic for advice or treatment.

Primary Care Physician (PCP): A medical doctor employed in the public sector (by the government) who is assigned to work in public primary healthcare facilities in the community. **For this research, the term 'primary care physician' refers to all medical doctors that are registered with the medical board to legally practise medicine in Trinidad and Tobago regardless of it being in the public sector (PCP) or private sector (GP).*

Rent-a-dread: Refers to the commercial sexual services offered by a person (usually male) with dreadlocks, primarily aimed at tourists.

Sexual Dysfunction (SD): Sexual dysfunction refers to a problem that prevents an individual or couple at any age from experiencing satisfaction from sexual activity. SD problems can manifest as disinterest in sex, inability to become physically aroused, delay or inability to reach climax or experience of pain during the sexual activity.

Sexual Health Consultation: A medical appointment at which a patient should have access to accurate sexual and reproductive health information. The physician or health care professional may offer sensitive counselling or advice/education or discuss with the patient about their issues as well as the treatment of such issues including contraceptive methods; obstetric and antenatal care for all pregnant women and girls; prevention and management of sexually transmitted infections or diseases, sexual functioning, or any other sexual or related issues. The health care professional may diagnostically take a sexual history or examine the patient's reproductive organs, take urine, blood samples, genital discharge/swabs, or smears for laboratory testing.

Sex in Later Life: Normal ageing brings physical changes in both men and women that promote sexual dysfunction (SD) – inability to have and enjoy sex. As men age, impotence or erectile dysfunction (ED), the loss of ability to have and keep an erection, becomes more common. ED may cause erections to take longer, be less firm, climax more quickly or take longer before another erection is possible. As women age, it could be expected that the vagina can shorten, narrow, and the walls can become thinner and stiffer and less lubricated. These changes could make sexual activity, such as vaginal penetration, painful or less desirable (apart from the use of hormone therapy to treat menopausal symptoms, which may increase sex drive for some women). For both men and women, ageing is coupled with chronic illnesses, disabilities, incontinence, surgeries, and the need for medicines; each can individually, or all collectively affect and exacerbate SD in later life.

Stigma: A process of devaluation of persons living with, affected by, or even associated with HIV.

Sugar Daddy: A **sugar daddy** is a boyfriend, usually a wealthy older man, who lavishes gifts on a much younger woman in return for her company or sexual favours. This relationship is considered chiefly financially beneficial to the young woman as the ‘sugar benefactor’ and can help to cover her needs such as tuition and living expenses.

Taboo: Defined as “proscribed by society as improper or unacceptable.” It refers to behaviours or practices that a society considers atypical, ill-fitting from the consensus of normal practice.

Trinbagonian: A term used to collectively refer to citizens of the nation state Trinidad and Tobago who are otherwise known as Trinidadians and Tobagonians respectfully.

Chapter 1: Introduction

Research Background and Rationale

1.1 Chapter Overview

This is a mixed-methods study presented in a research paper style format that has examined the status of primary care physicians' (PCPs) knowledge, attitudes, and practices in sexual healthcare for middle-aged and older patients in Trinidad and Tobago (T&T). The first chapter describes the foundation of this research by providing a comprehensive background and study rationale. The background commences with the global significance of sexual healthcare needs in middle and old age, presented in the form of a review paper (the first research paper of this thesis). The review paper entitled 'Emphasizing the Importance of Sexual Healthcare among Middle and Old Age Groups: A High Time to Re-Think?' discusses the effect of ageing on sexuality whilst reinforcing the need for prioritising sexual healthcare for patients in middle and old age. Subsequently, an overview of the research setting, Trinidad & Tobago, was presented; it entailed a synopsis of prevalent sexual health conditions and problems faced by those middle-aged and older, as well as the existing issues resulting in the lack of priority for sexual healthcare, prevention, or promotion in this age group. The reasons contributing to the lack of sexual healthcare provisions (for over 45s) are highlighted including the sociocultural taboos about sex, youth-focused political agendas, infrastructural limitations, and lack of awareness by physicians.

The study rationale expresses the need for sexual health concerns of older adults to be addressed proactively and more frequently by PCPs. It promotes ideals for ensuring more opportunities for effective sexual health communication between physicians and their older patients. However, the reality that physicians experience difficulties discussing sexual health and taking a sexual history is revealed. Also, a brief outline of their barriers is discussed. Sexual health communication and training in sexual function in middle and old age is highlighted as a key component to ensure a successful and effective sexual health consultation and increased incidences of better sexual health outcomes for middle-aged and older patients. Consequently, to determine physicians' knowledge, attitudes, and practices in sexual healthcare is emphasised as invaluable and critically necessary in this region and hence the focus of this research.

1.1.1 Research Interest

My interest in this study originated from a memory about an unpleasant experience during medical school; a clinical interview training session where my ability to take a medical history from random patients was being assessed with the goal being to gather an accurate history to make appropriate differential diagnoses. That day, my random patient was a male diabetic of 60 years and when he presented to me, he had not disclosed that he had symptoms of erectile dysfunction (ED). Nonetheless, I conducted the clinical interview confidently, analysed his lab results, and correlated it to his clinical history and chronic disease management. My confidence and rapport with the patient deteriorated rapidly when I realised, I should ask whether he suffered with impotence. I did poorly at this medical consultation not because the sexual history note-taking I learned were insufficient, however, because my professional experience was limited to discussing gynaecological related issues or family planning and reproductive health. Socially I had only ever discussed sex with female professors, family members, and friends. When my sixty-year-old male patient explained, with his eyes averted to the floor, that he had in fact been having on-going sexual performance issues, it was intensely awkward and uncomfortable for us both. I was nervous and dumfounded by my reaction to the situation.

Perhaps I did not have enough experience then. I remember feeling an uncontrollable sense of embarrassment. This memory remained with me and resurfaced when I embarked on my PhD in search of my research question. For me it was natural to lean towards health-related quality of life in the elderly as I was socialising with many older adults from very early in life. While seeking the research gaps in this area, I came across physician-patient relationships and sexual health communication and remembered my experience and how difficult it was to communicate with my older male patient about his ED. I did not become a medical physician but instead entered public health research. However, this memory from medical school is the reason I pondered as to how physicians felt about discussing sexual health with patients and whether they can effectively address their patients' concerns. Fortunately, my deliberations overlapped closely with the current gaps in sexual healthcare provisions in older adults which led me ultimately, to this research.

1.2 Background

1.2.1 Significance of Sexual Health in Later Life: A Global Perspective

Preface

The Sustainable Development Goals (SDGs) were fashioned to guide health, social, and economic initiatives until 2030 and are likely to influence the allocation of resources for global health programmes.^{2,3} Matters that are not highlighted by the SDGs are likely to receive limited national and global attention, even if these issues are significant in themselves.⁴ This research contributes to Sexual and Reproductive Health (SRH) which is included in SDG 3: ‘*Ensure healthy lives and promote well-being for all at all ages;*’ as this goal calls for achieving universal access to sexual and reproductive health (SRH) care, reducing global maternal death rates, and ending the AIDS epidemic by 2030; and SDG 5: ‘*Achieve gender equality and empower all women and girls.*’³ However, this study focuses on sexual health in later life, and the SDG framework does not appear to be favourable for other STIs (besides HIV), sexuality education or sexual health beyond reproductive age. There is no direct mention of the term ‘STIs’ within the SDGs, while several other communicable diseases are specifically named.⁴ Also missing is direct reference to older adults’ access and rights to SRH care services that are appropriate for them in terms of addressing issues regarding sexual functioning in later life. Current SDG targets are for sexual health promotion, treatment, care, and education appropriate for those of reproductive age. Regrettably, these targets appear to exclude the age group of interest in this study.

Nevertheless, the study population may benefit indirectly from SDGs 3 and 5 if included in HIV/AIDS treatment and care. With targeted advocacy, they may also benefit from SDG 4: *Ensure inclusive and quality education for all and promote lifelong learning;* as there is need to improve sexual health promotion and knowledge regarding sex in later life for patients and their health care providers (HCPs).³ A similar approach can be adopted for improved policies, increased availability and access to sexual health care, and treatment services appropriate for older adults under SDG 10, more specifically target 10.3, which states ‘*To ensure equal opportunity and reduce inequalities of outcome,*

including through eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and actions in this regard'.³

This study advocates addressing sexual health in older patients though not targeted directly by the SDGs, the right to sexual health care and treatment for older adults is still a public health concern. Consequently, this thesis commences with its first research paper, a review entitled “Emphasizing the Importance of Sexual Healthcare among Middle and Old Age Groups: A High Time to Re-Think?”, and it presents the public health rationale for the research contained in this thesis. The paper discusses why sexual health amongst people aged 45 years and older is of public health importance. This rationale begins by describing how sexual function is affected by natural ageing, while older adults maintain interest in sexual activity in later life. Some older adults have new relationships, multiple partners or have become remarried later in life, all of which are intimately related to their sexual health. The review explains that sexual healthcare and practice is traditionally focused on reproductive health and STIs, particularly for the youth. However, there is evidence to suggest that interest in remaining sexually active continues into middle and old age. STIs are now more frequent in the over 45s age group along with sexual functioning issues; therefore, older adults have continued sexual healthcare needs. There is evidence showing that older adults seek sexual healthcare in general practice, but their sexual health is rarely discussed during the medical consultation. The review therefore urges for healthcare professionals, policymakers, researchers, and educators to: increase their sexual health knowledge and practice, conduct further research, and continue sexual health promotion and policy planning but with the middle-aged and older adults included in these developments.

1.3 Research Paper I

The paper is entitled: Emphasizing the importance of sexual healthcare among middle and old age groups: A high time to re-think. (Appendix 1 contains a copy of the journal published format of this article).

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RESEARCH PAPER COVER SHEET

PLEASE NOTE THAT A COVER SHEET MUST BE COMPLETED FOR EACH RESEARCH PAPER INCLUDED IN A THESIS.

SECTION A – Student Details

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Emphasizing the Importance of Sexual Healthcare among Middle and Old Age Groups: A High Time to Re-Think.

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Abstract

Our sexuality and sexual health are affected by physiological, pharmacological, psychosocial, and illness related changes as we age. Physiological changes in men can cause less firm erections due to narrowing of the arteries that supply blood to the penis and in women, the vagina can become shorter, narrower and less lubricated. Pharmacological and medical interventions may affect libido in both men and women by decreasing overall sexual desire resulting in a diminished interest in sex over time. Illnesses more prevalent amongst middle-aged and older adults including diabetes can also influence sexual function, such as increased erectile dysfunction (ED) amongst men and lack of sexual arousal in women. Societal changes, including increased rates of divorce, use of the internet to find sexual partners, suggest that older populations are also at risk of sexually transmitted infections (STIs). Even though the WHO's definition on sexual health contains no age limits, most sexual health policies, services, and interventions target people from adolescence to early child-bearing years. Many people continue to be sexually active in later years, yet health promotion and services target the young (under 25 yrs.), with little opportunity for prevention, treatment, or positive sexual health promotion in the over 45s. Sexual dysfunction, STIs are an increasing public health issue amongst middle-aged and older adults but are not considered a priority for surveillance in sexual healthcare. This review aims to examine how sexual health is affected by ageing and why sexual health amongst people aged 45 years and above is of public health importance.

Keywords: middle-aged; old aged, sexual health, sexual dysfunction, sexuality, ageing.

Introduction

On average, the population is getting older because of successful public health interventions increasing life expectancy. An estimated 29.3% of the world's population is middle-aged (45-64 years) and older (above 65 years).^[5] In developed countries like Japan, life expectancy at birth now exceeds 83 years and is at least 81 years in several other countries, including the UK and 79 years in the US.^[6] In less developed regions such as East Asia and the Caribbean it has also increased to at least 74 years (with the notable exception of parts of Africa where deaths caused by the HIV/ AIDS epidemic is responsible for the fall in life expectancy rates).^[6] Thus, much attention has focused on the implications of an ageing population. Individual and societal benefits of increased life expectancy include the value of longer periods of life, a sustained sense of well-being and productivity (increased retirement age), and, extended periods of social engagement, however, these are coupled with problems associated with an ageing population. These problems include chronic illness and non-communicable diseases, higher probability of developing dementia, disability and dependency. Notably, minimal attention has been paid to this group with respect to their sexual health and how it affects their quality of life (QOL). Policy makers and the media seem to equate sexual health with youth (both positively and negatively) while the sexual healthcare needs of the middle-aged and elderly is ignored.^[7]

The World Health Organization (WHO) defines sexual health as - "*a state of physical, emotional, mental and social well-being related to sexuality; not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be protected, respected, and fulfilled*".^[8] While this definition contains no age limits, most sexual health policies, services and interventions target people from adolescence to early child-bearing years. In many high-income countries including the UK, public health strategies aiming to combat poor sexual health, such as their Teenage Pregnancy Strategy, National Chlamydia Screening Programme and the Sexual Health and HIV Strategy have focused primarily on the young,^{[9],[10],[11]} possibly due to the assumption that sexual health

amongst older people is not of public health importance or even that older people are not sexually active, and therefore not at risk of poor sexual health outcomes.

This review aims to examine how our sexual health is affected by ageing and why sexual health amongst people aged 45 years and above is of public health importance.

The impact of normal ageing on sexual function

For most men and women, changes in sexual function occur around mid-life and into subsequent decades as a normal consequence of ageing.^[12] These changes include physiological (biological and physical) and psychosocial (emotional, mental, and social) changes, some of which can be illness related or brought on by pharmacological intervention, but all of which further influence our sexuality.

Physiological aspects of ageing on sexuality

As we age, physiological changes (including hormonal levels) in our bodies may affect our sexual competence and can lead to problems, including diminished or absent interest in sex, difficulty becoming sexually aroused or lack of enjoyment during sex.^[13]

Men: The physical changes coupled with ageing are associated with an increased risk of impotence. Erections can be less firm or smaller than they used to be due to narrowing of the arteries that supply blood to the penis, and they produce less ejaculate during an orgasm or lose an erection faster after orgasm.^{[12],[13]} Testosterone levels begin to decline in the fifth decade, often resulting in a diminishment of sexual desire.¹² Loss of desire is associated with, and often a consequence of, diminished sexual responsiveness.

Women: Hormonal changes after menopause or a hysterectomy can cause the vagina to become shorter, narrower, and less lubricated.^{[12],[13]} Oestrogen depletion following menopause may affect the psychology and the physiology of sexual response. Blood flow to vaginal and genital tissues and sensory stimulation are directly affected by declining oestrogen levels.^[14] These changes can produce vaginal dryness and recurrent genital pain with intercourse (dyspareunia), contributing to loss in desire and diminished sexual responsiveness.^{[12],[14]}

Medical and illness-related factors

Physical illness can affect sexual function directly by interfering with endocrine, neural, and vascular processes that mediate the sexual response, indirectly by causing weakness or pain and psychologically by provoking changes in body image and self-esteem.^[13] In men and women, the age-related chronic or systemic conditions that instigate these changes and affect overall sexual satisfaction and performance include: endocrine or metabolic disorders such as diabetes; cardiovascular diseases; cancers; neurologic disorders and generally any injuries related to the reproductive organs, chronic pain and incontinence.^[15] The burden of chronic disease is growing due to increased life expectancy and lifestyle changes. For example, the estimated global prevalence for diabetes in 2010 was 347 million and was expected to affect 438 million people by 2030,^[16] however, we are set to exceed this estimate as the prevalence was 422 million in 2014.^{[17],[18]} Age has shown to be a significant risk factor for all types of sexual dysfunction. The age-related probability of complete erectile dysfunction (ED) is three times greater in patients with diabetes than in those without.^[19] ED prevalence and severity increase with age from 39% in men in their 40s to 67% for men in their 70s.^[20] Surgical therapy in men can affect erectile function by interfering with the neurologic innervation of the penis. Gynaecologic and mastectomy surgeries in women affect decline in orgasmic pleasure, such as following a hysterectomy because of the absence of uterine contractions.^{[13],[14]} For men and women who view hysterectomy as a further loss of femininity, the women's self-esteem and body image may be negatively affected. Conversely, for women who experience relief from pain, abnormal bleeding, or cramping, hysterectomy may result in improved sexual function.^[14]

Pharmacological factors

Whilst pharmacological interventions have been developed to combat age-related illnesses and conditions, medications can cause or exacerbate changes in sexual function. These effects on sexual function can be more apparent among older persons as the ageing process influences physiologic drug distribution, metabolism and excretion. In men, medications such as the antihypertensive agents, beta blockers and diuretics appear to be the primary causes of impaired erection.^[15] In addition, cardiovascular drugs, cancer chemotherapy

agents, anxiolytics, antipsychotics, a wide range of antidepressants, lithium and numerous drugs of abuse (including cocaine, alcohol, narcotics, and amphetamines) have all been linked to impaired erectile function.^[13] In women, reported side effects are associated with antidepressant, antipsychotic and neuroleptic medications and include decreased sexual desire, impaired arousal and lubrication, vaginal anaesthesia, delayed orgasm, and anorgasmia.^[14,15] Antihypertensive drugs have been shown to impair physiologic sexual response in women by decreasing vaginal blood volume and pressure and pulse responses.^[14] With regard to diabetes, male sexual dysfunction is a common, under-appreciated complication of this disease that can include disorders of libido, ejaculatory problems, and ED.^[21] All three forms of male dysfunction can be a significant burden to diabetic patients and can affect their QOL.^[21] There is a paucity of research on the effects of diabetes on women; at this point it does not appear to be correlated with sexual function as there is no evidence that peripheral or autonomic neuropathies directly affect the female sexual response.^[12]

Psycho-social aspects of ageing on sexuality

Sexual function in middle-aged and older adults also has *psychological* influences like those that impact on the sexuality of younger persons. Common sources of sexual dissatisfaction noted among couples of all ages include commitment issues, marital conflict, sexual intimacy, communication problems, lack of trust, and incompatibilities in sexual desire and performance.^[22] However, what makes these factors different for older adults is that these may be amplified by anger and resentment that may have built over the years, as well as by feelings of entrapment and resignation and the option to leave if the relationship no longer seems viable.^[13] Psychosocial stresses such as depression or anxiety may fuel increased sexual difficulties, for example stress attributable to the death of a spouse, divorce or separation, loss of a job or social status and deterioration of support networks.^[13]

Adapting to changes in sexuality

Regardless of the physical and psychological barriers coupled with ageing, many middle-aged and older adults adapt to improve their sexual lives. However, there are greater societal pressures to maintain a youthful appearance, perhaps influenced by an ageist media. Thus, widely accessible anti-ageing products and treatments, as well as the growing popularity of plastic surgery and cosmetic treatments occur in this age group. According to the American Society for Aesthetic Plastic Surgery (ASAPS) 2016 report, ages 40 to 54 contributed to making up the majority of cosmetic procedures – 49% [7.6 million] cosmetic procedures performed and ages 55 and over second highest with 4.1 million.^[23] Reported factors that drive older patients towards anti-ageing treatments and procedures include: improving general self-esteem; to be competitive in the workplace; to feel more attractive and connected/accepted in their social circles; to get a new start on life and attract new partners; and to look as young as they feel, as people become more "fitness" and attractive-conscious.^[24]

The internet offers forums for sex education and entertainment and the opportunity to meet sexual partners. The sexuality of older adults, like younger adults, has been greatly enhanced (or grossly distorted) through the varied avenues of the internet through which many have found new opportunities for sexual expression.^[25] The popularity of internet use for cyber dating and meeting the newly single middle-aged and older people is growing as several sites such as “Friends over 50”^[26] and “50+ Dating”^[27] and many others are well established. Re-marriage and cohabitation in middle and old age is a progressively growing socio-demographic trend. In the US, about 50% of the “baby boomers” (the post Second World War generation born between 1946 and 1964) have divorced and remarried and the proportions ever-divorced, currently divorced, and married at least twice, are highest among individuals ages 50 and over.^{[28],[29]} For those who are lonely in middle and old age, forming new relationships could be a necessary socio-emotional goal which may serve to improve their psychological and sexual wellbeing. In fact, relationships formed in later life tend to be more positive, deeper, and more meaningful than those relationships in young adulthood.^[30] Interestingly, the dynamic of relationships in later life include choosing partners that are vastly younger in age (for reasons that may include making them feel youthful again). In the Caribbean, US, and Latin America the terms

“Sugar Daddy” and “Cougar Syndrome” have been coined for these types of sexual relations which are becoming more acceptable possibly due to TV and Music celebrities of both sexes who flaunt their new relationships globally in the media with much younger partners.

Sexual behaviour and health in middle-aged and older adults

Sexual dysfunction (SD)

Our knowledge is limited regarding sexual behaviour in middle-aged and older adults as many surveys on sexual behaviour or routine data collection exclude older people. Surveys which did include this demographic suggest that older adults are sexually active and consider sexual function,^[31] performance and ability to have sex as very important.^{[32],[33]} A cross-sectional study in the UK and US showed that more than 80% of 50-90-year olds are sexually active.^{[34],[35]} However, this age group has a higher probability of sexual dysfunction (SD) due to ageing and development of chronic illnesses. Commonly reported SD problems amongst middle-aged and older adults include (i) lack of interest in sex; (ii) arousal problems; (iii) climaxing too early; (iv) inability to achieve an orgasm; (v) experiencing pain during sex; (vi) not finding sex pleasurable; and (vii) anxiety about performance.^{[36],[37]}

The prevalence of these issues varies according to country. The National Social Life Health & Ageing Project (NSHAP) in the US indicates that more than half of people between 57-65 years and about a third of those 75-86 years are sexually active, about half (of both age groups) self-reported at least one bothersome sexual problem; one third report at least two.^[38] In a pan European study (Sweden, the UK, Belgium, Germany, Austria, France, Spain and Italy) on sexual activity, dysfunction, health seeking attitudes and behaviour, 83% of the men and 66% of the women 40-80 years are sexually active.^[39] SDs frequently reported were early ejaculation (11%) and ED (8%) in men; and a lack of sexual interest (18%), an inability to reach orgasm (13%) and lubrication difficulties (11%) in women.^[39] Higher frequencies for these were seen in Spain, with early ejaculation (31%) and lack of sexual interest (17%) the most commonly reported male sexual problems and a lack of sexual interest (36%) and an inability to reach orgasm (28%) the most commonly

reported female sexual problems.^[40] Recent pharmaceutical developments have provided options such as “wonder drugs” for sexual performance enhancement, for example Viagra or Cialis, which aim to improve sexual experiences for those with ED. Additionally, several widely available varieties of lubricants and mood enhancers aim to address dryness, stimulation, and interest for both sexes.

Sexually transmitted infections

In addition to SD, sexually transmitted infections (STIs) are an increasing public health issue amongst middle-aged^[41] and older adults.^[42] One in four people living with a diagnosed HIV infection is now aged 50+ years, likely due to improved survival and continued transmission.^[43] In the UK, adults aged 50+ years accounted for 9.0% of all new HIV diagnoses in 2006 and 17% in 2015, which almost doubled over the period.^{[44],[45]} The median age at diagnosis was 55 years; 73% were diagnosed between the age of 50 and 59 years, with the rest diagnosed aged 60+ years.^[41] Although this is a perceivably low proportion to the entire 50+ population, this is not a group traditionally considered at risk and signals the need to develop services accommodating the older population. Additionally, people diagnosed 50+ years were more likely to be diagnosed late compared to those diagnosed under 50 years old (58% compared to 39%).^{[42],[43]} Late diagnoses can be attributed to low levels of awareness of later life sexual health issues among GPs which contributes significantly as a barrier to discussions relating to sexuality in consultations with older patients.^[46] Additionally, STIs in middle and old age are not considered a priority for national surveillance in sexual healthcare mainly because countries are mandated to report on global indicators for prevalence of STIs such as HIV between the age group 15–49 years.^[47] The burden of disease among those aged 50+ years is frequently ignored and this represents a significant blind spot in the global response to the epidemic of HIV infection and acquired immunodeficiency syndrome (AIDS).^[48] Regardless, part of the combination prevention strategies for HIV infection, diagnosis and treatment of STIs is one of the biomedical interventions overlooked to patients in middle and old age.^[49] While many older adults remain sexually active and may have concerns about sexual function or STIs, their problems are infrequently addressed by the health sector.^[50]

Sexual healthcare

Middle-aged and older adults are frequent attendees of general practice ^[49] and report that this is the favoured setting for advice or treatment; however both patients and physicians find it difficult to discuss sexual health issues.^{[31],[36]} Primary care physicians do not address sexual health proactively with older people, and unless it is raised by the patient it may not be discussed,^[31] as few will be willing to initiate this discussion with their physician.^[51] This could be a result of the societal emphasis that has linked sexuality almost exclusively to young people and may consequently have discouraged these patients from seeking sexual advice within the primary care setting.^[52] Sexual health promotion materials target young people,^[53] with few exceptions. The “Middle-age Spread”, for example (see Figure 1 below), was the first sexual health campaign in the UK that targeted people over 45, alerting them of the risk of STIs.^[54] Generally, these missed opportunities for prevention or intervention of sexual health issues for over 45s are exacerbated by the striking absence and under use of or poor quality sexual healthcare services available to this age group in many countries.^[55] Information from healthcare professionals regarding normal age-related changes in sexuality, together with advice on how to continue meaningful sexual relations, may play a key role in altering such negative attitudes.^[12] Sexual lifestyle advice should be a component of holistic healthcare for middle-aged and older patients with chronic ill health.^[51]

Conclusions and Recommendations

Globally, those aged 45 years and older represent the second largest population group to whom, positive sexual health promotion is lacking. Though over 45s present with treatable sexual health conditions, these are often overlooked or dismissed as being a "normal part of ageing". Commercially available products exist to alleviate some of the issues that can arise due to sexual dysfunction and there are ways of rejuvenating sexuality as one gets older, such as internet dating and sexual performance enhancers. However, the right to the best possible health does not diminish as we age and for this to improve, much research is needed to better understand sexual health as we age and how to develop appropriate services and training for healthcare staff. Regarding sexual healthcare in later life, healthcare professionals need to be proactive in: relevant continuing medical education in care and effective sexual health communication, establishing appropriate sexual healthcare

age appropriate services. Healthcare professionals and policy makers must consider and encourage the promotion of good sexual health related QOL to create more sustainable and happier relationships, less sexual health burden and a healthier middle-aged and older population.

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Contribution

This paper is part of the doctoral thesis at LSHTM. The first author PR has done the majority of the work including the conception, review and manuscript preparation. VK reviewed and offered minor suggestions.

Conflicts of interest

None declared

**Remember
wearing
this? Then
remember
to wear
this!**





Remember when you thought this looked fab and groovy? When everything was peace, love and tie-dye tee shirts? You're older and wiser now of course. An experienced lover. All the sexual anxieties of youth a thing of the past. But if that's true, how come it's older people who are getting more sexually transmitted infections (STIs) than ever before? Simple. Once we hit our 40s and 50s, we drop our guard. We think things like syphilis, gonorrhoea, genital warts and chlamydia are strictly for young people. Well, unfortunately, STIs don't ask how old you are before they infect you. And they don't care how few sexual partners you've had recently either. So, if you want to enjoy a few more perfect summers of love, remember - condoms rock. Use them!

For confidential advice phone the FPA helpline on 0845 122 8690 or Ask WES online at www.fpa.org.uk.
The Family Planning Association is a registered charity number 250187, and a limited liability company registered in England, number 887832 © FPA 2010.

Figure 1: FPA (UK) 2010 Middle-aged spread campaign⁵⁴

1.3.1 Sexual Health in Middle-Aged and Older Adults: Trinidad & Tobago

1.3.1.1 Preamble

Similarities in the global trend presented in paper 1 above of existing and emerging sexual healthcare needs in middle-aged and older patients were observed in Trinidad and Tobago (T&T). Furthermore, T&T has unique characteristics about its healthcare system, sexual health provisions, and sociocultural norms that influence general perceptions of sexuality and possibly how sexual health concerns are managed during a medical consultation. This section elaborates on the current situation: worldviews about sexuality in later life, prevalent sexual health conditions in middle and old age, status of sexual healthcare provisions offered in primary care, and the perception of sexual health from the physician, all described in the context of the research setting.

1.3.1.2 Research Setting: Trinidad & Tobago

1.3.1.2.1 Overview

This research was conducted in the Republic of Trinidad and Tobago, the most southerly twin-island state of the West Indies (see Figure 2), with a multicultural population of 1,372,598 persons,⁵⁶ comprising East Indian 35.4%, African 34.2%, Mixed African/East Indian ('dougla') 7.7%, other mixed heritage 15.3%, other ethnicities 1.3%, and unspecified 6.2%.⁵⁷ Trinidad and Tobago is recognised by the World Bank's economic indicators as a high level economy as it is the leading Caribbean producer of oil and gas.^{1,58} Consequently, T&T was upgraded by the Organisation for Economic Cooperation and Development (OECD) in late 2011 as a 'developed country'.⁵⁹ Irrespective of this status of achievement, there is a disparity in T&T with our 'high-income developed country' status as there are various aspects of inequality and need for capacity building in other sectors including energy, education, food production, and healthcare. Trinidad and Tobago faces several challenges including diversification and managing the decline in oil and gas production and exports.⁶⁰ The T&T primary healthcare system is plagued with several challenges too and the pace of reform has been slow. Regrettably, the average percentage of deprivation experienced by people living in multidimensional poverty in Trinidad and Tobago is 35.1 per cent, thus, the share of the population that is multi-dimensionally poor adjusted by the intensity of the deprivations is 0.02 on the Multidimensional Poverty Index (MPI value).^{61,62,63,64}

Figure 2: Map of the Caribbean - Trinidad & Tobago



Source: World Maps – Trinidad & Tobago⁶⁵

1.3.1.2.2 Sociocultural Expression of Sexuality in Trinidad & Tobago

T&T's culture is one that stigmatises expressions of sexuality. Many persons generally appear shy, reserved or embarrassed about addressing anything about sex regardless of age, gender, and socioeconomic status. This may include talking about sex, sexuality, sexual health concerns, and opinions regarding sexual orientation or expressions of sensuality. Even if encouraged to engage in discussion, it is still difficult as society has put a cultural stigma on sexuality. It is more taboo for older age groups than younger generations, but this may be partially due to ageist influences such as the media and politics. There is, however, one exception, Carnival. Trinbagonians in large numbers embrace and openly enjoy some aspects of their sexuality during the Carnival season.

Carnival and Sexuality

Trinidad & Tobago (T&T) is renowned for its major cultural tourism event, the pre-Lenten Carnival.⁶⁶ From a historical perspective, during the pre-Lenten events from Christian traditions, debauchery, extravagance, hedonism, and sexual excess were celebrated in dance, masquerading, and feasting for a last time. Carnival emerged as it coupled with Christian influences and European practices of hosting a public masquerade ball before

lent to openly enjoy exposing and breaking social, racial, and sexual taboos.⁶⁷ It was originally about costumed characters, music and dance expressing irony, socio-political commentary, and pleasure mostly by middle-class Europeans.⁶⁸ However, when slavery was abolished, more African ‘creoles’ began to have their own backyard masquerade balls, and the festival changed to include more ridicule and derisions of the European plantation owners, where they mocked and imitated their masters’ behaviour.^{67,68} It was an opportunity for the creoles to liberate themselves openly from mental, physical, and sexual servitude and oppression which they demonstrated through dance, costuming, and the characters played.⁶⁷ However, the concept of carnival has evolved beyond its historical reference to a cultural festivity.⁶⁹ This transition was noticeable when Trinidad & Tobago became independent from the British in 1962.⁷⁰ This change in governance conveyed a new sense of national pride and T&T identity and patriotism, which was celebrated and became a mainstay onwards from the very first carnival as an independent nation in 1963.⁷⁰ This new outlook on carnival encouraged a series of changes including the birth of new events showcasing local talents in song, dance, arts, and costume design as the festival evolved.⁶⁷ The carnival of today has become a more commercialised version with some historical remnants. It has evolved into a major tourist attraction and income earning opportunity for business community and the tourism sector. The face of carnival has evolved over time. Now smaller segments of traditional ‘Ole mas’, with character-playing and mocking socio-political commentary mostly depicted in song (calypso), are overshadowed by the majority of masqueraders now participating in ‘Pretty Mas.’ ‘Pretty mas’ consists of large groups of people in similar more sensual costumes engaging in hypersexualized dancing including gyrating of their hips (referred to in T&T as ‘wineing’).⁷¹ Only during this season participants of various ethnicities and age groups engage in taboo behaviours (including visitors) as it is virtually a national culturally acceptable opportunity to liberate ones inhibitions and violate societal norms of sexuality from dress code, dance, song, even to risky sexual behaviour.⁷¹ In fact, the carnival experience was described as a form of expression ‘carnavalesque’ by Bhatkin in 1968, as frank and free, and an opportunity to express liberty from norms of etiquette and decency that are usually imposed, and he described the dress code or lack thereof as an opportunity where bodily excess is celebrated.⁷² The reversion to traditional sexual inhibitions and

taboos occurs at the beginning of the Lenten period. This signals the end of the Carnival season and the return to traditional social codes and conservatism.

Evidence shows that the popular sociocultural Carnival experience is related to increased irresponsibility of unsafe sexual behaviour, as it appears to occur more frequent during this season.⁶⁶ The risky sexualised behaviour may be on account of the mentality of freedom of sexual expression as it is traditionally discouraged and only socially permitted during the limited Carnival season. Every year, there has been an overall increase in the population growth rate associated with the sexual activities prevalent during the festivities. An estimated 15% increase in the number of live births is noted every November and December.⁶⁷ These seasonal births termed the “Carnival baby” have been a long-standing joke in T&T for decades.⁷³ Additionally, a rise in the incidence of sex tourism and HIV/AIDS also is reported to be visible during this period.⁷³ The Family Planning Association of Trinidad and Tobago (FPATT) and external organisations such as the Population Services International-Caribbean (PSI) conduct numerous behaviour change campaigns on STI and pregnancy prevention to curb the rise in STIs and unwanted pregnancies during carnival.⁷³ Most of these STI prevention interventions are youth-focused despite the fact that middle-aged and older adults also participate in Carnival, and they are equally vulnerable and participate in similar high-risk behaviours. The patterns of behaviours exhibited during Carnival may contribute to the HIV/AIDS epidemic and increased prevalence of STIs in all age groups, especially in MARPs and older adults, which suffer from underreporting.⁷⁴

Risky Sexual Behaviour (Perspectives about Unprotected Sex)

In addition to the sexualised behaviours associated with Carnival, there are social worldviews about unprotected sex. Unprotected sex was standard within presumed monogamous relationships, based on interplay of mostly trust, but also age, appearance, and relationship status.^{75,76} Infidelity which might result in unprotected sex, was often justified because the act was unexpected and spontaneous, and because the partner appeared ‘clean’.^{75,77} However, the issue of using protection (condom use) had become associated with ‘gay sex’ and HIV prevention among homosexuals since the HIV/AIDS

epidemic in the early 1980s. As a result, heterosexuals with this flawed perception are less likely to use condoms to avoid perceived stigma and discrimination.⁷⁷ In T&T, it is very difficult to purchase condoms without feeling embarrassed. Condoms are usually shelved behind the cash register and can only be purchased by asking the cashier or pharmacist. This may discourage persons in a population that is already very guarded about sex and, even more so, for those persons who are intimidated by asking for contraception publicly. Irrespective of the reason, unprotected sex encourages an increased risk of STD transmission. This behaviour is even more prominent after alcohol consumption and during the Carnival season after which a spike in unwanted pregnancies, abortions, and STDs occurs in all age groups.

Sexuality Related Laws

Homosexuality

The multicultural and multi-ethnic society of T&T adopts various global religious doctrines which largely endorse heterosexuality as the norm for sexual orientation and is likely the reason why alternative sexualities are deemed unconventional.⁷⁸ People who have other sexual identities or behaviours may suffer psycho-social discomfort and be victims of homophobia.^{78,79} In T&T, unlike some countries, including other Caribbean islands like Jamaica, there is no overt homophobia, but there is de facto moral code—an unspoken, understood culture of prejudice.⁸⁰ However, because the religious and cultural influences indirectly create and promote homophobia, laws of the land have been established based on these dominant sociocultural and religious norms. The national criminal code in T&T up to September 19th, 2018, prohibited sex between two people of the same sex.⁸⁰ Section 13 of the Trinidad and Tobago Sexual Offences Act 1986 (Strengthened in 2000) criminalised "buggery", offering a sentence of an average of 25 years. Also, Section 16 of the same act, on "serious indecency," stipulated that a person who was sexually intimate with a person of the same sex without having intercourse was liable to imprisonment for up to five years.⁸¹ However, Trinidad and Tobago made legal history in the Caribbean rolling back these long-standing homophobic laws. In March 2017, an LGBT activist took the government of Trinidad and Tobago to court, filing a lawsuit to strike down the "buggery law"—section 13, that criminalised anal sex, as the

activist presented that it was unconstitutional because it violated his right to privacy, liberty, and freedom of expression. On September 20, 2018, sections 13 and 16 of the Sexual Offences Act were modified, making it legal for consenting adults to engage in such activities.⁸² Sections 13 and 16 now read:⁸³

- ▶ “13. (1) A person who commits the offence of buggery is liable on conviction to imprisonment for twenty-five years.
- ▶ (2) In this section buggery means sexual intercourse without consent per anum by a male person with a male person or a male person with a female person.
- ▶ 16. (1) A person who commits an act of serious indecency on or towards another is liable on conviction to imprisonment for five years.

Commercial Sex

Other national sex related laws that silently influence Trinbagonians worldview of sexuality include those pertaining to commercial and transactional sex. “Sex work” and “sex workers” are not legal terms in any Caribbean country.⁸⁴ The most common terms used in sex related laws are prostitution and prostitutes. Prostitution was recently defined as “the offering of the body by a person of either sex for the purpose of arousing or gratifying the sexual desire of another for payment in return.”⁸⁵ Sexual intercourse is not a requirement to be categorised as prostitution as this may include pornography, exotic or lap dancing, stripping, internet sexual services, and escort, gigolo or “rent-a-dread” services.⁸⁵ Since the term prostitution globally carries stigma mostly to degrade women, it has been replaced with the concept of “sex work”. “Commercial sex workers are defined as men or women who provide sexual services in exchange for money as their main method of income” or in exchange for goods or services with someone not intended for any further relationship.”^{85,86,87} In the English-speaking Caribbean, almost all activities for female and male sex workers are criminalised.⁸⁸ T&T labels prostitutes and those organising prostitution or living on the remunerations of prostitution as “prohibited immigrants” or “prohibited aliens”.⁸⁹ These laws are intended to refuse such persons with intent or found participating in such activity entry into the country and define them as ineligible for the grant of immigrant status.⁹⁰ These activities exist but are kept hidden as a result of these laws. Some services such as exotic dancing and stripping are becoming

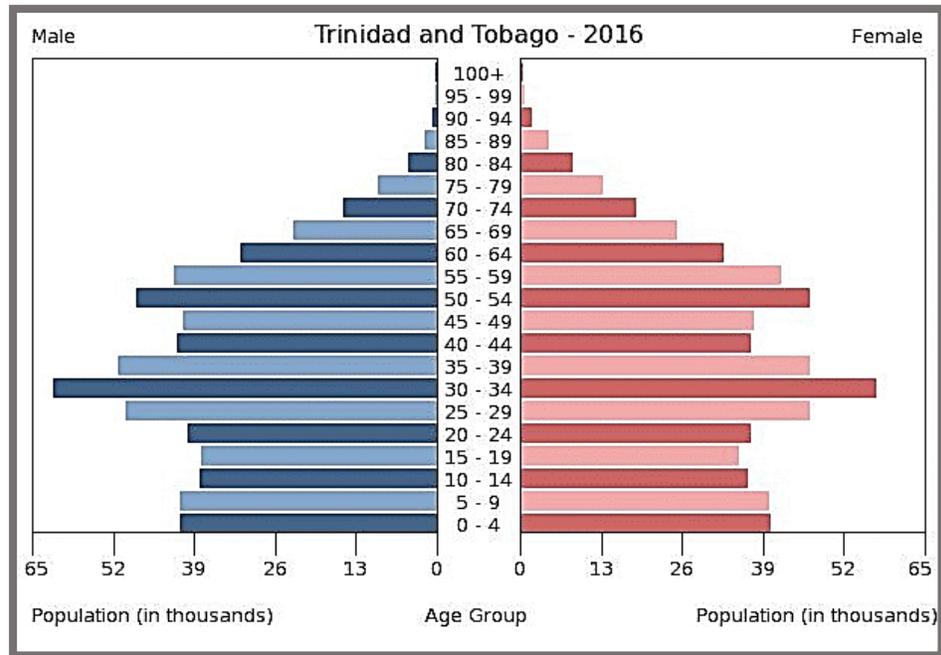
more visible and popular with younger generations at nightclubs and bars and special events including bachelor/bachelorette parties. However, as these are all generally taboo, it is difficult for MARPs to attend to or receive sexual health services (even though free of charge) primarily due to fear of stigma and discrimination and legal implications. NGOs usually must devise special means of targeting MARPs in hidden or undisclosed locations to carry out STI health-related interventions due to their fear of being discovered.⁹¹

Another aspect of sex work includes transactional sex which is also not a legal term but identifies all sexual activities that are exchanged for “wants” and “needs.”⁹² These may include anything from cash, food, goods (gifts, clothes, shoes) as a form of seasonal, part time, or full-time prostitution.^{85,92} It is chiefly “sex for financial gain, social status, consumerism and style.”⁹¹ This type of interaction affects the population of interest in this research because it involves young girls engaging in sexual activities with older men referred to as “Sugar Daddies” and young boys who engage with older women referred to as “Sugar mummies or cougars.”⁸⁵ In both genders, sex is exchanged for economic benefit, financial support including access to education, or to improve their standard of living.⁹³ These interactions are not hidden like commercial sex work but are still considered taboo. Though there are many moral codes dictating sexual behaviours in T&T, being able to have a good sexual health-related quality of life (HRQoL) could be of benefit into the older ages of this population. However, as we age, sexual functioning is also impacted not only by sociocultural practices, but also by other lifestyle choices including one’s health.

1.3.1.2.3 Epidemiology of T&T

The country is undergoing a demographic transition (see Figure 3, population pyramid) characterised by a decrease in fertility rates as the population growth rate has declined – 0.13%.^{60,94} This transition has highlighted an increase in the middle-aged and older age group (45yr.+) as they contribute to 34% [more than the world’s average for this age group] of the entire population (see Table 1).⁵⁷

Figure 3: Population pyramid for Trinidad & Tobago



Source: CIA- World Fact Book-Trinidad & Tobago 2018⁶⁰

Table 1: Middle-aged and older population in Trinidad & Tobago in 2017

Age group (years)	45-49	50-54	55-59	60-64	65+
Estimated number of persons	98,185	89,062	74,793	59,911	121,590
Percentage of total population	7%	7%	6%	5%	9%
Total population = 1,372,598					

Source: extracted from the Central Statistical Office (CSO) data⁵⁷

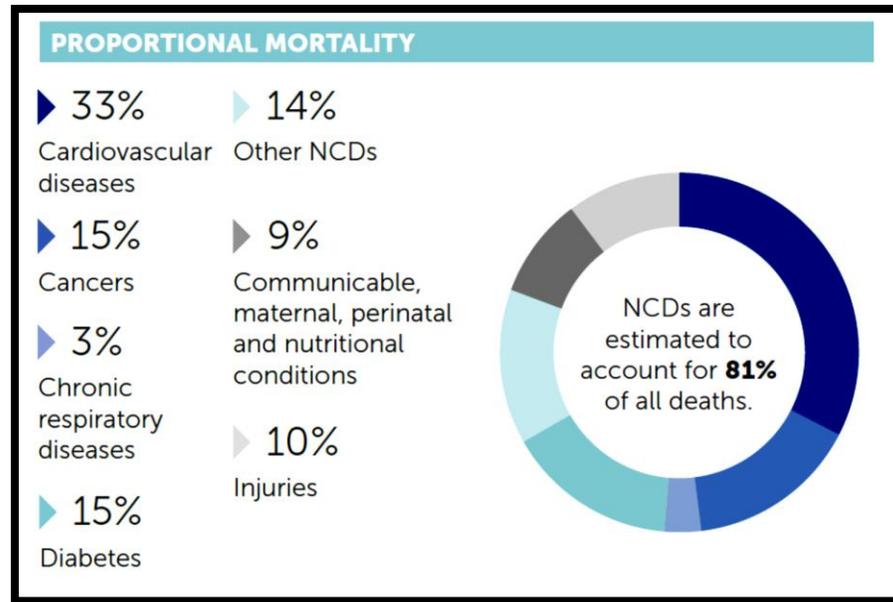
The life expectancy in T&T for males is 70.2 years, and for females it is 76.2 years.^{60,59} In 2012, healthy expectancy in both sexes was 10 year(s) lower than overall life expectancy at birth. These lost years of healthy life expectancy (YLL) represents 10 equivalent year(s) of full health lost through years lived with morbidity and disability.⁹⁵ There is evidence of an epidemiological transition in T&T (and most of the Caribbean except for Haiti) in increased rates of deaths and disability in non-communicable diseases (NCDs) when compared with previous decades which reflect higher prevalence of infectious diseases.⁹⁶ In 2012, 14% of the population was over the age of 60 and the primary causes of morbidity in this group was chronic NCDs.^{60,95}

1.3.1.3 Sexual Health Burdens in Older Adults

1.3.1.3.1 Ageing, Non-Communicable Diseases (NCDs), and Sexual Dysfunction (SD)

NCDs are collectively the leading cause of death in T&T and contribute to significant morbidity and public health sector expenditures.⁹⁴ As shown below in Figure 4, cardiovascular disease is the highest ranking cause of death in the country, accounting for 33% of deaths annually.⁹⁷ Heart disease, cancer, and diabetes together account for 63% of all T&T deaths.⁹⁷ NCDs are strongly influenced by four main behavioural risk factors: tobacco use, insufficient physical activity, harmful use of alcohol, and unhealthy diet.⁹⁸ These lead to a myriad of common physical, psychological, and lifestyle conditions such as diabetes, obesity, dyslipidaemias, hypertension and these, in turn, are risk factors of sexual dysfunction.⁹⁹

Figure 4: Proportional mortality [all ages + sexes]



World Health Organization: Non-communicable Diseases (NCD) Country Profiles, 2018⁹⁷

In recent years, pairing of public health priorities, sexual and reproductive health (SRH), and NCDs emerged. This initiative was commenced by the United Nations (UN) in 2011 when they identified several parallels between NCDs and disorders in SRH, including common risk factors, comorbidities and poor health-related quality of life (HRQoL) caused by them both.^{100,101} SRH problems can be numerous and refer to any combination of physiological or psychological issues related to sexuality, sexual dysfunctions, sexual disorders, reproductive concerns or problems. For the scope of this thesis, the focus of SRH will be sexual problems in older adults, primarily sexually transmitted infections (STIs), and aspects of sexual dysfunction exacerbated by the effects of normal ageing. Sexual dysfunction (at any age) refers to the inability of a person to experience sexual desire, arousal, orgasm or satisfaction under normal circumstances, during any stage of sexual activity.^{102,103,104} According to the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5), difficulties due to sexual dysfunction, excluding those that are substance or medication-induced, cause extreme distress and interpersonal strain for at least 6 months.^{102,103,104} As a result, sexual dysfunction can have a profound impact on an individual's perceived quality of sexual life.^{102,103,104}

Sexual dysfunction is a risk factor for vascular dysfunction independent of, but exacerbated by NCD related risk factors.^{99,105} Normally, for effective sexual arousal in men (penile engorgement and erection) and women, the body must have healthy cellular, vascular, and neurological systems. Together they ensure the release of nitric oxide (NO) from endothelial cells and neurons to initiate vasodilatation to the genitals.⁹⁹ Vascular dysfunction from ageing also manifests as endothelial dysfunction which is the basis of other arteriogenic vascular disorders seen in NCDs such as CVDs, CHDs including ischemic heart disease and diabetes.¹⁰⁶ There is evidence to suggest that ED (male sexual dysfunction) may be associated with atherosclerotic vascular disease, peripheral vascular disease, hypertension or myocardial infarction (MI).¹⁰⁷ Sexual dysfunction, whether triggered by ageing or NCDs, affect both males and females by decreasing sexual performance, negatively affecting their body image and perceived sexual desirability, lower libido and physical tolerance for sexual activity.^{99,107} Sexual dysfunction increases with age as evidence shows it is four-fold higher in men in their 60s.¹⁰⁸ For this reason, in persons 45 years and older, where natural decline in sexual performance may already be apparent, this can be exacerbated if they have increased risk factors for NCDs as well.¹⁰⁹

Cardiovascular Diseases (CVDs), Chronic Heart Disease (CHD)

CVDs/CHDs affect sexual arousal pathways and cause erectile failure in men and lack of vasodilation in women due to endothelial cell dysfunction.¹⁰⁹ In light of these parallels between CVDs/CHDs and impotence, a merger of sexual health and NCD prevention and care clinics could be of benefit as it is possible for a patient with undiagnosed NCDs to present with impotence. This may be indicative of a lack of blood flow in other blood vessels and possibly a red flag for heart disease.¹¹⁰ Also, there is evidence that men with ED have a two-fold increased risk for acute myocardial infarction (AMI).¹⁰⁶ The risk of AMI escalates with ageing. Evidence suggests that men 55 years and older with ED have a four-fold increased risk of AMI.^{108,111,112} The highest rates of ischemic heart disease and total CHD mortality for both males and females are seen in the English-speaking Caribbean, Argentina, Canada, the United States (US), and Uruguay; with Trinidad and - Tobago explicitly mentioned in the WHO report.⁹⁴

Hypertension

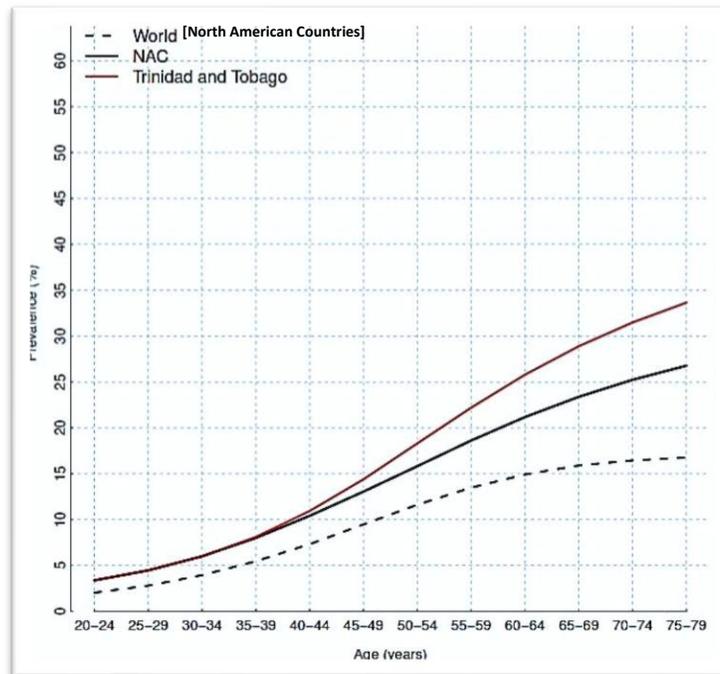
Hypertension is a contributory risk factor for CHD, 50% of ischemic strokes, haemorrhagic strokes and sexual dysfunction.⁹⁹ Hypertension causes phenotypical modifications of vascular endothelium, leading to endothelial dysfunction. This precedes the development of adverse cardiovascular events and sexual dysfunction. According to the results of the Chronic Risk Factor Survey conducted in 2011 by the MoH of T&T, 1 in 4 persons in T&T is living with high blood pressure. This prevalence is high with approximately twenty-six per cent of the population (29.8% of males and 23.1% of females) known to have this condition.¹¹³ This disease is seen in all age groups in T&T but usually in persons with other NCDs or NCD risk factors. If uncontrolled, hypertension in younger males and females increases their risk of sexual dysfunction exponentially with age.¹¹¹ This can be compounded by additional risks attributed to other NCDs.

Diabetes Mellitus & Metabolic Syndrome

Diabetes mellitus is one of the most common NCDs in nearly all countries. The global prevalence of diabetes worldwide since 2010 was 285 million and the projection was by 2030 to affect 438 million people. However, the prevalence was already 425 million in 2017,^{114, 115} and there is a new prediction for diabetes prevalence to rise to 629 million by 2045.¹¹⁶ T&T shows a trend like that of other high-income countries (shown in Figure 5 by the red line in the distribution) that have growing populations over 60 years of age exhibiting the highest proportion of diabetes prevalence.¹¹⁷

Diabetes has been associated with sexual dysfunction both in males and in females.¹¹⁸ It is an established risk factor for sexual dysfunction in men. Generally, 1 in 10 men present with ED, but it is three times more likely in diabetic men.^{119, 120} Fifty per cent of diabetic men have ED and this proportion increases with age, duration of diabetes, and deteriorating metabolic control: 39% at age 40, 65% over the age of 65.¹²¹ The severity of ED was found to be associated with increased levels of HbA1c – a long-term measure of blood glucose control. Diabetic men with ED are also at high risk of coronary heart disease.¹⁰⁹

Figure 5: Prevalence of Diabetes in Trinidad & Tobago in adults by age



Source: IDF Diabetes Atlas, 7th Edition, 2015¹¹⁷

The prevalence of sexual dysfunction is also high in diabetic women and more prevalent with age and low-grade education.^{99,106} Evidence from a 25-year longitudinal study on sexuality in diabetic women revealed that sexual complications can include reduced sexual arousal, slow and/or inadequate lubrication, diminished sexual desire, and painful sexual intercourse.¹²² Similar to diabetes, the metabolic syndrome (MetS) is a multifaceted condition with interrelated factors including insulin resistance, central adiposity, dyslipidaemias, low-grade inflammation, and atherosclerotic disease, endothelial dysfunction, and in males low testosterone levels, with the latter three directly related to sexual dysfunction.¹²³ Patients with uncontrolled diabetes mellitus or MetS have greater risk for a poorer sexual health-related quality of life, especially if they are in middle or old age.

Smoking

Tobacco is an additional risk factor for ED.¹²⁴ Trinidad and Tobago has the highest population of smokers in the English-speaking Caribbean (27%).⁹⁴ A two- to three-fold

increased risk of sexual dysfunction has been found in smokers regardless of age.¹²⁴ The evidence suggests that men who smoke more than 1 pack per day have a 50% higher chance of impotency than non-smokers of the same age.⁹⁴ Additionally, the association of ED with certain risk factors, such as heart disease and hypertension, and those with CVD/CHD or diabetes was amplified in current cigarette smokers.^{124,125} In women, recent studies have failed to demonstrate the risk of sexual difficulties among female smokers but infer there is a possibility of nicotine dependence, rather than smoking that might be associated with lower libido.¹²⁶

Cancer

After cancer treatment, some patients have reported loss of sexual desire, ED in men, and pain during sexual activity in women as their primary sexual problems.¹²⁷ Cancer treatments may impact or cause direct damage to any of the physiological systems needed for a healthy sexual response.¹²⁸ These may include hormonal, vascular, neurologic, psychological elements of sexual function or even removal of parts of the reproductive organs.¹²⁸ Prostate, bladder, colon, or rectum cancers and those that affect organs in the pelvis, put survivors at risk of sexual dysfunction. Men treated for prostate cancer have been found to have inevitably higher rates of dysfunction up to 75 - 85 %.¹²⁸

Obesity & Metabolic Syndrome

Obesity is associated with elevated levels of pro-inflammatory cytokines and C-reactive protein (CRP). These result in endothelial dysfunction and hypogonadism.¹²⁹ Evidence from a longitudinal study on middle-aged men found that sexual functioning is also affected by body mass index (BMI) and abnormal lipid profile, predictors of erectile dysfunction (ED) 25 years later.^{130,131} Being overweight or obese may increase the risk of ED by 30–90% as compared with persons of normal weight.¹³⁰ Subjects with ED tend to be heavier and with a greater waist than subjects without ED, and are also more likely to be hypertensive and hypercholesterolemic. In T&T, the prevalence of obesity in 2016 was 18.6%.¹³² This is significant even though for this research it is uncertain what percentage is attributed to persons in middle and old age.

1.3.1.3.2 Current Priorities for the Management of NCDs in T&T

The Ministry of Health (MoH) has a functional Chronic Disease Assistance Programme (CDAP) that provides citizens with free prescription drugs and other pharmaceuticals for treatment but for a prescribed list of chronic conditions including diabetes, asthma, cardiac diseases, arthritis, glaucoma, mental depression, high blood pressure, benign prostatic hyperplasia, epilepsy, Parkinson's disease, and thyroid diseases.¹³³ Although medications are available to assist the management of chronic illness in the middle-aged and older population alleviating some of the risk factors for sexual dysfunction and ED, some of these very same medications are pharmacological instigators for sexual dysfunction.¹³⁴

Sexual health problems for older adults are an emerging public health concern.¹³⁵ These problems already occur through normal ageing but may generate much more distress for those living with comorbidities from NCDs.¹⁶² In addition to the risks for sexual dysfunction, ageing does not spare older adults from the risks of contracting sexually transmitted infections (STIs), like their younger counterparts. NCDs and ageing are not the only factors impacting on sexual dysfunction but STIs as well.¹³⁶ According to Laumann et al. (2008), in the US National Social Life, Health and Ageing project (NSHAP) study, anyone with a lifetime history of STIs, will have increased odds of reporting sexual dysfunction problems.¹³⁷

1.3.1.3.3 Ageing and HIV/AIDS

There has been a significant change in the HIV epidemic. The cumulative number of people living with HIV (PLHIV) who are middle-aged and older is largely due to a shift in the proportion of disease burden from young adults to older age groups, successful antiretroviral therapy (ART) and increased life expectancy of PLHIV who can maintain viral suppression.^{138,139}

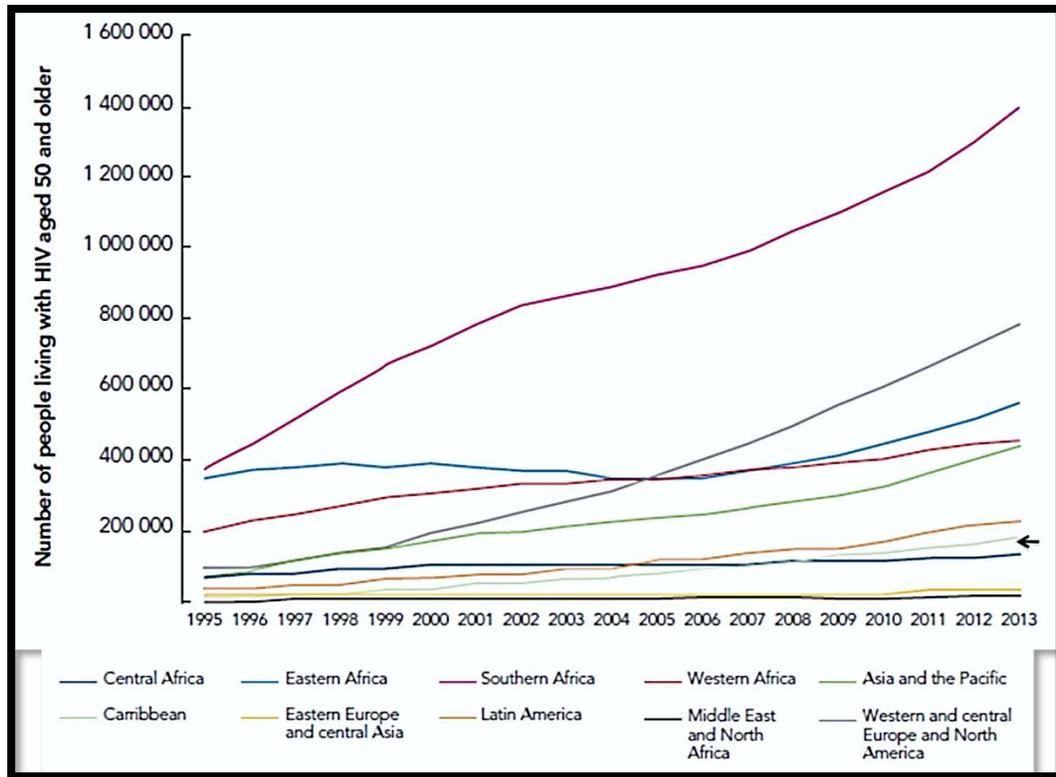
In the Caribbean, the total adult HIV prevalence is 1.1%, with the highest prevalence of 3.2% found in the Bahamas.¹⁴⁰ Though there has been a decline in incidence since the epidemic started, there was an estimated 12,000 new HIV infections and a total of 250,000 PLHIV in the region in 2013.¹⁴¹ In Trinidad and Tobago, HIV is believed to be spread primarily through heterosexual sexual intercourse. Prevalence of HIV is 1.1% which

equates to 11,000 persons (estimates from 2017).¹⁴² There were an estimated 500 deaths from AIDS in 2017. Eighteen per cent of reported infections were among young people ages 15 to 24, 57% in the 25- to 49-year-old age group and, 9% found in the 50 years and over age group.^{138,139} When disaggregated by age and sex, most of the new female HIV positive cases occurred among the 20-24 age group; while most of the new male HIV positive cases occurred among the middle-aged 45-49 age group.¹³⁹ While the data presented above is valuable, it is believed that the actual number of HIV-infected persons in T&T is gravely underestimated due to underreporting. Factors contributing to underreporting include stigma and discrimination and difficulty accessing most at-risk populations (MARPs).

HIV Risks in Middle and Old Age

People 45 years and older may exhibit many of the same HIV risk behaviours found in younger age groups including multiple partners, infidelity, and unprotected sex even in assumed monogamous relationships, unprotected sexual experiences with sex workers and others.^{143,144} Some risks are peculiar to this age group. For example, middle-aged or older women that are sexually active have a higher risk of acquiring HIV due to natural biological changes of ageing such as thinning of their vaginal walls after menopause.¹⁴⁵ These women have higher probability of developing lesions and tears, thereby increasing the risk of HIV transmission during sexual intercourse.¹⁴⁵ People aged 45 and older generally have a low perception of their own risk of acquiring HIV possibly because HIV/AIDS prevention and care services, including tuberculosis (TB) screening, has widely been marketed towards younger age groups, and infrequently include older people or their SRH needs.^{138,139,146} Research shows the number of PLHIV in the Caribbean (and the rest of the world) of middle and old age is on the rise¹⁴⁷ (see Figure 6: Caribbean indicated by the black arrow ←).

Figure 6: Regional Estimates of the number of PLHIV aged 50+ between 1995-2013



Source: UNAIDS, People 50 years and older, 2014¹³⁹

HIV Treatment

Providing treatment can be challenging for middle-aged and older PLHIV depending on whether they have other existing chronic conditions, their immune response to ART, ART availability in the public service, and even their socioeconomic status.¹⁴⁸ These patients may have to remain on ART and unlike younger patients; compliance on ART can suffer if they already suffer from several chronic conditions simultaneously.^{148,149} Some emerging data indicate that older patients also do not respond to ART as well as younger people.^{138,150} Timely detection and initiation of ART is therefore especially important in this age group, since their immune systems tend to recover more slowly.^{143,151} Patients of middle and old age may be retired, pensioners, or facing poverty and their socioeconomic status can affect their compliance to ART.

1.3.1.3.4 Current Priorities for Management of STIs (Primarily HIV/AIDS) in T&T

At present, the focus is promoting prevention of HIV/AIDS, counselling, care, and treatment for PLHIV and supplemental target groups: youth, prisoners, and commercial sex workers. Services available to the general public free of charge include health education and promotion, STI testing through Queen's Park Counselling Centre and Clinic (QPCC&C), HIV testing and counselling, prevention of mother to child transmission programme (PMTCT) and ART at the TRHA, SWRHA and the Medical Research Foundation (MRF).¹³³ Regarding policy formulation, significant ones include the National HIV Testing and Counselling Policy, Health Sector Workplace HIV and AIDS Policy, the Prevention of Mother to Child Transmission policy and the Post Exposure Prophylaxis Policy. There is no active policy or special clinic service offered to facilitate middle-aged and older patients for HIV/STIs. However, if patients of this age group do require HIV testing, care, and treatment, they will be accommodated at the same clinics that facilitate youth or PMTCT at the health centres or they may visit FPATT at a subsidised fee or be referred to QPCC&C which offers service free to the public.

1.3.1.4 Limitations in Sexual Health Provisions in Primary Care Services of T&T

1.3.1.4.1 Overview of the Infrastructure of Primary Care Services

The Ministry of Health (MoH) has oversight of the entire health system in T&T. MoH has a comprehensive and integrated network of 106 health facilities distributed among five Regional Health Authorities (RHAs) in Trinidad, North West (NWRHA), North Central (NCRHA), East (ERHA), South West (SWRHA), and one on the islands Tobago (TRHA) as shown in Figure 7. Each RHA has at least one hospital with several polyclinics or District Health Facilities (DHF) and health centres (see Figure 8) based on the population density and access needs of the residents in each region.¹³³

Under the RHA structure, health services and medicines, if available, are free to the public. Strategies exist to improve healthcare delivery by partnering with the private sector, international professionals and organisations for some of the critical services that may be unavailable or overwhelmed in the public service.¹⁵⁵ Even though healthcare infrastructure may exist, T&T continues to face a shortage of qualified healthcare professionals. Using estimates from 2007, PCPs constitute only 7.0% of the national quota of available health

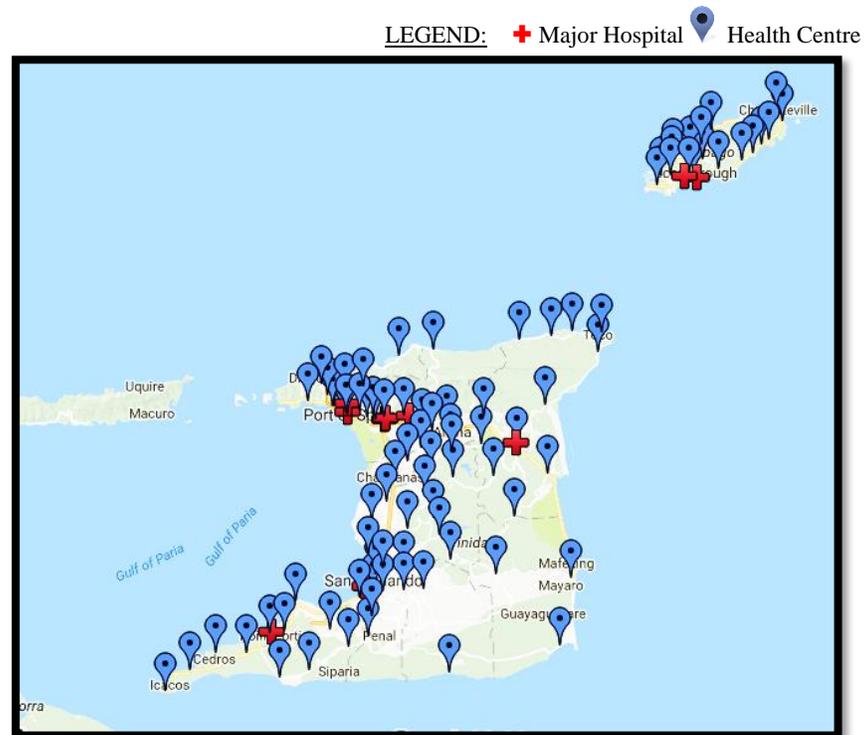
personnel. The physician density is 1.18 physicians/1,000.⁶⁰ At times, there is also a shortage of drugs available in the national formulary, as well as resources for routine procedures.⁶⁰

Figure 7: Distribution of RHAs in T&T



Source: Ministry of Health¹³³

Figure 8: Distribution of healthcare facilities in RHAs of T&T



Source: Ministry of Health¹³³

Regarding STI management, it must be noted that HIV/AIDS is treated as a separate entity from SRH and from other STIs in T&T (and most of the Caribbean). In the MoH, the HIV/AIDS coordinating unit (HACU) was established to execute monitoring and evaluation of the health sector's HIV/AIDS plan. When the epidemic started just over three decades ago¹⁵² several international organisations came into the region offering monetary support to establish care and treatment programmes specifically to reduce the prevalence of this disease. Consequently, more surveillance activities exist in supporting HIV/AIDS, unlike other STIs.

The Population Programme Unit (PPU) is the department within the MoH that is chiefly responsible for the delivery of sexual and reproductive health services (except for HIV/AIDS). The PPU was mandated to facilitate primarily fertility management services to citizens since its inception in 1969.¹³³ Based on PPU's original vision, the services currently offered are still in line with fertility management in all primary care facilities and two of the major hospitals in NWRHA. These services include diagnostic screening or cervical cancer, counselling, specialist referrals and training, and education

programmes. Some of the SRH services including STI treatment are currently being delivered through the RHAs in primary care and QPCC&C.¹³³ As a result, existing SRH programmes currently are woman-centric, reproductive-health focused, and generally lack a comprehensive and sustainable framework to deliver quality integrated care. Details regarding the active programmes for sexual health managed by the PPU are described in the following section, 1.2.2.4.2.

1.3.1.4.2 Current Sexual Health Provisions in Primary Care

The focus for sexual healthcare in T&T is primarily on youth, gynaecology, PTMCT, HIV, STIs, reproductive health, and the most recent addition, men's health. Regardless of age or sex, in all health centres, reproductive health services, contraception, family planning services are made available at no cost, although they are not always easily accessed. There is no standard national healthcare service timetable as each health facility generally has a unique timetable.¹⁵³ Equipment to conduct testing or screening for SRH services is available in health centres but this too needs to be scheduled as there is lack of adequate space and personnel to conduct SRH services.¹⁵³ Some services are not integrated in SRH services including HIV and AIDS and reproductive cancer screening. For example, voluntary counselling and testing (VCT) is not offered in family planning clinics.¹⁵³ As some services such as breast, cervical, and prostate cancer screening is not offered routinely (usually at specific clinics, times, and locations), specialised NGOs such as the Family Planning Association of T&T (FPATT) and the Cancer Society of Trinidad and Tobago offer these services but at a (subsidised) cost. Similarly, men's health clinics are available only in some of the RHAs and the focus is mainly on screening for prostate cancer.¹⁵⁴ There are no special clinics or referral systems currently in place to address sexual dysfunction, sexual disorders or psychosexual health. Currently, patients with these conditions are most likely to present at general health office clinic or at the NCD clinics that are frequented by older patients. They may be referred to a psychologist or medical social worker. The overarching issue affecting older patients is the shortcoming of the current primary healthcare programs to promote a holistic set of opportunities that effectively address the needs related to their sexual health and well-being.

1.3.1.4.3 Shortcomings of Sexual Health Surveillance Data & Statistics

In addition to the lack of available or accessible SRH services, national surveillance for SRH (and many other areas) in T&T has suffered from a lack of resources and requires urgent capacity building and effective management. For most diseases, data may not be available, up to date, or accurate. Several reasons for these shortcomings include a lack of sustainable human resources, data access, reporting and feedback protocols, training, and equipment.

Apart from HIV/AIDS and reproductive health statistics, no other data such as sexual health disorders, conditions or dysfunction (including as vaginismus, menopause, psychosexual health problems, ED) or even other STIs (such as HPV, Syphilis, Gonorrhoea, Chlamydia) may be readily available. In addition, there is a lack of laboratory facilities to accommodate for population level testing, the availability of test kits, and a general lack of data ownership. There is minimal effort shown by public or private healthcare professionals to collect, analyse, or report this data nationally, partially because they do not think that it is part of their job. In addition, there are few data quality and management policies and limited training opportunities to ensure best practices with regard to data ownership and responsibility being taken seriously. There is also no data feedback system in place, thus, it is unsurprising that there is a general lack of interest to perform or execute routine or even cross-sectional data collection and analysis activities. Even when data is collected, inadequacies may still exist. With HIV/AIDS data, there is still a data gap, since the focus of international bodies including the UNAIDS and WHO's indicators for reporting national HIV surveillance statistics go up to 49 years of age. As a result, there is little, or no data collected or reported on adults 50 years and older.

Given the limitations of this setting, for the purposes of this research, due to limited availability and accuracy, there is little, or no data presented about middle-aged and older patients regarding the prevalence of STIs, HIV/AIDS or sexual dysfunction in T&T. Only 'guesstimates' of the burden regarding sexual dysfunction can be assumed based on the reported statistics of NCDs. Data presented in this thesis are best estimates but are, however, not a true representation of the actual burden.

Some of these inadequacies in SRH provisions have been given consideration in recent years and the MoH has expressed the will to improve sexual health care and delivery. There is however, no certainty that the sexual health needs of the middle-aged and older population will be addressed.

1.3.1.4.4 New Sexual Reproductive Health (SRH) Policy for T&T

In 2012, the government of the Republic of Trinidad and Tobago (GORTT) conducted an analysis to establish the requirements of a suitable comprehensive national Sexual and Reproductive Health (SRH) policy to address emerging SRH patients' needs so as to improve their sexual HRQoL.¹⁵³ The results from this analysis recommended the new SRH policy to include issues related to cancers of the male and female reproductive system, teenage pregnancy, gender-based violence, erectile dysfunction in males, and menopausal issues in females.¹⁵³ Vulnerable groups identified in this new policy include youth, persons with disability, elderly, persons diagnosed with infertility, persons of the same sex orientation, and sex workers.¹⁵³

The proposed SRH policy framework is still lacking an integrated universal access approach to SRH. There was little consideration given to addressing prevalent sexual health conditions in middle and old age. Only specific conditions were considered; namely reproductive organ cancers, ED in men and menopause in women. Further consideration of the UNs 2011 call to integrate SRH and NCDs is needed. Collaborative efforts and resource integration to facilitate sexual health education for patients and physicians, SRH surveillance including this age group, treatment and care in SRH, STIs, and NCDs for all patients including middle-aged and older adults will still need to be addressed in this new policy.

Having reviewed the burden of SRH and identified the lack of provisions in primary care for patients 45 years and older, addressing the SRH needs of this population in T&T emerges as being urgent. The importance of SRH care for this age group is high because: the number of PLHIV and/or sexual dysfunction aged 45 years and older continues to grow (though underreported) in T&T; current surveillance systems have not adapted or evolved to cater for this age group; and HIV/AIDS services are still standalone instead of being

managed alongside patients' concurrent health problems such as diabetes, heart disease, and hypertension in middle-aged and older patients.^{138,139} The new proposed policy has not characterised adequate sexual healthcare services for this age group including STI clinics, STI/NCD integrated treatment and care, sexual dysfunction clinics catering for both sexes, and psychosexual therapy support services. Presently middle-aged and older people in T&T do not have access to SRH care and treatment or SRH that is suitable or accessible and that meet their specific needs.

Infrastructural and financial barriers aside, a patient's sexual healthcare is reliant on their physician. How physicians perceive patients and handle a consultation is influenced by factors including their sexual health knowledge, attitudes, care, and management practices with older patients.

1.3.1.5 Primary Care Physicians' (PCPs') Sexual Health Training & Experience

Social stigmas exist in T&T about discussing sex. These stigmas may pervade and impact even in a professional environment such as a medical consultation. Deep-rooted issues relating to personal beliefs and religion can influence one's perception but for physicians, this should not outweigh the patient's presenting of complaints and care needs. Some studies have revealed that a significant proportion of physicians may not even discuss information about topics they find morally controversial.^{155,156} In one study, the physicians did not entertain the fact that older adults were still sexually active; as a result, their issues were not considered at all.¹⁵⁶ Bearing these studies in mind, establishing what were the PCP's attitudes towards discussing sex with older persons in T&T was critical to identifying what shaped and influenced their attitudes. This information can inform sexual health education strategies not just for PCPs but may be extended to the entire population as their perceptions may be culturally entrenched.

Other studies revealed that even if PCPs were approached for sexual health concerns, some physicians do not feel equipped to discuss sexual health with their older patients for several reasons, citing lack of expertise or training as the main barriers to discussing sexual issues.^{464,157} Some PCPs are currently not proactive in discussing sexual issues with older patients due to perceived embarrassment and lack of knowledge or experience about

sexual activity or prevalent sexual health concerns of this age group.^{155,157} Research has identified a low level of awareness of later life sexual health issues among PCPs as a significant barrier to initiating discussion relating to sexuality.¹⁵⁷ Some studies acknowledged the need for continued professional education in sex in later life and sexual health communication for physicians. As mentioned in the review paper, the notion that sexual health is not a priority in older adults is propagated by ageist stereotypes and prejudices that promote older adults as asexual and only in monogamous and heterosexual relationships.^{110,155} Other reasons for not initiating the discussion include fear of causing offence to older patients.¹⁵⁸ This phenomenon may be of sociocultural origin but may also stem from a lack of sexual health communication training and sexual history taking practice with this age group and should therefore be researched further. Some studies have revealed that most of these accounts shared by PCPs are assumptions rather than actual experiences.¹⁵⁹ How PCPs perceive and manage later life sexual problems remains relatively unexplored.⁴⁶ In particular, little research has been conducted on the attitudes of PCPs towards older people who experience sexual health concerns and medical conditions that may affect their sexual health.⁴⁶ Determining what are the barriers and facilitators for conducting a sexual health consultation with older patients is useful for T&T. This information can aid understanding of the problems in addressing older patient's sexual health needs and, from the PCPs' perspective, how the health care service provision for this demographic can be improved.

A few studies highlighted that reticence in sexual health discussions is not only by the PCPs, but it is also shown by the older patients.^{32,33,34,39} This constitutes an actual barrier to open and effective communication that can directly affect accurate clinical diagnosis and patient outcome. If PCPs routinely practise sexual history taking, much useful information will be obtained, and the patient may be sensitised to several issues of which s/he may not have been aware.¹⁶⁰ With routine discussion, the patient may feel more comfortable discussing concerns or problems about sexual functioning that arise in the future with the physician.¹⁶⁰ Assessing sexual history taking practices with PCPs in T&T is critical because it affords the opportunity to establish whether gold standard sexual history taking practices are conducted and whether it is applicable to older patients in these settings.

Communication barriers between patients and physicians are one of the main reasons for a low report rate of sexual dysfunction.¹⁶¹ As the proportion of older adults in the population increases, more of them will seek assistance for sexual dysfunction.¹⁶²

As mentioned in Chapter 1, identification of sexual dysfunction may help physicians diagnose underlying vascular related medical conditions. Sexual concerns are actually common among patients; however, studies suggest that these concerns are not appropriately investigated by PCPs.¹⁶³ Based on this lack of communication and infrequent practice of taking a sexual history with older patients, it can be assumed that sexual health provision within primary care is inconsistent and dependent on the attitudes and training of PCPs (some of whom may be too embarrassed to discuss sex).¹⁶³ As a result, establishing if PCPs are trained to respond to the specific sexual health needs and challenges of this population is of significant importance. In T&T, middle-aged and older PLHIV are likely to be diagnosed late during HIV infection at considerable risk of their health because this age group is not usually at the top of the PCPs' mind when it comes to this infection. Assessing PCPs' knowledge in sexual health functioning in middle and old age is urgent to determine if PCPs can effectively respond with appropriate treatment to this group.

There are several issues of sexuality that are under-studied in ageing¹⁶⁴ and there is a general deficit in research conducted in this area. Further studies on the perceptions of middle-aged and older adults (with sexual health concerns) on health care experiences with their doctors are needed. Examining the relationship dynamic of medical professionals with older patients can provide more insight on how expression of sexual issues is currently being addressed. Studies conducted have usually involved small numbers of participants. Little has been done to determine the sexual health care knowledge, attitudes, and perceptions of PCPs that are involved in the care of middle-aged and older adults. Conducting such research to determine the existing barriers/facilitators that impact on raising sexual health issues during consultations may aid in addressing known communication problems and positively impact patient outcomes.

1.4 Research Gaps and Rationale

Research has shown that many primary care professionals find it difficult to discuss sexual health matters particularly with older adults, resulting in the loss of key opportunities for prevention and intervention.⁴⁶ Studies have also revealed that patients would welcome increased opportunities for discussion of personal topics if appropriately initiated by the doctor.¹⁶⁵ Even though some studies identified some of the barriers and facilitators to communication, little research has been undertaken to provide an effective model to address the communication needs of middle-aged and older patients and their physicians with regard to their sexual health concerns. The existing literature reviewed advocates for investigation of sexual healthcare communication needs of PCPs. Additionally, previous studies recommended that improved communication should be considered to address some of the sexual health needs of middle-aged and older patients.

Existing studies are projections based mostly on the U.S., Canadian, or European populations and perspectives. Although they are developed nations, these may not reflect the same experiences as a small country with an intimate-sized population. Although there were also studies with some cultural and ethnic similarities conducted in India and in neighbouring Latin American countries, these too may not reflect the Caribbean context. Previous studies were conducted mostly in a predominantly Caucasian population with different sociocultural norms, national SRH, and STI policies with wider coverage including their older population, SRH priorities in primary care for all ages, and continuous health education and health promotion for patients and providers. As a result, there is scope and need for further research to be conducted in the Caribbean. In Trinidad & Tobago, although it may have a similar primary health care system as seen in some of the other islands of the Caribbean region, it is a multi-ethnic, multicultural, high income country, and therefore may be different from many of the other Caribbean countries and possibly its own unique sociocultural imprint on information gathered in this setting.

This thesis aims to fill this important gap in the literature by contributing to the limited collective works on the influence of the physicians' sexual health communication with middle-aged and older patients in primary care settings by specifically determining their

current knowledge, attitudes and sexual health care, and sexual history taking practices with these patients. There have been no studies to date on this subject area in the Caribbean region. In addition, due to the fact that Trinidad and Tobago is a very culturally and ethnically diverse country, it was possible to identify distinctive culturally specific factors that affect middle-aged and older Trinbagonians with regard to the unique healthcare experiences when communicating sexual health concerns. This research is the first of its kind in T&T (and the Caribbean region) and it will provide a national level baseline data on PCPs' knowledge, attitudes, and sexual healthcare practices with older patients. This study is timely as the national SRH policy is still in its draft form and the evidence-based findings and recommendations originating from this work may be offered for consideration in the finalisation of the national SRH policy.

The PCPs' knowledge and attitudes towards practices in providing sexual healthcare to middle-aged and older adults is not yet understood. Insights from the PCPs' perspective about what shapes their attitudes towards sexual health and what influences their sexual health communication and care management practices may help us understand the status of the current sexual healthcare provisions in primary care and, indirectly, on how this has affected middle-aged and older patients. This research was designed to explore these questions from the diversified accounts of the national primary care physician population in Trinidad & Tobago.

1.5 Thesis Outline

Chapter 2 supports the study aim revealed in this introduction by presenting some of the existing theories regarding physicians' knowledge, attitudes, and practices (KAP) and discusses the relationship of how KAP may influence the physicians' communication in a sexual health consultation. These theoretical contexts constitute the backbone of this research and served as guiding principles for pursuing the overarching research question. Applicable physician-patient communication models are discussed and a working model of the influences on sexual health communication based on my synthesised findings is presented later in the discussion section in Chapter 8. Subsequently, Chapter 3 defines the mixed-methods approach conceptualised for this study and describes the overarching two-pronged sequential qualitative and quantitative measures employed during data collection and analysis throughout the study. Each individual method is described separately in Chapters 4 and 5. Successively, there are three research papers answering different parts of the overarching research question including:

-Paper 2: A qualitative study exploring Primary Care Physicians' attitudes to talking about sex with their middle-aged and older patients. {Chapter 4}

-Paper 3: Knowledge, Attitudes & Practices of Primary Care Physicians with regard to sexual health for middle-aged older adults. – Quantitative paper – {Chapter 5}

-Paper 4: What Primary Care Physicians' characteristics are associated with the sexual health care management of middle and old aged patients and how are they influenced by different clinical scenarios. – Quantitative paper – {Chapter 6}

Following the research paper chapters is Chapter 7 which aims to collectively analyse and summarise my findings by triangulation. The final section of this thesis is the Discussion and Conclusion in Chapter 8. The research findings were synthesised, and a new conceptual model is proposed for sexual health communication in medical consultations. This Discussion Chapter also conveys the overall strengths and limitations of this research and concludes the study's findings with recommendations for: existing sexual health policy, medical education and post graduate training, health promotion, and further research needs.

Chapter 2: Theoretical Context

Physicians' Communication in a Sexual Health Consultation

2.1 Chapter Overview

In the previous Chapter, I have emphasised that research gaps exist regarding PCPs' knowledge and attitudes towards sexual health in later life, also, if they do communicate effectively and, as well, diagnostically take a sexual history with these patients. In this chapter, I aim to explore this gap by delving into what are PCPs' knowledge, attitudes, and practices in sexual healthcare with older patients. To guide my research, I reviewed existing conceptual frameworks and models for understanding physician-patient relationships and communication in clinical consultations and where possible, sexual health-related ones. A conceptual framework or model is an analytical tool. It usually represents relationships and organizes ideas in context backed by theory.¹⁶⁶ The advantages of conceptual framework analyses are that they can undergo modification, and its emphasis on understanding instead of prediction of what is not yet well understood¹⁶⁷. In this chapter, I review existing literature on KAP and conceptual models in communication in physician-patient relationships. I conclude that, to the best of my knowledge, there is currently no existing framework that directly relates neither physician-older patient relations nor effective communication in sexual health consultations itself, both of which are my chief areas of interest. The chapter concludes by proposing a new conceptual model for sexual health communication based on existing evidence, which has guided my research and developed further in my Discussion Chapter (8) based on the findings of this study.

2.2 Knowledge, Attitudes & Practices (KAP) in Sexual Health Communication

Knowledge, attitude, practices (KAP) surveys are widely used to gather information about public health globally. However, are KAP surveys useful and appropriate?

The KAP(B) survey tradition was first born in the field of family planning and population studies in the 1950s.¹⁶⁸ KAP surveys were designed to provide information on the knowledge, attitudes, and practices in family planning that could be used for programming.^{169,170} KAP studies evolved onto different perspectives including community perspectives and human behaviour and several themes in primary care.¹⁶⁸ The attractiveness of KAP surveys was due to characteristics such as an easy design, quantifiable data, ease of interpretation and concise presentation of results, generalisability of small sample results to a wider population, cross-cultural comparability, speed of implementation, and the ease with which one can train enumerators.^{168,169,170,171} On the other hand the method has been criticised for assuming that the data provided is applicable and offers accurate information about knowledge, attitudes, and practices.^{172,173,174}

In KAP surveys, the knowledge assesses the extent of community knowledge about public health concepts, culture-specific knowledge of illness notions and explanatory models, or knowledge related to health systems.^{168,169} The narrow focus on knowledge can further be explained by the definition of knowledge and the agreement on whose knowledge counts.¹⁶⁸ Measuring attitudes is part of a standard KAP survey /questionnaire and they refer to a person's general positive or negative feelings about an issue, object, or person that are interlinked with the person's knowledge, beliefs, emotions, and values.¹⁷⁵ However, many KAP studies do not present results regarding attitudes, probably because of the substantial risk of falsely generalising the opinions and attitudes of a particular group.¹⁷⁰ Attempting to measure attitudes via a survey has been criticised because people tend to give answers they deem acceptable or preferred. Sensitive topics are difficult and the interview context may influence responses.^{168,169,169} The attitude scales (numbers/verbal) may fail to reflect the respondents' answers.^{170,171} A third and integral part of KAP surveys is the investigation of work/health-related practices. Questions normally concern the use of different treatment and prevention options and are

hypothetical.^{168,169} In general, KAP surveys have been criticised for providing only descriptive data and failing to explain the logic behind people's actual behaviour.¹⁷⁶ Another concern is that behind KAP survey data is often the false assumption that there is a direct relationship between knowledge and behaviour, when in fact, knowledge is only one factor influencing treatment-seeking practices, and there is need to address multiple factors to truly understand underlying associations including the socio-cultural, environmental, economic, and structural factors.¹⁶⁹

Regardless of the critiques presented by some researchers, KAP surveys are well represented in the literature, however, studies that aim to explore the clinical knowledge, attitudes, and practices of physicians regarding their patient care are limited. This study aims to explore the population-based awareness of PCPs' knowledge level (competence) in sexual function in later life, their attitudes (perceptions) addressing sexual health in middle-aged an older patient and their clinical practices (sexual health diagnosis, care, and treatment choices) in offering sexual health care for these patients.

For the purposes of this research, PCPs' clinical practices referred to how PCPs managed their medical consultations with specific attention to whether they communicated with their patients about their sexual health. Care and treatment practices that offered a communicative approach included, diagnosing the patient by taking a sexual history, counselling patients about their diagnosis, discussing their sexual health issues and offering sexual health advice and education where needed. Other non-communicative management strategies included offering referrals to other HCPs for consultation, prescribing medication, referrals for lab testing or taking a physical examination. As this study was a first of its kind in T&T, based on the theory, the KAP approach was an appropriate option for assessment of PCPs' knowledge and attitudes and clinical sexual health care practices. This option allowed for cross-sectional capture at baseline in sexual health diagnosis, communication, care, and delivery in primary care settings and therefore the focus of this theoretical context will take a closer review of sexual health communication bearing the two populations of interest of this research (the PCP and the older patient) in mind.

2.3 Literature Review-Search Strategy

The search strategy employed was not limited by study design as its purpose was to offer a descriptive synthesis of what we already know about physician-patient communication in older patient's sexual health.

1. (((elder* or old*) adj2 people) or old* patient* or old age* or age* population).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
2. (senior citizen or geriatric).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
3. baby boomer*.mp.
4. "Aged, 80 and over"/ or Aged/ or Geriatrics/ or older person*.mp.
5. exp Middle-aged/
6. 1 or 2 or 3 or 4 or 5
7. Sexual Dysfunction, Physiological/ or Sexual Behavior/ or sexual function.mp.
8. Sexually Transmitted Diseases/ or sexually transmitted disease*.mp.
9. (sexual health or sexual intimacy).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
10. (sexual behaviour or sexuality or sex education).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
11. 7 or 8 or 9 or 10
12. (medical history or sexual history or communication or discussion).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
13. Communication/ or Physician-Patient Relations/ or Communication Barriers/ or Nurse-Patient Relations/ or communication barrier*.mp. or "Attitude of Health Personnel"/ or Professional-Patient Relations/
14. 12 or 13
15. (primary care or general practitioner or GP or PCP).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
16. 6 and 11 and 14 and 15 **=155 articles**

2.4 Sexual Health Communication

2.4.1 PCP Sexual Health Communication with Middle-Aged and Older Patients

The need to conduct research pertaining to older adult sexual health concerns was initiated by a brief review conducted in 1977 on the ‘Disorders of sexuality and communication in the elderly’.¹⁷⁷ This paper solicited researchers to conduct studies looking into the sexual health concerns of the elderly and issues around communication of these problems. However, since the abovementioned review, actual studies on the subject of older adults and communication regarding their sexual health in primary healthcare settings have only become more prevalent in the last 10 years. One of the earlier studies, conducted by Gott and colleagues in 2004, interviewed 22 GPs in Sheffield, UK about how they perceive sexual concerns of older patients. This study found that GPs do not address sexual health proactively with older people and that, within primary care, sexual health is equated with younger people of reproductive age and not seen as a valid topic for discussion with the older age group as they are beyond child bearing years.¹⁵⁸ Gott’s study revealed that many beliefs held about the sexual attitudes and behaviours of older people were based on stereotyped views of ageing and sexuality, rather than personal experience of individual patients.¹⁵⁸ The research question that arises is how do primary healthcare physicians describe their attitudes towards older patients’ sexuality and sexual health and, in their accounts, what are the factors that shape these attitudes? Gott’s findings also identified a low level of awareness of later life sexual health issues among GP participants and significant barriers to initiating discussion relating to sexuality in consultations with older patients. It also acknowledged the need for continued professional education in the sexual health of older adults for physicians.¹⁵⁸

A similar study of this kind occurred in 2008 in Turkey and with a larger sample of PCPs. The study focused on the knowledge and attitudes of doctors towards sexuality in older people, and it revealed that most of the physicians had limited knowledge but their attitude was positive towards sexuality in the elderly.¹⁷⁸ The authors, Dogan et al. found that female physicians had less knowledge than males and had more negative attitudes towards sexuality in this age group.¹⁷⁸ The reasons for this may stem from rules of socialisation during childhood. Most young children were taught to respect their elders, and this will include being almost submissive and cooperative rather than authoritative or assertive.

Even though older physicians had more knowledge than younger physicians, both groups exhibited similar attitudes. The authors also identified a low level of awareness of later life sexuality among Turkish medical doctors.¹⁷⁸ The findings of both of these studies, which were physician-directed, suggest a need to improve the education and training of doctors at both undergraduate and postgraduate levels to enable them to provide better sexual healthcare to older people. The research question that ensues is, what are the associations between Primary Care Physicians' (PCPs) characteristics and their knowledge and attitudes towards sexual healthcare?

In addition to these studies on the PCPs' perspective of sexuality in older adults, there were a few studies conducted based on the perceptions of sexuality, STIs, sexual issues, and communication from the older adult perspective. One of the larger studies of this kind was a community-based study conducted in the U.S. in 2006 on the attitudes and behaviour of older women regarding HIV and how they communicated with their doctor.¹⁷⁹ The older women in this study sample were sexually active, and engaged in potentially risky sexual behaviour, yet they believed that physicians should address issues of sexuality.¹⁷⁹ This research concluded that there is both a gap and a disparity in older women's dialogue with physicians on sexual health matters.¹⁷⁹ Subsequently, McAuliffe et al. published a review on the barriers to expression of sexuality in older patients.¹⁸⁰ This review highlighted communication barriers such as attitudinal (for example, myths around sexuality and ageing), physiological (for example, sexual dysfunction), or physical (for example, loss of partner or lack of privacy).¹⁸⁰ McAuliffe also recommended the need for further research on the attitudes of healthcare professionals towards sexuality of older patients and also their sexual health needs.¹⁸⁰ A few supporting studies based primarily on sexuality, sexual knowledge of elderly, and their quality of life concurred on this: sexual problems are frequent among older adults, but these problems are infrequently discussed with physicians. The study in 2007 by Robinson and Molzhan concluded that there are implications for gerontological nurses, the need to support personal relationships for older adults, to encourage health promotion, and to ensure sexuality is discussed with older adults.¹⁸¹

Another useful literature to this study is the review conducted by Price in 2009 pertaining to the interest of sexual health concerns and communication.¹⁸² This review explored the attitudes towards older people's sexuality and, again, had implications for other healthcare professionals. It ends with a similar conclusion (as discussed in previous studies) that sexuality is multifaceted and difficult to contain in a discussion. Price emphasised that nurses need to feel more comfortable talking about sexuality with older people. Another recent study by Politi et al. focused on patient-provider communication about sexual health among older adults. The study concluded that some women felt that healthcare providers should ask about sexual and reproductive health issues only if questions relate to an associated health problem (e.g., STIs) and in ways that can be answered by all women regardless of partner status and, as well, to follow questions with non-judgmental discussions.¹⁵⁸

As seen in a few studies, the reticence among older patients and their providers regarding the discussion of sexual health, frequently constitutes an actual barrier to open and effective communication. If, however, a good screening sexual history is routinely elicited, the discomfort may be less obvious during consultation and much useful information will be obtained.¹⁸³

2.4.2 Sexual History Taking

A sexual history is an enquiry of a patient's personal history concerned with sexual function and dysfunction.¹⁸⁴ It is particularly important in gathering data from a patient who has a disease of the reproductive tract, who experiences sexual dysfunction, or who requests contraception, abortion, or sterilisation. The extent of the history varies with the patient's age and condition and the reason for securing the history.¹⁸⁴ As a result, a short (focused) sexual history is recommended as part of every complete physical examination.¹⁸⁴ However, it is understood that a practitioner needs a detailed sexual history to understand the patient's complaint and to plan treatment.¹⁸⁵ It may include the age at onset of sexual intercourse, the kind and frequency of sexual activity, and the satisfaction derived from it.

However, many PCPs feel concerned about their ability to take an appropriate sexual history, regardless of how skilled and confident they may be while taking a standard history. This may be a result of educational practices as sexual history taking has tended to be taught separately, coupled with the fact that talking about sex in general is daunting.¹⁸⁵ In addition to this being difficult for practitioners, for some patients, there may be great discomfort approaching a medical professional for help in sexual matters.¹⁸⁵ However, regardless of the uncomfortable situation, or patient's age or gender, a sexual history is very important and there are core components of a sexual history that every practitioner should ask and discuss as seen in the following based on Bates, CDC, NHS Trust, and BASSH National Guidelines^{186,187,188,189,190}:

Core Sexual History Components:

5Ps – Partners, Practices, Prevention, Protection, Past

- ▶ *Reasons for attendance*
- ▶ *Symptom review*
- ▶ *Last sexual intercourse (LSI) – date, patient gender, sites of exposure, condom use (Practices)*
- ▶ *Previous sexual partners – as for LSI (Partners)*
- ▶ *Previous STIs (Past)*
- ▶ *For women – Last Menstrual Period, contraceptive and cytology history (Prevention)*
- ▶ *HIV, Hepatitis B & C risk assessment (Protection)*
- ▶ *Establish mode of giving results*

These guidelines have been used in several other medical universities and adopted in several hospitals and training programmes. Other key points involved in conducting a sexual history include the need for the physical environment to be welcoming and comfortable and the consultations should take place in private behind sound-proofed doors.¹⁹¹ Ideally, patients should be in the consultation alone to allow them to reveal information. The PCP should also remember that patients can be vague or use euphemisms if embarrassed and, hence, they should observe non-verbal cues. These are particularly vital.¹⁹¹ Also when discussing sexual behaviours, the PCP should ensure that the patient understands any medical terminology that they may use.¹⁹¹ Also due to the fact that human sexual behaviour is diverse, practitioners should avoid moral or religious judgement of

their patient's behaviour and concentrate instead on managing health-related needs, including psychological and emotional, and take time to address patient's concerns.¹⁹¹

With reference to the middle-aged and older age group of this study, it is observed that assessment of sexual functioning is not necessarily part of the core components of a sexual history and will possibly only be assessed if the patient attended the consultation with it as a chief complaint. Then it will be noted under “reason for attendance” followed by the relevant “symptom review”. Identifying sexual dysfunction should possibly be considered a core component particularly with the middle-aged and older population due to the high prevalence of sexual dysfunction in this general population – most often undiagnosed and untreated.¹⁹² These communication barriers between patients and physicians are one of the main reasons for a low report rate of sexual dysfunction. As the proportion of older adults in the population increases, more of them will seek assistance for sexual dysfunction. Based on a few studies, sexual problems are characterised by diminished or absent sexual interest, and by disturbances in the physiological or psychosocial patterns associated with the sexual response cycle. Key reported sexual dysfunction problems are (i) lack of interest in sex; (ii) arousal problems—trouble maintaining or achieving an erection (men) and trouble lubricating (women); (iii) climaxing too early; (iv) inability to achieve an orgasm; (v) experiencing pain during sex; (vi) not finding sex pleasurable; and (vii) anxiety about performance.

As previously mentioned, sexuality is a very important part of emotional, physical, and mental health, and hence, incorporating a sexual history as part of the overall patient history is an important consideration. Based on previous studies, although PCPs and other health professionals may experience in some circumstances a degree of apprehension and embarrassment in discussing sexual issues, it is nonetheless essential to learn to be comfortable in asking questions about sexuality and in responding to issues that arise from such questioning. A sensitive, non-judgmental approach on the part of the physician is essential and may create an atmosphere of security for both patient and physician.¹⁹³ Discussing sexual history with patients may impact on patients’ uptake of screening, willingness to disclose personal relevant health information, and overall relationship with their providers.¹⁹³ Unfortunately, because PCPs infrequently ask about their older patient’s

sexual health, because of time constraints, their discomfort level with the topic and perceptions of patient discomfort disclosing this information.¹⁹³ The research question that ensues is: What are the associations between Primary Care Physicians' (PCPs') characteristics and sexual healthcare practices (sexual history taking/ frequency of discussing and treating sexual concerns)?

Communicating with PCPs about sexual health may be particularly difficult with older patients. Although studies are limited, as mentioned previously, the data indicates that older adults value sexuality and engage in sexual activity.¹⁵⁵ PCPs have also reported fear of offending older patients, particularly women, if they approach sexual health issues during the medical consultation.¹⁹⁷ Thus, many older women have reported experiencing sexual health issues that they have not discussed with a clinician. Dispelling the myth that all older people should have a declining interest in sex may help patients feel less reticent about talking to physicians about sexual matters.

Sexual history taking is a core clinical skill for all physicians regardless of comfort, yet many medical schools do not adequately address this important topic within the curriculum.¹⁹⁴ In fact, in most medical universities the core components of a general patient medical history are taught; also, elements of a sexual history are not given the same merit. Sexual history taking has become noticeable more recently as continuing medical education (CME) courses in the form of optional training for medical professionals, residents, and recent medical graduates.¹⁹⁵ Even though presently there are a few options for training (post medical graduation) in sexual history taking, the focus tends to be on patients from a family planning perspective, younger populations, psychiatric patients and patients of the lesbian, gay, bisexual, and transgender (LGBT) community.^{195,196} Clearly, the literature reviewed suggests a need to investigate the sexual healthcare communication needs of physicians, as there is a dearth of information improving patient–physician communication about sexual health for older adults.

2.5 Understanding Effective Physician-Patient Communication

The literature reviewed has helped me to question many aspects of this research regarding PCPs' medical knowledge, their attitudes, and how these influences the manner physicians communicate (and their resultant practices). For me to gather a comprehensive understanding, it is important to question the following:¹⁹⁷ What shapes a PCPs' knowledge, attitudes, and practice? How do these factors associate? What PCPs' characteristics are associated with addressing sexual health in consultations with patients of middle and old age, and how are they influenced by different clinical scenarios? These questions are the foundation of this research.

Essentially, I would like to pursue what influences the sexual health communication between older patients and their PCPs in the context of investigating their knowledge, attitudes, and practice towards sexual health care with these patients. This may assist in understanding what are the associations between Primary Care Physicians' (PCPs') knowledge, attitudes, and sexual healthcare practice?

I therefore decided to further examine the physician-patient relationship model to identify factors that impact upon communication.

Theoretical Concepts

Understanding Communication in the Physician-Patient Relationship

Perhaps the physician-patient relationship requires interaction between individuals sharing concerns or issues of vital importance, which may be emotionally laden and require close collaboration.¹⁹⁸ Evidently, inter-personal communication is the primary tool by which the physician and the patient exchange information.¹⁹⁸ In an attempt to understand how this can be effective, the following must be reviewed:¹⁹⁹

1. the information exchange between doctor and patient;
2. the dynamic of the interpersonal doctor-patient relationship;
3. the decision-making process;
4. Influences on physician communication.

The Importance of the Exchange of Information between Doctor and Patient

The aim of medical communication in a consultation is primarily alternating information sharing, seeking and giving between the doctor and the patient.^{199,200} Doctors need the right information to establish the right diagnosis and treatment plan. Both parties must be willing to communicate relevant information, so that doctors can do their job: diagnose, treat, and impart this information to their patient.¹⁹⁹

The Dynamic of the Interpersonal Doctor-Patient Relationship

Roter and Hall state that talking is the main ingredient in clinical consultation and it is the central mechanism by which the physician-patient relationship is fashioned and by which therapeutic goals are achieved.^{199,201} Therefore, establishing a good rapport between doctor and patient may infer a remedy for optimal patient outcomes. Some refer to the social rapport style which essentially manifests as attitudes towards the patient and attitudes of personal interest, empathy, a helpful demeanour, a non-judgmental attitude, an overall balance of humour and friendliness are reported as ideal.²⁰² However, the most essential task would be to actually address the patient's need (health care practice) and reason for the visit in attempt to move closer towards attaining any therapeutic goals.²⁰¹ This essentially is the constituents of the patient-centred model approach where the goal is to follow patients' leads, to understand patients' experiences from their point of view'.^{198,199,201} This type of physician-patient relationship is viewed as egalitarian anywhere the physician is considered empathetic and conveys respect, authenticity, unconditional acceptance, and warmth, practices a lot of listening to what the patient communicates including their non-verbal behaviour.^{199,202} Even though this model is promoted as ideal, the physician has goals as well and the ideal clinical scenario should integrate this patient-centred model with some mutual balance of physician-centred approaches.¹⁹⁸ In this way the patient leads in areas where s/he is the expert (needs, concerns, symptoms) and then the physician leads in his/her jurisdiction of expertise regarding medical knowledge about illness and/or treatment).^{198,199,202} However, Stewart and Roter, state that "the most common forms of the physician-patient relationship are based on levels of control between the physician and patient, those with high control by the doctor are called paternalism".²⁰² This is the most prevalent but not desirable as in this model of relations, physicians dominate from the start

of the consultation to the therapeutic goals, and decision-making as the patient's voice is generally absent. In this situation, the role of the physician is to act in the patient's best interest.¹⁹⁷ This type of 'physician-centred' relationship can be regarded as the opposite of the 'patient-centred' relation, which is more egalitarian.¹⁹⁹ The patient-centred approach is promoted collectively in medical education because with patient-centred communication, the physician aims to ensure that the patient's clinical concerns, needs, and expectations are heard.¹⁹⁷ This technique is assumed to empower the patient and promote a sense of shared "ownership" of the treatment plan and possible patient compliance.^{201,202}

Decision-Making

Another purpose of communication in a clinical consultation is to ensure appropriate patient outcomes in terms of therapeutic goals to establish in the form of an agreed treatment plan.^{199,200} Traditionally, the physician-patient relationship was paternalistic, with the doctor directing care and making decisions about treatment; however, this approach has been replaced by the ideal option of 'shared decision-making.'²⁰³ However, this may not be the same in primary care practices in Caribbean countries as these health centres are generally quite overbooked and physicians decide whether or not there may be time to share decision-making power. Regardless of barriers, for this to occur, the first step is on the part of the physician to offer and share responsibility for medical decision-making which may be governed by a defined set of attitudes and beliefs that determine future behaviour between the physician and the patient.¹⁹⁹

For the scope of this research, the focus is on the influences of physicians' communication.

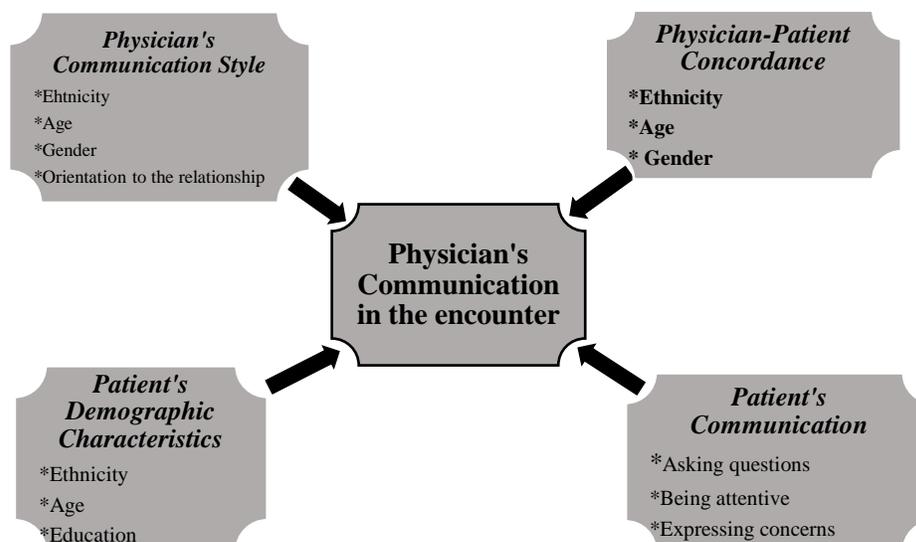
2.6 Influences on the Physician's Communication

Within the context of any clinical consultation, there are several factors that can affect the dynamic between physicians and patients and how they communicate and perceive each another.²⁰⁴ Physicians have stereotypes and may categorise their patients based on or bias their perception about their patient's social status, education or even behaviours such as "s/he is reserved, not too educated, very difficult patient, very kind, staunch religion, and easy to help".²⁰⁴ Other influences such as shared identities, commonalities or concordance²⁰⁴ – although there is not a lot of research confirming concordance as a predictor of better patient outcomes based on similar in age or gender. Another factor that may influence physician's behaviour is, in fact, the patient's communication style.^{199,208} For example, physicians generally are more responsive to the actively involved patient in part because they have a better understanding of the patient's needs and concerns.²⁰⁴ An ecological study conducted by Street Jnr. et al. focused on these four sources of potential influence — (1) *physician's communication style*, (2) *patients' characteristics*, (3) *physician–patient demographic concordance*, and (4) *patient's communication* and have established this theoretical model below in the Figure 9 that has been used as a guide in this study and adapted post results in Chapter 8, Discussion & Conclusion.²⁰⁴

A physician's bedside manner and how they communicate with or perceive a patient may simply depend on the doctor's style.^{199,204} Some are more talkative and provide more information; some are more supportive and listen more.²⁰⁵ A physician's style of communicating with patients may have evolved their professional experience with several patients over time, their worldview about care, and socialisation related to gender, culture, and medical training.²⁰⁴

The model below shows the interaction of these different influences on physician's communication.

Figure 9: Potential influences on physicians' communication²⁰⁴



2.6.1 Conceptual Framework & Working Model for Research

To fully understand PCPs knowledge, attitudes, and practices in sexual health and their physician – older patient dynamic specifically in a sexual health consultation, a model or framework that recognises this relationship and factors that potentially influence physician’s sexual health communication is required, but this must be supported by empirical evidence. To the best of my knowledge, no such model or conceptual framework currently exists that illustrates factors or characteristics that shape or influence sexual health communication in a physician-older-patient dynamic. Therefore, I have proposed a priori hypotheses from the literature (presented in chapters 3-6, Methodologies) which I have tested, and I also used these to create a new ‘working’ model based on what Street Jnr. et al (2007) have presented, as it represented the closest model for understanding the factors and characteristics that promote effective PCP-patient communication in a health consultation. However, in Chapter 8, I have adapted this model to incorporate sexual health communication and other factors based on my synthesised findings. This working framework may be more specific to the Trinidad & Tobago setting; thus, it can be tested in future research. The results of this thesis, and the framework that is generated, will take one step towards determining the knowledge, attitudes, and sexual healthcare practices of PCPs that will be best for addressing sexual health needs of patients in middle and old age.

2.7 Chapter Summary

Physician-Patient communication impacts patients' satisfaction, quality of care, and health.²⁰⁶ There is still need for further research as to how these various patient- and doctor-characteristics relate to one another negatively or positively in their influence on communication. Since different patient and physician characteristics can influence physician-patient communication, so too will the nature of the presenting complaint. For patients who present with sensitive private complaints such as sexual health concerns, discussing sexual history with these patients is an important part of a physical and emotional health assessment.²⁰⁶ Communication about sexual history may impact patients' screening behaviours, willingness to disclose personal relevant health information, and overall relationship with their physicians. However, physicians frequently do not directly ask about sexual health because of time constraints, their discomfort level with the topic, and perceptions of patient discomfort in disclosing this information.²⁰⁶ Improving Physician-Patient communication about sexual health for older adults warrants further research.²⁰⁶

This chapter presented the theoretical framework that influenced the researcher's interest in physician-patient communication. The researcher was interested in physician-patient relationships in primary care settings and more specifically regarding the nature of sensitive types of medical consultations such as those that address sexual health concerns and how the physician- and patient-characteristics may interact on its success.

The following Chapter 3 presents the methodology, which was designed and guided by the study aims, objectives, research questions, and theoretical foundation in these preceding chapters.

Chapter 3: Methodology

A Mixed-Methods Approach

3.1 Chapter Overview

This chapter presents the mixed-methods approach employed to address the four research questions of this PhD. It offers a comprehensive description of the conceptual design for this mixed-methods study. This chapter presents an overview of existing and emerging mixed-methods research typologies and designs as context for the subsequent rationale for selecting this approach. Subsequently, the nominated mixed-methods design is defined, and a synopsis of the strengths and limitations of this choice is discussed. Following this is an overview of the three methodical phases (qualitative, quantitative, & triangulation), plus a description in terms of their sequence, priority, and level of integration. Specific details regarding each phase's sampling, data collection and analysis, techniques, and a justification for its appropriateness, strengths and limitations to address the relative research question is presented in the subsequent individual chapters 4 and 5 which are dedicated to each methodical phase.

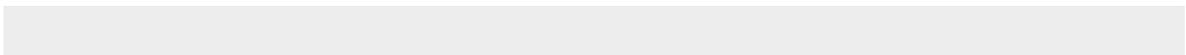
3.2 Research Questions, Aims & Objectives

3.2.1 Research Aims & Objectives

The aim of this study is to determine what are PCPs' knowledge of, attitudes towards, and practices in sexual healthcare for patients of middle and old age in Trinidad and Tobago.

The objectives of this work are:

1. To describe the current practice in terms of management of and training surrounding sexual healthcare and sexual history taking during consultations between primary care physicians/general practitioners with middle-aged and older patients.
2. To determine the factors that contribute to the communication dynamic in the 'primary care physician – older patient' medical consultation on sensitive issues regarding the patient's sexual health.
3. To capture baseline data on the Knowledge, Attitudes and Practices (KAP) of PCPs in Trinidad and Tobago on sexual healthcare and sexual history taking with patients who are 45 years and older.
4. To provide recommendations for best practice (based on research findings) for PCPs to improve sexual healthcare delivery, including sexual history taking, during consultations with middle-aged and older patients.



3.2.2 Research Questions of Thesis

A mixed-methods approach was considered best to satisfy the research objectives and to address each of the thesis research questions as follows:

Research Question 1

How do primary healthcare physicians describe their attitudes towards older patients' sexuality and sexual health, and, in their accounts, what are the factors that shape these attitudes?

This research question was addressed by fulfilling the first two objectives of the thesis and employing a qualitative research method involving the conduct of in-depth semi-structured interviews with PCPs (*See Chapter 4, qualitative phase, for further details on the interview process*). The in-depth interview method was thought to be most appropriate to answer this exploratory research question. More details on the full methodology employed will follow in Chapter 3, Methodology.

Research Question 2

What are the associations between Primary Care Physicians' (PCPs') characteristics and their knowledge, attitudes, and sexual healthcare practice?

Research Question 3

What are the associations between Primary Care Physicians' (PCPs') knowledge, attitudes, and sexual healthcare practice?

Research Question 4

What Primary Care Physicians' characteristics are associated with addressing sexual health in consultations with patients of middle and old age, and how are they influenced by different clinical scenarios?

These three research questions were addressed primarily by fulfilling the third objective of the thesis which employed a quantitative research method in the form of a national survey. The conceptual framework and design of the survey instrument was informed by the data analysed from the qualitative segment allowing for a literal 'mixing of the methods' and

integration. Using this quantitative approach was thought to be most appropriate as these research questions were explanatory and each was complemented by testable hypotheses (*See Chapter 5, Quantitative Phase for details on hypotheses*). The sequential approach was thought to be most effective as the design of the survey instrument was grounded in the cultural context of the study setting, and it also incorporated the worldviews of the participants it was being administered to. Additionally, the designed instrument was thought to be more advantageous versus employing a ready-made survey that could have been difficult to adapt to the setting or unsuitable as it may not have covered all the areas of interest. More details on the overall methodology employed will follow in this Chapter 3.

3.2.3 Epistemological Approach

A critical realist perspective was embraced in this research. Critical realism is a philosophy of science associated with Roy Bhaskar (1944-2014).²⁰⁷ It combines general philosophies of science and social science to describe an interface between the natural and social worlds.^{207,208} As a critical realist, the goal of research is to cultivate deeper levels of reasoning and understanding, and not to recognise generalisable laws based on statistical relationships between dependent and independent variables²⁰⁹ (positivist) or to identify the lived experience or beliefs of social actors (interpretivist).²⁰⁸ Critical realists maintain that the selection of methods should be determined by the nature of the research problem.^{208,188} In fact, from this perspective, it is recommended that the most effective approach will be to use a combination of quantitative and qualitative methods or techniques²¹⁰ and triangulation, a method which involves using more than one method or source of data in the study of a social phenomenon.²¹¹ What is most important from a critical realist perspective is how these methods—quantitative and qualitative—are used.²¹² Having adopted this line of thinking, I have outlined my preference of a mixed-method approach and explained the interplay of these methods below.

3.2.3.1 Qualitative Measures

Qualitative methods can help to illuminate complex concepts and relationships that are unlikely to be captured by predetermined response categories or standardised quantitative measures.^{208,209} From a critical realist perspective, the key strength of qualitative methods is that the in-depth interview method technique is open-ended.²⁰⁸ This allowed themes to emerge during the course of inquiry with each participating PCP that could not have been anticipated in advance.

3.2.3.2 Quantitative Measures

Quantitative methods are generally employed to identify patterns and associations that may otherwise be masked to test theories about how causal mechanisms operate under particular sets of conditions.²¹³ From a critical realist perspective, the strength of quantitative methods is that it was used to develop reliable descriptions and provide accurate comparisons and identify associations.²⁰⁸ These measures helped to tease out new and unexpected causal mechanisms during this study between the PCPs' characteristics and their sexual healthcare and practices with middle-aged and older patients.

3.2.3.3 Methodological Triangulation

Triangulation is considered as a method of integration and there are at least three understandings of the term 'including mutual validation, integration of different perspectives, and its original trigonometrical meaning.' Critical realist is generally compatible with all three of the purposes of methodological triangulation as each definition shows different opportunities for relating qualitative and quantitative results.²¹⁴ As a critical realist, methodological triangulation is employed for three purposes: *confirmation*, *completeness*, and *abduction*^{210,195}

- ***Confirmation (Convergence)***

The purpose of seeking confirmation considers the original trigonometrical definition of triangulation: techniques that are used to locate a fixed position. For this research, seeking confirmation enhances the reliability and validity of my quantitative and qualitative findings and may support a more robust conclusion than either single method of data could support alone.²¹⁵ Attaining confirmation having triangulated my qualitative and quantitative results may offset any biases that are associated with any

of the single methods.²¹⁶ From a critical realist (and also positivist) standpoint, this use of triangulation is based on the assumption that there is a perceptible social reality unlike interpretivists who remain doubtful whether a tangible reality exists.²¹⁷

▪ ***Completeness (Complementarity)***

From a critical realist perspective, the purpose of seeking completeness when triangulating quantitative and qualitative data is to determine any complementary findings by integrating diverse aspects of the same reality but examining it from different perspectives. Complementarity truly illustrates the benefits of uniting methods and the opportunity to achieve a more complete understanding, comprehensive patterns, and a greater level of detail than could not be obtained from interpreting from only one method's results.²¹⁸ On the other hand, a positivist's interest may only reveal different aspects of a phenomenon, whilst an interpretivist may only seek to decipher a wider range of perspectives. However, the disadvantage of this purpose is that completeness can be more uncertain or ambiguous than seeking confirmation.^{192,218}

▪ ***Abductive reasoning (Interpretation)***

Abductive reasoning (also called abduction, abductive inference, or retrodution) is a kind of logical inference described by Charles Sanders Peirce as "guessing."²¹⁹ The term explains the process of synthesising a new conception or explanatory hypothesis.²²⁰ Unlike positivists and interpretivists critical realist focus on deriving an explanatory understanding based on the development of abductive inferences.

Further description of the actual steps involved in triangulation in this research are introduced here in Chapter 3 but elaborated further in Chapter 7.

3.2.4 Emergence of Mixed-Methods Research

*'We are in a three methodological or research paradigm world, with quantitative, qualitative, and mixed-methods research all thriving and coexisting'*²²¹

Mixed-methods research has developed rapidly in recent years and has been championed by writers such as Abbas Tashakkori, Alicia O’Cathain, Anthony Onwuegbuzie, Burke Johnson, Charles Teddlie, David Morgan, Jennifer Greene, John Creswell, and others. Mixed-methods, as a research paradigm, is seen as emerging from the 1990s onwards as a viable alternative research method. The paradigm’s intellectual foundation actually began prior to the 1990s with pioneering work by Campbell and Fisk on Multitrait-Multimethod Matrices in 1959,^{222, 223, 224} followed by developments around the conception of triangulation by Webb et al. in 1966,^{225, 226} Denzin in 1978, and Jick in 1979.²²⁷ The typology of Mixed-methods used was postulated by Greene et al. in 1989.^{228, 205} Origins of actual Mixed-methods in practice were among fieldwork sociologists and cultural anthropologists early in the 20th century.²²⁹

As a research paradigm, the Mixed-methods approach incorporates a distinct set of ideas and practices that separate the approach from the other main research paradigms.²³⁰ It has evolved with a distinctive nature, separate methodological orientation with its own worldview, vocabulary, and techniques.²³¹ However, the mixed-methods approach has been challenged by many other research paradigms that have favoured the use of *either* quantitative *or* qualitative methodologies, and they have argued that the defining characteristics of the mixed-methods approach involve its use of:

- quantitative and qualitative methods within the same research;^{210,224}
- a research design that clearly specifies the sequencing and priority that is given to the quantitative and qualitative elements of data collection and analysis;²¹⁰
- account for how the quantitative and qualitative aspects of the research relate to each other;²¹⁰
- emphasis on how triangulation is used.²¹⁰

As recognized by mixed-methods researchers, both quantitative and qualitative research are important and useful. The goal of mixed-methods research is not to replace either of these approaches but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies.²³² Mixed-methods research offers great opportunities for methodologists to describe and develop techniques similar to what researchers actually use in practice, and it helps to bridge the division between qualitative and quantitative research.²¹² Though much recent methodological work on the mixed-methods research paradigm are in several authors, namely Brewer and Hunter, Caracelli and Graham, Reichardt and Rallis, Tashakkori and Teddlie, Newman and Benz, Creswell, Greene, Johnson and Christensen, yet much work remains to be undertaken to further inform researchers about study designs, data analysis, mixing and integration procedures, rationales, and epistemological stance in mixed-method research.²¹²

3.2.5 The Rigour of Mixed-Methods Research

Mixed-methods research is becoming more popular in primary care, using integrative quantitative and qualitative data collection and analysis methods as it indicates that data will be combined, related, or mixed at some phase of the research process and integration calls for collecting quantitative and qualitative data concurrently or in parallel or gathering information sequentially. This form of research is more rigorous than collecting both quantitative and qualitative data individually. The fundamental reasoning of mixing is that neither quantitative nor qualitative methods are sufficient in themselves but when used in combination, both methods yield a more complete analysis as described in section 3.3.

The steps required in sound Mixed-methods approaches entail several decisions to be made in the following steps. Here I present the alternatives considered for answering this same research question followed by a section describing the actual mixed-method approach chosen.

Various types of methods need to be considered for the research question selected. For this study, data collection and analysis could have been via open-ended field observations or using structured observation checklists and interviews—quantitative data collection via survey administered by telephone or face-to-face interviews.²¹¹ Qualitative data were collected through open-ended or semi-structured interviews and field observations of practices. The most efficient method that would allow for data to be collected in a Caribbean country with limited internet connectivity at health centres in a fast-paced environment for primary care that is dispersed over a wide geographical location needs to be selected.

Priority

Priority is the emphasis on which method occurs and when. For this research, it was possible to consider offering priority to quantitative or qualitative data, or use an equal priority option.²¹³ Due to the fact that this was baseline data collection in T&T since no data about this research was known, priority was given to qualitative measures first to establish an understanding of the research problem.

Implementation

Implementation refers to how the data are collected in phases or together. In a sequential approach, quantitative or qualitative data collection serves as a basis for the next data collection and analysis stage.^{211,213} This approach is ideal when one phase can contribute to the next phase and enhance the entire study. In the concurrent approach, quantitative and qualitative data are collected at the same time and are brought together in the results or interpretation of the results. In primary care research, concurrent approaches are recommended due to time constraints. However, due to considerations of my research questions, a sequential approach was best.

Integration Priority

Integration refers to the mixing phase of the research where integration of both the quantitative and qualitative data collection and analysis occur.^{213,215} Integration opportunities for this research included: when data analysis can lead to further data collection, when results are reported; from qualitative data analysis into quantitative data collection; transforming

qualitative data into quantitative illustrating another approach to integration at the data analysis stage. Integration demonstrates the rigour of mixed-methods research.

The following sections confirm why Mixed-methods were most appropriate and the mixed model I selected for this research.

3.2.6 Rationale for a Mixed-Methodology

Mixed-methods or multimethod research holds potentials for rigorous, methodologically sound investigations in primary care.

The multi-method approach was thought to be a strategy for overcoming each individual method's weaknesses and limitations by deliberately combining different types of methods within the same investigation.²³³ Most research endeavours can be enhanced by including some features of other approaches as a means of cross-validation or triangulation. Using mixed-methods provided the opportunity for the qualitative data to help explore statistical results from quantitative data, and for quantitative outliers or extreme results to be better understood through qualitative data collection.²¹³ By incorporating a sequential multi-method approach, I have been able to improve the efficiency of this research process which increased the likelihood of reaching conclusions that were relevant, valid, and potentially generalisable.²¹³ The integrated use of both qualitative and quantitative approaches allowed for an understanding of meaning, along with quantitative testing of the study hypotheses. For these reasons, a sequential multi-method approach was employed.

3.3 Mixed-Methods Approach in this Thesis

Qualitative and quantitative methods were employed in this study primarily to determine different aspects of the overarching research question that examines *PCPs' knowledge of, attitudes towards, and practices with middle-aged and older patients with sexual health needs accessing primary care services*. Semi-structured interviews were conducted with a proportion of PCPs to explore their in-depth views on sexual healthcare with middle and old aged patients. Subsequently, a survey was designed and administered to all PCPs nationwide to measure overall knowledge, attitudes, and sexual healthcare practices. Data for each component were collected and analysed separately to produce separate findings as presented

in chapters 4, 5, and 6. Chapter 7 presents an integration of these findings analysed via methodological triangulation. Some researchers refer to this integration method as the “third effort” because it occurred after analysis of the qualitative and the quantitative components and required a lot of time and energy.²³⁴ Notably, the term triangulation can be confusing because it has more than one meaning. It can be used to describe corroboration between two sets of findings or to describe a process of studying a problem using different methods to gain a more complete picture.²¹⁴ The latter meaning is commonly used in mixed-methods research including this study. Integration of the methods was possible at two points in this study: when the qualitative data analyses lead to quantitative data collection and when the overarching results were being reported.

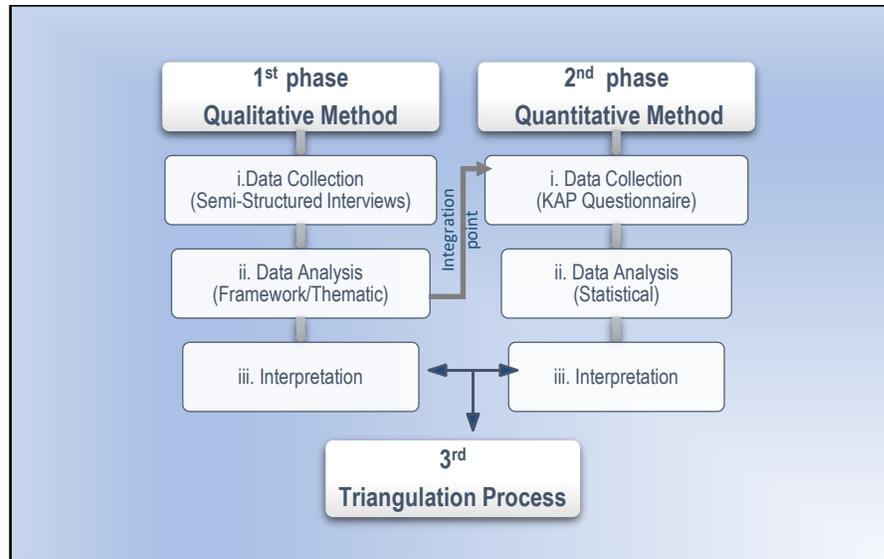
3.3.1 Mixed-Model Study Design

This study primarily employed an instrument design model. However, the difference was that equal priority was given to both qualitative and quantitative data collection and analysis unlike the typical sequential approach. Implementation was a two-phase project that began with qualitative data collection and analysis and moved to quantitative instrument design and testing. Integration occurred at the data analysis stage, when the analysed qualitative data was used to develop the survey instrument for a second round of data collection. The intent of this approach was to develop an instrument that was grounded in the views and cultural and clinical context of the setting of the PCPs rather than using a readymade instrument that might not reflect their views. This sequential approach made the study easy to conduct and logical, but it was time-consuming and challenging to code and analyse qualitative data into a measurable instrument.²³⁵

The triangulation model is used in primary care research and the intent is to reconcile and bring together numeric (quantitative) and text (qualitative) data.²³⁶ This component was added to our existing sequential model of this study. However, this study did not follow the exact structure of the triangulation model where both quantitative and qualitative data is usually gathered at the same time; but we followed the intent of the model which was to integrate the two forms of data to best understand the overarching research problem.²¹⁶ The phases were equally prioritised similar to the triangulation model design, as they were both important in weighting for answering the study’s research questions. This is unlike the

common instrument model design where there is a qualitative priority, and the quantitative method is used in a secondary role.

Figure 10: Mixed-model study design



► ***Interaction between Phases***

This mixed model study illustrates a direct level of interaction between its qualitative and quantitative phases as the two methods are mixed before a final interpretation. This interaction occurs as the initiation, design, and conduct of one phase is completely dependent on the result of the other. The temporal relationship is therefore sequential as the arms are implemented in two distinct phases: the data collection and analysis of the first phase—qualitative arm (interviews with PCPs regarding their attitudes to sexual healthcare of middle-aged and older patients)—preceded the second phase—quantitative arm (a national knowledge, attitudes, and practices, KAP survey, for PCPs regarding sexual healthcare for middle-aged and older patients). Building from the exploratory results of the first phase, some of the resulting categories became variables and a quantitative instrument was developed and used for the second phase to test and generalise the initial findings. The mixing strategy therefore allowed for connecting from the analysis of the first (qualitative) data set to direct data collection of the second (quantitative) set. Therefore, how the quantitative results built on the initial qualitative results could be assessed. The second opportunity for interaction occurred at the triangulation stage where both findings were assessed together to derive interpretation of the overall findings (See Methodological Triangulation, section, 7.1.1.1).

3.3.2 Strengths and Limitations of this Mixed-Methods Approach

There were several theories and studies conducted in primary care that fuelled my interest in conducting this mixed-methods research as it can address some research questions more comprehensively than by using either quantitative or qualitative methods alone. From the supportive body of literature on mixed-methods, research questions that profit most from a mixed-methods design tend to be broad and complex, with multiple facets so that they may each be best explored by quantitative or qualitative methods.^{233,278} I felt reassured that I was generally on the right track with this approach as my research question has many facets as presented at the beginning of this chapter and described prior in section 3.3 (Mixed-Methods Design). Overall, I felt that I was able to attain a more meaningful interpretation of PCPs' knowledge, attitudes, and clinical practices to sexual health care in later life.²³⁶ Another strength I observed was experiencing the dynamic between the qualitative and quantitative arms of the study and seeing how each of the datasets mirrored and offered much complementarity in the other's findings and, moreover, the few but interesting differences attained in the triangulation.²³⁷ Regardless, there were several overarching advantages and notable weaknesses with regard to the mixed-methods design I employed for this research:

3.3.2.1.1 Overview of the Strengths

- The two-phased approach followed by triangulation was straightforward to justify, implement, describe, and report.
- The individual approaches were strong methods and were acceptable to both qualitative and quantitative biased audiences.
- As suitable survey instruments were not readily available, a new instrument (the KAP survey) was produced as a product of this research process.
- The mixing phase (interaction) allowed for the designed instrument to be grounded by the views of and fitting to the participants and research setting.
- The approach was useful as lessons learned in the first phase influenced the design of the second phase and much complementarity was found in triangulation of the data sets, in the end.

3.3.2.1.2 *Overview of Possible Limitations of this Design*

- Ethical approvals took time and for this two-phase study, each required their own ethical approvals to be procured.
- Time-consuming data collection process: These methods required a considerable amount of time to implement both phases as time was needed prior to analyse the qualitative results, then convert them into measurable concepts and design a new instrument.
- Interpreting data using can be complicated and time intensive from these various methods and via methodological triangulation.
- Triangulation was difficult at times since not all the data could be triangulated as some themes were not measurable quantitatively.
- Pilot testing was needed on this new survey instrument before the questionnaire was administered – additional time.
- There was so much quantitative data that not all of it could have been incorporated into a measurable construct into the instrument, as this would have made the survey instrument too long and would have decreased its chances of being completed (it was already quite long).

In hindsight, some of the limitations of the mixed method were only made clearer after various stages of establishing and executing the methods. Firstly, after in-depth review of the various definitions of mixed-methods to be used and understanding the philosophical issues and paradigms that support the version of the mixed-methods approach I considered, this process could be quite time consuming and purist audiences (preferential to solely one method) may not agree with this approach.^{238,239} Secondly, after confirming the design typologies (type of qualitative approach via semi-structured interviews and selecting the type of quantitative approach – survey method) that theoretically were suitable for the research questions, I would have not been able to predict problems with execution of the survey in the field with the national sample (discussed in Chapter 5, Quantitative Phase).²⁴⁰ Finally, after confirmation of the method of integration to be used for this study (and there were a few other options to consider such as reversing the order starting with a national survey versus interviews or using observational study method in addition (these are discussed in Chapter 8), there were barriers in the mixing phase.²⁴¹ Having a prior quantitative background, during

the data analysis of the qualitative data and the design of the survey, was most challenging. I was initially overwhelmed by the depth involved in qualitative data analysis and the vast difference in techniques for analysis, followed by difficulties in identifying ‘quantifiable’ qualitative data – making themes into measurable constructs into a survey format that would be as accurate as possible and suitable for its research purpose. Regardless, I attained many skills in this learning process, and I have a deeper appreciation for the rigour involved in Mixed-methods. Overall, this was one of the more suitable methodologies to employ and it attained results for the research questions of this study.

3.4 Chapter Summary

Integration of methods, data collection, and analysis is the hallmark of mixed-methods research.^{242,243} Integration should ideally occur at the level of the research questions, analysis, and samples for study, instrumentation, data collection methods, and analytic strategies.^{217,244} The research design adopted for this study sought to achieve all of these standards of integration. The overarching research question selected invited a multi-method approach. The four subsequent research questions utilized two different methods – qualitative and quantitative. An integration of methods occurred when the analysed themes from the qualitative phase of this study were converted into quantifiable concepts suitable for measurement and were incorporated in the design of the survey instrument for the quantitative phase. An integrated study sample was also used as some of the same physicians were sampled in both components of the study. The multi-method strategy employed encouraged for integrated analytical strategies to be considered hence a triangulation protocol was used to bring both data sets together for an overall interpretation of the overarching research question.

The following are results chapters presenting the key findings that ensued from employing the mixed-method data collection and analysis techniques described here. These results chapters are displayed as a series of research papers answering the four research questions of this thesis, followed by a summary of triangulated results chapter illustrating the triangulation of all findings.

Chapter 4: Qualitative Phase

PCPs' Views and Attitudes towards Sexual Health in Middle-Aged and Older Patients

4.1 Qualitative Phase

4.1.1 Method Justification

The qualitative arm aims to answer the research question:

- i. *How do primary healthcare physicians describe their attitudes towards older patients' sexuality and sexual health, and, in their accounts, what are the factors that shape these attitudes?*

To answer this question, a qualitative methodology using in-depth semi-structured interviews was employed. Semi-structured interviews are used to answer research questions that are exploratory and explanatory in nature and hence this method is most applicable to this research question. The semi-structured interview style employs an open framework that allows for focused, conversational, two-way communication and exchange of information. The flow of questions in a semi-structured interview commenced with more general topics first. It was followed by the relevant topics and the possible relationship between these topics and any emerging issues were explored. This method allowed for exploration of primary care physicians' perspectives on sexuality and aging, sexual healthcare for the middle and old aged, and their attitudes to discussing sex with patients of this age group or offering an appropriate treatment regime.

This semi-structured interview method design allowed the researcher to design and use a topic guide tool with a clear format of questioning that provided reliable, comparable qualitative data to be attained. This qualitative approach allowed for the questions/topics to be prepared ahead of time and the opportunity to be more prepared and competent during the interview. This approach appeared to be more practical for medical professionals being interviewed at their work settings as they are limited with their time and availability to participate in research activities. The interviewer used the topic guide and topical trajectories where appropriate.

4.1.1.1 Description of Method

This qualitative method involved conducting semi-structured interviews with PCPs in public and private primary care settings in Trinidad and Tobago. The aim of the interview phase was to determine physician's general perception of the sexual healthcare status of patients aged 45 years and older and their personal views about taking a sexual history and communicating with patients in this age group about their sexual health. The topics explored included the physician-patient relationship; sexual health of the older adult; sexual healthcare priorities; clinical experience on managing sexual health of older adults, delivery and challenges in primary care; factors facilitating and hindering effective communication of sexual health including taking a sexual history; and physicians' training needs in sexual healthcare of older adults. These topics were derived from the literature on ageing and sexuality and sexual health in primary care with older adults. The topic guide that was employed can be viewed in Appendix 5.

▶ *Sampling*

In-depth semi-structured interviews were conducted with a purposive sample of GPs/PCPs in Trinidad and Tobago. A provisional target of 40 interviews was set as this sampling framework was designed to capture a range of different views and experiences of PCPs in T&T. The sampling frame was narrowed to include PCPs based in two out of five health authority districts nationwide. As there are two islands in the twin island state of Trinidad and Tobago, the researcher decided to choose one health authority in each island. As there is only one in Tobago, the Tobago Regional Health Authority (TRHA) was selected; and the largest of the four RHAs in Trinidad, being the North West Regional Health Authority (NWRHA) (responsible for the most populated area of Trinidad & Tobago with a catchment of approximately 500,000 individuals), was selected.²⁴⁵ The criteria were mainly based on physicians' gender, years of experience, and whether they worked in the private or public sector. Secondary criteria determined if they were working with rural or urban communities and whether the PCPs had any experience managing special clinics such as sexual health, chronic disease, or gerontology. The sampling frame is seen in Table 2 below.

Primary Criteria

- Sex: Male & Female
- ≥ 10 / < 10 years of primary care medical service in T&T
- Primary care practices (public sector) / General practices (private sector)

Secondary Criteria

- Rural or urban county (locality)
- Specific clinical experience in Sexual health/Chronic disease or Gerontology

Table 2: Original sampling frame

All Criteria	<10 years' experience						≥10 years' experience					
	Rural clinic			Urban clinic			Rural clinic			Urban clinic		
	SRH	GER	NCD	SRH	GER	NCD	SRH	GER	NCD	SRH	GER	NCD
Public Sector - original estimated total number of participants sought = 20												
Male												
Female												
Private Sector - original estimated total number of participants sought = 20												
Male												
Female												

▶ **Recruitment**

→ *PCPs*

The researcher sampled PCPs who were officially registered with the Medical Board of Trinidad and Tobago that were employed directly at health centres governed by Tobago Regional Health Authority (TRHA) and the North West Regional Health Authority (NWRHA) in Trinidad. The sample lists of PCPs currently employed and available (not on vacation) during data collection period of the study were provided by the County Medical Officer of Health (CMoH) for the RHA to use for recruitment. PCPs enlisted were mapped using the sample criteria and offered a written study participation request. The list of study participants was compiled based on their response to availability and willingness to participate.

→ *GPs (PCPs from Private Sector)*

The researcher sampled GPs that were officially registered with the Medical Board or General Practitioner Board of Trinidad and Tobago employed in private offices located in the same geographic borders that are served by TRHA and the NWRHA to participate in the study. Recruiting GPs were more difficult as there is currently no complete and accurate list of GPs that could have been obtained by any authority in the country because they function privately. The GPTT or MBTT only ensure that these practitioners have valid medical practitioner license locally, hence, they do not manage up-to-date lists of practice location or even contact information for this group. As a result, GPs were recruited via purposive sampling that met the same sample criteria. Possible candidates were suggested by advisers at the Ministry of Health and after making contact with these GPs, a final list of confirmed study participants was recruited based on their response to availability and willingness to participate.

▶ *Data Collection and Analysis*

Analysis was initiated during the data collection period to inform further interviews. The complete data set was analysed using framework analysis, a content analysis method which uses a thematic approach to classify and interpret summaries of the qualitative research data.²⁴⁶ The backbone of the framework was created using the core themes identified in the literature. Using deductive methods, the interview data was coded and classified under these headings and frames using MS Excel. Inductive methods followed to further analyse the emerging themes that arose from the data summaries. This method was suitable and commonly used for the thematic analysis of semi-structured interview transcripts that do have similar topics or key issues so that they can be categorized in relation to each theme, to be compared and contrasted in the matrix developed.²⁴⁶ The framework coding and analysis was done by the primary researcher and a sample of transcripts was reviewed by the PhD supervisor.

4.1.1.2 Strengths and Limitations of this Qualitative Method

Qualitative research method was the most appropriate option for the research question—to ascertain how PCPs describe their attitudes towards older patients’ sexuality and sexual health and, in their accounts, what are the factors that shape these attitudes. This type of question demanded learning from the participants (in a setting) from their experience and how they interpret what they experience, how they feel, and why. I required a method that will allow for discovery so that I would be able to capture PCPs’ perceptions and interpretations of sexuality in health and how they view their older patients seeking this type of care from them and how they see their role in this situation. In hindsight, I felt that this was the only approach to consider—qualitative. Regardless of which type of qualitative method I chose – unstructured in-depth interviews or structured – ‘attitudes to sex in a medical setting’ and my chosen method allowed for the opportunity of unearthing the central themes on this topic.^{247,248}

The main strengths of this method were:

- Its open-ended appropriateness for capturing a detailed understanding (unlike a survey with close-ended questions) which was required for this question;²⁴⁹
- The opportunity to gather an in-depth detail as participants were able to elaborate on their responses to explain themselves better and give examples;²⁵⁰
- Human to human interaction, for such a ‘personal topic’: this method allowed for perceptions of participants themselves to be captured and this human to human interaction facilitated that in most cases;²⁵¹
- Interviews were conducted at the primary care offices so that accounts were given in context and I was able to visualise some of the descriptions they offered, for example, physical limitations such as minimal privacy barriers in some consultation rooms, as well as the fact that the clinic is overcrowded with patients.

The limitations experienced utilising this method mainly were:

- I interviewed 35 PCPs out of a possible 175 PCPs, thus, it may not be that their accounts were generalisable due to small sample sizes and the subjective nature of the research;^{250,251}
- Further subjectivity was experienced during this process – it is possible that I could have received different responses on a different day with different PCPs, especially if they had been given more time in some settings;
- As the qualitative researcher, I was the instrument for data collection and analysis and therefore data are mediated through this human instrument (rather than through inventories, questionnaires) which can add researcher bias;^{249,251}
- The research techniques may have affected the findings as participants tried to interact or provide answers, they felt I wanted to hear – social desirability or the opposite, some persons were very reserved and were less responsive;²⁵²
- Transcription and framework analysis are rather tedious processes for data cleaning and analysis of data captured via this method.

4.1.1.3 Ethical Approvals, Ethical Considerations & Data Privacy

For the research study, full authorisation and ethical approval was received from the ethics committee of the London School of Hygiene and Tropical Medicine (LSTHM) and the Ministry of Health of Trinidad and Tobago to conduct this study. Additional extension of approval was also given when the data collection period prolonged (see Appendix 2 for approvals).

There were no ethical dilemmas experienced during this study to access data or anyone. No one was given any incentives to participate in any aspect of the study and no one asked for any. Topic guides and survey instruments were all approved via PhD supervisors and ethics committees for appropriateness of study protocols including sensitivity of the questions being asked. I did not diverge from these questions and probes on my topic guide given the PCPs' time and the fact that the approach was semi-structured and pre-approved.

To conduct the data collection process, a study package was prepared for each participant that contained information about the study, anonymised interview form to collect participant

demographic information and a consent form. Each participant returned a signed consent form indicating their approval to participate and permit use of their anonymised and non-linkable data given in this study. The interviews were conducted in private rooms within the health centres where they worked. Participants were assigned a unique study ID number. The ID numbers were coded for by the first letter of their sex (M/F), followed by health facility type public or private sector (PB/PV), and followed by a two-digit number, e.g., MPB06 or FPV16. With participants' consent, these interviews were digitally recorded and transcribed verbatim. Field notes were also recorded and analysed along with the interview data.

4.2 Research Paper II

Preface

In this first Results Chapter, the researcher presents her second research paper (published format found in Appendix 1) entitled: *Primary care physicians' attitudes towards talking about sexual health with their middle-aged and older patients in Trinidad & Tobago*.

This research paper (published format in Appendix 1) presents the first set of findings derived from this study. These are qualitative findings as discussed in the previous Methodology Chapter, resulting from analysis of in-depth semi-structured interviews held with primary care physicians in Trinidad and Tobago. The data presented here satisfy the first two objectives of this study:

1. To describe the current practice in terms of management of and training surrounding sexual healthcare and sexual history taking during consultations between primary care physicians/general practitioners with middle-aged and older patients.
2. To determine the factors that contribute to the communication dynamic in the 'primary care physician – older patient' medical consultation on sensitive issues regarding the patient's sexual health.

This paper justifies these objectives as well as provides an answer and greater understanding of the first research question of this thesis:

How do primary health care physicians describe their attitudes towards older patients' sexuality and sexual health, and, in their accounts, what are the factors that shape these attitudes?

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RESEARCH PAPER COVER SHEET

PLEASE NOTE THAT A COVER SHEET MUST BE COMPLETED FOR EACH RESEARCH PAPER INCLUDED IN A THESIS.

SECTION A – Student Details

Student	PATRICE ALICIA RABATHALY
Principal Supervisor	KAYE WELLINGS
Thesis Title	PRIMARY CARE PHYSICIANS' KNOWLEDGE OF, ATTITUDES TOWARDS AND PRACTICES IN SEXUAL HEALTH CARE FOR PATIENTS OF MIDDLE AND OLD AGE IN TRINIDAD & TOBAGO

If the Research Paper has previously been published please complete Section B, if not please move to Section C

SECTION B – Paper already published

Where was the work published?			
When was the work published?			
If the work was published prior to registration for your research degree, give a brief rationale for its inclusion			
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SECTION C – Prepared for publication, but not yet published

Where is the work intended to be published?	JOURNAL OF EDUCATION AND HEALTH PROMOTION
Please list the paper's authors in the intended authorship order:	PATRICE A. RABATHALY, VIJAY K. CHATTU
Stage of publication	Submitted

SECTION D – Multi-authored work

For multi-authored work, give full details of your role in the research included in the paper and in the preparation of the paper. (Attach a further sheet if necessary)	PAPER PRODUCED AS PART OF THESIS, MAJORITY OF WORK - DRAFTS, CONCEPTION AND REVIEW CONDUCTED BY STUDENT - FIRST AUTHOR, MINOR REVISIONS OF FINAL MANUSCRIPT BY ADVISORS (CO-
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	AUTHOR AND THOSE IN ACKNOWLEDGEMENTS)
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Student Signature: Patrice A. Rabathaly

Date: SEPTEMBER 22, 2018

Supervisor Signature: KAMM

Date: September 30th 2018

Primary care physicians' attitudes towards talking about sexual health with their middle-aged and older patients in Trinidad & Tobago

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Abstract

Background: A good quality sex life and interest in sex are positively associated with health in middle-aged and later life. For effective diagnosis of sexual health problems an appropriate discussion about sexual health issues, including a sexual history is advised. Diagnosis of sexual health problems may also help identify underlying non-communicable diseases and conditions more common in older adults, such as diabetes and hypertension. Despite the importance of healthy sexual lifestyles, how sexual health care is delivered and managed during consultations by primary care physicians is relatively unexplored, particularly in relation to consultations with older adult patients.

Aim: This paper aims to explore primary health care physicians' (PCPs) attitudes to sexual health care and management of middle-aged and older patients (45 years and over) in Trinidad and Tobago. Additionally, the paper aims to discuss from their accounts, what influences and shapes their attitudes.

Methods: In-depth semi-structured interviews were conducted with 35 PCPs in Trinidad and Tobago. Topics examined included physician-patient relations, sexual health care management challenges, communication and sexual history taking practices, and training needs of PCPs. The Framework analysis method was adopted for analysis.

Results: Most doctors interviewed stated that they were not comfortable with conducting a sexual history with their older patients. They admitted that they rarely discussed or initiated talking about sexual health with this age group. Barriers to sexual health communication during medical consultations included time constraints, inappropriate environmental conditions for privacy, inadequate professional referral services (existing sexual health services target predominantly family planning, antenatal care or HIV), insufficient medical training in sexual function in middle and old age, reluctant patient behaviour, conflicting personal beliefs on sexuality and socio-cultural factors, such as gender, age and societal roles. However, physicians expressed willingness to participate in postgraduate training to improve their communication about sexual health, sexual function in middle and old age and sexual history taking practices.

Conclusion: PCPs may be reluctant to raise sexual health-related issues with their older patients. Participants in this study acknowledged that their older patients may not initiate this discussion due to discomfort and embarrassment. Consequently, physicians' inability to effectively communicate with these patients could result in missed opportunities for health care prevention and intervention, and patients' concerns may remain unheard and their sexual problems untreated.

Keywords: sexual health, sexual history taking, primary care, middle-aged, old aged.

Introduction

In primary care, sexuality in later life is often neglected.²⁵³ This is contradictory to the fact that everyone aspires to grow old, the second largest population on earth is over 45 years and older (due to increased longevity) and people in this age group are still sexually active.²⁵⁴ As a result, the same attention that is given to improve their daily life filled with comorbidities from chronic diseases, improving their sexual health-related quality of life should also be considered. However, health care professionals, researchers, government policies and even globally agreed sustainable development goals have been known to overlook sexuality, sexual health care and sexual views of older people.²⁵⁵ For sexual health of the middle-aged and beyond to be put on the agenda, the first hurdle to overcome is for people regardless of age to be able to openly talk about sex. Talking about sex is difficult for most, even in the medical setting²⁵⁶ including between physicians and patients of middle and old age.

Middle-aged and older patients frequent the primary care setting for their general health concerns which may include sexual health care.²⁵⁷ There are very important clinical reasons for addressing sexual health issues during the medical visit such as identifying sexual dysfunction.¹¹⁰ In fact sexual dysfunction should possibly be considered a core sexual health concern particularly with the middle-aged and beyond due to its high prevalence - most often undiagnosed and untreated.²⁵⁸ Studies indicate that older adults value sexuality and engage in sexual activity such as the National Social Health and Ageing Project (NSHAP) study in the US which indicates that more than half of people aged 57-85 and about a third of those aged 75-85 are sexually active.²⁵⁹ It is possible that sexual concerns are common among patients; however, there is evidence to suggest that these concerns are not appropriately investigated by clinicians.²⁶⁰

Even though patients may want to attain sexual health care they are rarely forthcoming with expressing their sexual health concerns to their doctors.²⁵⁸ A review by McAuliffe et al. and other population based studies, identified some reasons for these patients' communication barriers with their health care professionals.^{180,261} The study also included the apparent lack of expression of sexuality to their partners indicating that communicating issues regarding sexuality is difficult in general.^{180,179,261} These included attitudinal barriers such as myths

around sexuality and ageing, physiological barriers such as sexual dysfunction, or physical barriers (loss of partner or lack of privacy²⁶¹ or during a medical consultation where a relative or friend may be present or situations where some patients have developed relationships while residing in nursing homes).¹⁸⁰ Sexual health provision for middle-aged and older patients within primary care appears to be inconsistent and dependent on the attitudes and training of PCPs (some of whom may be too embarrassed to discuss sex).^{262,263}

Diagnosing sexual health concerns

Despite its importance, many health care professionals feel concerned about their ability to take an appropriate sexual history, regardless of how skilled and confident they may be taking a standard medical history.¹⁵⁸ Research suggests that general practitioners (GPs) do not proactively discuss sexual health with their middle-aged and older patients. Unsurprisingly, as we noted that sexuality in the media and sexual health in our existing care policies and surveillance systems for STIs is equated with younger people, the same is true within primary care.¹⁵⁸ Studies indicate that physicians in primary care (including general practice) appear to have limited knowledge about sexuality in older patients. Specifically, female physicians have less knowledge and had more negative attitudes towards sexuality in this age group. Communication barriers between patients and physicians (amongst others) have been suggested as one of the main reasons for a low report rate of sexual dysfunction.²⁶⁴ It should be noted that sexual dysfunction such as ED are indicative of other underlying medical conditions such as diabetes, pituitary tumours, cardio vascular conditions such as atherosclerosis, and depression and hence should not be ignored.^{265,266,267}

Available research regarding sexual health communication with middle-aged and older patients and their health care providers are mostly patient centered but have highlighted some of the barriers. Few studies focused on the health care provider perspective but have been conducted mainly in high income countries.

This paper aims to explore the attitudes of primary health care physicians' (PCPs') in Trinidad and Tobago when discussing sexual health and its care with their middle-aged and older patients. This research aims to discern what are the barriers and facilitators to

communication and how do PCPs feel about discussing sex or taking a sexual history with their middle-aged and older patients. From these accounts, the researcher wishes to ascertain what is responsible for shaping their views on middle-aged and older patient sexuality and how their attitudes affect their medical consultations with these patients. This will be achieved by addressing the following research questions: *What are the communication barriers and facilitators when discussing sexual concerns with patients over 45 years of age?; How do PCPs feel about discussing sex or taking a sexual history with patients over 45 years old?; What shapes PCPs' views and attitudes about middle-aged and older people's sexuality?; How do their attitudes and perceptions of sexuality and sexual health care provisions in middle and old age affect their consultations?.*

METHODS

A qualitative methodology using in-depth semi-structured interviews was employed. This method allowed the researcher to further explore primary care physicians' perspectives on sexual health care for middle-aged and older adults and their attitudes to discussing sex with these patients.

Sampling

In-depth semi-structured interviews were conducted with a purposive sample of GPs/PCPs in Trinidad and Tobago. A provisional target of 40 interviews was set with the intention that no new data would arise using the sampling to redundancy or theoretical saturation approach. The researcher narrowed the sampling frame to include PCPs based in two out of five health authority districts nationwide. Trinidad and Tobago is a twin island state, thus one district in each island was selected. As there is only one in Tobago – the Tobago Regional Health Authority (TRHA) was selected and the largest of the four RHAs in Trinidad namely the North West Regional Health Authority (NWRHA) was chosen for Trinidad. The participant criteria were mainly based on physician gender, years of experience and whether they worked in the private or public sector. Secondary criteria determined if they were working with rural or urban communities and whether the PCPs had any experience managing special clinics such as sexual health, chronic disease or gerontology.

Recruitment

→ PCPs

The researcher sampled PCPs who were officially registered with the Medical Board of Trinidad and Tobago (MBTT) that were employed directly at health centres governed by Tobago Regional Health Authority (TRHA) and the North West Regional Health Authority (NWRHA) in Trinidad to participate in the study. The lists of PCPs currently employed and available (not on vacation) were provided by the County Medical Officer of Health (CMOH) for that district enabling the researcher to confirm sample and recruitment. PCPs were mapped using the sample criteria as a guide and contacted and offered a participation request. The final list of study participants were recruited based on their response to availability and willingness to participate.

→ GPs

The researcher sampled GPs (private PCPs) who were officially registered with the MBTT or General Practitioner Board of Trinidad and Tobago (GPTT) employed in private offices located in the same geographic borders that are served by TRHA and the NWRHA to participate in the study. Recruiting GPs were more difficult as there is currently no complete and accurate list of GPs that could have been obtained by any authority in the country because they function privately. The GPTT or MBTT only ensure that these practitioners have valid medical practitioner license locally hence they do not manage up to date lists of practice location or even contact information for this group. As a result, GPs were recruited via purposive sampling that met the same sample criteria. Possible candidates were suggested by advisers at the Ministry of Health and after making contact with these GPs a final list of confirmed study participants were recruited based on their response to availability and willingness to participate.

Data Collection and Analysis

The interviews conducted were part of a wider mixed-methods study that aims to assess PCPs' overall knowledge, attitudes and practices with regard to sexual history taking, communication and management of sexual health care for middle-aged and older patients. The topic guide employed was not only informed by supporting literature but also based on questions derived from a priori hypotheses being tested in the wider study. The aim of the interview phase was to determine physician's general perception of the sexual healthcare status of patients aged 45 years and older and physician's views about taking a sexual history and communicating with these patients about sexual health. The topics explored included the physician- patient relationship; sexual health in later life; sexual health care priorities; clinical experience on managing sexual health in older adults, delivery and challenges in primary care; factors facilitating and hindering effective communication of sexual health including taking a sexual history; and physicians' training needs in sexual health care of older adults.

Each participant was provided with a study information sheet and consent form to be signed indicating their approval to participate and permit use of their anonymised and non-linkable data given in this study. The interviews ranged from thirty to ninety minutes and were conducted in consultation rooms within the health centres where participants worked.

Analysis was initiated during the data collection period to inform further interviews. The complete data set was analysed using Framework analysis, a content analysis method which uses a thematic approach to classify and interpret summaries of the qualitative research data.^{246,268} The backbone of the framework was created using the core themes identified in the literature and a priori themes. Using deductive methods, the interview data were coded and classified under these headings and frames in Excel. Inductive methods followed to further analyse the emerging themes that arose from the data summaries. The framework coding and analysis was done by the primary researcher and a sample of transcripts was double coded and others reviewed by the research supervisor.

Ethical Considerations

Ethical approvals were attained from the ethics committees of the London School of Hygiene and Tropical Medicine (LSTHM) and the Ministry of Health of Trinidad and Tobago. No difficulties were experienced in attaining ethical approvals and no ethical dilemmas occurred

during data collection. No incentives were given to participants, but refreshments were offered during interviews. For this paper, all linkable or identifying details were replaced with a general tab e.g. MPV or FPB followed by a 2-digit code to protect the participants and maintain confidentiality.

Results

In-depth semi-structured interviews were conducted with 35 PCPs from private (n=19) and public healthcare practices (n=16) in Trinidad and Tobago during the period March – May 2011. A provisional target of 40 interviews was set, however it was observed that no new data arose using the sampling to redundancy or saturation approach,²⁶⁹ by the 35th interview, as many participants provided repetitive verbatim or similar perspectives on the same questions. During purposive sampling, the researcher aimed to ensure that the range of characteristics and experiences of the PCPs interviewed met the sampling criteria closely. Non-responders, n=3, were due to unavailability to participate. The PCPs' collective experiences (attitudes and subsequent actions) during sexual health consultations with patients of middle and old age, and the sociocultural factors that may have shaped these behaviours are presented below.

Communication barriers in sexual health consultations with older patients

PCPs described various obstacles responsible for the ineffective communication that ensued during discussions regarding sexual health concerns of middle-aged and older patients. Categorized broadly, these barriers include socio-cultural factors, workplace setting limitations and the status of the physician-patient relationship. Influenced by PCPs' personal beliefs about sexuality, factors such as age, gender, ethnicity, religiosity, education level, socioeconomic or professional status and community locale (rural or urban) impact on the outcome of sexual health discussion. Deterrence was attributed to the negligible privacy in some consultation rooms, lack of appropriate referral services for sexual health and time constraints owing to the large clinic attendances. PCPs also analysed features of their physician-patient relationship and remarked that a good rapport, mutual respect, a basic level of comfort and trust must be well established between both persons. Once lacking, the probability for sexual history taking and fruitful discussion on sexual health concerns reduces.

Sociocultural factors

PCPs' personal beliefs about discussing sex

Discussing sex in the medical setting appeared to be taboo for most physicians in this study. When asked how they would describe their feelings talking about sexual health with their middle-aged and older patients, the words 'reluctant', 'reserved' or 'uncomfortable' were most common. Very few PCPs identified with feeling as unaffected or normal. Notably, during the interviews with the researcher, some PCPs even in their past accounts about older patients, avoided use of words or phrases with 'sex' or 'sexual' in them and never mentioned the sexual reproductive organs by name, although these are all appropriate medical sexual jargon.

“Some of the patients complain that they don't feel to... (*PCP whispers*) you know? to go and do... (*PCP nods at researcher to assume understanding of the words omitted*) so I explain that this happens at menopause.” **FPB01**

“What's happening is a normal thing (*PCP refers to menopause*) and they shouldn't stop, you know...? (*PCP looks assumingly at the researcher*). I let them know that they could still have the best...” (*nods his head expectantly at researcher to assume understanding of the words omitted*).

MPB03

Some PCPs even avoided the term 'sexual history' and referred to it as “those” questions. Other PCPs were able to articulate the words but felt uneasy about taking a sexual history and that the sexual history itself appeared to be a barrier. PCPs also explained that the notion of the discomfort could have been triggered by either the patient or physician.

“When you are asking 'those' questions, they start to look away, show signs of anxiety and being uncomfortable. There are some boundaries, you know, (*nods in agreement at researcher*) I do feel uncomfortable.” **FPB07.**

Some PCPs admitted that they react to the patient's expression of embarrassment when talking about sexual matters and at other times the discomfort arises with them and they convey it to the patient.

“I know it's something we have to overcome but if I am uncomfortable asking those questions and if that shows the patient will be uncomfortable.”

FPB02

Some PCPs admitted that it was trying at times to listen to their patients discuss sexual practices that did not align with their own values or comfort zones.

“It is difficult to not let your own personal values influence your interaction with the patient and not be judgemental (*of the sexual circumstances presented by the patient*), because you can feel very uncomfortable” **FPB06**

PCPs acknowledged the possibility that their perception of sexuality could influence how they perform and feel about taking a sexual history, or optimally treating middle-aged and older patients for sexual health concerns.

Gender preferences

PCPs reported that when it comes to discussing sexual concerns, their middle-aged and older patients preferred speaking to physicians of their same gender. PCPs shared that they too were more comfortable as they recalled better rapport with the patients in those consultations.

“Most women would prefer to see a female doctor” **[Male PCP]**

“I have had a couple male patients who were open talking about sex, and I did find it a little bit uncomfortable.” **[Female PCP]**

PCPs also reported that some older female patients tend to be more reluctant to discuss sexual health issues with them if the patient has any affiliation with other staff working at the clinic (health care professionals/customer service representatives). PCPs explained that these patients become apprehensive to share or have any personal information especially anything regarding their sexual health status documented. They fear that their data will not remain private and confidential as these other persons could possibly access their information. PCPs were clear to distinguish that it was not due to mistrust with themselves as these patients were willing to see the PCP at another clinic.

“Most women even with a female PCP don’t want to disclose sensitive sexual health info at a clinic where they know the people who work there.”

[MPV02]

PCPs recommended for future; it should be optional for patient’s not to register their health concern with the other attending health care personnel that they visit prior to consultation with PCP.

Age

PCPs identified “age gap” as a barrier. In their accounts of their sexual health consultations with older patients, “discomfort”, “embarrassment”, and “fear” were common themes resulting from ageist views on who is eligible to ask or talk about sex. PCPs reported that as their patients get older, if they are still sexually active they perceive their own sexuality as something to hide, otherwise they expect it is to be non-existent.

“Personally, it’s a difficult topic (sexual health) to broach especially when you’re dealing with people who could be the age of your parents who might think that this is not something to be discussed” **FPB07**

Some PCPs reported a profound anxiety to talk about sexual concerns with a patient with whom there was a vast age difference between them. For instance, PCPs have stated that patients who perceive them as “very young” are more likely to be reluctant to discuss sexual concerns with them regardless of who raised the topic. The PCPs themselves found it difficult to discuss sexual health with older patients because they recognize the patients as elders to whom respect must be shown and discussing sex – the topic or asking an elder about their private experiences, was perceived by some PCPs as invasive, too personal or disrespectful.

“A woman of 70 years is not going to start talking about her sexual health because it might sound disrespectful. Regardless, only if she brings it up, no problem, I will talk about it, but I would not bring it up.” **MPB08**

Most PCPs explained that their reluctance for initiating (or continuing) a discussion about sex, was due to fear of asking something viewed as offensive to a middle-aged and older patient. Avoidance was preferred by PCPs whose patients forewarned them not to ask about sex as they expressed their ageist view of sexuality inferring that they were too old to have sex or responded somewhat ashamed since talking about it to them was viewed as taboo, embarrassing or ‘dirty’.

“They don’t think that beyond a certain age they should be engaging in sexual intercourse or they think that if they had a problem in that department, it’s to be expected - a natural part of the aging process, so to speak.” **FBP06**

However, some PCPs contemplate that some of these patients just felt ashamed to confirm that they still were sexually active.

Community (Locale)

PCPs reported that they noticed in small rural communities communal social norms and practices to socialise together and to share about each other's chronic illnesses except for sexual health matters. PCPs found older patients to be more shy or outright reticent on this topic in such closed societies. The social norm is to be guarded about sexual matters, so these patients are less likely to initiate such a discussion. PCPs were explicit that if they intend to discuss sexual health, they really need to be sensitive about how it is brought up as to avoid stepping over anyone's boundaries, causing offence or embarrassment. If such a misstep occurred, PCPs have experienced severe consequences including communal mistrust, difficult to redeem for PCPs who worked in a small rural community. PCPs also discovered that some of their older patients preferred to pursue alternative medical routes especially for sexual concerns because they felt it was too taboo to discuss in a formal clinical setting.

“A lot of them will go to the herbalist and buy these things rather than seek professional help. They come to us only after these alternative methods did not work or made their circumstances worse” **FPV04**

PCPs have expressed their disappointment being ‘plan b’ when it comes to sexual health issues but also voiced their acceptance that traditional healers and use of herbal products is cultural practice for older populations and it appeared more common in rural areas.

Religion & Ethnicity

PCPs voiced that it is more noticeable that both physician and patient are inhibited from effectively discussing sexual health-related issues (regardless of who raises it) if the patient is of a staunch religion or of a different ethnicity.

“I ask more of the Afro-Trinidadian men. If they are Muslim I wouldn't dare go there, they are too religious. Very religious people won't want to discuss this, they don't want to go there.” **[PCP's ethnicity: Afro-Trinidadian]**

“You get more openness from Afro-Trinidadian women than you do from Indo-Trinidadians – to me... African women are far freer with talking casually about these things. Indian women are a lot more cagey...” **[PCP's ethnicity: Mixed Trinidadian]**

In most cases, PCPs were more comfortable with speaking with a patient that was of a similar ethnicity as they assumed having possibly more similar cultural stance on the sexuality and less likely to offend the patient.

PCPs' Sexual Health Training

Background in sexual health

Almost all PCPs admitted that they did not have sufficient exposure to information about sexual health in general and even less or not all pertaining to middle-aged and older adults during their medical training. They felt this may have disadvantaged them in terms of their level of competence around communication of such sensitive topics and having adequate knowledge to offer appropriate care.

“In med school we did not have much exposure to sexual health; it is not fully integrated into the curriculum as much as what would be needed to make us competent at practicing.” **FPB06.**

PCPs have also admitted that they are just not familiar with prevalent sexual health concerns in middle and old age other than erectile dysfunction, menopause and STIs. They readily acknowledged that uncertainty and a lack of confidence of being able to diagnose or improve older patient sexual health concerns that are unknown to them encourages them to avoid initiating sex health discussions and in the fewer events when unfamiliar sexual health concerns are presented by the patient, the PCP is more likely to offer a referral. The PCPs indicated the need for more exposure to sexual health topics and skills at the medical student level, particularly in terms of communication, sexual history taking and sexual function in middle-aged and older adults. PCPs unanimously agreed that further training at the postgraduate level is important, and they would be interested in participating in such training preferably in the form of CPD course.

Diagnostic sexual history taking skills

PCPs reported that if they do take a sexual history with this age group, it is not done routinely and only due to a patient presenting a complaint (mostly STI-related) or as in majority of the cases if the patient initiates the discussion. It was unanimous among PCPs that taking a sexual

history with these patients is indeed important; however, not prioritising it is more common practice

“The sexual history was just part of your medical history taking skills. It targeted largely young people because even the whole ED thing, that’s a recent issue that is, not really discussed that much. **FPV03**

“From my personal experiences I haven’t done a lot of it unless they brought it up” **MPB02**

Some PCPs attempt to introduce the topic, but most agreed that the typical questions on a standard sexual history are also not adhered to in practice with this age group. They take a rather focused version neglecting questions regarding sexual orientation, sexual preferences (type of sex), and, if appropriate, contraception, and number of sexual partners. Sexual orientation is the most avoided question and due to discomfort, all 35 PCPs interviewed stated that they had never asked their older patients this question.

“I would be very uncomfortable; I actually never asked a patient that (referring to sexual orientation) but maybe it is something that we need to consider. Sometimes on their physical appearance you may wonder that, sometimes a lot of patients become offended if you ask any questions like that, especially our culture. We may not see asking sexual orientation as a normal question, so I have never considered that to be honest.” **FPB05.**

Few PCPs shared their experiences in consultation with a homosexual but none of the PCPs shared experiences treating a transgendered middle or old aged patient up to the time this data was collected. Even though they admitted being aware of LGBTIQ persons, in PC sexuality is assumed to be purely heterosexual.

Patient’s lack of education:

Some PCPs described how it was difficult to engage with older patients when they held entrenched beliefs about sex, making it difficult to offer advice such as ‘being a condom user infers that you have an infection’, ‘having sex with a virgin can cure HIV’, and ‘sexual dysfunction means not being able to have sex five and six times a day’

“In terms of an older audience, you cannot teach an old dog new tricks it’s a little more difficult to change their mind about some things. **MPB06**

PCPs admitted that they really feel turned away to discuss sexual health with a patient who is ill informed and difficult to accept their counsel. PCPs suggested that there is need for population wide health promotion in sexual health education tailored for patients in middle and old age about the sexual health concerns they are more likely to face at this point in their lives. Some ideas included special talks, posters or pamphlets in the waiting room as these will help normalise sexual health within the clinical setting and give patients more confidence to discuss these issues with their doctor. This in turn will increase the population's overall awareness and it may improve PCPs' overall confidence to initiate such discussions with them.

“I think once the public is sensitized that doctors will be asking these questions from time to time, they will be more aware and won't think you are minding their business” **FPB03**.

Workplace Limitations

Lack of national priorities for sexual health provisions in middle and old age

PCPs described that the clinics are oversubscribed by mostly middle and old aged patients of a lower socioeconomic status. PCPs are encouraged to focus on chronic disease management for this age group, namely diabetes, hypertension and other cardiovascular diseases, although they have recognised that sexual health care is linked to some of these chronic diseases.

“We work in a system that is tremendously overloaded with patients and understaffed with doctors. You try to focus more on the problem they came for than address issues that they have with sexuality” **MPB02**.

Lack of appropriate preventative care and referral services

PCPs acknowledged there is no focus on sexual health care of middle-aged and older adults the current PC system they work in does not foster supportive systems such as genitourinary medicine (GUM) services for sexual dysfunction in women and men in middle and old age and far less for psychosexual therapy. Men rarely attend the health centre; they have denial issues when it comes to having health problems especially impotency. For these patients to be accurately diagnosed PCPs refer their patients for secondary care at the nearest hospital for a gynaecologist or a urologist consultant in private health care (if the patient can afford it). PCPs reported that psychosexual therapy is not presently available in primary care. The

existing protocol for such circumstances is to refer the patient to a medical social worker whom PCPs all deem are inadequately trained to address some of the sexual health issues. PCPs admit to feeling helpless in these situations as they know they are making fruitless referrals. Unsurprisingly primary care also lacks proficient preventative care clinics and health promotion for sexual concerns especially for middle and old age patients as their sexual health concerns are less recognized, diagnosed and treated than younger patients. PCPs agreed that antenatal care for pregnant women and the STI clinics are the only sex health clinics that are supported in primary care which are not really geared to address the sexual health concerns of older patients.

We need to have the support systems for appropriate referrals and we also need to be competent to investigate.... A lot of times we are not, and we cannot inform patients” **MPB05**

Resource poor setting

PCPs explained that they work in resource poor settings with a limited manpower, time and treatment options which hamper their ability to be more exploratory during their consultations.

“doctors in the community will reiterate that we wish we had more time to actually provide optimal primary healthcare” **MPB03.**

Even when PCPs do attempt to address sexual health issues they concur that the environment in most public health centres is not conducive in making the patient feel comfortable and, in some cases, there are concerns about maintaining confidentiality.

“Public health centres don't offer privacy for patients, so the patients will be in one room and they will not be a real door, there is just like a curtain and you can come in at any time” **FPB04.**

Necessary infrastructural changes to the consultation rooms in some primary buildings are needed so that they can install doors or use sealed off rooms for more privacy. Also, all patients could be given an optional brief sexual health care assessment questionnaire to complete to give directly to their PCP. This technique is successful three-fold as it offers the opportunity for the patient: (i) to identify sexual health issues and keep this confidential to

themselves bypassing registering this with other health care personnel; if completed it triggers the PCP to initiate a sexual health discussion/take a sexual history and (ii) the patient and PCP can address this concern during the consultation more comfortably as the patient will be expecting the discussion. Even if the form is not completed and returned to the PCP empty the PCP can still use this opportunity to confirm with the patient that there are no sexual health concerns as s/he notices the form was left incomplete and this will ensure no missed opportunities for sexual health care intervention or prevention.

Professional barrier

There appeared to be collective beliefs about roles in primary care regarding the expected physician-patient relationship. PCPs reported that older patients view them as a person in authority and part of the elite in society who they should treat with respect (regardless of their age).

“When people come to the clinic or hospital, they’re expectant, they’re needy and they come from a position where they feel you are high up and they’re down there” **MPB05**.

“There is a professional barrier; doctor vs. patients, they don’t see the doctor as being an equal; they see the doctor as being this person of authority, so they are very cautious about what they say to you” **FPB06**.

The reality is that hierarchy creates a professional barrier between physician and patient. Patients revere the PCP inculcating professional boundaries and the physicians offer paternal focused care mostly due to resource limitations and sometimes because of the patient’s education level or lack of compliance to treatment regime or they prefer it.

Physician-patient rapport

PCPs reported that they try to foster better rapport by keeping their questions brief, while letting patients know that sexual health is important and that their issues are common in the attempt to facilitate the discussion and make the patient less uncomfortable (as well as themselves). However, despite the obstacles expressed by most interviewed doctors some of the more experienced PCPs used communicative techniques to empathise and inspire the patient’s trust to facilitate a sexual health discussion or even to take a history.

“It has to do with empathy. First, try to calm their fears, convince them that you have their best interests in mind. Educate them, let them know that there’s a privacy clause that cannot be broken at all; now they’ll open and talk to you. When they start, whenever they come to the clinic, they look for you.” **MPB03**

PCPs who described how older patients are not forthcoming when talking about sex, even when the PCP initiates the discussion, also conveyed that their patients disliked being asked about their sexual activity. Their older patients stated it could be too personal and ‘disrespectful’ to them evidenced when patients abruptly close questions when asked about sexual concerns to end their own discomfort. PCPs acknowledged that ignoring older patients’ sexual health is detrimental as problems will persist or develop. Most PCPs agreed it is the physician’s role and responsibility to initiate discussions, as patients may be unaware of what questions to ask and, in most cases, will not bring up the topic. PCPs attempt to facilitate the conversation by disguising the topic among other medical conditions such as chronic diseases, which some have identified as very important for middle-aged and older males.

“when I am prescribing medications I would say okay, some types may cause a little problem with erectile dysfunction – Are you experiencing any problems in that already? Then I will talk about it in relation to heart disease and day well you know it might be a very early sign of Coronary Artery Disease especially for the males in this age group. You are telling them about the heart which should be an okay kind of topic makes them more readily to talk about it.” **FPB01**

Other helpful suggestions like the ones above-mentioned to stimulate discussion on sexual health included using tools to aid during the medical consultation. Aides suggested included algorithms, a sexual health inventory or a sexual health scale like those used for detecting depression. More simple tools to aid patient comprehension were also suggested, such as 3D sexual reproductive anatomy organ models and charts describing the physiology of sexual dysfunction. Even a pamphlet in the waiting room with a few questions or checklist of topics or information you would like your PCP to offer to the patient could be considered. These

last options provide the opportunity for the PCP to initiate the discussion but guided by the patient and was favoured by most PCPs as they felt this method confirmed the patient's consent to participate in a sexual health consultation.

Discussion

PCPs reported discouraged attitudes and a lack of willingness to discuss sexual health, reinforced by the existing limitations in the provision of sexual health care and the limited skill set of some PCPs in sexual health care in later life. These attitudes arose because of several factors. These included: resource constraints due to overload of patients and lack of medical staff (including not enough doctors), inappropriate environmental conditions (such as lack of proper doors in consultation rooms for privacy), and inadequate professional referral services (such as limited sexual health clinics and no sexual health therapists or specialist in older people sexual health). PCPs acknowledged that they have limited medical training in sexual health of older adults and communication skills in sexual health. PCPs also spoke about their 'reluctant' patients' behaviour which made it difficult to breach or continue a discussion on the topic, as well as how their own beliefs and the above-named sociocultural influences affect impact on their sexual health care and delivery. However, since these physicians recognize the importance of sexual health care for these patients, they expressed a willingness to attain training to improve their background in sexual health in later life and communication in sexual history taking practices. PCPs recommend empowering their middle-aged and older patients about sexual health as they think it may improve their physician-patient relationships and welcome support from Ministry of Health to provide directives and appropriate resources to improve overall direction in sexual health care and treatment for this age group.

Study Limitations

This study has provided a greater understanding of the PCPs' accounts however, potential biases were considered when interpreting the findings. We were reliant on self-reported data from the interviews and these accounts were strictly of the physicians' perspective, and some of their responses may be biased by social desirability. In some interviews PCPs answered questions quite cautiously by providing brief textbook-like answers to the more biological questions such as – “What comes to mind when you hear the term ‘sexual health care’?” and for other questions such as “What questions do you ask your middle-aged and older patients when you take a sexual history?” they responded what they perceived the interviewer wanted to know. With this in mind a few check-back questions were used to control for this "impression management". Interestingly and unknowingly, some PCPs divulged more information, or their responses changed completely the second time they were asked a few of the same rephrased questions - possibly they became more open and comfortable as the interview proceeded or as time allowed. This type of initial bias influenced how the researcher proceeded with data collection in the same and future interviews. In terms of analysis, the researcher was able to determine possible reasons for the change of responses which provided more insight into the observed attitude and behaviour that the physician exhibited when discussing their perception of sexuality of and sexual health care practices with middle-aged and older patients with the researcher. Based on repetitive frequency of themes it was clearer for some that these were the most common expressions of the PCPs for example out of 35 interviews, if 35 persons indicated that they never ask a patient about their sexual orientation it is quite clear that was a unanimous feeling. If 30 persons indicated that they were uncomfortable discussing sex with old aged persons that would still be a common theme. For the one or two persons who shared a view very different from everyone else such as I would take a sexual history with any patient regardless of age even if they are over 70 at every visit - this would be an outlier as it was the only or least frequent theme presented.

Not all outliers are discussed in this paper, but they are described in various places as they too were PCPs' views. As qualitative interviews were only conducted with 35 persons which was 20% of the PCP population so even though it may be an outlier out of the 35 this comment could be representative of other PCPs. I selected what I considered the “classic”

themes from my dataset that exemplified the key themes or patterns that emerged. I focused on the interviews that best exemplified the dominant features of the data explored and on those themes that grabbed my attention e.g. if I felt it was interesting or a new revelation, different from everyone else - these were outliers.

All interviews were conducted in primary healthcare settings, some at times when it was extremely busy. This could have been a limitation as interviews had to take place within certain time constraints, such as during a space between patient consultations or on the physician's lunch break, putting further pressures on the service. At one health centre as the patients reacted angrily when they thought the researcher was jumping the queue and being favoured by the physician while they have been sitting in the waiting room in turn for a very long time. In terms of analysis, this could have contributed to the brevity of some interviews or responses rather than avoidance of a question or topic being discussed.

Additionally, the nature of the questions in this interview raised sensitive subjects, about the physician's personal perspective about sexual health and their treatment practices which some respondents generally at the beginning of the interviews would rather not talk about, hence opportunities for sensitivity bias. To avoid this, the researcher made every attempt to build trust by using projective techniques and indirect questions. In addition to sensitivity bias, some physicians may have provided socially acceptable answers that may be false because they felt that their position or office could be under examination. This was because this study was permitted by the Ministry of Health and as a result some physicians did not want to participate. Interacting with these biases there was moderator bias which was due to the researcher's gender, age and non-clinical background depending on the interviewee. This was experienced during interviews with older male physicians as the researcher is a young adult female. All of these biases were recorded as part of 'observational interview field notes' and were also taken into consideration when analysing each case interview.

The PCPs overall attitudes when talking about sex in primary care were discomfort, disinclination to treat sexual health issues of middle-aged and older as a priority and insecurity with regard to how much they actually knew about sexual health of this age group.

These findings have much similarity with other findings in the literature. For example Gott et al. found that GPs in the UK do not address sexual health proactively with older people and that, within primary care, sexual health is equated with younger people and not seen as a valid topic for discussion with the older age group.¹⁵⁸ Low level of awareness of later life sexual health issues among GP participants and significant barriers to initiating discussion relating to sexuality in consultations with older patients were similarly identified. The authors also acknowledged the need for continued professional education in sexual health of older adults for physicians.¹⁵⁸ The reservation among older patients and their healthcare providers regarding the discussion of sexual health, frequently constitutes the main barrier to open and effective communication. A study conducted by Politi et al. concluded that the older patients felt that health care providers should ask about sexual health issues only if questions relate to an associated health problem (e.g. STIs) and in ways that can be answered by all regardless of partner status, and follow questions with non-judgmental discussions.²⁰⁶ If the physician can initiate such a discussion and a good screening sexual history is routinely elicited, much useful information will be obtained. Furthermore, the patient may become informed to a number of issues of which he or she might not have been aware.¹⁸³ Perhaps a door has been opened so that if concerns or problems about sexual functioning arise in the future, the patient will feel more comfortable discussing them with the doctor.²⁷⁰

Many physicians feel concerned about their ability to take an appropriate sexual history, regardless of how skilled and confident they may be taking a medical history. Similarly, in our study PCPs voiced their lack of confidence regarding their professional competencies in sexual health care and communication with older adults. These findings may also exist in other developing countries whose medical school curricula are being taught with a similar sociocultural influence. Regardless of the uncomfortable situation, or patient's age or gender, a sexual history is very important and there are core components of a sexual history that every practitioner should ask and discuss.¹⁸³ With reference to the middle-aged and older age group of this study identifying sexual dysfunction should possibly be considered a core component due to the high prevalence of sexual dysfunction in this general population - most often undiagnosed and untreated.²⁷¹ It should also be identified as a marker of organic or psychiatric

disease e.g. erectile dysfunction (ED) as a risk marker for cardiovascular disease and as an iatrogenic side-effect of medication or surgery.²⁷¹

Regarding the professional barriers that exist in the physician–(middle-aged or older) patient relationship this may be more specific to Trinidad and Tobago and possibly other developing countries that still promote the paternalistic model of care, specifically due to resource constraints, lack of sexual healthcare policies on the national level as well as strong sociocultural influences. The societal influences in Trinidad & Tobago can stem from living in an extended family or one in which there is community loyalty – where the ‘village brings up the child’. These lifestyle settings influence one’s personal beliefs regarding respect and care and more familial and societal roles. In addition to sex being taboo, the T&T society is accustomed to show respect for the elderly, therefore when one becomes a physician this ingrained need to show respect continues even in the medical consultation. Hence, they find discussing sex with an older patient uncomfortable as it is perceived as disrespectful (‘minding their business’). On the other hand, patients have an inbuilt respect for professional roles/ office. Society is taught to have respect for people in authority.

This paternalistic fiduciary relationship is reinforced because most middle-aged and older patients do not have many alternatives (beside unaffordable private care) to seek sexual health care elsewhere. This is because it is unlikely for them to attend family planning clinics as they do not meet the criteria (or interested in contraception or fertility, seeking antenatal or postnatal care). There are sexual health clinics (genitourinary medical (GUM) services) but a referral is usually required from a health (primary care) centre and these services focus primarily on medicalized sexual health care – HIV and other STIs rather than sexual health-related quality of life and sexual functioning and wellbeing -which may be more pertinent to this age group. Middle-aged and older patients are more likely to seek doctors in the primary care setting or the general practitioner (private), both at which they seem to have difficulty acquiring care for their sexual health needs²⁷⁰

Unfortunately, sexual problems are frequent among older adults, but these problems are infrequently discussed with physicians.²⁷² The physicians agree it is their responsibility to initiate discussions about sexual health (putting aside their personal discomfort talking about sex with an older patient) however because of their resource poor settings and time constraints some feel it should be a shared responsibility especially if it is a concern of the patient. This causes controversy over the societal norm of paternalistic care because even though the physicians want to be in control of the consultation (particularly regarding treatment options) they don't want to exhibit this control when talking about sex with the patient. The patient also does not want to breach the topic as they are also uncomfortable thinking that they will disrespect the physician. Contrary to these needs, if the reverse situation occurs where sexual health is not a primary complaint and the physician initiates the discussion the patient is even more uncomfortable and feels disrespected.

Existing evidence suggests that discussing later life sexual health issues within medical consultations is problematic both for patients and for professionals.²³¹ Due to these dilemmas the suggested way forward will include the promotion of appropriate health education for all, further research and policy development in sexual health and provision of appropriate resources to improve sexual health care for middle-aged and older adults. There is urgent need for up-to-date sexual health education for medical students, present day physicians and patients. Public knowledge and awareness about sexual health in older age groups needs to promote, rather than just focusing on the under 25-year age group and it should also focus on including improving understanding about how aging affects sexuality. To avoid underreporting of sexual health issues in this age group and the loss of key opportunities for prevention and intervention¹⁵⁸ there is need to prioritize, at a national level, sexual health care for middle-aged and older patients in primary care settings. This can be instituted by the design and implementation of sexual health policies that include care for the middle-aged and beyond; medical education policies that ensure mandatory continuing medical education in sexual health, sexual history taking and sexuality of older adults for practicing physicians.²⁷³ With regard to further research, there is need to determine the middle-aged and older patients' perspective of barriers and facilitators when communicating with

physicians, their sexual health needs, and services they require and to compare with the views expressed by physicians.

Conclusion

Primary care physicians may be reluctant to raise sexual health-related issues with their older patients. Their patients' may not initiate this discussion due to discomfort and embarrassment. Consequently, physicians' inability to effectively communicate with these patients result in missed opportunities for health care prevention and intervention, and patients' concerns may remain unheard and their problems untreated. As a result, there is an urgent need to address sexual health care among this vastly increasing middle-aged and older population in our health system with regard to care and treatment, health education and training policies with our medical physicians in primary care.

4.2.1 Mixing Phase

After qualitative data analysis was completed, the emerging themes that arose from the summaries were conceptualized. Each qualitative concept was then assessed to determine whether it could become quantifiable for the purposes of creating a survey instrument.

4.2.1.1 Moving from Qualitative to Quantitative Phases

Figure 11 describes the steps taken in moving from the qualitative phase to quantitative. It aims to describe how data from the interviews were selected and converted to appropriate measurable concepts used to design the survey instrument.

Steps 1 to 5

These steps primarily describe the Framework analysis process. The first step involved a verbatim (word for word) transcription of each interview conducted and, though it was quite tedious, it was an opportunity to become immersed in the data. Reflective field notes were added to the transcripts such as my thoughts or impressions during the interviews as part of initial interpretation. Coding was initiated using deductive methods as some codes were pre-defined from existing communication and KAP theory and areas of interest such as comfort level. This was followed by open coding which involved reviewing each transcript line by line, ascribing a label that described my interpretation of each paragraph or section. Codes included patient or physician behaviours, attitudes, perceptions, values, beliefs, and my own experiences during the interviews such as my perceptions e.g. PCP discomfort with interview—no eye contact with researcher.

By the end of the coding, the data were fully categorised systematically and, in a position, to be compared or contrasted with other parts of the data set. At this step, the transcripts undergo indexing or charting according to the existing categories and codes which were entered into an excel spreadsheet to generate a matrix of this data. Charting was a form of summarizing the data by code categories from each transcript. Once the matrix is created, ideas, concepts or potential emerging themes are noted. Connections were mapped between categories to explore relationships and associations in attempt to interpret the data.

Step 6 -7

After reviewing the entire qualitative matrix, I had to identify which aspects of the data can be quantifiable – meaning that can be turned into a quantitative question, concept, or idea that can be tested in a survey instrument. For example, PCPs identified that they feel uncomfortable discussing sexual health with their middle-aged and older patients. This concept is Comfort Level, and this was ‘quantifiable’ or measurable as I was able to ask about comfort level in the survey and convert the measurements into a Likert scale to ascertain PCPs’ levels of comfort. This is different from themes or concepts that could not be measured in a survey such as the number of times PCPs refrained from using the word ‘sex’ or described a reproductive organ in layman terms. This concept was labile and interpreted as ‘Avoidance’ and it was very difficult to ascertain how this could have become a question on the survey or measured in any format. By the end of this step, all of the concepts that could have been measured in the survey were determined. Existing surveys’ formats and styles were reviewed for determining how questions that were applicable to each concept type should be phrased or created. For example, there were several different ways to ask about physicians’ attitudes or comfort levels such as ratings, scales, or dichotomous options.

Steps 8 -12

These steps were critical in deciding the final survey type which was a KAP approach but one that still met the CME style that I was interested in assessing. I wanted to ensure that the original survey instrument that I created was well suited for the purpose of assessing KAP in a format that was representative and applicable to the study population of PCPs. I selected from the interview data a few clinical scenarios of real experiences described by the PCPs. I then researched accurate clinical diagnoses and formulated a clinical vignette derived primarily for their experiences and matched appropriate questions assessing knowledge, attitudes, and practices. The aim was to find a way to get these PCPs to tell me how they felt about a patient, what they assumed their condition or problem was at presentation, and how they would manage the patient. This was easy to ask in an interview but had to be well planned in a survey design.

I aimed to standardise each set of questions assessing KAP for each clinical scenario, by ensuring they each had at least one question testing knowledge, attitudes, and practice; one

correct answer only for knowledge questions and comparable patient gender, age, presenting complaints in each scenario. It was difficult to select only six scenarios, but they were chosen based on ability to fit into the KAP criteria for this study given the restrictions of word count for each scenario and question set. Once the consultations (clinical vignette sections) were complete, the rest of the survey was designed to address other aspects of the research questions in terms of associations of other aspects of sexual history taking knowledge, attitudes, and practices that were identified not only in the qualitative data but also ensuring that they tested the a priori hypotheses that were proposed (see Chapter 5: Study Hypotheses). For example, one of the hypotheses which queried PCPs training in sexual function in later life will make them more likely to take a sexual history with older patients. This was addressed in the survey by ensuring questions about PCPs training levels in sexual health were asked. This was then comparable with questions on willingness or frequency to take a sexual history. Once the draft survey was designed, the number of actual questions for each section was agreed and then an online version of the survey was piloted for feedback primarily for feasibility, usability, acceptability, and understanding.

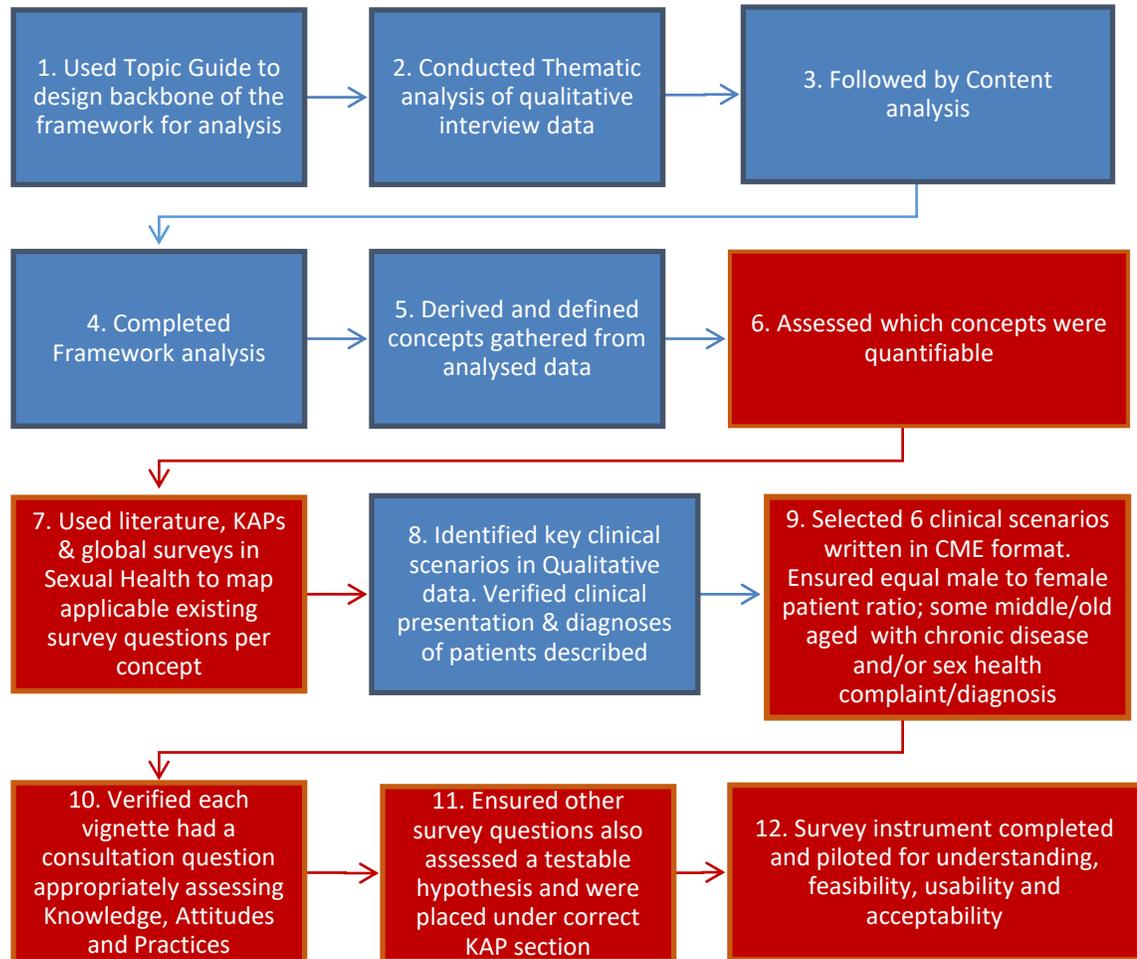
4.2.1.2 Strengths and Limitations of the Mixing Phase (From Qualitative to Quantitative)

Generally, all of the qualitative data could have been coded quantitatively as it illustrated capability to be categorised and assigned meaningful numerical values as I converted words (themes) into numbers through coding and looking for emerging patterns.^{274,275} I manipulated the themes to establish the foundation for the KAP survey (a suitable instrument grounded in the evidence provided by the participants). These measurable constructs enabled an opportunity to achieve statistical insight to further support the meaning of the qualitative data and to help examine a priori hypotheses.^{276,277} Converting the qualitative data into measurable constructs did not undermine from the qualitative thematic analysis or results, rather, it revealed areas where I assumed there would be complementarity and statistical backing for the interpretation of some qualitative results. This experience offered reassurance for the mixed-methods and triangulation executed in the subsequent phases.

Figure 11 : Stages in the Development of the Quantitative Instrument

■ Steps in the Qualitative Data analysis

■ Steps in the Quantitative Instrument design



Chapter 5 – Quantitative Component:

Associations between PCPs' Characteristics and their KAP in Later Life Sexual Health

5.1 Quantitative Phase

The following section provides a justification and comprehensive description of the quantitative phase of this study.

5.1.1 Method Justification

This phase was employed to answer the following research questions of this thesis:

- ii. *What are the associations between Primary Care Physicians' (PCPs) characteristics (demographics) and their knowledge, attitudes and sexual healthcare practice?*
- iii. *What are the associations between physicians' knowledge and attitudes and their reported sexual healthcare practice?*
- iv. *How do PCPs characteristics influence their reported sexual healthcare treatment options offered to patients in middle and old age for sexual health-related concerns?*

The survey method was selected as the most appropriate for addressing the research questions. This technique provided a broad capability to the researcher enabling her to collect applicable information covering the different aspects of the research questions, including personal facts, attitudes, practices, and opinions of the study population. This method was efficient and approachable to participants to capture self-reported data and anonymously provide an avenue for more honest and unambiguous responses than other types of research methodologies. It allowed the researcher to collect the necessary amount of data, which ensured a more accurate sample to gather targeted results from which quantitative associations and conclusions were ascertained. This method provided opportunities for deductive testing of objective theories (hypotheses) by further examining the relationships among variables that were analysed using statistical procedures described in the Data Analysis section described in 5.1.1.2 - Description of Methods.

5.1.1.1 Study Hypotheses

A research hypothesis is a formal statement that presents the expected relationship between an independent and dependent variable.^{278,279} A null hypothesis expressed as H_0 , is a statement that there is no actual relationship between variables and usually states the opposite of what the researcher would expect or predict.²⁸⁰ The purpose of establishing null hypotheses would be to test them in a test of statistical significance which was designed to assess the strength of the evidence against the null hypothesis. After testing, the conclusion will either retain the null hypothesis or reject it in favour of an alternative hypothesis H_a , where there is evidence to support relationship between the variables under study.²⁸¹ Interestingly, accepting H_0 does not indicate that H_0 is completely true but there may not be enough evidence against H_0 .^{278,279,280,281} On the other hand, rejection of a true null hypothesis is referred to as a type I error and the subsequent results may not produce the result observed in the study and may lead to changes that are unwarranted.²⁸² Type II error is where a false null hypothesis is accepted, and the ultimate truth remains unknown although evidence might support an alternative hypothesis, and this may lead to maintenance of a status quo when a change is warranted.²⁸² For this research, listed below are the core a priori null hypotheses (which originated from the literature and from the qualitative analysis) tested using the survey method:

* N.B. For the following hypotheses, formal training (or knowledge) in sexual health includes effective sexual health communication, diagnostic sexual history taking, knowledge about sexual health functioning and conditions in later life enabling the clinician to competently conduct a sexual health consultation which will involve the clinician to examine, discuss, diagnose, counsel, and treat any sexual health-related matter.

Table 3: Null hypotheses

Questions	Null Hypotheses H ₀
<p>1. Are PCPs who are formally trained (knowledgeable) in *sexual health more likely to be generally comfortable discussing sexual health or taking a sexual history during a consultation with patients in middle and old age?</p>	<p>Formal training (knowledge) in *sexual health has no effect on a PCP's comfort level during the conduct of a sexual health consultation with patients of middle and old age.</p>
<p>2. Are PCPs more likely to be (generally comfortable) discussing sexual health/taking a sexual history with their middle-aged and older patients of the same gender?</p>	<p>Gender concordance between a PCP and a middle-aged or older patient has no effect on a PCP's comfort level during the conduct of a sexual health consultation with them.</p>
<p>3. Are PCPs who are 40+ years more likely to be (generally comfortable) having sexual health discussions/taking a sexual history with patients of middle and old age?</p>	<p>PCP's age has no effect on their comfort level during the conduct of a sexual health consultation with a middle-aged or older patient.</p>
<p>4. Are PCPs with ≥ 10 years of professional medical practice more likely to be (generally comfortable) having sexual health discussions/taking a sexual history with patients of middle and old age?</p>	<p>The number of years of professional medical practice has no effect on a PCP's comfort level during the conduct of a sexual health consultation with a middle-aged or older patient.</p>
<p>5. Are PCPs with ≥ 10 years of local medical practice in TT more likely to be (generally comfortable) having sexual health discussions/taking a sexual history with patients of middle and old age?</p>	<p>The number of years of local medical practice has no effect on a PCP's comfort level during the conduct of a sexual health consultation with a middle-aged or older patient.</p>
<p>6. Are PCPs that treat middle and old aged patients in urban-based communities more likely to be (generally comfortable) discussing sexual health issues/taking a sexual history with them than PCPs who work with patients that are in rural communities?</p>	<p>A PCP's community medical practice location has no effect on their comfort level during the conduct of a sexual health consultation with a middle-aged or older patient.</p>
<p>7. Are PCPs that are foreign medical graduates more likely to be (generally comfortable) having sexual health discussions/taking a sexual history with patients of middle and old age?</p>	<p>A PCP's medical training location (local/foreign) has no effect on their comfort level during the conduct of a sexual health consultation with a middle-aged or older patient.</p>

5.1.1.2 Description of Method

The following description explains how the survey method was employed, from its creation to administration, to collection and analysis of the data needed to address the research questions and hypotheses of this research.

▶ *Participants*

The study sample had been identified to be the entire population of public sector PCPs (national survey) countrywide in Trinidad and Tobago which was n=175 PCPs.

▶ *Survey Instrument Design*

The survey instrument employed was designed to examine Knowledge, Attitudes, and Practices (KAP). Though there were several typical KAP surveys^{283,284,285} reviewed in the literature available for ideas or adaptation but none of them were considered adequate in several ways, e.g., some of the content did not address the research questions²⁸⁶ of interest sufficiently. For example, the treatment options listed did not suit the cultural context^{287,288} or the target population of 45 years and older. Hence, measurable concepts were derived from the qualitative phase and a uniquely designed survey instrument grounded in the participants' perspectives and cultural context was produced.

The actual design that was agreed to be most suitable to assess KAP of medical practitioners involved the incorporation of a continuing medical education (CME) style KAP section within the traditional survey format.^{289,290} This was considered most apt as medical professionals are very familiar with medical board and licensing examinations and mandatory professional workshops throughout their career in this layout.^{291,292} The CME style format typically may contain a written clinical case of a patient with a presenting complaint along with possible tests results or medical history information followed by a series of questions which is the best probable diagnosis or treatment or course of action. Vignettes have been used before to assess physicians' knowledge, attitudes, and practices.²⁹³ For this survey, the clinical scenarios were derived from the qualitative findings reported by the PCPs in phase 1 and these were then matched with existing content related examination questions. CME medical examination practice books were reviewed including USMLE²⁹⁴ 1 and 2,²⁹⁵ to accurately fashion the questions in the correct CME style. The content was also

vetted by medical physicians to ensure that the diagnoses and treatment options were matched accurately with the clinical scenarios being considered.

Consequently, the final survey instrument consisted of four sections. **Section 1 and 2** asked about the physician's demographic characteristics such as age, gender, ethnicity, religion, practice, setting, and whether they attained postgraduate training opportunities.

Section 3 consisted of six clinical vignettes each describing a patient of either middle or old age, presenting with a direct sexual health complaint such as an STI or sexual dysfunction/addiction issue or a chronic illness unknowingly affecting their sexual health. The format of section 3 was designed to assess PCPs' knowledge, attitudes, and practices (KAP). Each clinical scenario were followed by questions: asking the PCP to make an appropriate diagnosis based on the information provided (knowledge); determine whether the PCP was comfortable discussing sex with a patient based on the scenario (*attitude*); and finally, an opportunity to offer treatment options to the patient based on the diagnosis and presenting circumstances (practice). This was an atypical KAP assessment using a CME style question design. Questions regarding PCPs knowledge offered one correct (best answer) option amongst three other options; questions assessing physician's attitudes used Likert scales^{296,297} to determine comfort level²⁹⁸ offering four options: 'very comfortable', 'comfortable', 'uncomfortable', 'very uncomfortable'; and finally, questions regarding physician's practices offered a range of communicative sexual health options including counselling about their sexual health diagnosis (empathetic sex education about their problem and treatment options), individual/couple sex therapy (sex health discussion to improve patient's sex health-related quality of life), sexual history taking (diagnostic testing to assist in correctly ascertaining sexual health prognosis) and other treatment options such as physical examination, laboratory testing, and referrals.

Section 4 contained questions about sexual history taking (frequency and content) and presented phrases of general attitudes towards sexual healthcare in middle and old age asking PCPs whether they agreed or disagreed with them and finally a section asking about their training interests and preferences (one-day workshops, CME session, online training program, etc.). The survey was designed using Survey Monkey as an online method of administration using the Cochrane methodology to improve online survey participation.²⁹⁹

▶ *Piloting and Survey Administration*

The survey was piloted online with non-clinical academic research staff and some GPs and other medical physicians to assess its feasibility, usability, and readiness. After minor revisions from piloting, the researcher initiated rolling out the national online survey using Cochrane's methodology to improve its response rate.²⁹⁹ Cochrane's methodology proposed the following options to increase response rates by more than a half: using non-monetary incentives; shorter e-questionnaires; include a statement that others had responded; have a more interesting topic, an offer of survey results; use a white background; personalise e-questionnaires; use a simple header; use textual representation of response categories; give a deadline; include a picture in an e-mail; use the word "Survey" in the e-mail subject line; and include a male signature.²⁹⁹ However, many of these methods could not even get fulfilled as the original idea of going online proved unfeasible in Trinidad & Tobago, due to limited internet connectivity and infrastructure in Primary Care facilities. Several of the primary care centres no longer had computers for the survey to be accessed or the internet connection was not supportive to allow successful download of the electronic survey. The PCPs were still interested in participating but recommended a paper-based survey to be completed by hand to ensure participation. The researcher needed to devise a new manual data collection plan while in field.

▶ *Data Collection*

A paper-based version of the online self-reporting KAP survey instrument was manually distributed to all PCPs who were registered with the national medical board of T&T who were available (present at work not on vacation or leave) during the survey administration. The researcher visited all 106 health centres country wide in Trinidad and Tobago to hand-deliver each PCP two survey packets: one which contained the printed anonymised survey instrument and another with the study information sheet and consent forms. The researcher returned after one week to collect the sealed completed packages at the reception desk from all the PCPs from that health centre.

▶ *Data Analysis*

The paper-based surveys were entered into the online version on Survey Monkey as individual entries. Each entry automatically updated the researcher's electronic master

database for this survey. Each of the researcher's entries was checked by a volunteered data entry assistant to ensure accuracy of each entry. The complete database was cleaned to remove any duplications and to assess any missing data. Subsequently, variable labelling and new variable creation followed, and a full descriptive and inferential statistical analysis was conducted using STATA. Some of the statistical results are presented in the form of descriptive statistics—means, medians, and standard deviations for continuous variables, while frequency distributions and percentages were for categorical variables. The core hypotheses tested various aspects of PCPs knowledge, attitudes, and practices. Corresponding variables were created and associations were assessed in various univariate and multivariate logistic regression models to determine the odds ratios and statistical significance of these associations.

Variable Construction and Statistical Testing

I. Assessing Knowledge

- A knowledge score variable was computed to determine how well the participants scored overall on the 6 knowledge-based questions. These questions aimed to assess if PCPs were able to identify the correct diagnosis of prevalent sexual health conditions in the middle-aged and older patients presented in each clinical vignette. The knowledge score variable was able to ascertain the number of correct answers to each knowledge question and then attribute dichotomous values for correct (1) or incorrect (0) to compute each participant's total number of correct answers.

- A mean knowledge score of prevalent sexual health conditions in middle and older age was also calculated to gather the knowledge score of the group of PCPs that participated in this survey.

II. Assessing Comfort

- A comfort level score variable was computed to assess PCPs reported attitudes towards discussing sex with each of the middle-aged and older patients presented

in the six clinical vignettes. The variable was created by visually binning the four responses of the Likert scale (*very comfortable, comfortable, uncomfortable, and very uncomfortable*) to fit a dichotomous set of responses establishing if PCPs felt ‘generally comfortable’ or ‘generally uncomfortable’ in each scenario.

- Two new variables were created; one for comfort level attending to female patients and the other for attending to male patients. These new computed variables offered opportunities to suggest associations between PCPs attitudes about discussing sex based on the attending patient’s gender.

III. Assessing Practice

→ Discussing Sex

A variable was computed to determine the frequency of which PCPs opted to talk about sex with the patients presented in the clinical vignettes. The mean number (m=4) out of 6 consultations in which the PCPs opted to discuss sex was derived and used as the reference point for further calculations. The discuss sex score reveals whether PCPs talk about sex 2 out of every 3 consultations or less. For the purposes of this study, 2 out of 3 consultations are considered frequent.

→ Taking a Sexual History

A sexual history taking variable was computed based on the frequencies reported for taking a sexual history. This variable specifically conveys whether PCPs opted to take a sex history with patients.

All aforementioned computed variables for Knowledge, Attitudes, and Practices were cross-tabulated with the relevant variables for PCPs characteristics including all variables pertaining to sexual health training (communication, sexual function in middle and old age, sexual history taking skills); sexual health practices (discuss sex and take a sexual history); variables for physician’s demographics (gender, age, practice setting, years of practice experience, university attended); to provide resultant frequencies and build logistic regression models to establish univariate and multivariate odds ratios and p values to

determine the direction and strength of association of these variables in relation to the hypotheses of interest.

Data from the third and fourth sections of the survey were analysed primarily to illustrate frequencies of responses by PCPs with regard to their general attitudes towards sexual health, sexual history taking practices, and training preferences. Statistical findings for all including these final sections of the survey are summarised in the upcoming results sections of this thesis presented in the form of research papers.

5.1.1.3 Strengths and Limitations of the Qualitative Method – KAP Survey

Practically and theoretically, this method was most apt for testing the seven a priori hypotheses regarding PCPs attitudes towards sexual health care with older adults and for the two research questions interested in determining associations between PCPs characteristics and their KAP. It offered an opportunity to conduct a national survey and employ statistical methods, which in research is often considered dependable and suitable where standardised comparisons are encouraged. There were specific advantages and challenges experienced when this survey method was employed as:

- ❖ It allowed for population-based data to be captured on all the PCPs in T&T, even though it was a small-sized study overall [as total number participants available were 155]. These were all of the PCPs in the public sector that were available in country at the time of the survey.
- ❖ The manual paper-based distribution method employed (though tedious and required a longer period of data collection than a new period of data transcription and cleaning) ensure maximised participation – successful 60% response rate.
- ❖ Various quantitative methods could have been employed and used as a contingency – first attempted online distribution but as that failed, it was not difficult to consider another approach.
- ❖ Some of the limitations of this method however included the fact that for statistical analysis, this method is best with larger sample sizes; otherwise, it may give a false impression of homogeneity in the sample.³⁰⁰
- ❖ Small samples usually are insufficiently powered to be able to extrapolate the statistical analysis results to the overall population.³⁰¹ Power is the probability of

rejecting the null hypothesis when the null hypothesis is false, that is, the probability of saying there is a difference when a difference exists. An underpowered study does not have a sufficiently large sample size to answer the research question of interest.³⁰²

- ❖ The KAP clinical consultation section of the survey was designed in a CME format that could have been intimidating to some participants who did not welcome the familiarity but rather felt it was like an exam. Other design flaws included not offering a standardised set of clinical management options for the questions assessing PCPs practices. This made it difficult to analyse and compare. There were also only six clinical scenarios and may not be considered a fair test of knowledge level in sexual health in later life.
- ❖ In terms of analysis, limitation issues including multicollinearity were found (high correlations between two or more predictor variables among the PCPs characteristics) in early stages of building the regression models. Statistically, it was (tested but it was) difficult to calculate, interpret, and report Cronbach's Alpha reliability coefficient for the Likert scales used throughout the survey.³⁰³
- ❖ I was limited to sampling from the PCPs in public sector as there was no appropriate sample of solely private functioning PCPs, thus there is no knowledge as to how many PCPs were not included nor how this may have changed the population sample characteristics.
- ❖ Quantitative methods were apt to determine these research questions that asked *what are...?* However, the survey had closed questions and this method could not explore the reasons for the results, in terms of asking *why?* or *how?*
- ❖ The survey method also could not capture the human experience or perceptions; it was limited to self-report methodology and depended solely on what the participant chose to report, an opportunity for reporting bias.

Though there were limitations to this method, it was reassuring that a mixed-methods approach was employed overall as some of the questions and data that was not captured here were in the qualitative arm, and this gives credence to the next phase of methodological triangulation of both data sets.³⁰⁴

5.1.1.4 Ethical Considerations & Data Privacy

- ▶ For the research study, full authorisation and ethical approval was received from the ethics committee of the London School of Hygiene and Tropical Medicine (LSTHM) and the Ministry of Health of Trinidad and Tobago to conduct this study, and additional extension of approval was also given when the data collection period prolonged (see Appendix 2 for approvals).
- ▶ There were no ethical dilemmas experienced during this study to collect or have access to data or anyone. No one was given any incentives to participate in any aspect of the study and no one asked for any. Topic guides and survey instruments were all approved via PhD supervisors and ethics committees for appropriateness of study protocols including sensitivity of the questions being asked. I did not diverge from these questions and probes on my topic guide given the PCPs time and the fact that the approach was semi-structured and pre-approved.
- ▶ To conduct the data collection process, a study package was prepared for each participant that contained information about the study, anonymised interview form to collect participant demographic information and a consent form. Each participant returned a signed consent form indicating their approval to participate and permit use of their anonymised and non-linkable data given in this study. The interviews were conducted in private rooms within the health centres where they worked. Participants were assigned a unique study ID number. The ID numbers were coded for by the first letter of their sex (M/F), followed by health facility type public or private sector (PB/PV), and followed by a two-digit number, e.g., MPB06 or FPV16. With participants' consent, these interviews were digitally recorded and transcribed verbatim. Field notes were also recorded and analysed along with the interview data.

5.2 Research Paper III

Preface

In this Quantitative Results Chapter, I present my first research paper (published format found in Appendix 1) regarding: Sexual Healthcare Knowledge, Attitudes and Practices amongst primary care physicians in Trinidad & Tobago.

This research paper presents quantitative associations between physicians' socio-demographic characteristics such as their gender, age, practice setting, years of experience, sexual health training, medical degree training abroad or locally, and their existing knowledge of sexual health in later life, attitudes, and current sexual health care practices towards sexual history taking and discussing sex with these patients. The data presented fulfil the last two objectives of this study:

1. To capture baseline data on the Knowledge, Attitudes, and Practices (KAP) of PCPs in Trinidad and Tobago on sexual health care and sexual history taking with patients who are 45 years and older.
2. To provide recommendations for best practice (based on research findings) for PCPs to improve sexual health care, including sexual history taking, during consultations with middle-aged and older patients.

In addition, this paper addresses these two research questions of this thesis:

- *What are the associations between Primary Care Physicians' (PCPs) characteristics and their knowledge, attitudes and sexual health care practice?*
- *What are the associations between Primary Care Physicians' (PCPs) knowledge, attitudes and sexual health care practice?*

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RESEARCH PAPER COVER SHEET

PLEASE NOTE THAT A COVER SHEET MUST BE COMPLETED FOR EACH RESEARCH PAPER INCLUDED IN A THESIS.

SECTION A – Student Details

Student	PATRICE ALICIA RABATHALY
Principal Supervisor	KAYE WELLINGS
Thesis Title	PRIMARY CARE PHYSICIANS' KNOWLEDGE OF, ATTITUDES TOWARDS AND PRACTICES IN SEXUAL HEALTH CARE FOR PATIENTS OF MIDDLE AND OLD AGE IN TRINIDAD & TOBAGO

If the Research Paper has previously been published please complete Section B, if not please move to Section C

SECTION B – Paper already published

Where was the work published?			
When was the work published?			
If the work was published prior to registration for your research degree, give a brief rationale for its inclusion			
Have you retained the copyright for the work?*	Choose an item.	Was the work subject to academic peer review?	Choose an item.

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SECTION C – Prepared for publication, but not yet published

Where is the work intended to be published?	JOURNAL OF FAMILY MEDICINE AND PRIMARY CARE
Please list the paper's authors in the intended authorship order:	PATRICE A. RABATHALY, VIJAY K. CHATTU
Stage of publication	Submitted

SECTION D – Multi-authored work

For multi-authored work, give full details of your role in the research included in the paper and in the preparation of the paper. (Attach a further sheet if necessary)	PAPER PRODUCED AS PART OF THESIS. MAJORITY OF WORK - DRAFTS, CONCEPTION AND REVIEW CONDUCTED BY STUDENT - FIRST AUTHOR. MINOR REVISIONS OF FINAL MANUSCRIPT BY ADVISORS (CO-
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	AUTHOR AND THOSE IN ACKNOWLEDGEMENTS)
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Student Signature: Patrice A. Rabathaly

Date: SEPTEMBER 22, 2018

Supervisor Signature: KAMMPS

Date: September 30th 2018

Sexual Healthcare Knowledge, Attitudes and Practices amongst primary care physicians in Trinidad & Tobago with middle-aged and older patients

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Abstract

Background: Our understanding of health care professionals' competence level in both their sexual history taking practices and their attitudes in addressing sexual health concerns of patients in middle and old age is lacking. This paper is part of an overarching study that examined primary care physicians' (PCPs) knowledge, attitudes and sexual healthcare practices with patients who are 45 years and older in Trinidad and Tobago. It focuses on the associations between physicians' characteristics and their existing knowledge, attitudes and current sexual history taking practices.

Method: A self-reported survey instrument assessing clinical sexual health knowledge, attitudes and practices was administered nationwide to all registered PCPs (n=155) in the public health care service. Descriptive and inferential statistical analysis was conducted using STATA.

Results: PCPs who were foreign medical school graduates, at least middle-aged, male, and worked in urban primary care practices, had improved odds of discussing sexual health with middle-aged and older patients. PCPs with any training in sexual health communication or sexual history taking were three times more likely to successfully initiate a sexual health discussion or take a sexual history with a patient of this age group. Over 90% of physicians reported taking a sexual history only if the discussion was patient initiated. Over 50% of PCPs indicated they will not ask patients in this age group about sexual orientation, their sexual partners nor sexual abuse or violence.

Conclusion: Even though PCPs in Trinidad and Tobago reported having a positive willing attitude towards offering sexual health care to middle-aged and older patients, they had a low level of knowledge of sexual function in later life and inconsistent sexual history taking practices with them. Findings underscore the need for improved training in physicians' education on sexual function in older adults, sexual health communication and history taking.

Keywords: Primary care (PC), sexual health, sexual history taking, middle-aged, old age, Knowledge, Attitudes, Practices, (KAP), Trinidad & Tobago, Caribbean

Introduction

Primary care (PC) is often the first point of contact for patients with sexual health problems.³⁰⁵ With the rising prevalence of sexual dysfunction (SD) in middle and old aged persons,³⁰⁶ management of such sexual concerns should be covered in PC. However, PC is known to be a resource poor setting with limited availability of sexual healthcare services for older people.³⁰⁷ “Youth” is associated with sexuality (conditioned by popular media) which may contribute to the ageist views shared by some Primary Care Physicians (PCPs) that sex becomes less important with age, and older people are sexually less desirable or incapable. Sexual ageism is also reinforced by the natural age-based decline in sexual function.³⁰⁸ PCPs with such ageist beliefs about sexuality justify why for sexual health, they focus on patients of reproductive age, for pregnancy, sexually transmitted infections (STIs) and contraception.³⁰⁶ To them, sexual health is a valid topic to discuss with younger, but not older patients because sexual priorities become irrelevant as patients age.³⁰⁸

Apart from ageist views about sex, PCPs avoid discussing sex with their older patients for further age-related reasons, but these evoke discomfort and fear. Age discrepancy between PCPs and patients can influence a sexual history consultation: with younger patients they perceive them as more likely to expect or be open to discuss sex contrary with an older patient. In fact, some PCPs have rated the experience as unwelcoming, as if interrogating your own parents about their sex life.^{308,309} In studies with PCPs who are uncomfortable discussing sex with someone older, they have expressed fear of offending the older patient due to the perception of sex being irrelevant to them or to the chief complaint.³⁰⁸ Some PCPs feel embarrassed or awkward with sexual language and additional fear of the possibility of inciting patient arousal during a consultation.³⁰⁹ In addition to the influence of age on worldviews about sexuality, lack of training in sexual health knowledge or communication also discourages PCPs.³⁰⁹ PCPs have reported that the fear is rooted in their feeling of incompetence due to inadequacy or limited knowledge of sexual health in older age patients or how to take an appropriate sexual history with them. In contrast, despite the normal decline in sexual functioning with age, older patients wish to maintain a healthy, satisfying sex life well into their later years.^{310,311,310} PCPs treating older patients should therefore be knowledgeable in SD, STIs and intimacy in later life and comfortable and proactive in managing these patients sexual health concerns.^{312,313}

In the last decade, only a small number of population-based studies research sexual health lifestyle preferences or concerns of the middle and old aged such as the large global study in European countries on sexual behaviour,³¹⁴ or a the few national studies focused on ageing and sexuality including the national surveys on sexual attitudes and lifestyles (NATSAL) in the UK³¹⁵ and the national social life and health ageing project (NSHAP) in the US³¹⁶ There are even fewer quantitative surveys reporting on incidence and prevalence of sexual dysfunctions in men and women in this age group³¹⁷, or on appropriate tools to improve sexual health communication.³¹⁸ Most of the research is patient centred and a dearth of information exists regarding the physician's perspective. Studies that discover the factors that influence PCPs knowledge about sexual function in later life and their attitudes towards sexuality in consultation with middle-aged and older patient's and insights about how they address their sexual health concerns is warranted.

This study was conducted with PCPs in Trinidad and Tobago and attempts to fill some of these research gaps. It adds to the sexual health literature by contributing to the limited collected works on physicians' sexual health care knowledge, attitudes towards and sexual history taking practices with middle and old aged patients. As there have been no other studies to date on this subject in the Caribbean region, this research provides some baseline data and future opportunity for comparative analysis with other Caribbean territories. As Trinidad and Tobago is a very culturally and ethnically diverse country there is opportunity to discover distinctive culturally specific factors that affect their physicians and older patients and a chance to document any unique healthcare experiences associated with communicating sexual health concerns. This paper aims to quantitatively identify the characteristics of PCPs that influence their knowledge, attitudes and practices (and the associations among these variables) in sexual health consultation with middle-aged and older patients.

Methods

This quantitative paper is part of overarching mixed-methods study with a sequential exploratory design that consists of a qualitative and quantitative arm.³¹⁹ The qualitative arm explored PCPs attitudes towards sexuality and sexual health care of middle-aged and older patients and this data was collected by conducting 'one-to-one' semi-structured interviews with 35 PCPs from public and private sector. These interviews generated two types of qualitative data: interviewer field notes and transcripts of the interviews [*See paper 2:*

Rabathaly PA, Chattu V. An exploratory study to assess Primary care physicians' attitudes towards talking about sexual health with older patients in Trinidad and Tobago. *Journal of Family Medicine and Primary Care* 2019. DOI: 10.4103/jfmpc.jfmpc_325_18].³⁰⁹ The data received were analysed using Framework analysis and the results informed the design of the survey instrument.³²⁰

Data collection: In April 2012, an anonymous, self-completion questionnaire survey package (with a study questionnaire, study information sheet, and consent form) was manually distributed to 155 PCPs recruited from 106 health centres nationwide. The questionnaire was developed to investigate how PCPs' characteristics were associated with their sexual health knowledge, attitudes and care practices with middle-aged and older patients. In the first section of the questionnaire, demographics (*age, gender, ethnicity and religion*), education and training (*medical school abroad or in T&T, number of years graduated, medical practice setting in rural or urban/suburban location and postgraduate training in sexual health*) characteristics were collected. Section 2, probed practitioners' views on six clinical vignettes (see Table 4 below) about sexual health-related complaints presented by middle-aged and older patients. Each vignette was followed by at least three questions aimed to assess PCP's knowledge (determine a correct diagnosis), attitudes (comfort level discussing sexual health with the patient) rated on a Likert scale; and practices (preferred diagnostic/treatment approaches) Each set of subsequent relative questions must assess: a correct diagnosis; comfort level (when consulting patient based on presentation) by means of a Likert scale ranging from 'very comfortable to very uncomfortable' and a selection of preferential treatment practice presented in a continuing medical education (CME) style. Following were sections 3-4, which were general questions about PCPs attitudes towards sexual health care and sexual history taking and their preferences to undertake further training in sexual health.

Development of survey instrument: As far as could be determined from our review of the literature, there are no existing validated tools for assessing PCPs' KAP towards sexual health in middle-aged and older adults available. Therefore, the survey style, sections especially the clinical scenarios and KAP questions were developed using published literature, and shared experiences in interviews with PCPs,³²¹ from the qualitative phase of

the study. For section 2, the rationale for using the vignette style to present clinical scenarios followed by a series of relative questions is very similar to the format used in CME, a style that is familiar with most clinicians. Each clinical scenario contained the following fundamental criteria: a clearly stated patient gender, a patient of middle or old age, and presenting complaints with an identifiable sexual health prognosis.

Table 4: Summary of clinical vignettes used in the PCPs KAP survey

#	Patient Gender	Patient Age	Patient Presenting complaints	Sexual Health-related Diagnosis	Notes
1	Male	53	-Depression -Issues managing Diabetes	Erectile Dysfunction	New patient
2	Female	65	-Decreased libido due to painful intercourse	Vulvodynia	Open minded patient about sexual health
3	Male	55	-Depression due to decreased sex drive	Decreased libido	On antidepressants and is over worked at his job
4	Female	60	-Pain on urination and 'rash' on vagina	-Dysuria and acute bilateral vulval blisters -STI: Gonorrhoea	Rural community teacher married to the community pastor
5	Female	67	-Minor headaches and muscular pain -Chronic hypertension and diminished libido	Hypoactive sexual desire disorder (HSDD) due to antihypertensive medication	Presents initially with minor symptoms; just started taking antihypertensive medication
6	Male	54	-Sexual fetish: addicted to online porn and chronic use of sex toys over human interaction -Frequent absentee from work	Sexual Addiction	New patient

Originally the researcher initiated an online survey dissemination strategy guided by Cochrane's methodology to increase response rate of research using online or postal services.³²² The questionnaire was designed using the online platform -Survey Monkey and the survey instrument was piloted in this format primarily to determine ease of use of the online tool, general understanding and ambiguity of the questions. Regardless of successful administration online, during the actual fieldwork this method proved unfeasible in the country setting after discovering: a lack of internet access attributable to absence of infrastructure and connectivity (mostly at rural based clinics) or a lack of computers at most of the community health clinics in PC. Hence, the online survey was printed and manually distributed to each recruited physician. Ethical approval was obtained from the ethics committee of the London School of Hygiene and Tropical Medicine, and Ministry of Health of Trinidad and Tobago.

Data analysis: Multivariable statistical analysis was carried out using SPSS21 and Stata12 to answer hypotheses generated for this study. Predictive analyses presented in the form of scores, odds ratios (ORs) and p values were calculated by means of logistic regression models examined to learn relationships between PCPs consultation experiences in terms of their knowledge of sexual function; comfort level addressing sexual concerns and preferred diagnostic/treatment practices in sexual health in later life. General standard frequencies were calculated to illustrate PCPs proportions for general perceptions regarding sexual health and sexual history taking with older patients and their professional training preferences. All findings are summarised in the results section below.

Results

From a sample of 155 PCPs, the survey achieved a 60% response rate (n=93). Just over 50% of PCPs who participated were male; under 40 years of age and 60% graduated from a locally based medical university in the West Indies. Most PCPs (80.7%) graduated from medical universities based in the Americas (Caribbean and Latin America) with the second highest number of PCPs trained in Indian based universities of the Western Pacific (13.9%). 67% of PCPs reported that they had no formal training in sexual function in later life. (See Table 5 below).

Table 5: Characteristics of study participants (PCPs)

Characteristics	N =93	(%)	Characteristics	N =93	(%)
<u>Age Groups</u>			<u>University attended:</u>		
Under 30 years old	12	12.9	Locally based university (UWI)	56	60.3
30-39	44	47.3	Foreign based university	37	39.7
40-49	20	21.5	<u>Medical Training (University Location) - by World Region</u>		
50-59	9	9.7	African	3	3.0
60 years and older	8	8.6	European	1	1.1
			American	75	80.7
			Other	1	1.1
			Indo-Western Pacific	13	13.9
			<u>Practice Location</u>		
			Urban /Sub urban	66	71.0
			Rural area	27	29.0
<u>Gender</u>			<u>Number of Years Post-graduation</u>		
Female	41	44.1	Under 10 years	41	44.1
Male	52	55.9	10 years and more	52	55.9
<u>Formal training</u>			<u>Religious Influence</u>		
Sexual function in middle and old age (undergraduate level)			Catholic	26	28.0
Yes	30	32.6	Protestant	14	15.2
No	62	67.4	Hindu	33	35.5
Sexual function in middle and old age (postgraduate level)			Muslim	13	14.0
Yes	36	39.1	None	4	4.3
No	56	60.9	Other	3	3.3
Sexual History taking skills			<u>Ethnicity</u>		
Yes	53	57.6	Afro-Trinidadian	7	7.5
No	39	42.4	Indo-Trinidadian	45	48.4
			Mixed Heritage	11	11.8
			Tobagonian	1	1.1
			Not from T&T	29	31.2

Knowledge

Summarized in Table 6, no PCP attained a full knowledge score of 6, in correctly diagnosing every one of the clinical scenarios. The mean knowledge score attained was 2.27 and more than half (57%; n=53) of PCPs scored less than 2 out of 6. PCPs who attained higher than the mean knowledge score were 2.43 times more likely to have had formal postgraduate training in sexual function in later life. The common topics PCPs reported that they studied in sexual health at the post-graduate level included: general STI management (66.7%); HIV care (60.2%); family planning and general clinical skills training (55.9%). Only 39.1% of PCPs studied ‘sexual function in older patients. Markedly, 19.4% of PCPs indicated that they were never trained in any of the sexual reproductive health (SRH) or sexual health communication topics listed. Furthermore, 42.4% of PCPs were never taught to take a sexual history.

Table 6: PCPs' Knowledge of sexual function & sexual history taking with older patients

<i>Mean knowledge score for sexual function in middle-aged and older patients (out of 6 questions) = 2.27</i>			
	<u>%</u>	<u>n(93)</u>	
PCPs that scored less than the mean	56.99	53	
PCPs that scored more than the mean	43.01	40	
Training in Sexual Functioning in patients of Middle and Old age			
<i>PCPs that attained knowledge scores above the mean were more likely to have had formal training in sexual function in later life:</i>			
	<u>Odds Ratio</u>	<u>95% CI</u>	<u>P> z </u>
At any level	1.61	0.70 - 3.71	0.26
at the Undergraduate level	0.70	0.29 - 1.72	0.44
at the Post-graduate level	2.43	1.03 - 5.75	*0.04
Training in Sexual History Taking with patients in Middle and Old age			
<i>PCPs with formal training in sexual history taking skills were more likely to be:</i>			
	<u>Odds Ratio</u>	<u>95% CI</u>	<u>P> z </u>
Recently graduated (≤10years ago)	1.85	0.79 - 4.32	0.15
Educated locally <u>and</u> recently graduated	2.48	0.83 - 7.46	0.12
Educated abroad <u>and</u> recently graduated	1.50	0.31 - 7.25	0.16
Educated abroad (foreign medical graduate)	1.14	0.49 - 2.64	0.77

**Statistically significant*

PCPs Attitudes

Summarized in Table 7 were the general attitudes PCPs shared regarding sexual healthcare for those aged 45+. The majority of PCPs agreed that sexual function in later life was important (96%) and support health promotion in this age group (95%). Yet, a few PCPs agreed that sexual healthcare for those aged 45+ had little relevance to their well-being (11%), not a priority (29%), limited time available to discuss in PC (59%) and not apt taking sexual history from older patients (14%).

Table 7: General attitudes towards sexual health care for middle-aged & older patients

<p>% of PCPs that agree</p>	➤ <i>It is important to discuss sexual function with patients with chronic health conditions, such as diabetes.</i>	96%
	➤ <i>Doctors need more training on middle-aged and older people's sexual health</i>	96%
	➤ <i>More sexual health promotion targeting middle-aged and older people is needed.</i>	95%
	➤ <i>Cultural or religious background of a patient often acts as a barrier to discussions about sexual health</i>	86%
	➤ <i>The middle-aged and older patients I see rarely discuss their sexual health during a consultation.</i>	80%
	➤ <i>General practice is the most appropriate service for providing sexual health care</i>	80%
	➤ <i>There is not enough time to discuss sexual health with middle-aged and older patients</i>	59%
	➤ <i>Sexual dysfunction is usually caused by psychological problems</i>	54%
	➤ <i>Taking a sex history from a middle-aged / older patient is more time-consuming than from a younger patient</i>	49%
	➤ <i>Effort is better placed improving the sexual health of younger people.</i>	46%
	➤ <i>Sexual health of middle-aged and older people is not a public health priority</i>	29%
	➤ <i>Primary Care Nurses are more suitable to discuss sexual health issues with middle-aged and older patients</i>	27%
➤ <i>It would be disrespectful to routinely ask middle-aged and older patients about their sexual health.</i>	14%	
➤ <i>Sexual health has little relevance to middle-aged and older people's overall well-being</i>	11%	

Data analysis of the first five clinical scenarios (that were disease focused – STIs; chronic illness; sexual performance difficulties; surgery; medication), revealed that over 90% of PCPs stated they were generally comfortable discussing sexual health given those patients and their presenting complaints. However, in the sixth clinical scenario only 71% of PCPs were comfortable discussing sex with that patient who presented with a psychosexual problem.

Further analysis into the predictors of PCPs comfort when discussing sex with male middle and old aged patients suggests that PCPs must also be male [OR=4.75; p=0.00], over forty years of age (at least middle-aged) [OR=3.1; p=0.03] and educated abroad [OR=4.14; p=0.01]. When these PCP characteristics were applied in the multivariate model, it was noted that ‘training in sexual health communication’ was also statistically significant and it increased the PCPs odds three-fold to be comfortable discussing sexual health with the male patients [OR=3.19; p=0.05]. Though not found to be statistically significant, the suggested ORs present the preferred direction of the association for PCPs who were more likely to be comfortable discussing sexual health with a female patient 45+ years of age. Predictors of comfort with increased odds were found similarly with gender and age concurrence, foreign education and training in sexual health communication.

Table 8: Predictors for comfort when talking about sex

<i>PCPs who were comfortable discussing sexual health with middle-aged or older <u>MALE</u> patients were more likely:</i>							
Characteristics	Odds Ratio (OR) [Crude]	95% CI	P> z	Odds Ratio (OR) [Adjusted All]	95% CI	P> z	
Trained in sexual health communication	2.28	0.92 - 5.70	0.08	3.19	1.03 - 9.89	*0.05	
Male physicians	4.75	1.79 - 12.6	*0.00	3.60	1.16 - 11.19	*0.03	
40+ years in age	3.1	1.10 - 8.67	*0.03	2.40	0.53 - 10.8	0.26	
Educated abroad for medical school	4.14	1.4 - 12.2	*0.01	2.93	0.69 - 12.6	0.15	
Graduated ≥ 10 years or more ago	2.39	0.95 - 5.95	0.06	0.46	0.69 - 3.12	0.43	
Worked locally for ≥10 years or <u>more</u>	1.74	0.64 - 4.71	0.27	2.38	0.39 - 14.7	0.35	
Rural practice setting	1.63	0.58 - 4.64	0.36	1.37	0.13 - 1.08	0.07	
<i>PCPs who were comfortable discussing sexual health with middle-aged or older <u>FEMALE</u> patients were more likely:</i>							
Characteristics	Odds Ratio (OR) [Crude]	95% CI	P> z	Odds Ratio (OR) [Adjusted All]	95% CI	P> z	
Trained in sexual health communication	2.61	0.78 - 8.12	0.12	2.43	0.64 - 9.30	0.19	
Female physicians	1.31	0.39 - 4.35	0.66	1.79	0.43 - 7.41	0.42	
40+ years in age	2.46	0.63 - 9.64	0.20	4.58	0.78 - 26.7	0.09	
Educated abroad for medical school	2.46	0.63 - 9.64	0.20	1.60	0.31 - 8.32	0.58	
Graduated ≥ 10 years or more ago	1.10	0.34 - 3.57	0.87	1.11	0.08 - 13.90	0.94	
Worked locally for ≤10 years or <u>less</u>	1.78	0.54 - 5.81	0.34	2.46	0.20 - 30.8	0.49	
Rural practice setting	1.43	0.36 - 5.66	0.61	1.42	0.06 - 10.8	0.65	

*Statistically significant

Practices: Discussing Sex with their middle-aged and older patients

PCPs that attained any training in sexual health communication during their medical education or professional career were three times more likely to discuss sexual health matters with their older patients (OR= 3.15; p=0.032). Notably these odds increased to almost four times more likely (OR=3.74; p=0.032) with multivariable analysis once the other predictors - age, gender, education abroad and whether they were recently graduated were included in the model.

Table 9: Predictors for discussing sex

<i>PCPs who are MORE LIKELY to have discussions about sexual health with their middle- aged & older patients are:</i>								
Characteristics	Odds (OR) [Crude]	Ratio	95% CI	P> z	Odds (OR) [Adjusted All]	Ratio	95% CI	P> z
Trained in sexual health communication	3.15		1.10-9.02	*0.03	3.74		1.16-12.06	*0.03
Male physicians	1.19		0.43-3.28	0.74	1.42		0.43-4.75	0.56
40+ years in age	1.64		0.56-4.79	0.37	4.09		0.96-17.45	0.06
Educated abroad for medical school	1.16		0.41-3.29	0.79	0.85		0.21-3.43	0.82
Graduated ≤10 years	1.37		0.48-3.89	0.56	3.27		0.51-20.9	0.21
Worked locally for ≤10 years	1.45		0.52-4.09	0.48	1.05		0.19-5.78	0.95
Rural practice setting	1.23		0.39-3.84	0.72	1.07		0.31-3.79	0.91

*Statistically significant

Practices: Sexual history taking

PCPs self-reported the topic content from a standard sexual history they will ask their middle and old-aged patients (Table 7). Most PCPs commonly asked about their sexual activity and frequency of intercourse (89%), number of sexual partners (93%), condom/contraceptive use, reproductive concerns or history (99%), STIs and sexual function problems (91%). However, fewer PCPs (≤60%) reported they would ask their older patients about type of sexual practices, gender and age of sexual partners and circumstances regarding sexual abuse or violence and markedly less than 50% of PCPs reported that they would ask about their sexual orientation.

Table 10: Sexual history taking topics discussed by PCPs with a middle-aged or older patient

<i>(%) of PCPs who will ask their middle-aged and older patients about:</i>	➤ Condom use	99%
	➤ Contraceptive use (female patients where applicable)	99%
	➤ Sexually Transmitted Infections (past or present)	99%
	➤ Reproductive history or concerns (past pregnancies, births, menopause)	99%
	➤ Number of sexual partners	93%
	➤ Sexual function problems (dysfunction, discomfort, libido, desire)	91%
	➤ Sexual activity and frequency of Intercourse	89%
	➤ Contraceptive use (male patients)	82%
	➤ Sexual abuse/violence	60%
	➤ Type of sex practices (oral, vaginal, anal etc.)	55%
	➤ Gender and Age of sexual partners	51%
➤ Sexual orientation	48%	

Regarding the occurrence of sexual history taking with this age group, 92% of PCPs opted to only if the patient had a relevant medical condition that warrants taking a sexual history. Nevertheless, 20% of PCPs reported they will take it at the first visit, 28% prefer to take it annually and only 2% of all PCPs will routinely ask at each visit. Almost all PCPs (99%) opted to take a sexually history if a sexual health complaint was raised by the patient. PCPs characteristics that favour sexual history taking opportunities with the middle and old aged were analysed (Table 8). Though no statistically significant p values were found the suggested ORs present the preferred direction of the association. Characteristics with the stronger associations indicative of increased sexual history taking practices include training is sexual history taking (OR=3.37) and working under 10 years in an urban based practice (OR=2.32).

Table 11: Predictors of sexual history taking with patients of middle and old age

<i>PCPs who are MORE LIKELY to take a sexual history with their middle-aged or older patients are:</i>							
Characteristics	Odds Ratio (OR) [Crude]	95% CI	P> z	Odds Ratio (OR) [Adjusted All]	95% CI	P> z	
Trained in sexual history taking	3.03	0.71 - 12.97	0.14	3.37	0.72 - 15.7	0.12	
Male physicians	1.02	0.25 - 4.05	0.98	0.93	0.18 - 4.78	0.93	
40+ years in age	1.36	0.32 - 5.81	0.68	1.71	0.24 - 12.2	0.59	
Educated abroad for medical school	1.36	0.32 - 5.81	0.68	1.05	0.17 - 6.44	0.96	
Graduated ≥ 10 years or more ago	1.02	0.25 - 4.05	0.98	1.53	0.11 - 22.2	0.76	
Worked locally for ≤10 years or less	1.60	0.40 - 6.43	0.51	2.25	0.19 - 26.9	0.52	
Urban practice setting	2.12	0.52 - 8.60	0.29	2.32	0.54 - 10.02	0.26	

Associations found between PCPs knowledge, attitudes and practices

Analysed and summarised in Table 9 below are the suggested associations based on the hypotheses that emerged from the overarching research question: *What are the associations between PCPs knowledge, attitudes and practices?* The multivariable analysis revealed that PCPs with greater knowledge scores were more three times more likely to take a sexual history annually (OR= 3.44; p=0.03). Other associations were not found to be statistically significant but attained favourable associations as shown in Table 9.

Table 12: Associations between PCPs' sexual health care knowledge, attitudes & practices with middle-aged and older patients

KNOWLEDGE & ATTITUDES			
<i>PCPs with a higher than average knowledge score are more comfortable discussing sexual health with:</i>			
	Odds Ratio	95% CI	P> z
Female middle-aged and older patients	1.24	0.37 – 4.14	0.72
Male middle-aged and older patients	2.24	0.86 – 5.82	0.10
KNOWLEDGE & PRACTICES			
<i>PCPs with a higher than average knowledge score are more likely to:</i>			
	Odds Ratio	95% CI	P> z
Discuss sexual health with their middle-aged and older patients	1.04	0.37 – 2.89	0.94
Be educated in sexual history taking	1.59	0.68 – 3.72	0.28
Take a sexual history annually	3.44	1.14 – 10.34	*0.03
Take a sexual history at the first visit	1.04	0.33 – 3.32	0.94
Initiate a sexual history if medical consultation warrants one	3.90	0.43 – 35.09	0.22
ATTITUDES & PRACTICES			
<i>PCPs who are comfortable talking about sexual health with middle and old age patients are more likely to:</i>			
	Odds Ratio	95% CI	P> z
Discuss sexual health with a female patient	2.86	0.8 – 10.05	0.10
Initiate an annual sexual history with a female patient	1.91	0.37 – 9.80	0.44
Discuss sexual health with their male patients	2.18	0.78 – 6.27	0.15
Initiate a sexual history on the first visit with a male patient	3.09	0.63 – 15.08	0.16
Initiate a sexual history if medical consultation warrants one with a male patient	1.16	0.20 – 6.80	0.87
Initiate an annual sexual history with a male patient	2.59	0.66 – 10.18	0.17

*Statistically significant

Discussion

Gender and age concordance, training in sexual health communication and medical training from a foreign based medical school (not from the University of the West Indies -UWI) were statistically significant predictors for a PCP to be generally comfortable when discussing sexual health with an older patient. Although not found to be statistically significant, the ORs also illustrated a similar direction of association for female PCPs who were comfortable discussing sexual health with female middle-aged and older patients. PCPs with formal training in sexual functioning in later life were 2.4 times (p=0.04) more likely to identify more of the sexual health conditions presented in the clinical vignettes in the survey. Perhaps these scores match as PCPs reported, 19% of them were never trained in SRH, and only 32% were trained in sexual functioning in later life at medical school and 39% after graduating.

Fifty-seven per cent of participating PCPs were not able to correctly identify more than 2 of the 6 sexual health conditions prevalent in later life. The modal knowledge score attained was less than the mean score of 2.3. Notably, trained PCPs in sexual health communication (OR=3.2, p=0.03) and were three times more likely to be comfortable discussing sexual health with their older patients. Clinically important based on the direction association were those PCPs trained in sexual history taking who were three times more likely to be comfortable diagnostically taking a sexual history from older patients. However, the content of the sexual history with an older patient seems to be more focused on STIs, contraception, reproductive history, frequency of sexual activity and sexual function. Only just over 50% of PCPs reported that they will ask these patients about sexual violence, type of sex, gender or age of their sex partners and less than 50% will ask about sexual orientation. 90% of all PCPs reported they will only take a sexual history if it is patient initiated or a relative medical condition warrants it.

The study achieved a response rate of 60%, which is a major strength as the trend of response rates usually are much lower for clinician surveys in PC.^{323,324,325} However, a limitation of this study was its relatively small sample size. The total size of the population was small thus it achieved some non-statistically significant results because of it was underpowered.^{300,301} It should be noted that the total number of PCPs in the entire population is n=175 and those who were available (on island and at work) when the survey was disseminated was n=155 and they were all targeted and successfully a 60% response rate (n=93) was achieved. When interpreting these results this should be taken into consideration and therefore the direction of association (ORs) for those variables that attained non-statistically significant p-values should still be considered. Possibly, the purely private PCPs who could not be included only because it was not possible to denote the parameters of their sample, if included may have reduced the effects of type 2 error.

Additionally, during the data collection phase of the study, a decision was made to deviate from the Cochrane Online methodology of administering surveys.²⁹⁹ Manual administration of survey was employed as the online survey method was not feasible due to limited access to work-based computers (not all health centres were equipped with computers). If Cochrane's method remained the response rate would have been compromised as a result a

manual method (though time consuming as it doubled the data collection period as some health centres were in very difficult to access locations and some PCPs just took long to complete the survey) maximised returns and was most effective.³²⁶

Other limitations could include the fact that the survey was designed using a CME style as well as the fact that the study was endorsed by the local Ministry of Health these may have influenced participant reporting bias.³²⁷ Additionally, as this study focused primarily on the physicians' characteristics notably the patient perspectives and experience on sexual health consultations were not examined here and warrants further research. Previous researchers have reported that physicians' lack knowledge in ageing on sexual health.^{310,328,329} Perhaps considerations to address curriculum and training in medical school on sexual health in later life to ensure the inclusion of the impact of ageing on sex should be reiterated. In the local setting in T&T, further examination as to why certain sexual health topics are favoured such as the typical STIs and reproductive health needs to be investigated. Sexual health communication and diagnostic sexual history taking skills needs to be reinforced especially since local graduates account for most practising physicians in the country. Findings in this study were congruent with previous studies that found age and gender concurrence to be facilitators of physician-patient communication.²⁰⁶ Unlike in T&T where there are more PCPs under 40 years old in both genders in addition to existing patient related communication barriers in the local resource poor primary care settings. Female PCPs did not appear as knowledgeable or comfortable with sexual health communication as their male colleagues.^{158,159,160} Also specific to T&T was the factor that being educated was a predictor of comfort to discuss sexual health with these patients. Not statically significant but the direction of association inferred that PCPs working in urban based practices were more likely to take a sexual history with their older patients. These findings are unique and warrant further research as it can be concerning as previously mentioned most of the PCPs are locally trained and rural based communities account for about 30% of the population. Also, investigators have qualitatively studied sex issues in a primary care setting and concluded that addressing sexual histories should be part of routine care.³³⁰ However, in T&T, this study revealed that less than 50% of the PCPs ask about sexual orientation and less than 60% ask about sexual partners and preferences. In addition to the reduced frequency of sexual history taking especially if it dependent on patient initiation but it is also not being conducted

incompletely. Not addressing sexual concerns or taking appropriate diagnostics in sexual health leaves these older patients at greater risk for sexual dysfunction and poorer sexual health-related quality of life.³³¹ STDs may also be often be misdiagnosed or unrecognized in older adult patients when physicians do not discuss sexual health frequently far less take a sexual history from them.³³²

Insights from these findings infer review of local clinical sexual health education at both the undergraduate and postgraduate level. Opportunities exist to improve PCPs' knowledge gaps, overall attitudes towards and practices with sexual health of middle and old age patients in the local setting. There is need to amend primary care policy to include sexual health in later life a priority and future research to attain the private physician sector perspectives as well as the older patients.

Conclusion

Training in sexual health education on sexual health in later life at the local medical schools in their compulsory curriculum is critical. This will inevitably develop graduating physicians' overall knowledge and competence on prevalent sexual health issues among patients in middle and old age. CMEs in general is important for postgraduate physicians however, sessions on sexual health in later life, sexual history taking, and communication need to become available and possibly even mandatory as it is critical for practising physicians who routinely treat this age group to become up to date. National health promotion strategies using the media, educational materials or educational opportunities at the clinics needs to include sex education for those in middle and old age and not only focus on those in reproductive age groups. This may help to decrease taboos associated with sexuality at the community level and decrease the discomfort level faced in the medical consultation as information about sexual concerns at this age become readily available.

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Contribution

This paper is part of the doctoral thesis at LSHTM. The first author PR has done the majority of the work including the conception, review and manuscript preparation. VK reviewed and offered minor suggestions.

Conflicts of interest

None declared

Chapter 6 – Quantitative Component II

Characteristics of PCPs Associated with Addressing Sexual Health in Consultations with Patients in Middle and Old Age

6.1 Research Paper IV

Preface

In this final research paper, the researcher presents findings for publication regarding: *What primary care physicians' characteristics are associated with addressing sexual health in consultations with patients of middle and old age, and how are they influenced by different clinical scenarios?*

This research paper presents quantitative associations between physicians' socio-demographic characteristics such as their gender, knowledge of, and attitudes towards sexual health in later life and their current sexual health care practices towards sexual history taking and discussing sex with patients in middle and old age. These associations were created with the hope of ascertaining predictors of the resulting treatment/care management options the PCPs selected to offer theoretical patients in this age group (via a clinical vignette) that presented with chronic illness and/or sexual health-related dysfunction. The data presented here serve to fulfil the last two objectives of this study:

1. To capture baseline data on the Knowledge, Attitudes, and Practices (KAP) of PCPs in Trinidad and Tobago on sexual health care and sexual history taking with patients who are 45 years and older.
2. To provide recommendations for best practice (based on research findings) for PCPs to improve sexual health care, including sexual history taking, during consultations with middle-aged and older patients.

This paper fulfils these objectives and provides an answer and greater understanding of the final research question for this thesis:

The findings offer insight into the current situation in primary care with regard to sexual health care services for middle-aged and older patients in T&T. The associations ascertained are the characteristics of PCPs that favour better sexual health care management of middle-aged and older patients seeking appropriate sexual health care.

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RESEARCH PAPER COVER SHEET

PLEASE NOTE THAT A COVER SHEET MUST BE COMPLETED FOR EACH RESEARCH PAPER INCLUDED IN A THESIS.

SECTION A – Student Details

Student	PATRICE ALICIA RABATHALY
Principal Supervisor	KAYE WELLINGS
Thesis Title	PRIMARY CARE PHYSICIANS' KNOWLEDGE OF, ATTITUDES TOWARDS AND PRACTICES IN SEXUAL HEALTH CARE FOR PATIENTS OF MIDDLE AND OLD AGE IN TRINIDAD & TOBAGO

If the Research Paper has previously been published please complete Section B, if not please move to Section C

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Where is the work intended to be published?	JOURNAL OF FAMILY MEDICINE AND PRIMARY CARE
Please list the paper's authors in the intended authorship order:	PATRICE A. RABATHALY, VIJAY K. CHATTU
Stage of publication	Submitted

SECTION D – Multi-authored work

For multi-authored work, give full details of your role in the research included in the paper and in the preparation of the paper. (Attach a further sheet if necessary)	PAPER PRODUCED AS PART OF THESIS, MAJORITY OF WORK - DRAFTS, CONCEPTION AND REVIEW CONDUCTED BY STUDENT - FIRST AUTHOR, MINOR REVISIONS OF FINAL MANUSCRIPT BY ADVISORS (CO-
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	AUTHOR AND THOSE IN ACKNOWLEDGEMENTS)
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Date: SEPTEMBER 22, 2018

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Date: September 30th 2018

What primary care physicians' characteristics are associated with addressing sexual health in consultations with patients of middle and old age, and how are they influenced by different clinical scenarios?

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Abstract

Background: Sexual health communication and sexual history taking are essential diagnostic tools. If performed, physicians are enabled to accurately diagnose and educate their patient and inform them of appropriate care options to improve their sexual health-related quality of life. However, studies have reported that physicians struggle having these discussions with their middle aged and older patients and lead to increased missed opportunities for intervention and treatment and even misinformation about other underlying causes of sexual dysfunction (SD) such as chronic illness known to be more prevalent in older patients. Favourable physicians' characteristics for a successful sexual health consultation include physicians' knowledge of sexual health in later life and comfort level discussing sex with patients however, not many studies have examined the predictors for appropriate sexual health treatment options offered to patients in middle and old age. The aim of this paper is to determine predictors of the sexual health care and treatment options that PCPs offer to their middle aged and older patients and how are these predictors influenced by the patients' characteristics.

Method: A clinical vignette style approach was used in a self-reported survey instrument assessing sexual health knowledge, attitudes and practices (sexual health care management or medicalised treatment options) nationwide to all registered PCPs (n=155) in Trinidad and Tobago. Descriptive and inferential statistical analysis was conducted using STATA.

Results: This paper reveals that PCPs that offer any sexual healthcare management or treatment options are more frequently male physicians that are more likely to be comfortable discussing sexual health with middle aged and older patients regardless of their patients' gender. PCPs that offer to counsel the patient about a sexual health diagnosis or discuss sexual health more frequently are more likely to be knowledgeable about sexual function in middle and old age and trained in sexual history taking. PCPs that opt to discuss sex health with middle aged and older patients including couple therapy are generally more likely to be comfortable discussing sex health with patients regardless of their gender.

Conclusion: Successful sexual healthcare management and consultation options with middle aged and older patients can be predicted by physician's gender, knowledge of sexual health in later life and their comfort level and frequency discussing sex with these patients, increased likelihood is relative to the patient's gender and presenting complaint.

Keywords: Primary care, sexual healthcare, sexual history, predictors, consultation, middle age, old age, Trinidad & Tobago, Caribbean

Introduction

A sexual history is defined as an enquiry of a patient's personal history concerned with sexual function and dysfunction³³³. It is essential to take a routine (comprehensive) sexual history when gathering data from a patient who has a disease of the reproductive tract, who experiences sexual dysfunction, or who requests contraception, abortion or sterilization³⁰⁶. The actual core components of a sexual history are known as the '5Ps' - Partners, Practices, Prevention, Protection and Past based on Bates, CDC, NHS Trust, and BASSH National Guidelines.^{188,334,335,336} These core sexual history components can only be addressed if the health provider asks the patient relevant questions concerning their: reasons for attendance, review of their symptoms, last sexual intercourse (LSI) – date, gender, sites of exposure, condom use with previous sexual partners, sexual orientation (self and partners), previous STIs risk assessment; and for females, last menstrual period, contraceptive and cytology history (females).^{334,336} Sexual functioning is part of the definition as should also be assessed but in practice it may only be assessed if the patient willingly presents this as a complaint at the consultation. The extent of the history varies with the patient's age, presenting condition and the reason for securing the history and is recommended as part of every physical examination [a physical examination is a diagnostic and therapeutic interaction in which the physician evaluates anatomic findings (to be integrated with the patient's history and pathophysiology) using techniques such as observation, palpation, percussion, and auscultation].³³⁷ In practice, a short (focused) sexual history – one with specific questions regarding the presenting sexual health-related complaint or underlying issue that is indicated by the medical history is more prevalent.

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Reticence among older patients and their healthcare providers regarding of sexual health discussions, frequently constitutes an actual barrier to open and effective communication.³³⁹ If, however, a good screening sexual history is routinely elicited, much useful clinical data will be obtained. Effectively taking the sexual history may impact patients' screening behaviours, willingness to disclose personal relevant health information, and overall relationship with their physician.^{265,270,272} Furthermore, the patient may be sensitized to a number of issues of which he or she might not have been

aware.^{183,41,46,158} Perhaps most importantly, a door will be opened so that if concerns or problems about sexual functioning arise in the future, the patient will feel more comfortable discussing them with the clinician.³⁴⁰

Discussing sexual health or taking a sexual history with patients is an important part of a physical and emotional health assessment; PCPs often struggle with enquiries regarding intimacy and sexual function.³⁴¹ PCPs have reported that communicating with older patients about sexual health may be difficult. In fact they admitted that they sometimes overlook taking a diagnostic sexual history and focusing on addressing the non-sexual medical reasons their older patients attended the clinic instead.^{341,309} A few reasons why PCPs rarely ask their middle aged and older patients about sexual health are because of time constraints in primary care, their discomfort with the topic and perceptions of patient distress disclosing this information. PCPs have also reported fear of offending the older patients if they approach sexual health issues during the medical consult.³⁰⁹ Thus many middle and older aged patients have reported experiencing sexual health issues that they have not discussed with a physician.³³⁹ When PCPs omit taking their sexual history, it may have negative consequences for their care. For example, failing to make a correct diagnosis, not initiating proper care or management such as appropriate referrals, and delaying treatment are consequences that may result from the inadequate sexual health inquiry.³⁴²

Consequently, sexual health communication and sexual history taking are essential diagnostic tools.³³⁵ If these assessments are conducted correctly physicians are enabled to accurately diagnose their patient and inform them of appropriate care options to improve their sexual health-related quality of life.^{340,341,183} If physicians are experiencing difficulties having these discussions this leads to increased missed opportunities for intervention and treatment and possibly be misinformed about other underlying causes of sexual dysfunction such as chronic illness that appears to be more prevalent in older patients.^{343,344}

The quality of the physician-patient sexual health communication influences patients' overall satisfaction, quality of care, and opportunities for improved sexual health.³⁴⁵ For

the patient, a sexual health discussion is a consultation and care management opportunity to gain sex education³⁴⁶ and momentary talk therapy, proven to increase patient confidence about sexual problems and clarify any misconceptions they may have about sex.³⁴⁷ To achieve this confidence, the patient needs to be reassured that the physician is knowledgeable, genuinely cares, will uphold confidentiality and can offer appropriate treatment.³⁴⁸ To achieve effective (and comfortable) sexual health consultations PCPs are required to be knowledgeable about sexual health conditions that exist in middle and old age.³⁴⁹ It is possible that PCPs' knowledge level in sexual health in later life may be an indicator of their competence that impacts on how well they precisely diagnose and treat older patients seeking sexual healthcare. In any medical consultation the success of the encounter is proposed to be dependent on the nature and role of the physician in the physician–patient relationship and their characteristics.³⁵⁰ As sexual health consultations are very sensitive topics to discuss it is critical that the patient feels comfortable with the physician so they may disclose information freely.³⁵¹ Therefore, physicians' characteristics that predict a more likely to occur sexual health consultation may not only be predicted by physicians' knowledge of sexual health in later life, comfort level discussing sex with patients as well, regardless of patients' gender, age or the nature of the sexual health complaint raised.^{309,352}

There were a few studies examining the physician's perspective in sexual health care consultations with middle aged and older patients³⁵³. A handful of studies have examined appropriate consultation tool options for improved communication in sexual history taking interviews.³⁵⁴ More prevalent studies have ascertained the barriers and facilitators to communication^{309,347} and even some aspects of sexual history taking practices have been reviewed.^{338,340,342,355} To date, not many studies examine the physicians' perspective with regard to determining PCPs' predictors for treatment options in sexual health with patients in middle and old age.

This paper fills that gap in the literature as it uses vignette style patient case studies to examine the associations between patient characteristics in primary care which include their reason for attendance – for chronic illness and/or sexual health conditions and PCPs'

characteristics (gender, sexual health knowledge, conduct a sexual health discussion or take a sexual history). The aim is to examine what are PCPs' predictors for the sexual healthcare treatment they offer to their middle aged and older patients and how are these influenced by the patients' characteristics.

Methods

This quantitative paper is part of an overarching mixed-methods sequential exploratory study that consists of a qualitative and quantitative arm. The data presented in this paper are from the quantitative arm captured in Section 1: PCPs socio-demographic characteristics and Section 3: Consultation experiences of the survey instrument employed. The details of this survey design and administration methods are presented in the third research paper this study [*Rabathaly PA, Chattu V. Sexual Healthcare Knowledge, Attitudes and Practices amongst primary care physicians in Trinidad and Tobago. Journal of Family Medicine and Primary Care 2019. DOI: 10.4103/jfmpc.jfmpc_322_18*].³⁴⁶

Vignette Methodology

Section 3: 'Consultation experiences' of the survey instrument was created using a vignette-based methodology. This method is frequently used to examine decision-making processes, including clinical judgments made by health professionals regarding patient care.³⁵⁶ The strategic design of the six clinical vignettes presented in this paper were shaped from the qualitative arm of this overarching study that explored PCPs attitudes towards sexuality and sexual health care of their middle aged and older patients (data collection and analysis techniques are described in the second paper produced from this study {*Rabathaly PA, Chattu V. An exploratory study to assess Primary care physicians' attitudes towards talking about sexual health with older patients in Trinidad and Tobago. Journal of Family Medicine and Primary Care 2019. DOI: 10.4103/jfmpc.jfmpc_325_18* }.³⁰⁹ A vignette is a brief, carefully written description of a person or situation designed to simulate key features of a real world scenario.³⁵⁶ The most applicable scenarios were selected from the qualitative data each containing a patient aged 45-64 years or 65 years and older; a presenting complaint that was a chronic illness and/or sexual health-related

presenting symptom or reason for visit; and three scenarios were male patients and the other three were female. Vignette equivalence was achieved by ensuring the content and characteristics of each vignette contained *experimental aspects* that assess their effect on the dependent variables³⁵⁶ (PCPs' diagnosis, PCPs' comfort, treatment options); *controlled aspects*, which were the consistent components across all six scenarios (patients age group, presenting complaint chronic disease/sexual health-related, all scenarios assessing the same type of questions) in order to eliminate extraneous variance;³⁵⁶ and (c) contextual aspects, which demonstrate some variation across vignettes in order to provide authenticity (these were the extra specific details about each patient e.g. work status, marital status, medications, personality), but were not thought to exert a causal influence on the dependent variables.³⁵⁶

As previously mentioned, each clinical vignette contained at least three questions fashioned into measurable concepts. These concepts assessed: *knowledge*: ability to identify the correct diagnosis for the given scenario- of which there was only one; *attitudes*: comfort level when conducting a discussion about patient's sexual health based on the clinical scenario given using a Likert scale ranging from 'very comfortable to very uncomfortable'; and *practices*: where a range of specific sexual health-related and other treatment options to choose from based on the clinical scenarios. The KAP style was fitting for the research question and the CME format of the questions was apt for the study population as PCPs would be familiar with the clinical scenario medical exam format from their clinical training. The actual clinical diagnoses were matched with their appropriate symptoms and medical treatment options so that the vignettes were completed with accurate information and presented in a manner that will occur in real life.

Analysis

For this paper the focus is on PCPs' sexual health care practices which are the treatment and management options the participating PCPs selected for each clinical vignette in the survey. The '**sexual healthcare treatment**' options included counselling (advising) the patient about a sexual health diagnosis, discussing their sexual health issues with them or their partner/couple therapy or sexual history taking 'routine' (comprehensive history taking) or 'focused' (contains limited specific questions and sometimes taken only if

indicated by patient or information in medical history). The ‘**medicalised treatment**’ options {medicalised -to identify or categorize a condition or behaviour as being a disorder requiring medical treatment or intervention;³⁵⁷ medical treatment – the use of an agent, procedure, or regimen, such as a drug, surgery, or exercise, in an attempt to cure or mitigate a disease, condition, or injury}³⁵⁸ included care offered via prescription drugs, use technology e.g. ultrasound, physical examination, laboratory testing or a referral. Table 14 is an overview of the PCPs’ sexual health care practices illustrating the frequencies of all reported treatment options offered to these theoretical patients based on patient information and presenting complaints in each clinical scenario.

Only the PCPs’ sexual healthcare treatment options were statistically analysed by univariate and multivariate logistic regression models to identify associations between physician characteristics and these selected treatment options according to the patient’s characteristics: *age group* (45 – 64 years, and 65 years and over), *gender* (male or female) and their *reason for attending the services* for a chronic disease or sexual health complaint. Table 15 below illustrates a summary of the analysis of each medical consultation revealing the suggested associations in the form of odds ratios (ORs) of physician’s characteristics (independent variables) and their reported sexual healthcare treatment options (dependent variables) they selected based on the clinical presentation of the middle aged or older patient.

Results

From a sample of 155 PCPs, the survey achieved a 60% response rate (n=93). This study examined personal characteristics including PCP’s demographics (males=55.9% and under 40 years old=60.7%). >90% of PCPs were generally comfortable discussing sex with patients 45 years and older yet 59% think there is not enough time to do this in primary care; 57.6% were educated in sexual history taking skills; 56.9% of PCPs were less knowledgeable about sexual health conditions in 45+ year olds (attained less than mean score of 2.27/6) and 39.1% were educated about sexual function in middle and old age at postgraduate level.

Consultation Analysis

No remarkable differences were found on overall patient sexual health treatment options offered comparing patient gender and age. In general PCPs appear to be more frequent with medicalised treatment options as over 70% of PCPs selected these options for all clinical scenarios. For all sexual health treatment options over 50% of the PCPs selected these options. Notably, counselling the patient about their sexual health-related diagnosis was the most recommended >90% for most clinical presentations. 52.7–77.4% of PCPs offered discussing sexual health concerns with the patient/partner. Taking a routine sexual history was the least popular option as only 21.7% of PCPs selected it.

The most popular treatment options offered for the erectile dysfunction (ED) patient as counselling. 90.3% of PCPs counselled him about ED, and over 70% of PCPs offered all medicalised treatment options that focused on his diabetes (medical history, laboratory blood testing, antidepressants and diabetic medication and education). For the female patient who was very open minded about sex that presented with vaginal dryness and painful intercourse, PCPs favoured counselling her about her diagnosis (94.6%) and 81.7% offered medicated creams and 58.7% conducted a physical examination. For the depressed, overworked middle-aged man with sexual dysfunction, the most popular treatment selected was to offer couple therapy (63.4%) and conduct a comprehensive medical history with limited general sexual health questions (90.2%). In consultation 4 with the middle-aged female patient who presented with valvular blisters diagnosed with genital herpes, about half of PCPs, (49.5%) recommended that her spouse should make an appointment, but the most popular treatment offered were conducting a vaginal exam (75%) and conducting STI laboratory testing (81.7%). With the hypoactive sexual desire disorder (HSDD) patient, 77.4% of PCPs offered to discuss why medications can affect her sex drive and 65% wanted to change her antihypertensive medication. In the final consultation, with the middle-aged man with sexual addiction, 59.1% of PCPs reported that they would counsel the patient about his diagnosis but 90.3% of them will refer him to a psychologist.

Table 13: Sexual Health Consultation Analysis

PCPs' reported sexual health & medicalised treatment options offered to patients 45+ years with chronic disease and related sexual dysfunction N=93

Patient consultation characteristics		% of PCPs that offered the following sexual health care treatment options N (%)			% of PCPs that offered the following medicalised treatment options N (%)					
#	Gender Age, presenting complaint/s									
1	Male, middle aged =53yrs With diabetes & depression (first visit)	Take diagnostic routine sexual history †missing values n=92	Counsel about diagnosis: erectile dysfunction (ed)	Take diagnostic sexual history indicated by medical history	Take diagnostic medical history	Educate with pamphlets on diabetes	Recommend blood tests	Recommend antidepressants	Chang diabetic medication	
		Yes	†20 (21.7)	84 (90.3)	55 (59.1)	86 (93.5)	68 (73.9)	88 (94.6)	72 (77.4)	73 (78.5)
	No	†72 (78.3)	9 (9.7)	38 (40.9)	7 (6.5)	25 (26.1)	5 (5.4)	21 (22.6)	20 (21.5)	
2	Female, old aged =65 yrs. With vaginal dryness & painful sexual intercourse. Very open minded about sexual health	Counsel on diagnosis: dyspareunia, vaginismus & atrophic vaginitis	Discuss sexual health care treatment options		Prescribe localized oestrogen & 17-b oestradiol vaginal creams	Recommend vaginal dilators	Refer her to the STI & family planning clinic	Conduct vaginal exam	Refer to another physician for vaginal exam	
		Yes	88 (94.6)	71 (77.2)		76 (81.7)	4 (4.3)	2 (2.2)	54 (58.7)	3 (3.2)
	No	5 (5.4)	22 (22.8)		17 (18.3)	89 (95.7)	91 (97.8)	39 (41.3)	90 (96.8)	
3	Male, middle aged = 55yrs With depression & sexual dysfunction. Currently on antidepressants and is overworked at his job	Advise to bring partner to discuss sexual health intimacy issues as a couple			Recommend medical leave (time off) from his job	Conduct a focused medical history	Conduct a comprehensive medical history with limited general sex health questions	Prescribe more anti-depressants	Prescribe Viagra	Refer him for in-depth laboratory tests
		Yes	59 (63.4)			22 (23.9)	15 (16.3)	83 (90.2)	0 (0.0)	17 (18.3)
	No	34 (46.6)			71 (76.1)	78 (83.7)	10 (9.8)	93 (100)	76 (81.7)	62 (66.7)
4	Female, middle aged =60yrs With STIs, dysuria and vulva blisters. Rural school teacher married to community pastor	Counsel the patient about her diagnosis: genital herpes	Discuss sexual health care treatment options with her		Refer her for full STI laboratory screening	Conduct a vaginal exam	Refer her to the national (QPCC&C) STI & family planning clinic	Refer her to another physician to conduct a vaginal exam	Recommend her spouse to make an appointment	Recommend a follow up visit to assess healing
		Yes	85 (90.4)	64 (68.8)		76 (81.7)	69 (75.0)	39 (42.4)	2 (2.2)	46 (49.5)
	No	7 (9.6)	29 (31.2)		17 (19.3)	24 (25.0)	54 (57.6)	91 (97.8)	47 (51.5)	79 (85.0)
5	Female, old aged = 67yrs With hypertension & hypoactive sexual desire disorder (HSDD) Presents with minor headaches and muscular pain. New to antihypertensive medication	Discuss the merits of a good quality sex life to her	Discuss with her how medications can affect sex drive	Tell her to bring her partner to discuss sexual health intimacy issues as a couple	Explain to her that there is nothing wrong with reduced sexual desire at her age	Change her hypertensive medication	Refer her to the national (QPCC&C) STI & family planning clinic	Refer her to the nurse to discuss her problems with her instead	Refer her to a psychologist	Educate her about hypertension with leaflets
		Yes	49 (52.7)	72 (77.4)	60 (64.5)	43 (46.7)	65 (69.9)	0 (0.0)	7 (7.5)	17 (18.3)
	No	44 (47.3)	21 (32.6)	33 (35.5)	50 (53.3)	28 (30.1)	93 (100)	84 (92.5)	76 (81.7)	58 (62.4)
6	Male, middle aged = 54yrs With sexual addiction to sex toys & online porn. Frequent absentee from work (first visit)	Counsel the patient about his diagnosis: sex addiction problems			Refer him to a psychologist	Recommend outdoor extracurricular activities	Refer him to the national (QPCC&C) STI & family planning clinic	Prescribe serotonergic (SSRI) antidepressants		
		Yes	55 (59.1)			84 (90.3)	1 (1.1)	5 (5.4)	21 (22.6)	
	No	38 (40.9)			9 (9.7)	92 (98.9)	88 (94.6)	72 (87.4)		

Predictors of prospective patient sexual healthcare management and consultation

Gender

The data show that being male [physician or patient is a predictor] for increased likelihood attaining sexual health care management treatment options. PCPs who were male were four times more likely to take a routine (comprehensive) diagnostic sexual history (OR=3.99; p=0.02). On the other hand, female PCPs were twice more likely to conduct focussed sexual histories (OR=2.42; p=0.05). Predictors for counselling a male patient about his sexual health diagnosis are PCPs who are comfortable discussing sexual health with male patients (OR=5.88, p=0.00), or who discuss sex frequently with middle-aged and older patients (OR=22.1, p = 0.00).

Comfort

The predictors for discussing sexual health treatment options with female patients who present with sexual health concerns are three times more likely to be PCPs who discuss sex health frequently with their patients (OR=3.63, p=0.02). Whilst the predictor for middle aged female patients presenting with STIs, PCPs were 16 times more likely to if they discuss sex frequently with their patients (OR=16.2, p=0.02). Predictors of PCPs who favoured discussing sexual health treatment options with the female patient presenting with chronic hypertension and low sexual desire, were PCPs who discuss sex with their 45+ year old patients frequently (OR=7.58, p=0.00). The predictors of the PCPs who were more likely to discuss the merits of a good quality sex life with this patient are also PCPs that are nine times more likely to discuss sex health with middle-aged and older patients (OR=9.44, p=0.00). The predictors for recommending couple therapy to this patient to discuss sexual intimacy problems with her and her husband are PCPs who are three times more likely to discuss sex frequently with their patients (OR=3.33, p=0.02). Predictors to counsel the sex addict patient were PCPs who were 22 times likely to discuss sex frequently with their middle aged and older patients (OR=22.1, p = 0.00).

Education and Knowledge

The predictors for discussing sexual health with old aged female patients who present with sexual health complaints such as of vaginal dryness, were PCPs that were almost three times more likely to be trained in sexual history taking (OR=2.75, p=0.05) as well as sexual

function in middle-aged and older adults (OR=2.82, p=0.05). Predictors for discussing the merits of a good quality sex life with an old aged hypertensive female patient were PCPs who are twice more likely to have been trained in sexual history taking (OR=2.37, p=0.05) and three times more likely to be trained in sexual functioning in older adults (OR=2.90, p=0.01). Predictors for recommending couple therapy to this same chronic disease patient to discuss sexual intimacy problems with her and her husband were PCPs who were 3 times more likely to discuss sex frequently with middle aged and older patients (OR=3.33, p=0.02). The predictors for PCPs who are more likely to counsel the sex addict patient about his diagnosis were those who were five times more likely to be trained in sexual history taking (OR=5.50, p=0.00), and six times more likely to be trained in sexual functioning in older adults (OR=6.04, p=0.00).

Table 14: Predictors of PCPs' Sexual Health Treatment Options

*Statistically significant †Omitted because of collinearity

	Predictors for: <i>Take a routine sexual history</i>	[Crude] (OR)	95% CI	P> z
	PATIENT #1: Male, Middle aged =53yrs with Diabetes & Depression (First visit)	Male physicians	3.99	1.22 – 13.17
Comfortable discussing sex with male patients		4.50	0.96 – 21.01	0.06
Discusses sex frequently with middle aged patients		5.70	0.70 – 45.6	0.10
Educated in sexual history taking skills		2.37	0.77 – 7.27	0.13
Educated about sexual function in middle and old age		1.54	0.56 – 4.20	0.39
Knowledgeable about sexual health conditions in 45+ yr. old		1.81	0.67 – 4.90	0.24
Predictors for: <i>Take a sexual history indicated by medical history</i>		[Crude] (OR)	95% CI	P> z
Female physicians		2.42	1.02 – 5.78	0.05*
Comfortable discussing sex with male patients		0.51	0.12 – 1.32	0.16
Discusses sex frequently with middle aged patients		0.82	0.29 – 2.32	0.70
Educated in sexual history taking skills		0.50	0.21 – 1.19	0.12
Educated about sexual function in middle and old age		0.36	0.29 – 1.56	0.36
Knowledgeable about sexual health conditions in 45+ yr. old		1.30	0.55 – 2.96	0.57
Predictors for: <i>Counsel the patient about his diagnosis</i>		[Crude] (OR)	95% CI	P> z
Female physicians		3.03	0.59 – 15.5	0.18
Comfortable discussing sex with male patients		0.28	0.03 – 2.35	0.24
Discusses sex frequently with middle aged patients		3.57	0.86 – 14.9	0.08
Educated in sexual history taking skills		3.03	0.71 – 13.0	0.14
Educated about sexual function in middle and old age	4.35	0.85 – 22.2	0.08	
Knowledgeable about sexual health conditions in 45+ yr. old	0.57	0.14 – 2.28	0.43	
PATIENT #2: Male, Middle aged =53yrs with Diabetes & Depression (First visit)	Predictors for: <i>Counsel the patient about her diagnosis</i>	[Crude] (OR)	95% CI	P> z
	Female physicians	3.33	0.36 – 3.10	0.29
	Comfortable discussing sex with female patients	1.58	0.16 – 15.4	0.69
	†Discusses sex frequently with middle aged patients	-	-	-
	Educated in sexual history taking skills	2.13	0.34 – 13.7	0.42
	Educated about sexual function in middle and old age	4.70	0.50 – 43.8	0.17
	Knowledgeable about sexual health conditions in 45+ yr. old	0.48	0.08 – 3.04	0.44
	Predictors for: <i>Discuss treatment options with her</i>	[Crude] (OR)	95% CI	P> z
	Male physicians	1.50	– 3.99	0.41
	Comfortable discussing sex with female patients	2.46	– 8.50	0.65
	Discusses sex frequently with middle aged patients	3.63	– 10.9	0.02*
	Educated in sexual history taking skills	2.75	– 7.51	0.05*
Educated about sexual function in middle and old age	2.82	– 7.88	0.05*	
Knowledgeable about sexual health conditions in 45+ yr. old	0.80	– 2.14	0.66	
PATIENT #3: Male, 55yrs, with depression & sexual dysfunction, on antidepressants	Predictors for: <i>Couple therapy: Tell him to bring his partner</i>	[Crude] (OR)	95% CI	P> z
	Male physicians	1.46	0.62 – 3.41	0.38
	Comfortable discussing sex with male patients	3.09	1.22 – 7.81	0.02*
	Discusses sex frequently with middle aged patients	3.13	1.10 – 8.84	0.03*
	Educated in sexual history taking skills	3.24	1.33 – 7.85	0.01*
	Educated about sexual function in middle and old age	3.00	1.24 – 7.24	0.02*
	Knowledgeable about sexual health conditions in 45+ yr. old	1.13	0.47 – 2.65	0.79

Table 4: Predictors of PCPs' Sexual Health Treatment Options continued

PATIENT #4: Female, 60yrs, with STIs, Dysuria and vulva blisters. Rural School teacher married to community pastor	Predictors for: <i>Counsel the patient about her diagnosis:</i>	[Crude] (OR)	95% CI	P> z
		Male physicians	1.30	0.30 – 5.53
	Comfortable discussing sex with female patients	0.87	0.10 – 7.71	0.90
	Discusses sex frequently with middle aged patients	16.2	2.93 – 88.9	0.00*
	Educated in sexual history taking skills	2.45	0.55 – 10.94	0.24
	Educated about sexual function in middle and old age	1.92	0.43 – 8.57	0.39
	Knowledgeable about sexual health conditions in 45+ yr. old	1.28	0.29 – 5.72	0.74
PATIENT #5: Female, 67yrs; with Hypertension & Hypoactive Sexual Desire Disorder (HSDD); Presents with minor headaches and muscular pain. New to antihypertensive medication	Predictors for: <i>Discuss treatment options with the patient</i>	[Crude] (OR)	95% CI	P> z
		Male physicians	1.28	0.53 – 3.09
	Comfortable discussing sex with female patients	3.08	0.93 – 10.17	0.07
	Discusses sex frequently with middle aged patients	7.58	2.49 – 23.14	0.00*
	Educated in sexual history taking skills	2.14	0.88 – 5.23	0.10
	Educated about sexual function in middle and old age	1.89	0.77 – 4.61	0.16
	Knowledgeable about sexual health conditions in 45+ yr. old	1.10	0.45 – 2.68	0.83
PATIENT #6: Male, 54yrs, Sexual addict to sex toys & online porn. Frequent	Predictors for: <i>Discussing sex: merits of a good quality sex life</i>	[Crude] (OR)	95% CI	P> z
		Male physicians	1.11	0.49 – 2.52
	Comfortable discussing sex with female patients	2.89	0.82 – 10.2	0.10
	Discusses sex frequently with middle aged patients	9.44	2.51 – 35.4	0.00*
	Educated in sexual history taking skills	2.37	1.02 – 5.52	0.05*
	Educated about sexual function in middle and old age	2.90	1.24 – 6.76	0.01*
	Knowledgeable about sexual health conditions in 45+ yr. old	0.69	0.30 – 1.58	0.39
PATIENT #5: Female, 67yrs; with Hypertension & Hypoactive Sexual Desire Disorder (HSDD); Presents with minor headaches and muscular pain. New to antihypertensive medication	Predictors for: <i>Discuss how medications can affect sex drive</i>	[Crude] (OR)	95% CI	P> z
		Female physicians	1.79	0.65 – 4.95
	Comfortable discussing sex with female patients	0.58	0.12 – 2.87	0.51
	Discusses sex frequently with middle aged patients	3.30	1.12 – 9.83	0.03*
	Educated in sexual history taking skills	0.61	0.22 – 1.69	0.34
	Educated about sexual function in middle and old age	0.60	0.22 – 1.62	0.31
	Knowledgeable about sexual health conditions in 45+ yr. old	1.69	0.61 – 4.69	0.31
PATIENT #5: Female, 67yrs; with Hypertension & Hypoactive Sexual Desire Disorder (HSDD); Presents with minor headaches and muscular pain. New to antihypertensive medication	Predictors for: <i>Couple therapy- tell her bring her partner</i>	[Crude] (OR)	95% CI	P> z
		Male physicians	1.93	– 4.56
	Comfortable discussing sex with female patients	2.42	– 7.94	0.14
	Discusses sex frequently with middle aged patients	3.33	– 9.48	0.02*
	Educated in sexual history taking skills	1.79	– 4.23	0.19
	Educated about sexual function in middle and old age	1.85	– 4.37	0.16
	Knowledgeable about sexual health conditions in 45+ yr. old	1.87	– 4.53	0.17
PATIENT #6: Male, 54yrs, Sexual addict to sex toys & online porn. Frequent	Predictors for: <i>Counsel the patient about his sexual addiction</i>	[Crude] (OR)	95% CI	P> z
		Male physicians	1.80	0.78 – 4.16
	Comfortable discussing sex with male patients	5.88	2.19 – 15.7	0.00*
	Discusses sex frequently with middle aged patients	22.1	4.67 -104.5	0.00*
	Educated in sexual history taking skills	5.50	2.22 – 13.6	0.00*
	Educated about sexual function in middle and old age	6.04	2.40 – 15.2	0.00*
	Knowledgeable about sexual health conditions in 45+ yr. old	0.74	0.32 – 1.71	0.48

Discussion

Summary of results

Overall, PCPs with increased likelihood to offer *any* sexual healthcare management or treatment options as outlined in Table 14 are more frequently male PCPs that are more likely to be comfortable discussing sexual health with middle aged and older patients regardless of their patient's characteristics. PCPs that offer to *counsel the patient about a sexual health diagnosis* or *discuss sexual health more frequently* are more likely to be knowledgeable about sexual function in middle and old age and trained in sexual history taking. PCPs that opted to *discuss sex health* with middle aged and older patients including couple therapy are generally more likely to be comfortable discussing sex health with patients regardless of their gender.

In review of these results, it is apparent that sexual health conditions in middle and old age require appropriate diagnostic testing (sexual history taking and lab testing) to ensure patients are correctly diagnosed.³³³ Treatment options of sexual health talk therapy for individual and couples, discussion to clarify misconceptions and issues about sex are also important.³⁴⁵ Conducting these consultations should be knowledgeable about sexual function in middle and old age, and the prevalent sexual health conditions and sexual dysfunction that plague later life and are equipped with sexual history taking skills.³⁴⁶ To offer appropriate sexual healthcare treatment options, PCPs should also be comfortable and confident to discuss sexual health with their middle-aged and older patients regardless of their gender.³⁴³ Some studies have implied that discussing sexual health and taking a sexual history is difficult particularly for female physicians.^{343,342} These results suggest a similar direction of association as the male PCPs appeared to be more comfortable in most of the consultations and including taking a routine comprehensive sexual history with a male patient. Interestingly the treatment option to take a *focused* sex history was favoured by the female PCP and to conduct this PCP did not require being knowledgeable in all areas of sexual health compared with the routine sex history. A previous paper from this study reported that PCPs did report taking a focused sexual history with older patients where they omitted the diagnostic questions regarding type of sex, sexual violence, age and gender of partners and sexual orientation.³⁴⁶ Appropriate sexual health communication strategies in medical consultations require PCPs to have good communication skills in sexual health and discussion techniques

for sexual activity related content. Increased frequency of sexual health discussions can also improve the PCPs' confidence to conduct these types of consultations and as patients become more accustomed to having these discussions they too will be sensitised, and the nature of the consultation may appear less difficult in the future.

Sexual health treatment options for middle aged and older adults are limited as the services are either non-existent or discriminated against as they favour younger populations. In developing countries there are several sexual and reproductive health clinics that focus on prevention of mother-to-child transfer of HIV (PTMCT), antenatal and postnatal care and then STI clinics that are usually populated by young adults and teenagers. There are even adolescent sexual health care clinics that promote safe sex practices. Additionally, sexual psychotherapy services are either very few or not available. These types of referrals would be returned or sent back and forth in PC or sent to a psychologist who may have not have studied sexual health care in-depth to cover topics such as elder abuse and rape in this age group, sexual addictions or SD that is not considered etiological PCP to manage³⁵².

For improving the overall sexual health communication, diagnostic techniques and sexual health education of PCPs, it is important to review the role of the PCP in the physician-patient relationship for a sexual health consultation. Sexual health consultations are more effective with a patient-centred and shared decision-making approach as the treatment options are patient specific and may be best to offer patients a range of treatment options and discuss with them what the most appropriate care is for them. This may be very difficult to achieve in primary care as this time of care requires time for discussion- a resource very limited in these settings.³⁴² Paternalistic care is also a trademark in primary care in developing countries not only because of the time constraint but physicians finds it easier to tell the patient what to do and how to take their medication as they find middle- aged and especially older patients more difficult that younger patients attend to.

Study Limitations

In this study there were some limitations. We were unable to truly assess patient characteristics and their impact on treatment options selected by PCPs. Perhaps more demographics could have used to assess this as well as comparable clinical vignettes. A practice score would have been a great comparative variable to compare with all PCPs

however this too was difficult to create as the practice options were not standardised in this survey. The reasons were to allow the PCP more flexibility with the treatment options with different patients. Usually physicians will not use the exact same rubric as each patient can be very different due to their series of co-morbidities.

Vignette designs may be an ideal method for investigating how health clinicians make decisions that affect their patients. However, vignette-based studies have also attracted some criticisms regarding potential limitations in construct and external validity. Indeed, a key consideration, inherent to all vignette studies, is the extent to which a written stimulus, and participants' responses to it, can accurately represent certain aspects of what happens in the "real world." Concerns are sometimes raised that vignettes do not accurately reflect "real world" phenomena, and that this affects the validity of results and conclusions however, these scenarios were taken directly from actual scenarios that from PCPs in the qualitative arm of the study.

All treatment options were applicable in all scenarios and therefore PCPs were given the opportunity to choose freely all the options they will offer the patient in that scenario. However, the question could have benefitted from having expected standardised treatment options for each so that it would be easier to measure practice amongst the group of PCPs and create a practice score. Additionally, for future this question would be best assessed if the practice options were prioritised by the PCPs. In this way the researcher would be able to really ascertain the priority of sexual health care treatment amongst the group for PCPs based on predictors as well as patient presenting complaints and characteristics.

Future research and recommendations

Further research to determine the most effective physician-older patient communicative strategies to be used in sexual health care clinics in local PC settings with a multicultural middle-aged and older population is encouraged. Also, studies focused on examining the influences on PCP's decision-making in sexual health care management in later life and research investigating what factors affect the treatment options and care strategies PCPs choose (medicalised versus communicative or diagnostic) for older patients would be welcomed. These studies can offer insight into how PC practices should be organised and managed to obtain the best benefit for patients attending PC for sexual health care in later

life. There is need to improve training opportunities for PCPs in sexual health communication and knowledge about sexual function in old age to ensure more opportunities for timely and accurate diagnoses, intervention and treatment for sexual health conditions in middle-aged and older adults in Trinidad and Tobago.

Conclusion

PCPs aim to improve the overall sexual health-related quality of life of their middle-aged and older patients seeking sexual health care and treatment. However, a good interpersonal relationship between the physician and patient is considered a prerequisite for optimal medical care especially for private topics such as sexual health.³⁷⁵ The success of every consultation is rooted in the sharing between the physician and patient and thus it is important for the PCP to exhibit the right amount of empathy (as it may not always be possible to have sociodemographic concordances between PCP and patient), be experienced in sexual health communication skills and be up-to-date in sexual health knowledge in later life. These criteria were found to be predictors for PCPs to perform sexual health consultations with older patients. However, competence and confidence amongst PCPs vary with regard to sexual health care practices influenced by patients' and physicians' characteristics. This paper revealed that sexual healthcare management and treatment options for middle aged and older patients can be predicted by physicians' gender, knowledge of sexual health in later life and their comfort level and frequency (experience) discussing sex with these patients.

Chapter 7 – Triangulation of Findings

7.1 Introduction

This chapter presents an overview of the core findings obtained from this study. Guided by the triangulation protocol outlined in Chapter 3, Methodology, the results are presented in a triangulation matrix. The qualitative and quantitative findings are arranged side by side according to the common core meta themes that arose from both datasets. In each row of the matrix, the researcher has provided an interpretation of the triangulated results relative to whether they illustrate convergence, complementarity, divergence, or silence.

Chapter Aim & Objectives:

To provide an overview of the results of this study by:

- ▶ Presenting the core triangulated results in a matrix;
- ▶ Describing the direction of the results with regard to convergence, complementarity, divergence, and silence;
- ▶ Providing a triangulated interpretation of each pair of findings;
- ▶ Presenting a summary of the overall results found in this study.

7.1.1 Triangulation Phase

7.1.1.1 Protocol Justification

Social research is founded on the use of many single research methods and, as such, may suffer from limitations associated with that method or from the specific application of it. Triangulation offers the prospect of enhanced confidence. Webb et al. noted the importance of cross-validating results by using multiple methods and suggested, once a proposition has been confirmed by two or more independent measurement processes, that the uncertainty of its interpretation is greatly reduced.³⁵⁹ As such, triangulation has been used in this study to enhance the credibility and persuasiveness of this research account.

7.1.2 Methodological Triangulation

Qualitative and quantitative methods were employed in this study primarily to determine different aspects of the overarching research question that examines: *What are PCPs knowledge of, attitudes towards and practices with middle aged and older patients with sexual health needs accessing primary care services?* As mentioned in earlier sections, semi-structured interviews were conducted with a 35 PCPs to explore their views on sexual health care with middle and old-aged patients. Subsequently, a survey was designed and administered to all PCPs nationwide to measure overall knowledge, attitudes, and sexual health care practices. Data for each component were collected and analysed separately to produce two sets of findings as presented in Chapters 4, 5, and 6. Chapter 7 presents an integration of these findings analysed via methodological triangulation.

Methodological Triangulation proposes that a combination of the two approaches can yield higher-quality results without unreasonable additional effort and can be a more efficient encompassing way to create understanding.³⁶⁰ Some researchers refer to this integration method as the “third effort” because it occurs after analysis of the qualitative and the quantitative components; it also requires a lot of time and energy.³⁶¹ Notably, the term triangulation can be confusing because it has more than one meaning.³⁶² It can be used to describe corroboration between two sets of findings or to describe a process of studying a problem using different methods to gain a more complete picture primarily because the underlying assumption of methodological triangulation is that no single research method is free of errors and the research question or phenomenon should be examined from different

methodological perspectives as possible.^{362,363} This latter meaning is commonly used in mixed-methods research including this one.

7.1.2.1 Triangulation Protocol Theory

Triangulation in this study has provided opportunities to observe: (a) convergence and corroboration of some findings using two different methods regarding certain aspects of the same research question. This form of validity indicates that research results were enhanced with the two different methodological approaches producing convergent findings about the same empirical domain;³⁶⁴ (b) complementarity which assumes that neither methodological tradition qualitative or quantitative can answer the research questions on its own. Complementarity conveys elaboration, enhancement, illustration, and clarification of the results from one method with findings from the other method.³⁶⁵ Complementarity is congruence of findings that can only be expected if relationships are found between findings where the convergence of the research results is not possible as the different methods did not ‘measure’ the same attributes of some concepts.

The actual process of triangulating findings from different methods took place at the interpretation stage of this study when both data sets had been analysed separately (as shown in Chapter 3: Mixed-methods – Figure 10 adapted from O’Cathain et al.). Prior to conducting triangulation analysis, a matrix must be prepared for comparing and analysing both datasets. The foundation of this matrix was established by the meta themes selected from the qualitative phase of the study when the topic guide was designed. The meta themes are those key headings that were used as the backbone of the framework analysis and is fitting to be utilised here for congruence and standardisation of the methods.³⁶⁶ Several techniques have been described for triangulating findings and, for this research, the findings from the qualitative and quantitative components have been outlined by the meta themes on the same page, and much consideration as to where findings from each method agrees (convergence), offer complementary information on the same issue (complementarity), or appear to contradict each other (discrepancy or divergence) have been reviewed.^{362,366,367} Explicitly looking for disagreements between findings from different methods is an important part of this process.³⁶⁸ Disagreement is not a sign that something is wrong with a study.³⁶²

Exploration of any apparent “inter-method discrepancy” may lead to a better understanding of the research question.^{369,370} The guidelines for this process were also adapted from the description of how to carry out triangulation in the triangulation protocol established by Farmer et al’s developed for multiple qualitative methods.³⁶⁶ Farmer et al. technique involved producing a “convergence coding matrix” to display findings emerging from each component of a study on the same page.³⁶⁶ The technique required moving away from just thinking about the findings related to each method, to what Farmer and colleagues called meta-themes that cut across the findings from different methods.³⁶⁶ Once these were established, it allowed for deep consideration of where there is true agreement, partial agreement, silence, or divergence between findings from qualitative themes and quantitative survey results. ‘Silence’ is where a theme or finding arose from one data set and not another.³⁶² ‘Silence’ was expected in this study’s analysis because during the qualitative data collection, in-depth interview techniques were employed to examine different aspects of sexual health care practices and some of these findings were not quantifiable to be assessed in the survey.

Kelle also described a somewhat similar triangulation process as described above, but he capitalised analytically on divergences and tensions in findings from different sets of data and reinforced why mixed-method analysis was important.³⁷¹ Kelle used examples to fully explain how a finding from a quantitative panel study – a statistically significant correlation and a linked set of qualitative data – enabled further exploration of processes he was analysing. Kelle emphasised the opportunities afforded by multiple methods, as in his study, understanding the investigated phenomenon could not be fully explained only on the basis of statistical information. Both qualitative and quantitative data had to be analysed and results combined in order to produce an adequate explanation for the research question to which the phenomenon was being applied. Without both sets of data, the interplay between the macro-level and the micro-level findings would remain unobserved.³⁷¹ Thus, whilst the data are separate, they are integrated via analysis and then given equal weight in their contribution to theorising the relationship between macro-, meso-, and micro-level findings.^{371,370} This interplay approach was also adopted in interpreting the combined findings in this study. For convergent validity, the researcher examined the degree to which the pair of findings from the two different research methods is comparable (converges on) with the other that it theoretically could be like or where high correlations would be evidence of similarity. For

divergent validity, the researcher examined the degree to which the pair of findings of interest were not similar where possible (diverges from) and was different from the other that they theoretically should not be alike.

7.1.2.2 Adapted Triangulation Matrix

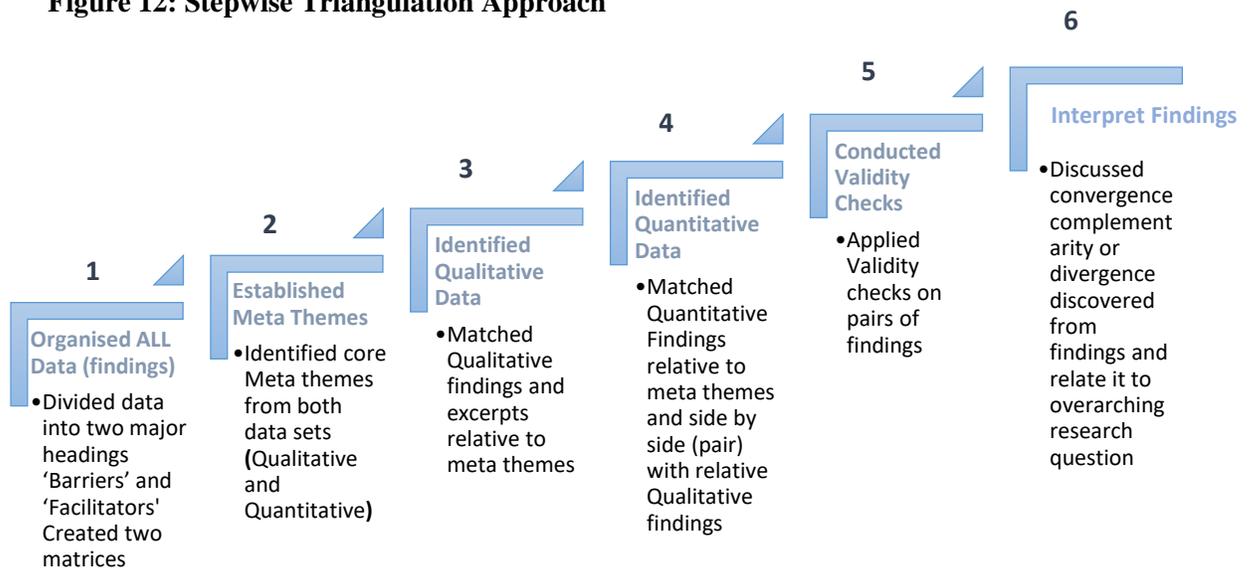
Having reviewed these different theories of techniques, the following triangulation matrix was designed and employed (Table 15 below).

Table 15: Matrix of Triangulated Results

Meta Themes	Qualitative		Quantitative Statistical findings	Findings show:	Triangulated Interpretation
	Findings	Excerpt/ Data		(convergence/ divergence/ silence/ complementarity)	

The following stepwise approach was employed to triangulate the findings of this study and explain how the matrix had been compiled. The completed matrix can be found in Appendix 6.

Figure 12: Stepwise Triangulation Approach



The overall results having applied the triangulation method described above is summarised in 7.12 Triangulated results. The data are categorised under the headings:

- Silent Findings;
- Convergent Findings;
- Complimentary Findings;
- Divergent Findings.

7.1.3 Triangulated Results

7.1.3.1 Silent Findings

Workplace Barriers

PCPs attempt to address sexual health issues in most consultation rooms in PC but for some public health centres, these were not the most suitable to make the patient feel comfortable to discuss these issues. Additionally, the reasons that sexual health issues of this age group may be neglected and not followed up are lack of time for consultation, lack of appropriate treatment options such as sexual health therapy, psychosexual counselling, some STIs, and other hormonal testing; also, any sexual treatment for conditions or timely feedback for STI or other biochemical or imaging results in primary care are not unique to the TT setting.¹³⁶ Regardless, PC in T&T is a resource poor setting with a limited manpower, time, and treatment options which hamper their ability to have more exploration during sexual health consultations. Also, a serious consideration on how or if this can be addressed is needed. In general, as found in studies in the UK and US, the PC reflects the national focus and it is not suitable for sexual health care of older adults as it chiefly caters for prevention of management among younger people.^{8,9,10} Most of the policies are focused on STIs and the prevention of teenage pregnancy, no sexual policy is seen to translate into day to day practice, with issues such as sexual dysfunction and other non-STI-related sexual problems receiving very low priority in PC.¹¹⁰ Perhaps addressing or improving the current working SRH policy document^{76,94,110} with appropriate technical consultant working group who will methodically include issues that are relative to this age group, followed by appropriate sensitisation of PCPs, may be the most logical start.

Paternalistic Physician-Older Patient Relationship

A dominant finding shared by some PCPs in rural based clinics of T&T (from the qualitative research that was difficult to measure or examine via the quantitative survey method) was the expectation of the physician-older patient relationship. It is only fair to acknowledge that this theme is biasedly presented as it is only examined from the physicians' perspective, the chosen study population for this research. For subsequent research to accurately examine 'expectations' of this interaction between the physician and older patient, in-depth interviews and an observational study approach with both PCPs and patients may offer more insight into this phenomenon.^{372,373} Regardless, as this was a dominant emerging theme, research has found that patients' age is associated with style of interaction, which is, in turn, associated with patient satisfaction. Peck et al.

revealed that PCPs were more likely to have patient-centred encounters with patients over age 65 years; hence, developing an understanding of the factors or processes by which physicians and patients interact has the potential to improve many facets of health care delivery.^{309,373,375} In this research, PCPs in T&T described interactions that they termed ‘role expectations’ which similarly is what they only experience with their older patients about the role and type of relationship their patients expected from them in this setting. PCPs reported on how they were perceived by their older patients, as a person in authority regardless of their age whom they should treat with respect. Interestingly, this is the same view that the PCP has for their older patients. However, the difference is that the patient views the PCPs as someone prominent, who is part of the elite in society, thus, making the relationship a ‘top-down’.

For PCPs, this unspoken hierarchical role, which they admittedly foster (as they sometimes agree it may be easier to manage some non-compliant patients with), causes some of them inner conflict because their interaction with other patients are different. This expected role is what creates an additional barrier – a professional barrier between the physician and the patient especially when it comes to sexual health concerns.³⁰⁹ PCPs reported that their older patients react negatively, feeling embarrassed, and they admitted that they think it is a disrespectful topic for them to bring up with the PCP. This type of interaction shares some similarities with studies conducted in Croatia and China; here, a paternalistic care type of relationship is focused on—one where the patients revere the physician with a disease-centred focus or the physician’s agenda in view.³⁷⁴ Paternalism has been one of the traditional characteristics of the therapeutic relationship in medicine.³⁷⁷ It implies that the physician makes decisions based on what he or she discerns to be in the patient’s best interests, even for those patients who could make the decisions for themselves.³⁷⁵ This attitude presumes that physicians always know better than the patient and thus has suffered many criticisms.^{373,374,375} This is still practiced in some countries and jurisdictions, where paternalistic attitudes have been interwoven into all relationships including the physician-patient relationship.³⁷⁶ For T&T, in the PC setting, PCPs meet this ‘expectation’ for their older patients who even urge for the PCP to be paternalistic. Perhaps PCPs should consider using this to their advantage if the patient is finding it difficult to raise a sexual health concern as they feel ashamed to bring it up. Perhaps for these cases, the patient may be more willing to embrace the topic, if the PCP fulfils the paternal role and initiate the topic.³⁷⁷

PC is not a first line for sexual healthcare in later life in T&T

PCPs acknowledged that it was discouraging for them to 'keep up to date' with sexual health care needs and practices in middle and old age. Also, this disclosure was not a matter of PCPs' incapability but rather an emotional admission. PCPs explained that they are considered 'plan B' for sexual health concerns with this age group and concede to feeling replaced by traditional healers.³⁷⁸ This was a surprising finding for the researcher as PC is a free healthcare service unlike other developed countries such as the U.S. The underlying assumption was that alternative medicine options would have to be considered only if modern medicine was inaccessible or ineffective and palliative therapy would be best.

However, as T&T is almost 40% African heritage, studies in Uganda and South Africa illustrate that traditional medicine is a go-to for sexual health issues especially for male impotence.^{378,379} It is possible that alternative medical options were passed down historically or originated in the more rural parts of the country (as healthcare reform for integrated health care services in PC was only a recent initiative in the last decade) and became more popular due to the taboo associated with sexuality.

Additionally, there are striking gender differences in health seeking behaviour seen in PC in T&T based on observation and PCP confirmed that men rarely attend the health centre in general. This is no different than in other developed countries as men generally avoid seeking care until it is critical.³⁸⁰ However, what is interesting about this is that there is a growing body of gender-specific studies that review this 'delayed' approach to seeking care. However, it was found to be prominent among white middle-class men and reasons for this behaviour included psychological, sociological, and biological factors.³⁸¹ T&T has a remarkably different population (whites account for <8%).⁵⁷ Males who avoid seeking healthcare are varied in T&T's multicultural population; however, those who eventually seek PC are usually 'Afro' or 'Indo' Trinidadian of lower socioeconomic status. Regardless, PCPs reported that when it comes to sexual health issues, men are in denial especially with potency problems and are ashamed to talk about that with the physician. As a result, PCPs conveyed their discouragement, but they are capable of change and they have admitted that they will still attend to any older patient seeking sexual health care even after alternative medicine did not work or worsened their situation. These resolutions by PCPs can be accelerated if they also have increased access

to appropriate sexual health education in later life. However, it is important to standardise access to and options for care where possible. Traditional healers should become accredited where possible and attempt to address the systemic problems at the level of the community in terms of targeted health promotion for sexual health in later life and male sexual health and reduce PC health promotion from being women or reproductive age centred.³⁸²

7.1.3.2 Convergent Findings

Up-to-Date Knowledge of Sexual Health in Later Life is Paramount

From their qualitative accounts, PCPs admitted that they did not have sufficient medical training in general sexual health and even less pertaining to sexual health in later life. In a study conducted with alumni from Sheffield medical school, it was found that the quality of earlier level medical school training is considered an indicator of a PCPs ability to assess patients' sexual function.³⁸³ These findings were also analogous to studies with other HCPs including nurses who felt incompetent in sexual health consultations.^{384,385} Unsurprisingly, this finding corresponded with the knowledge scores as 57% of PCPs attained lower than the mean score of 2.3. Perhaps this reflects the missing gaps in the medical training as this score indicated their inability to identify common prevalent sexual health conditions in later life from survey's clinical scenarios.

In agreement with this study conducted in Sheffield, the quality and quantity of training at the undergraduate level medical training could contribute to the PCP's confidence and competence. Further analysis allowed for deeper understanding as to why this 'low' knowledge score was attained as PCPs trained at UWI (local based university in T&T) felt disadvantaged as most of their training focused on STIs at 67%, FPA at 56%, and 19% of PCPs were not trained in any sexual health at all. Some PCPs identified only three classes relative to SRH, but they were focused on gynaecologic and reproductive health. This allows for further reasoning about their negative attitudes and minimal sexual consultation practices with older patients. It is possible that because they have shared that their level of competence regarding diagnosis, treatment and communication in this aspect of sexual health were not up to par. This may have shaped their views that chances of offering appropriate care to middle-aged and older patients were fewer. Also, this may be one of the factors fuelling the feeling of lack of confidence which may manifest as avoidance or discomfort in a sexual health consultation with an older patient.

These findings helped to understand why in T&T, being ‘educated abroad’ was a predictor of comfort level when discussing sexual health with older patients. Being equipped with knowledge improved one’s level of confidence in diagnosis and treatment and being able to communicate about sexual health confidently and accurately. It corresponds with the data illustrating that PCPs educated outside of UWI were 2.4 times more likely to attain higher knowledge scores in recognising sexual health conditions in later life and that they most likely had exposure to education in sexual functioning in middle and old age. It is possible that the sexual health curriculum is more robust in other medical schools. An example is a study with UK medical graduates of whom 76% were confident in sexual history taking. Additionally, 78% of the graduates were assessed in sexual health.³⁸⁶ This unveils key recommendations for improving the undergraduate level medical school training in sexuality in T&T. Various topics need to be considered when augmenting the sexual health curriculum, as it should not focus solely on reproductive and contraceptive health. Communicative skills in a comprehensive broad knowledge-based curriculum in human sexuality could consider topics including but not limited to: management of sexual dysfunction,³⁸⁷ LGBTIQ health care,³⁸⁸ life course sexuality across genders, understanding of non-normative sexual practices, HIV/STIs, contraception, abortion, sexual coercion and violence, as well as medical legal aspects of relevant topics.³⁸⁹ Other topics of relevance are training in middle and old age sexual health conditions, effective communication strategies and diagnostic sexual history taking to improve PCPs competence and confidence, as well as discussing and diagnosing sexual health concerns with this age group.

Throughout both arms of this study, recommendations to improve medical education in sexual functioning in later life appeared to be the strongest facilitator and best resolution to negative attitudes and behaviours regarding conduct of sexual health consultations. Knowledge in sexual health communication and sexual functioning had strong associations with increased frequency and comfort level discussing sexual health, taking a sexual history, and attaining a higher mean score on the survey in identifying sexual health conditions in later life.³⁴⁶

PCPs Role in Initiating Sexual Health Consultations

Most PCPs agreed that it is the responsibility of the physician to initiate these discussions as it is their role. Unlike the patient, they are aware of what questions should be asked

and, in most cases, the patient will not bring up the topic. PCPs also identified that no matter how difficult it seems to discuss sexual health care with a patient, it is their responsibility and it should be done. This is because it is a definitive opportunity to address sexual issues affecting patient's health, if not, they will persist or develop.^{390,391}

Sexual History Taking is a Diagnostic Tool regardless of Patient's Age

In T&T, one of the unique findings is the fact the typical questions on a standard sexual history were not adhered to in practice with regard to this age group. They take a rather focused version neglecting questions regarding sexual orientation, sexual preferences (type of sex), and contraception (male and female), and for some, even number of sexual partners. Sexual orientation is the most avoided question and has never been asked by any of the PCPs interviewed, but as a larger number of PCPs participated in the survey, 48% have asked about it with their older patients.³⁴⁶ However, as part of triangulation considering new developments in the country, only this year 2018 were 'anti-homosexuality' laws removed.^{81,83,84} It is possible that these also influenced some PCPs to be reticent as they also do carry out medical legal roles as community-based physicians to handle rape cases, violent death, and asking this question could have been a conflict of interest depending on the response. Regardless, this question about one's sexual orientation is only asked medically in a sexual history consultation for the purpose as a diagnostic tool.³⁹² It is the role of PCP to ask this question especially if it will benefit in informing the PCP about her diagnosis. In lieu of not asking, PCPs have reported that if the patient does not willingly offer this information, they assume based on patient's appearance or behaviour. PCPs admitted that they are simply afraid to ask. However, not asking can lead the PCP to make uninformed or misdiagnosis which can be unethical practice.

Facilitators for Improved Sexual Health Consultations Suitable for Older Adults

For future studies, PCPs also suggested both on the survey and during the interviews on the use of communicative consultation tools to help them improve their sexual health discussions and history taking such as paper-based tools, e.g., sexual health Q&A forms for male and female patients to fill out and identify if they should ask the doctor about anything on the form. Alternatively, they can tick what applies and hand it in to the doctor so s/he can ask the patient instead; a sexual health algorithm to follow, 3D models and pictures of the sexual reproductive organs with possible dysfunction.³⁹³ M-health is now

becoming popular as a tool in sexual health communication,³⁹⁴ but it still needs to be determined as it will be useful for the middle-aged and older patients. These have been found throughout the literature, but there is need to identify tools that are specific and most appropriate for the T&T setting.

7.1.3.3 Complementarity

PCPs feelings of discomfort in sexual health consultations manifest into avoidant behaviours due to fear of being disrespectful

During the interviews, a large majority of PCPs voiced in different ways that asking about sexual health concerns is disrespectful either to the patient or by the patient. PCPs explained through interviews why they opt to protect the patient from feeling uncomfortable (as well as themselves) by only discussing sexual health if it was patient-initiated. Patient-initiated sexual consultations allow PCPs to avoid their fear of inadvertently disrespecting or losing their patient's trust. Although only 14% of PCPs' reported from the survey that asking a middle-aged and older patient about their sexual health is disrespectful, based on other responses such as 99% patient initiated sexual histories, strong direction of associations of training and education in sexual health communication and sex in later life favours comfort level when discussing sex; then, it is likely that more PCPs may also share this worldview.³⁹⁵ A systematic review of HCPs experience of discussing sexuality with patients revealed similar fear about "opening up a can of worms," as well as all of the other sociocultural barriers that exacerbate the worry about causing offense, personal discomfort.¹⁵⁸ Lack of initiation of sex health discussions result from additional factors including lack of confidence and appropriate sexual health education—both which may contribute to this worldview.³⁹⁶

During the first week of interviews, an observation was made with one male and one female PCP who found it difficult to utter the word 'sex' or 'sexual' even during the interview with the researcher. Based on their avoidance with the words, and averted eyes during the conversation, it was perceived by the researcher as though they were trying to be convincing rather than reporting that they talk about sex with their older patients comfortably and frequently. Alternative perceptions were considered that these PCPs were not comfortable with the word 'sex' or any sexual jargon and possibly they were not truly comfortable talking to patients about sex or with the researcher.³⁹⁷ These responses allow us to consider that they are not comfortable discussing sex because they admitted

that they will not initiate the topic. However, if the patient brings it up, they will oblige. This too was reconsidered by the researcher as what the PCP felt was the “socially desirable response”.³⁹⁸

Sociocultural barriers coupled with patient adverse reactions – strong deterrents that foster PCPs’ reticence and unwillingness to continue discussions on sexual health

There was complementarity regarding some of the barriers indicated in the survey under general perceptions and the associations that offered much strong associations for gender and age concordance. PCPs explained during interviews that older patients’ perception of their age and sexuality makes talking about sex difficult for them and even more so for PCPs who may also share ageist views. In these situations, PCPs admit/prefer to respect their patient’s stance instead of trying to educate them about sex because the patient’s reaction makes them both deter from talking about it any further, and it could be the reason why sex is rarely discussed in consultations. Similar to literature, it was found that PCPs and patients have increased comfort with sociodemographic concordances including age, sex, and possibly ethnicity.³⁹⁶ These concordances were found in the survey associations with regard to PCPs’ attitudes (comfort level) when discussing sexual health with middle and old aged patients and strong associations that were statistically significant were found for male PCP to male patient consultations and with age. A limitation in this study was the fact that other concordances could have been tested such as ethnicity and religion; these were available for the PCP but were not available for the patients in the consultations. For future work, these concordances are recommended for further research. However, from the interview data, PCPs shared their perspective that some religions promote anti-sex messages or view that sex is dirty to talk about and this is reinforced by experiences they have had with patients from staunch religious backgrounds who avoided the topic or made the PCP feel embarrassed for asking.³⁹⁹ As discussed in Paper 2, it could be envisaged that it would seem easier to have a ‘better’ rapport with a patient of the same gender to discuss sex health-related issues as there is possibly comfort and assumed understanding in having a common ground.³⁰⁹

Importance of appropriate sexual health education for middle and old aged patients

PCPs indicated that there is need for population-wide sexual health education suitable for middle and old aged patients about sexual health conditions they are more likely to face at this point in their lives. Special talks, posters, or pamphlets in the waiting room will help normalise sexual health within the clinical setting and give patients more confidence to discuss these issues with their PCP.³⁰⁹ These activities may aid prioritising sexual health in later life and putting it on the national agenda.

7.1.3.4 Divergent Findings

Gender concordance under query for sexual health consultations

PCPs reported that when it comes to sexual health issues, men are in denial especially with potency problems and are ashamed to talk about that with the physician even more so if especially if it is another male – some will speak quicker with an older female physician about it (and older female PCPs have verified these occurrences). This is contrary to the survey’s findings that offered statistically significant predictor of gender concordance (male gender in particular) with regard to discussing sexual health with male middle-aged and older patients. It is also a unique finding for T&T as most studies suggest gender concordance is prevalent.⁴⁰⁰ This preference may be routed in the mind-set of the domineering, controlling, chauvinistic type of male – “macho man’ who may not fear disclosing sexual impotence to his peers. Regardless, the [sexual] health-seeking behaviours of middle-aged and older men warrants further research.

PCP’s convey various levels of discomfort in sexual consultation with older patients

As discussed in research Paper 2, the population-based survey captured that only 39.8% of PCPs reported being uncomfortable if asked to address those sexual health consultations with middle-aged and older patients offered in the clinical scenario. In other aspects of the survey, more than half of PCPs expressed that they were generally comfortable discussing sex, counselling the patient about their sexual health diagnosis, and even offering couple sexual health therapy. However, it should be well taken into consideration that these responses of ‘positive attitudes’ were to paper-based clinical scenarios and not real-life situations where the patient is tangible. The in-depth interviews were only conducted with 20% of the total PCP population, and more time and opportunity to delve deeper into the issues surrounding their consultation experiences regarding their comfort level in discussing sexual health was afforded to them.

Additionally, the 'low' knowledge scores and inability for more than 50% of survey participants to identify more than two prevalent sexual health conditions in later life, and the fact that over 90% indicated that they will take sexual histories if patient-initiated, offers opportunity to contemplate and analyse how comfortable PCPs really are. Based on the literature and from this study, knowledge on sexual health in later life is a key indicator of confidence and comfort level and it is possible that perhaps these PCPs self-reported responses may account for some response bias.^{398,397}

PCPs willing to address sexual health regardless of cultural barriers

Cultural norms in small rural communities promote reticence regarding sex for several reasons mainly because they live like a larger extended family increasing the feeling of a lack of privacy. Sexual health discussions are taboo in these communities and the worst outcome with a patient who feels disrespected in such a community is a loss of trust from them and the whole community. However, rural-based PCPs are perhaps just more cautious and consider skilful ways of broaching the topic when necessary. Quantitatively, though not statistically significant, the direction of association suggested that rural-based PCPs appear to be more likely to discuss sex health in rural practices more comfortably especially with female patients. Perhaps there are more female PCPs 45+ years in age working in rural communities. It should be noted that there are more non-Trinidadians posted there and maybe female patients tend to be more open to someone who is not from the community.

PC currently inappropriate for seeking sexual health care if in middle and old age

Though majority of PCPs indicated that primary care is appropriate service for sexual health care because it does offer limited sexual health care to this age group however, PCPs revealed in in-depth interviews that the existing primary health care system they work in does not foster supportive systems for them to accurately diagnose or prevent sexual health issues of this age group. This discourages PCPs to initiate or follow care protocols because at present, many leads to incomplete diagnoses (except for STIs). The PCPs explained that they work in resource poor settings with a limited manpower, time, and treatment options which hamper their ability to be more exploratory during their consultations. Additionally, the physicians offer paternal focused care for the issues that the patient present as their primary complaint. Overall, primary care is not equipped to deal with sexual health in the middle and old age except for STIs and reproductive health;

therefore, it is predominantly appropriate for younger age groups. Anything else gets referred or it is not considered a priority. PCPs have acknowledged that there is not really a focus on sexual health care of middle-aged and older adults in Trinidad & Tobago. They admit that they have been encouraged to focus on chronic disease management for this age group, namely diabetes, hypertension and other cardiovascular diseases, even though they do identify that sexual health care is linked to some of these chronic diseases. PCPs revealed that they are insecure about offering proficient sexual health care for patients in middle and old age, and this stems from cultural taboos regarding sexuality. Regardless, PCPs cannot justify not addressing their sexual health in this age group as SD can sometimes be an indicator for an underlying cause of chronic illness and missed opportunities for diagnosis and intervention due to age, and other risk factors, which can lead to death in this age group.⁴⁰¹ For example, vascular erectile dysfunction is a powerful marker of increased cardiovascular risk. The only possible justification is if the PCP decided to circumvent SH, they will need to monitor their chronic illness as a preference as ED is not the only trigger.⁴⁰²

7.1.4 Strengths and Limitations of Triangulation Method

Triangulation in this study involved the deliberate combination of quantitative and qualitative methodologies to strengthen the mixed-methods research design and decrease any deficiency of using just one strategy and increase the ability to interpret the findings.⁴⁰³ In this study, one single method would not have adequately answered the research question in such an enriching manner.⁴⁰⁴ For example, using questionnaires and participant interviews, I found that PCPs who were interviewed used the opportunity to reflect on the pros and cons of their medical skills and expertise and vent about the limitations that they work within, but those who were not interviewed only had the survey to respond to limited to close ended options with no reasons or context for the options they selected. On the other hand, 59% of the PCPs agreed on the survey that there is not enough time to discuss sexual health with middle-aged patients. This was more than half of the PCP population that said this but with no opportunity to suggest why and what this means for PCPs who need sexual health care. Those who were interviewed divulged several reasons including the fact that their clinic was oversubscribed leaving an average of 5 minutes for each patient or that it is a lengthy process especially with an older patient. Thus, using interviews as well as questionnaires added a depth to the results that would not have been possible using a single-strategy study, thereby increasing the validity and

utility of the findings.⁴⁰⁵ Where there has been evidence of convergent findings, the benefit was increased confidence in the research data. Where there was evidence of complementarity, the strength was the innovative opportunity for deeper analysis followed by challenging or integrating theories to unfold a clearer understanding of the phenomenon.

However, every method has its challenges and, noticeably, triangulation required more time to analyse the information yielded by the two different methods. This is in fact the primary disadvantage of triangulation as it can be time-consuming.^{403,404} It involved collecting more data, more planning and organization, and generally more resources.⁴⁰⁶ The other disadvantage was that, at times, there was disharmony in trying to triangulate findings and this can be seen in the matrix in Appendix 6. Sometimes, the disharmony may not have been whether the data ‘matched’ for comparison but due to my own researcher biases or lack of understanding the phenomenon under review.⁴⁰⁷

7.2 Summary of Findings

The mixed-methods and triangulation approaches utilized in this study allowed for meaningful understanding of what are PCPs knowledge, attitudes, and sexual health care practices with middle aged and older patients? Utilising these various methods answered different aspects of this research question. The *quantitative methods* were employed to collect data about the events or phenomena that could have been described in an objective manner (e.g. socio-demographic characteristics, comfort level scales and knowledge scores, treatment preferences, frequency of taking sexual histories, diagnoses) for which values were formulated.^{363,364} The *qualitative methods* were used to analyse individual interpretations of experiences, motivations, actions, personal relevance, and unknown realities (e.g., PCPs attitudes and behaviours during consultations with patients, their worldviews about sexuality, primary care work-culture).³⁶³ *Triangulation* of these quantitative and qualitative methods and findings provided a linkage somewhat like a puzzle combined to produce a complete picture.^{363,364,367,368}

Following is the final chapter of this thesis which allows for a more reflective review of the overall findings, strengths and limitations of the research, and relative recommendations and study contribution.

Chapter 8 – Discussion & Conclusion

8.1 Chapter Overview

This is the culminating chapter of the thesis. It presents a summary of the key findings in this study, conferred in relation to the overarching research question and hypotheses, and highlights those findings congruent with the literature and those unique to the research setting of Trinidad and Tobago. As these findings have already been discussed and challenged with the literature in Chapters 4 to 7, in this presentation, it is really the overarching key messages.

Following on from the findings is a proposed working model for consideration to guide physician-older patient communication in sexual health consultations based on the synthesised findings. The working model is an adaptation of the original theoretical model discussed in Chapter 2; whose context guided this research.

The following section in this chapter reflects on specific points in this research journey in relation to office and field work experiences and decisions leading to the overall strengths and limitations of this research.

In the final section of this chapter, the researcher highlights this study's contributions and concludes with recommendations for future research in and better sexual healthcare and delivery practices for middle-aged and older patients attending primary care services in Trinidad and Tobago.

8.2 Findings of this Thesis

The previous results Chapters 4–7 have presented and discussed in much detail the findings of this research according to the various research methods. This section offers a summary of the overarching key findings of this study.

8.2.1 Summary of Key Overarching Findings

Even in the medical setting, PCPs have reported that they feel generally uncomfortable addressing sexual health with patients of middle and old age. PCPs admitted to not prioritising sexual health care provisions for older patients. PCPs lacked confidence in their own expertise in treatment and care for sexual health and management in later life. Almost 20% of PCPs confirmed that they were never trained in SRH and only 40% attained actual training in sexual function in middle and old age. Unsurprisingly, on the KAP, the mean knowledge score attained was 2.3 of 6, and almost 60% of PCPs attained lower than the mean, indicating that they were only able to identify a maximum of two of the common sexual health conditions in older adults. Nevertheless, it was found that PCPs with formal training in sexual functioning in later life were 2 times more likely to have attained a score higher than the mean and inevitably be able to correctly identify more of the sexual health conditions on the survey.

In addition to limited knowledge, PCPs described various obstacles hindering them from conducting appropriate diagnostic clinical interviews with patients in middle and old age about their sexual health concerns. Categorised broadly, these barriers included physician and patient-related socio-cultural factors, workplace setting limitations, and the nature and status of the physician-patient relationship. Influenced by PCPs personal beliefs about sexuality, factors such as age, gender, ethnicity, religiosity, education level, socioeconomic or professional status and community clinic locale (rural or urban) all impact on the outcome of a sexual health discussion. Deterrence was also attributed to non-human factors including the negligible privacy in some consultation rooms, lack of appropriate referral services for sexual health conditions, and time constraints owing to the large number of clinic attendees. PCPs also analysed features of their physician-older patient relationship and remarked that a good rapport, empathy, mutual respect, and a basic level of comfort and trust must be well established between both persons to attain any semblance of success which can occur after raising a sensitive topic like sexual health or even more probing while taking a sexual history.

Strong direction of association and statistically significant associations were found among PCPs characteristics such as gender and age concordance. Training in sexual health communication and attaining a foreign medical degree were predictors of comfort level and increased likelihood of discussing sexual health with an older patient. Also, unsurprisingly, if PCPs were trained in sexual health communication, the odds of being able to communicate or diagnostically take a sexual history from older patients increased. Regardless, this was an important finding as PCPs either rarely conducted sexual histories but mostly focused sexual histories to diagnostically assess their middle-aged and older patients. Less than 50% of PCPs asked their older patients about type of sex, gender and age of partners, sexual violence, and sexual orientation. To be a competent PCP when discussing sexual health, taking a diagnosis, counselling the patient or educating them about their sexual concerns in later life ought to be guided by the statistically sound findings. These findings infer attaining sociodemographic concordances, increasing one's background knowledge, and improving sexual health communication and history taking. Controlling these characteristics will in time improve overall capacity to frequently discuss sex with their older patients, which include sexual history taking (counselling, educating the patient or discussing their treatment options) versus medicalised options (such as offer prescriptive medications, recommend lab or HCP referral, physical examination) to address their sexual health concerns.

Overall, social psychology has an impact on PCPs worldview of sexuality as well as their knowledge, attitudes, and practices in sexual health in medicine. This study has identified the main communication barriers and key characteristics about PCPs that are important predictors associated with better outcomes in sexual health care intervention with older patients who seek help in PC. PCPs must improve their knowledge base in sexual health in later life, as this is the key indicator highly associated with increased comfort and frequency in accommodating sexual health consultations with older patients. Triangulated with the qualitative findings, the sociocultural factors and workplace limitations may be more difficult to control; however, improving one's knowledge base will alleviate the overall lack of confidence in treatment and care and reduce fear during clinical consultation with older patients.

8.2.1.1 Findings in Relation to Study's Overarching Research Question and Hypotheses

With regard to the overarching research question, “What are physicians’ knowledge, attitudes, and sexual health care practices with regard to middle-aged and older patients in primary care?”, sexual health care knowledge is a dominant characteristic that is strongly associated with comfort and confidence (both are attitudes) in discussing sexual health with their older patients. It is inferred from the analyses that a PCPs’ knowledge level influences PCPs’ attitudes and these both drive (determine the outcome of) PCPs’ resulting sexual health care practices. The study was not able to definitively ascertain causality around this, but the qualitative findings did offer some support to this inference as socio-cultural factors impact on PCPs worldview of sexuality as well as their knowledge, attitudes, and practices in sexual health in medicine. PCPs’ characteristics such as gender, age, where they have been educated (where the curriculum offers training in sexual health in later life), location of medical practice, and number of years of experience are important factors also affecting sexual health care clinical practices.

Regarding the study’s hypotheses, if we accept those findings that illustrated strong direction of association (though not statistically significant) as well as those that were statistically significant, then we will reject all the null hypotheses. However, this is not the case:

- ▶ *Formal training (knowledge) in sexual health has no effect on a PCP’s comfort level during the conduct of a sexual health consultation with patients of middle and old age.* – **REJECT THIS NULL HYPOTHESIS**

When PCP characteristics were applied in the multivariate model, it was noted that training in sexual health communication was statistically significant and it increased the PCPs’ odds three-fold to be comfortable discussing sexual health with their middle aged and older (male) patients [OR=3.19; p=0.05].³⁴⁶ A p value of 0.05 for formal training (knowledge) in sexual health communication shows evidence of association and statistical significance particularly for a male PCP being comfortable discussing sexual health in consultation with a male middle and old aged patient. Consultation with a female PCP and female middle-aged older patients did not show statistical significance but had a strong direction of association (high odds ratio) and therefore considered of relevant clinical importance (See Table 8: Predictors of comfort in Paper 3: Rabathaly PA, Chattu V. Sexual Healthcare Knowledge, Attitudes and Practices amongst primary care

physicians in Trinidad and Tobago. *Journal of Family Medicine and Primary Care* 2018. DOI: 10.4103/jfmmpc.jfmmpc_322_18).³⁴⁶

- ▶ *Gender concordance between a PCP and a middle-aged or older patient has no effect on a PCP's comfort level during the conduct of a sexual health consultation with them. – REJECT THIS NULL HYPOTHESIS*

PCPs comfort when discussing sex with male middle and old aged patients strongly suggests that PCPs must also be male [OR=4.75; p=0.00].³⁴⁶ A p value of 0.00 for 'gender concordance' shows strong evidence of association and statistical significance particularly for a male PCP to male middle and old aged patient interaction. Gender concordance with female PCPs and female middle-aged older patients did not show statistical significance but had a strong direction of association (high odds ratio) and therefore considered of relevant importance (See Table 8: Predictors of comfort in Paper 3: Rabathaly PA, Chattu V. *Sexual Healthcare Knowledge, Attitudes and Practices amongst primary care physicians in Trinidad and Tobago. Journal of Family Medicine and Primary Care* 2018. DOI: 10.4103/jfmmpc.jfmmpc_322_18).³⁴⁶

- ▶ *PCP's age has no effect on their comfort level during the conduct of a sexual health consultation with a middle-aged or older patient. – REJECT THIS NULL HYPOTHESIS*

PCPs' comfort when discussing sex with male middle or old-aged patients suggests that PCPs must also be over 40 years of age -at least middle-aged- [OR=3.1; p=0.03].³⁴⁶ A p value of 0.03 for age concordance shows evidence of association and statistical significance particularly for a middle-aged PCP consulting comfortably with a male middle or old-aged patient. Age concordance with PCPs and female middle-aged older patients did not show statistical significance but had a strong direction of association (high odds ratio) and therefore considered of relevant clinical significance (See Table 8: Predictors of comfort in Paper 3: Rabathaly PA, Chattu V. *Sexual Healthcare Knowledge, Attitudes and Practices amongst primary care physicians in Trinidad and Tobago. Journal of Family Medicine and Primary Care* 2018. DOI: 10.4103/jfmmpc.jfmmpc_322_18).

- ▶ *The number of years of professional medical practice has no effect on a PCP's comfort level during the conduct of a sexual health consultation with a middle-aged or older patient.* – **ACCEPT THIS NULL HYPOTHESIS**

The findings of this study suggest that PCPs who were comfortable discussing sexual health with middle-aged or older (male) patients were twice more likely to have graduated ≥ 10 years or more ago [OR=2.39; p=0.06] and for female PCPs with middle-aged and older female patients [OR=1.31; p=0.66].³⁴⁶ However, this predictor of comfort level during sexual health consultations with middle aged and older patients did not achieve statistical significance (a p value 0.05 and below) therefore may only be considered of clinical significance due to its strong direction of association (high odds ratio).

- ▶ *The number of years of local medical practice has no effect on a PCP's comfort level during the conduct of a sexual health consultation with a middle-aged or older patient.* – **ACCEPT THIS NULL HYPOTHESIS**

The findings of this study suggest that PCPs who were comfortable discussing sexual health with middle-aged or older male patients were twice more likely to have worked locally for ≥ 10 years or more [OR=1.74; p=0.27] and for female PCPs with middle-aged and older female patients [OR=1.78; p=0.34].³⁴⁶ However, this predictor of comfort level during sexual health consultations with middle aged and older patients did not achieve statistical significance (a p value 0.05 and below) therefore may only be considered of clinical significance due to its strong direction of association (high odds ratio).

- ▶ *A PCP's community medical practice location has no effect on their comfort level during the conduct of a sexual health consultation with a middle-aged or older patient.* – **ACCEPT THIS NULL HYPOTHESIS**

The findings of this study suggest that PCPs who were comfortable discussing sexual health with middle-aged or older male patients were more likely to have worked in rural based medical practices [OR=1.63; p=0.34] and for female PCPs with middle-aged and older female patients [OR=1.43; p=0.61].³⁴⁶ However, this predictor of comfort level during sexual health consultations with middle aged and older patients did not achieve statistical significance (a p value 0.05 and below)

therefore may only be considered of clinical significance due to its strong direction of association (high odds ratio).

- ▶ *A PCP's medical training location (local/foreign) has no effect on their comfort level during the conduct of a sexual health consultation with a middle-aged or older patient.* – **REJECT THIS NULL HYPOTHESIS**

PCPs' comfort level when discussing sex with (male) middle and old aged patients suggests that PCPs must be educated abroad [OR=4.14; p=0.01].³⁴⁶ A p value of 0.01 for age concordance shows strong evidence of association and statistical significance particularly for a PCP consulting with a male middle or old aged patient. Comfort level of PCPs who were trained abroad consulting with female middle-aged older patients did not show statistical significance but had a strong direction of association (high odds ratio) and therefore considered of relevant clinical significance (See Table 8: Predictors of comfort in Paper 3: Rabathaly PA, Chattu V. Sexual Healthcare Knowledge, Attitudes and Practices amongst primary care physicians in Trinidad and Tobago. *Journal of Family Medicine and Primary Care* 2018. DOI: 10.4103/jfmpe.jfmpe_322_18).³⁴⁶

8.2.1.2 Findings Congruent with Literature

As discussed in Chapters 4-7, the findings in this research confirm (and in few areas expand on others) previous work and commentary by other researchers on the following: sociodemographic concordances are helpful facilitators in sexual health consultations with older patients and possibly even more so for sensitive topics such as sexual health. This study only tested gender and age concordance in the survey, but ethnicity and religious concordances were found qualitatively.⁴⁰⁸ The literature supports findings regarding the lack of prioritisation of sexual health in PC clinic, both PCP and patients come with barriers of ageist views about sex health issues and sometimes both the PCP and the patient are lacking knowledge about the sexual concerns being discussed.⁴⁰⁹ Generally, the key finding that lined up with all the previously reviewed studies was the fact that PCPs exhibit a low level of awareness of the prevalent sexual health conditions in later life. Lack of knowledge at the undergraduate medical school level was the most common and profound finding⁴¹⁰ in both the interview and the national KAP survey

datasets; however, personal worldview about sex and sexuality – a cultural barrier – was also revealed, and it is the most difficult to amend. The only way cultural taboos about sexuality can be diffused would be through education and positive health promotion about sexual health and ageing with the assistance of the social media.

8.2.1.3 Key Findings Unique to T&T

Also, previously discussed in chapters 4-7, there were a few interesting findings that could be unique to T&T setting. One of those findings included the popularity of the use of traditional medicine to address sexual health in later life and this was understood as it could have been a common practice with historical roots, but it could also be fostered by the cultural taboo associated with talking about sex. This may be more of a custom; however, with sexual health promotion and education for patients about how to address their sexual health concerns with the PCP, this may become second line. However, another driver (this is congruent with some literature) of this is the fact that primary care is not the place for older adult patients to seek sexual health care. PCPs who are the service providers complain that PC setting is unfit for sexual health care in later life for a plethora of reasons¹⁵⁸ then perhaps what is most critical is to establish where middle-aged and older patients could seek sexual health care in the public sector in T&T. If PC does not address sexual health issues proactively with middle-aged and older patients, this warrants further attention and perhaps recommendations to expand the role of primary care within sexual health management needs to be considered; otherwise, older patients will have no choice but to continue to use alternative medicine and PCPs will continue to feel like a contingency plan after traditional healers when it comes to treating sexual health in later life.

The focused sexual history-taking habits were fostered out of fear of asking about sexual orientation and possibly due to the prior ‘homosexuality’ laws as well. The sexual history taking tool however is a diagnostic tool that PCPs stated that they use completely for their younger patients who they expect to be sexually active but then only part of the sexual history is purposely being asked to older adult. I cannot analyse any parts of the sexual history that are not applicable to older patient except for pregnancy and reproduction in females because of their age. As a result, the lack of use of the full tool of questions is mostly avoidance behaviour on the part of some PCPs to not feel

embarrassed asking their older patients details about their sexual intercourse, how it is done and with whom.⁴¹¹

In fact, it was most clear that some PCPs think that some of “those” questions are irrelevant and in the case of sexual orientation, this is not a normal question. PCPs will only get more acquainted and less fearful with the sexual history taking tool if they are trained with the knowledge and practice of asking each other. This may help PCPs further understand what they are trying to diagnose having asked these questions, in this regard, they can validate and evaluate that these are in fact normal common questions.⁴¹² As found in the Sexual Well Being Global Survey [SWGS] (which involved 26,032 respondents worldwide from 26 countries) on sexual behaviours, the ultimate goal for the physician in sexual health medicine is to assist patients (through appropriate diagnosis, therapy and education) to improve their overall sexual health and wellbeing.⁴¹³ Clinical attention to issues that assure sexual satisfaction and sexual wellbeing can have considerable influence on overall sexual desire and general wellbeing.⁴¹³ Clinical attention in sexual health also includes enhancing patient’s overall quality and quantity of their sexual experiences and opportunities to attain intimacy.⁴¹³ However, if common questions in diagnostic sexual history are difficult for PCPs to manage with their older patients then arriving at the interplay of sexual well-being and sexual satisfaction and maintaining levels of sexual desire that are favourable for these patients may continue to be challenging.

I expected to find that rural community clinics would be more taboo about discussing sexual health, but a more surprising finding was the unspoken but very ‘tangible’ professional barrier between PCPs and older patients and the fact that this almost-paternalistic relationship urged on by both parties actually exacerbates existing barriers to discuss sexual health.³⁷⁶ This needs to be addressed and perhaps the lead for change should come from the PCP to a more patient-centred approach.³⁷⁵

8.2.2 A New Model Based on Synthesised Findings

With reference to the model described in Chapter 2 (see diagram below), findings from this study have encouraged me to make additions for consideration for influences on sexual health care communication.

In this section, I have synthesised the findings from each of the analyses discussed above and described how I used them to refine the conceptual framework presented in Chapter 2. I populated this model with evidence on characteristics of PCPs associated sexual health communication (PCPs' sexual health practices). This new conceptual model aids the understanding of the potential influences on sexual health communication in clinical consultations presented below. However, all these relationships will benefit from further research as this is a new concept for consideration.

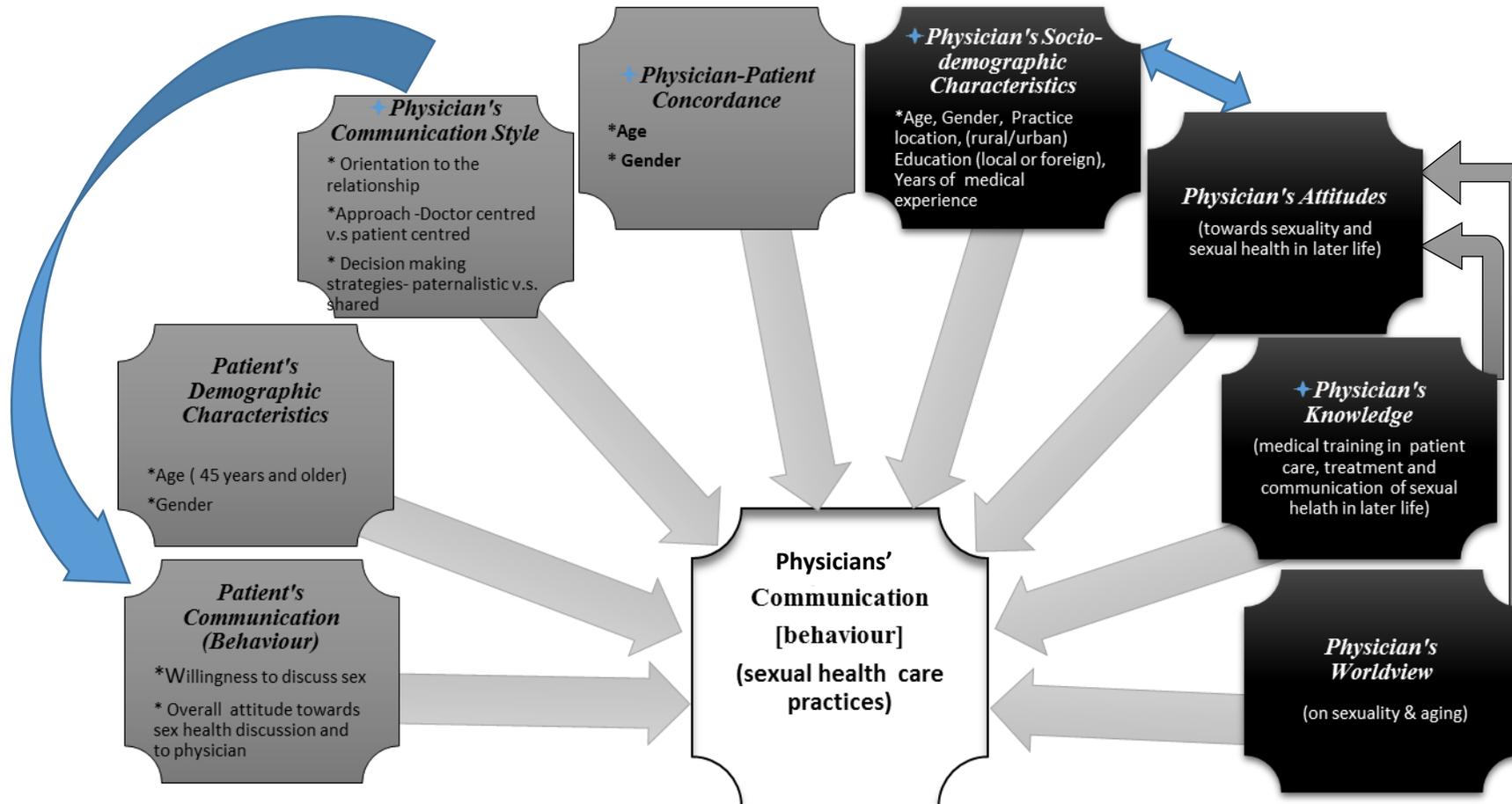
Using the above model by Street Jnr. et al²⁰⁴ presented in Chapter 2, and the findings of this study, the following adapted model (see Figure 13) is proposed for potential influences on physician's sexual health communication. The four core influences in the above model were maintained but were personalised to the contents tested in this study which influenced physician sexual health communication referred to in the model as physician's sexual health care practices. The additional influences seen in the adapted model below physician's demographics, sexual health worldview, knowledge, and attitudes were explained in the results chapters and in the summary of results section of this chapter in the context of barriers and facilitators to effective sexual health communication with middle-aged and older patients. They were also presented in terms of the research question, and, the relationship between physician's knowledge, attitudes, and practices were discussed. Increased (medical) knowledge of sexual health care in later life appeared to be a driver of positive attitudes (of comfort level with regard) to sexuality and sexual health care of middle and older aged patients. PCPs' knowledge directly impacted on sexual health care practices by increasing the likelihood of their sexual health communication strategies being employed. PCP's worldview on sexuality and how they perceive sexual health care also influences their management of patients seeking sexual health care in middle and old age. These relationships of potential influence are shown in the adapted model below. The adaption illustrates that for general physician-patient communication during medical encounters only, some of these influences may apply however for effective sexual health communication with patients 45 years and older as there are potentially more influences affecting the physician's communication with these patients.

Adapting this model in Trinidad & Tobago

This is only a proposed model (Figure 13.) of the potential influences on PCPs sexual health communication with middle and older aged patients, as found in this study. The findings therefore are most applicable to PCPs in T&T and possibly adaptable to any other health care professionals involved in sexual health consultations with middle-aged and older patients who exhibit similar sociocultural norms and educational experiences in medical or sexual health training as described in this study. The model for consideration below identifies room for intervention in terms of where there could possibly be an opportunity for behaviour change in a physician's (or other applicable health care professional) approach to sexual health care practices. The model proposed is open for assessment of whether interventions do foster change occur to any of the influential factors presented below. These interventions may include applying a change in one's communication style or approach by being observant to older patients' sensitivity during a sexual health consultation, applying concordance principles to ease rapport, increase in knowledge via update in training in sexual function in later life and assess whether there may be a positive change over a period of time in PCP's behaviour in terms of their sexual health care practices, overall attitudes and worldview about sexuality.

Figure 13: Potential Influences on Physicians' Sexual Health Communication

↑ indicate direction of influence ✦ indicate area of intervention



8.3 Reflections (in the Field)

8.3.1 Qualitative Experience

Observations in the Field

Though it would have been complimentary, this study did not employ observational methods. Therefore, no consultations between PCPs and their patients were observed in the field. All interviews describing sexual health consultations were self-reported experiences and accounts offered by the PCP. The only observations that were documented were the PCPs' actual attitudes and behaviours discussing retrospective experiences in sexual health consultations and their perspectives about sexuality and sexual health during the interview with the researcher. There were a few findings arising out of my analysis of field notes, though quite minimal.

Longest Interviews/Outliers

Interestingly, the longest recording times were with some of the older PCPs who were very keen on participating in the study. Both male and female PCPs had served in public sector as a PCP for more than 30 years and were functioning solely as private PCPs and closer to becoming retired PCPs. They had a wealth of knowledge to share and with all eagerness. We held interview sessions with them (4 of them stood out, 2 males and 2 females, who are seniors over 60 years old). Interviews were 90 to 120 minutes long compared with the average 30-45 minutes.

They offered more clinical scenarios as they had a lot of experiences and they were able to give comparative stories of when it was most difficult as a new PCP to talk about sexual health compared with now as an old adult themselves. Their perspectives were eye-openers and commonalities were seen in other interviews from younger PCPs who were going through what they described as their experience when they were new to community medicine. As senior PCPs, they find it very easy to talk to patients, young or old, about sexual health and they know how to gauge patients better as experience has taught them. They feel that they can still learn a lot as sexual health has changed and for old age, they can understand the impact of ageing on sexuality personally – perhaps the reasons supporting understanding, empathy, and where their patients may be coming from.

Choosing Quotes

When reporting the findings of qualitative research studies, it is typically very important to display data. Qualitative data is usually displayed by selecting key quotes or exemplars, building tables or matrices or using diagrams to visually display theories or models that emerged from a qualitative study. Displaying direct quotes, short stories or excerpts from interviews, field notes are a widely used method for describing themes. I use direct quotes because it helps my examiners/readers to assess and 'experience' the data I collected and analysed, understand the findings of my analysis, and to evaluate the plausibility, credibility or face validity of my claims. I chose excerpts that clearly support the claims I have made in my findings. The best excerpts were selected to support the interpretation and findings in this chapter and they embody the most balanced representation of what most PCPs felt and expressed. Most themes I described were excerpts which best narrated how they were expressed to me, plus, they offered optimal understanding about the findings I selected. I have also discussed or presented a few outlying (uncommon) responses from the PCPs to further offer a complete representation of all the perspectives from the participants in this study.

Based on repetitive frequency of some themes, it was clearer for some that these were the most common expressions of the PCPs. For example, out of 35 interviews, if 35 persons indicated that they never ask a patient about their sexual orientation, that is clearly a unanimous feeling. If 30 persons indicated that they were uncomfortable discussing sex with old-aged persons, it would still be a common theme. For the one or two persons who shared a view very different from everyone else—such as I would take a sexual history with any patient regardless of age even if they are over 70 at every visit—their response would be an outlier as it was the only or least frequent theme presented. Not all outliers are discussed in this paper, but they are described in various places as they too are PCPs views. As qualitative interviews were only conducted with 35 persons, about 20% of the PCP population, though it may be an outlier, out of the 35, this comment could be representative of other PCPs. I selected what I considered the “classic” themes from my dataset that exemplified the key themes or patterns that emerged. I focused on the interviews that best exemplified the dominant features of the data explored and on those themes that grabbed my attention. For

example, if I felt it was interesting or a new revelation, different from everyone else, I accounted them for outliers. Double coding was done on some transcripts with my Supervisor. This was noted in Paper 2 and in the methods chapter. Findings were compared with the literature and discussed in Paper 2 and in Chapters 7 and 8. The methodology of thematic analysis and double coding was justified in Chapter 3.

Reflection in between Interviews

In between interviews, time was set aside to reflect on the experience in terms of the flow of the interviews, interactions, PCPs' body language and responses, as well as the PC environment in order to compare it with the previous ones – these were field notes that were also triangulated. There were only a few incidents five where PCPs' behaviour was notable. They either displayed outright discomfort in the interview with regard to the questions or disinterest or were trying to be too convincing where they uttered 'yes' for everything. Also, when I would ask a rephrased version of the question, there were doubts or their responses changed. This was not experienced with others; in fact, most persons who changed their views admitted that this was what they first felt but now they feel at ease to declare how they truly felt (and usually that occurred later in the conversation when the rapport was improved over time).

Sometimes these 'change of views' offered by the PCPs resulted after answering questions they pondered on that presented ethical dilemmas known and unknown to them. For example, some PCPs expressed to me that they were not comfortable discussing sex (and additionally some PCPs will not conduct a relevant physical examination) with middle-aged or older patients for a variety of reasons including: their age, gender, religion, attitude, professional position and others. No PCP admitted this with any coercion by the researcher. Even though their personal choice to avoid a sexual health consultation inferred that perhaps they won't assist the patient could be viewed as a conflict with the Hippocratic oath (do no harm), or possibly as an act of negligence and maleficence. Regardless, PCPs opinions, actions and perspectives divulged during these interviews were respected and kept confidential and anonymous – this too was reiterated with the PCP at the end of the interviews. In most cases, for those PCPs who have admitted that their underlying reason for not following through with a sexual health consultation may stem primarily from their discomfort, they usually will

refer the patient to a competent physician or health care professional more experienced to consult the patient on such matters. Some PCPs even expressed that it is their right to refer patients in such circumstances that they cannot handle. Overall, PCPs comments such and these, did not affect the rapport or the rest of the interview between any of the 35 PCPs interviewed and the researcher. As the researcher, I remained calm, reactionless in my facial expressions to all responses given, maintained the same tone of voice as to not show any bias and simply continued with the rest of questions to complete my semi structured interviews.

8.3.2 During Quantitative Experience

Inconsistent Variables

This could be viewed as a limitation that physical examination of men was excluded from the six clinical scenarios. There was no reason for this as no bias was intended rather, a balanced number of scenarios should have been selected not only in gender, but as well in age, treatment options, etc. As indicated in the limitations, all treatment options should have been standardised for each scenario, thereby, offering the PCP the opportunity to rank in order of priority the treatment options recommended for the patient in those consultations. If the vignettes were presented in this manner, physical examination would have been an option for each patient regardless of gender.

Participants of Interest in this Study

My study was focused on examining the dynamic of the PCPs in the local setting. It was inferred by PCPs during the Qualitative phase most UWI-trained PCPs were exposed to limited training in SH. Thus, I wanted to assess whether being a locally trained PCP vs. a foreign trained PCP had any influence on their KAP. Most of the foreign graduates were trained in India, Africa, and some in Europe and the US based schools in the Caribbean.

Non-Responders in this Study

Generally, the study population showed interest and openness to participate once they understood what the research was about. Others, however, who felt that the research was invasive and personal, will not respond from the start. T&T needs to be exposed to more research opportunities so that it would be commonplace, and persons won't be uptight about participating.

Alternative Methods

I would consider targeting the PCPs' who worked solely privately and triangulate my findings with this new data set. It would also be useful to interview medical school lecturers (who are also private and public-based physicians in the health sector). The topic guide for these participants would be different, but it would allow for a comprehensive understanding of the entire picture. If they were involved in this study, I would have wanted to understand what shaped their teaching practices and try to determine why they would omit certain parts of the sexual health curriculum. I also considered observational study; however, many PCPs already admitted it was a very personal type of consultation and, too, patients were already so uncomfortable with them. How did I expect them to have behaved with an additional person in the room?

8.4 Overarching Key Strengths & Limitations

8.4.1 Strengths

Overall, key strengths which were reflected on for this study include:

- ▶ **Baseline Data for T&T and the Caribbean**

This research was able to provide great baseline data regarding PCPs' knowledge, attitudes, and sexual health care and treatment practices. Establishing the baseline (reference/value) will serve for use in future studies. It was a cross sectional study; as a result, some practices may have changed from when they were conducted. For example, renovations and brand-new health centres with better private rooms have been built. However, much can still be learned. This study was conducted in a multicultural setting and perhaps since Trinidad and Tobago is very different in terms of ethnicity, culture, and development than the other Caribbean islands, the results of this study may not be as easily generalizable, but it provides a study design of interest that may be reproducible across the region.

- ▶ **KAP & CME Format Section**

The KAP survey provided PCPs' "opinions." It measured the extent of a sexual health communication between PCPs and their older patients; it confirmed or disproved the thesis hypotheses; it provided baseline information about the nation's PCP' knowledge, attitude, and practices about SRH in later life; it also identified what is practiced across various clinical scenarios. The CME format was favoured by most, though a minor few PCPs indicated that

it reminded them of medical school examinations (though not necessarily indicated in an unfavourable way).

▶ Online Pilot/Data Collection Administration Change in Field

I designed a brief pilot study for my online KAP survey, and I rolled out this pilot prior to my arrival in T&T. The aim of this online pilot survey was primarily to assess ease of use and feasibility, acceptability, and understanding, plus, to determine if there were problems with the interface prior to implementing this tool as a national survey. The pilot study does not guarantee success in the main study, but it aimed to increase the likelihood of success if the ‘mini’ version of the larger study is executed well.⁴¹⁴ This was certainly very true, as my pilot experience did not really guide the actual survey methods employed. I still learned that my survey instrument itself had minor changes to make; hence, it was not difficult to change from electronic to paper-based method as the content remained the same. There was no difference in the content of the survey after minor changes, only in the method of administration from online to paper-based. Hence, many of these criteria were no longer applicable apart from assessing understanding of the questions that were asked – and I received further feedback from the users, plus, they had no issues comprehending what was asked. There is a need for more discussion among researchers using both processes; also, as outcomes of conducting online method was no longer feasible (nor use of Cochrane’s methodology to improve online response rate) and had to be changed in the field for the study. I opted to print paper-based versions of the survey and manually distribute them as this was most effective for quantitative data collection in this setting. I considered telephone interviews, but PCPs would have preferred face-to-face survey interviews instead. Additionally, PCPs did not appreciate giving out their phone contacts to researchers and would not have had the time to answer calls during work hours for a survey.

► Mixed-Methods Approach including Triangulation

The decision to conduct a sequential mixed-method study followed by triangulation (all discussed as results in Chapters 3 – 7) offered better scope to answer the different research questions. The results received from the two methods also presented some divergences which would not have been captured using a mono-method approach.

Additionally, the triangulation of these results allowed for further analysis and deeper understanding of the findings rather than new outcomes, which had many instances of confirmation and complementarity and opportunity to introspect on some of the divergences. It may be argued that because the qualitative arm was first and this data analysis informed the quantitative arm, this could be the reason why more complementarity ‘bias’ could have been seen; however, this confirmed that the results captured were more likely to be accurate. Further, Ratcliffe argued about the quantitative survey method of KAP and deemed its ability to produce accurate data on the underlying factors as narrow based on its limited comprehension of the socio-cultural context and its conceivably inaccurate interpretation of data.¹⁶⁹

In response to Ratcliffe, the KAP survey employed was not traditional (explained in Limitations in Section 8.4.2); however, there were still benefits as the KAP survey helped to obtain general information about PCPs’ knowledge regarding treatment and prevention practices. Plus, their demographics, SRH education, years of experience, setting, location, and some scores were determined. However, appropriate methods in relation to these study objectives were considered and other methods had to be employed in addition to KAP to ensure it was understood.

I agree with Ratcliffe that the underlying reasons and the sociocultural context would have been missing if a KAP study was the primary focus. I considered other suitable ethnographic methods, including focus group discussions, in-depth interviews, participant observation, and various participatory methods. Also, at the time of this research, a combination of qualitative and quantitative methods proved most effective and feasible.

8.4.2 Limitations

Overall, some limitations were considered when interpreting our findings.

▶ Interview Management

Some areas for improvement of the methods used and the research experience include better training as a researcher on how to identify and manage reporter and researcher bias during interview sessions and analysis. Some of the experiences are difficult to avoid, e.g., hierarchical seating in a consultation room. Some PCPs tried to manipulate the interview as well for their own comfort and preferences, or simply because they were older or of different gender and culture.

Another aspect of the interview process I reflected on was the number of interviews taken. Although I felt that conducting more interviews would not have captured further themes, it is possible that additional interviews may have provided more comprehensive information. Discussing sex even with physicians is taboo. The word is heavily stigmatised and, as such, it is possible that the PCPs' may not have felt comfortable being honest even about their professional clinical sexual health practices, attitudes, and comfort level, especially as they were interviewed at their workplace or even on the anonymised survey. However, I felt that this was best dealt with by assuring PCPs that this research was not associated with the Ministry of Health in any way (which had been their major concern) and that their interview data would be kept anonymous, plus, the interviews were conducted in consultation rooms free of other PCPs and patients.

▶ Courtesy Bias

There was also the problem of 'courtesy biases' during data collection of both the interviews and the survey, suggesting that some PCPs may have fashioned their responses according to their perception of *my expected response*. This choice by the PCPs was possibly to avoid embarrassment for having a particular opinion or conflict if they thought I may not have favoured their point of view. Some participants would rather act this way instead of refusing to participate in an interview or survey. Courtesy bias has been reported in many studies utilising surveys and, hence, raising a cause for criticism of the use of the survey method.¹⁷¹

In both qualitative and quantitative phases, some PCPs were hesitant to participate initially as they assumed that this survey had something to do with the MoH and feared that their responses would be determined, thus, jeopardising their jobs. These assumptions could have exacerbated the courtesy bias. For example, answers to the survey questions related to the PCPs comfort level in discussing sexual health with older patients seemed to be mostly positive as most PCPs indicated they were generally comfortable, yet during the in-depth interviews, most PCPs voiced their discomfort.

► **Survey Instrument**

I would consider improving the survey instrument by offering a different method to assess care practices (as discussed in Paper 3) by assessing practice in a standardised way to be able to compute an overall ‘practice score’. For better comparison and the attitudes—perhaps four categories for assessing comfort level is not the most appropriate measure, other rating scales could have been used. For example, I could have allowed PCPs to grade their level of comfort from 1 to 10 for different types of management strategies to really assess comfort in more than one way. For example, I only have an idea about their comfort based on the scenario presented. Yet, I do not know whether they are truly comfortable with the sexual health management options—despite indicating their willingness to offer them.

PCPs can very well offer treatment such as counsel the patient, but that does not mean they are happy doing it. Otherwise, it could mean they will for merely 2 minutes rather than 10. Other areas such as improving access to the full list of private and public PCPs and increasing the overall study population would have enhanced this study. There is still much to learn about private practice setting and further study to assess whether PCPs’ experiences are the same in this setting where resources are much improved—an opportunity for further post-doctoral research.

8.5 Recommendations for T&T

Going forward from this thesis, the suggestions take an important step towards seriously addressing gaps in sexual health knowledge in later life.

1. Educational Training for all Stages and Ages

My primary recommendation is focused on the key finding—to increase knowledge base in sexual health for all. I envisioned the implementation of a national sexual health and educational strategic plan with a cross-functional technical working group of professionals and clinicians to target various audiences: PCPs, medical students, patients in middle and old age, other HCPs implementing partners, etc.

- PCPs
 - i. Education and training of PCPs in comprehensive sexual health. Making sexual health a priority for PCPs will require revision of educational efforts on three levels: undergraduate clinical education, postgraduate residency training, and continuing education for clinicians in practice with a comprehensive CME covering the wide range of topics under sexual health including an all-inclusive sexual health module (e.g., in STI, HIV, and NCDs and management, family planning and reproductive life course and ageing, contraception for older males, sexual dysfunction and risk-reduction counselling, plus LGBTQIA.^{395,389,383}
 - ii. Training on the sexual health needs of lesbian, gay, bisexual, and transgendered patients is particularly inadequate for all ages and completely non-existent for older-aged groups. While medical students may be trained to assess sexual preference, they are often not attuned to the medical and social factors affecting LGBTQIA patients, despite the demonstrated impact of these factors on health outcomes.^{415,416}
 - iii. Asking sexual health questions, as some patients felt sexual health should only be discussed if a specific symptom or problem were present. Patients also reported feeling ashamed of their sexual problems or worried that providers might perceive them as sexually abnormal. Some older patients assumed any sexual problems were solely the result of aging and, thus, inevitable. Overall, patients need to better understand their own ability to start, stop, and control the

direction of any patient-provider discussions of sexual health. Efforts to educate patients should take these important factors into account.

- iv. Better continuing medical education and training could provide practicing clinicians with important sexual health knowledge as well as the confidence and skills to more effectively and routinely address individual sexual health needs.⁴¹⁷

- **Medical Students**

- i. Review of medical school curricula found that only 3–10 hours during 4 years of study were dedicated to sexual health – this needs to increase bearing the following in mind:
- ii. In formal medical education, more emphasis could be placed on assessment and maintenance of sexual health. For example, sexual health proficiency could be designated as an area in which medical residents must demonstrate formal competency to complete their residency.
- iii. Training on the sexual health needs of lesbian, gay, bisexual, and transgender (L) patients is particularly inadequate as they are often not attuned to the medical and social factors affecting LGBTQIA patients.

- **For the middle-aged and older patient**

Educating patients about sexual health to acquire a better understanding of sexual health in later life. In most clinical visits, patients are seeking information, explanations, or support from PCPs who will soon be more equipped to provide their patients with more info. In the interim, we can focus on wider health promotion so that they may benefit.

2. Changes in Primary Care Setting

- ✓ Expand PC services to have a wider sexual health focus with a more comprehensive package of related services (e.g., STI/HIV screening, provision of contraception for older males, sexual dysfunction and risk-reduction counselling).
- ✓ Promote discussing sex in everyday contexts. This approach may be particularly valuable in addressing health-care concerns of committed couples or older patients. PCPs may need to examine how their own attitudes and values about sexual health affect patient interactions. A sexual health approach can also address tensions about how to best achieve sexual health.

3. The Ministry of Health, Trinidad and Tobago

- ✓ Guide them to use the social media to play an important role in increasing patient health promotion in ageing and sexual health, helping to decrease stigma and normalize conversations about sexual health with PCPs through ads and infographics.
- ✓ Design and plan a sexual health programme over the life course from new-born to old-aged persons with training and activities in sexual health for all ages and stages
- ✓ Design sexual health educational materials for PCPs and for patient use. For example, design a five-question-focused sexual history for patients to fill out to initiate the sexual health discussion, to be piloted and implemented in PC settings.

- **Nationwide Health Promotion**

There needs to be nationwide sexual health education model that uses a familial sexual health approach using messages such as “screening is healthy for all” and “speak to your doctor together” can encourage couples to discuss sexual health issues to be addressed in the same visit. Education needs to encourage older patients to discuss sex in everyday contexts with each other. PCPs must learn how to initiate SRH discussions, and break this cycle of reticence.

- **Sexual Health Policy**

A broader sexual health focus in primary care instead of adding a new clinic for older adults (as this may encourage more stigma and discrimination). All related services (e.g., STI/HIV screening, family planning, sexual dysfunction, and psychosexual counseling) should be offered on particular days at each health centre. Counselling about sexuality needs to be a routine part of care to engage physicians and patients, thus, making this a normal venture. This will increase their comfort and possibly encourage a way to get partners involved.⁴¹⁸

- **PCPs' Socio-Demographics & Concordance**

Attempt to roster both male and female PCPs of varied age groups and backgrounds at all health centres, if possible. This way, for patients who have preferences, options will be available.

- **PCPs' Communication Style**

The present communication style of many PCPs is affected by the primary care setting and work culture. As mentioned in previous chapters, due to the low number of medical PCP staff and high number of patients, the time allowed per patient at most facilities is too limited for thorough consultations. This constraint also resulted in being more paternalistic (doctor-centred) and limited shared decision-making.

Other reasons contributing to this communication style including work culture and the expected PCP-patient relationship; therefore, appropriate training updating PCPs on effective consultations, PCP-patient communication, time management, and sexual health history taking can influence these interactions more positively. These sessions can be incorporated into Clinical Interview Skills in undergraduate level and as refresher courses under CMEs for postgraduate. Additionally, making amendments to existing policies on sexual health to include the middle-aged and older age group will also influence PCPs to consider this a priority in primary care alongside chronic diseases. Additionally, making CMEs mandatory for health care professionals will also assist so that these types of refresher courses and trainings can also be prioritized.

National Sexual Health Agenda

Taking into consideration the abovementioned recommendations and proposed model, the overall aim proposed is to foster change in our national sexual health care standards and practices. To initiate this achievement emphasis is recommended to be placed on increasing knowledge in sexual and reproductive health in later life, improving overall communication standards in ageing and sexual health care matters in PC and older patient related outcomes and wellbeing for sexual health concerns in later life. Even though the approach is PCP focused acknowledgement of work to be done to encourage awareness within our older population regarding sexual difficulties that are expected as one ages and where they can comfortably access appropriate care for such concerns is also promoted. This guidance is influenced from research and ongoing projects governed by the WHO – Europe where there has been an established WHO Strategy and action plan for healthy ageing in Europe.⁴¹⁹ In keeping with the proposed model (Fig. 14) and recommendations in this study, one primary aim of the WHO-Europe strategy includes ensuring that healthcare professionals in PC attain sufficient training to allow them to be receptive rather than daunted, when older people present with sexual difficulties especially when complicated by chronic illness.⁴¹⁹ Regardless, it is important for sexuality to remain a priority throughout our lifecourse and for sex in later life to become increasingly viewed as an integral ingredient of healthy ageing.⁴¹⁹

However, it is clear that addressing sexual health is complex but as shown in this small study (which only addresses a one aspect of SRH), there are many entry points for strategic intervention. Education level in sexual health in later life has been found to be a key indicator and influential factor in this study, directing attention and resources and using guidelines as outlined in the WHO Strategy above but also those from the SAFE Project: A European partnership to promote the SRH and rights of young people” (but adapting it to include sexual health in later life) can be a powerful means for T&T to achieve a sustainable, ongoing sexual health care practices in public health and PC settings.⁴²⁰ The overall recommendations of the SAFE project demonstrate the importance of implementing a Comprehensive Sexuality Education which should be initiated from an early age using a life course approach.⁴²⁰ Using this approach the population could be better sensitised and educated about sexual and reproductive health, sexuality and sexual health in later life continuously throughout their

educational experiences (including up to tertiary education). This approach should also be included in various community level health promotion and educational interventions. According to the SAFE project findings and guidelines appropriate complementary health care policies in sexual health focused on a lifecourse approach to SRH and SRHR should also endorse the various academic and public health care curriculums.⁴²⁰

8.5.1 Study Contribution

My thesis contributes the following to literature:

- ❖ *An understating of the physician's perspective on communication barriers and facilitators in sexual health consultations including sexual history taking with middle-aged and older patients in primary care settings.*
- ❖ *PCPs' characteristics and predictors of sexual health consultations with patients of middle and old age.*
- ❖ *Overview of the current practice of sexual health provisions in primary care in T&T for middle-aged and older patients in T&T.*
- ❖ *Influences on physician communication in sexual health consultations between physician and mature patients in primary care.*
- ❖ *Recommendations for best practice in improving sexual health communication.*
- ❖ *Baseline data on PCPs' KAP in sexual health care and sexual history taking with patients 45 years and older (specifically, associations between PCPs' characteristics and their KAP, associations between their KAP and the characteristics that predict more likely sexual health management options offered by PCPs to middle-aged and older patients presenting with sexual health related concerns).*
- ❖ *An adapted working model of the influences on PCPs' communication in sexual health consultations with middle-aged and older patients for future testing and modification.*

8.6 Conclusion and Recommendations

Effective training has the potential to enhance PCPs' ability to comfortably discuss sensitive sexual health issues, take a sexual history, provide more holistic patient-centred care, and ultimately reduce adverse sexual health outcomes experienced by patients in middle and old age.

Training in sexual health communication, sexual history taking and sexual functioning in later life are predictors of increased opportunities to manage comfortable sexual health consultations with middle and old patients seeking sexual health intervention. If PCPs' throughout T&T could better address sexual health issues, they could increase the availability of preventive health services and treatment to avoid poor sexual health outcomes—sexual dysfunction. Likewise, greater patient interest in open dialogue with their PCPs about sexual health could enhance patients' seeking of needed services and their satisfaction with care.

Ultimately, for both physician and patients, better education and training in sexual health will come in handy. Future research is encouraged to determine the KAP of private physicians and specialists working with middle-aged and older patients in T&T; to determine appropriate diagnostic sexual assessment tools for middle and old-aged patients; ascertain what factors influence decision-making and communication strategies in the physician-older patient relationship; and to discover the impact of cultural taboos on PCPs' decision-making process when treating older patients and how will the dynamic of PC change when faced with managing older LGBTQIA patients.

Appendices

Emphasizing the Importance of Sexual Healthcare among Middle and Old Age Groups: A High Time to Re-Think?

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Abstract

Our sexuality and sexual health is affected by physiological-, pharmacological-, psychosocial-, and illness-related changes as we age. Physiological changes in men can cause less firm erections due to narrowing of the arteries that supply blood to the penis, and in women, the vagina can become shorter, narrower, and less lubricated. Pharmacological and medical interventions may affect libido in both men and women by decreasing overall sexual desire resulting in a diminished interest in sex over time. Illnesses more prevalent among middle-aged and older adults including diabetes can also influence sexual function, such as increased erectile dysfunction among men and lack of sexual arousal in women. Societal changes, including increased rates of divorce, use of the internet to find sexual partners, suggest that older populations are also at risk of sexually transmitted infections (STIs). Even though the World Health Organization's definition of sexual health contains no age limits, most sexual health policies, services, and interventions target people from adolescence to early childbearing years. Many people continue to be sexually active in later years, yet health promotion and services target the young (under 25 years), with little opportunity for prevention, treatment, or positive sexual health promotion in over 45 s. Sexual dysfunction, STIs are an increasing public health issue among middle-aged and older adults but are not considered a priority for surveillance in sexual healthcare. This review aims to examine how sexual health is affected by aging and why sexual health among people aged 45 years and above is of public health importance.

Keywords: Aging, middle-aged, old aged, sexual dysfunction, sexual health, sexuality

INTRODUCTION

On average, the population is getting older because of successful public health interventions increasing life expectancy. An estimated 29.3% of the world's population is middle-aged (45–64 years) and older (above 65 years).^[1] In the developed countries like Japan, life expectancy at birth now exceeds 83 years and is at least 81 years in several other countries, including the UK and 79 years in the US.^[2] In less developed regions, such as East Asia and the Caribbean also increased to at least 74 years (with the notable exception of parts of Africa where deaths caused by the HIV/acquired immunodeficiency syndrome (AIDS) epidemic is responsible for the fall in life expectancy rates).^[2] Thus, much attention has focused on the implications of an aging population. Individual and societal benefits of increased life expectancy include the value of longer periods of life, a sustained sense of well-being and productivity (increased retirement age), and extended periods of social engagement, however, these are coupled with

problems associated with an aging population. These problems include chronic illness and noncommunicable diseases, higher probability of developing dementia, disability, and dependency. Notably, minimal attention has been paid to this group with respect to their sexual health and how it affects their quality of life (QOL). Policy makers and media seem to equate sexual health with youth (both positively and negatively) while the sexual health-care needs of the middle-aged and older is ignored.^[3]

The World Health Organization defines sexual health as “a state of physical, emotional, mental, and social well-being related to sexuality; not merely the absence of disease, dysfunction,

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or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be protected, respected, and fulfilled."^[4] While this definition contains no age limits, most sexual health policies, services, and interventions target people from adolescence to early child-bearing years. In many high-income countries, including the UK, public health strategies aiming to combat poor sexual health, such as their Teenage Pregnancy Strategy, the National Chlamydia Screening Programme, and the Sexual Health and HIV Strategy have focused primarily on the young,^[5-7] possibly due to the assumption that sexual health among older people is not of public health importance or even that older people are not sexually active, and therefore not at risk of poor sexual health outcomes.

This review aims to examine how our sexual health is affected by aging and why sexual health among people aged 45 years and above is of public health importance.

The impact of normal aging on sexual function

For most men and women, changes in sexual function occur around midlife and into subsequent decades as a normal consequence of aging.^[8] These changes include physiological (biological and physical) and psychosocial (emotional, mental, and social) changes, some of which can be illness related or brought on by pharmacological intervention, but all of which further influence our sexuality.

Physiological aspects of aging on sexuality

As we age, physiological changes (including hormonal levels) in our bodies may affect our sexual competence and can lead to problems, including diminished or absent interest in sex, difficulty becoming sexually aroused or lack of enjoyment during sex.^[9]

Men

The physical changes coupled with aging are associated with an increased risk of impotence. Erections can be less firm or smaller than they used to be due to narrowing of the arteries that supply blood to the penis, and they produce less ejaculate during an orgasm or lose an erection faster after orgasm.^[9,10] Testosterone levels begin to decline in the fifth decade, often resulting in a diminishment of sexual desire.^[9] Loss of desire is associated with, and often a consequence of, diminished sexual responsiveness.

Women

Hormonal changes after menopause or a hysterectomy can cause the vagina to become shorter, narrower, and less lubricated.^[9,10] Estrogen depletion following menopause may affect the psychology and the physiology of sexual response. Blood flow to vaginal and genital tissues and sensory stimulation are directly affected by declining estrogen levels.^[10] These changes can produce vaginal dryness and recurrent genital pain with intercourse (dyspareunia), contributing to loss in desire and diminished sexual responsiveness.^[9,10]

Medical and illness-related factors

Physical illness can affect sexual function directly by interfering with endocrine, neural, and vascular processes that mediate the sexual response, indirectly by causing weakness or pain and psychologically by provoking changes in body image and self-esteem.^[10] In men and women, the age-related chronic or systemic conditions that instigate these changes and affect overall sexual satisfaction and performance include endocrine or metabolic disorders such as diabetes; cardiovascular diseases; cancers; neurologic disorders; and generally any injuries related to the reproductive organs, chronic pain, and incontinence.^[11] The burden of chronic disease is growing due to increased life expectancy and lifestyle changes. For example, the estimated global prevalence for diabetes in 2010 was 347 million and was expected to affect 438 million people by 2030;^[12] however, we are set to exceed this estimate as the prevalence was 422 million in 2014.^[13,14] Age has been shown to be a significant risk factor for all types of sexual dysfunction (SD). The age-related probability of complete erectile dysfunction (ED) is three times greater in patients with diabetes than in those without.^[15] ED prevalence and severity increase with age from 39% in men in their 40 s to 67% for men in their 70 s.^[16] Surgical therapy in men can affect erectile function by interfering with the neurologic innervation of the penis. Gynecologic and mastectomy surgeries in women affect the decline in orgasmic pleasure, such as following a hysterectomy because of the absence of uterine contractions.^[10,11] For men and women who view hysterectomy as a further loss of femininity, the women's self-esteem and body image may be negatively affected. Conversely, for women who experience relief from pain, abnormal bleeding, or cramping, hysterectomy may result in an improved sexual function.^[11]

Pharmacological factors

While pharmacological interventions have been developed to combat age-related illnesses and conditions; medications can cause or exacerbate changes in sexual function. These effects on sexual function can be more apparent among older persons as the aging process influences physiologic drug distribution, metabolism, and excretion. In men, medications such as the antihypertensive agents, beta blockers, and diuretics appear to be the primary causes of impaired erection.^[12] In addition, cardiovascular drugs, cancer chemotherapy agents, anxiolytics, antipsychotics, a wide range of antidepressants, lithium, and numerous drugs of abuse (including cocaine, alcohol, narcotics, and amphetamines) have all been linked to impaired erectile function.^[10] In women, reported side effects are associated with antidepressant, antipsychotic, and neuroleptic medications and include decreased sexual desire, impaired arousal and lubrication, vaginal anesthesia, delayed orgasm, and anorgasmia.^[11,12] Antihypertensive drugs have been shown to impair physiologic sexual response in women by decreasing vaginal blood volume and pressure and pulse responses.^[11] With regard to diabetes, male SD is a common, under-appreciated complication of this disease that can include

disorders of libido, ejaculatory problems, and ED.^[17] All three forms of male dysfunction can be a significant burden to diabetic patients and can affect their QoL.^[17] There is a paucity of research on the effects of diabetes on women; at this point, it does not appear to be correlated with sexual function as there is no evidence that peripheral or autonomic neuropathies directly affect the female sexual response.^[9]

Psychosocial aspects of aging on sexuality

Sexual function in middle-aged and older adults also has psychological influences like those that impact on the sexuality of younger persons. Common sources of sexual dissatisfaction noted among couples of all ages include commitment issues, marital conflict, sexual intimacy, communication problems, lack of trust, and incompatibilities in sexual desire and performance.^[18] However, what makes these factors different for older adults is that these may be amplified by anger and resentment that may have built over the years, as well as by feelings of entrapment and resignation and the option to leave if the relationship no longer seems viable.^[10] Psychosocial stresses such as depression or anxiety may fuel increased sexual difficulties, for example, stress attributable to the death of a spouse, divorce or separation, loss of a job or social status, and deterioration of support networks.^[10]

Adapting to changes in sexuality

Regardless of the physical and psychological barriers coupled with aging, many middle-aged and older adults adapt to improve their sexual lives. However, there are greater societal pressures to maintain a youthful appearance, perhaps influenced by an ageist media. Thus, widely accessible anti-aging products and treatments, as well as the growing popularity of plastic surgery and cosmetic treatments, occur in this age group. According to the American Society for Aesthetic Plastic Surgery 2016 report, ages 40–54 contributed to make up the majority of cosmetic procedures – 49% (7.6 million) cosmetic procedures performed and ages 55 and over second highest with 4.1 million.^[19] Reported factors that drive older patients toward anti-aging treatments and procedures include: improving general self-esteem; to be competitive in the workplace; to feel more attractive and connected/accepted in their social circles; to get a new start on life and attract new partners; and to look as young as they feel, as people become more “fitness” and attractive-conscious.^[20]

The internet offers forums for sex education and entertainment and the opportunity to meet sexual partners. The sexuality of older adults, like younger adults, has been greatly enhanced (or grossly distorted) through the varied avenues of the internet through which many have found new opportunities for sexual expression.^[21] The popularity of internet use for cyber dating and meeting the newly single middle-aged and older people is growing as several sites such as “Friends over 50”^[22] and “50+ Dating”^[23] and many others are well established. Remarriage and cohabitation in middle and old age is a progressively growing socio-demographic trend. In the US, about 50% of the “Baby boomers” (the post-Second

World War generation born between 1946 and 1964) have divorced and remarried and the proportions ever divorced, currently divorced, and married at least twice, are highest among individuals ages 50 and over.^[24,25] For those who are lonely in middle and old age, forming new relationships could be a necessary socioemotional goal which may serve to improve their psychological and sexual wellbeing. In fact, relationships formed in later life tend to be more positive, deeper, and more meaningful than those relationships in young adulthood.^[26] Interestingly, the dynamic of relationships in later life include choosing partners that are vastly younger in age (for reasons that may include making them feel youthful again). In the Caribbean, U.S., and Latin America the terms “Sugar daddy” and “Cougar syndrome” have been coined for these types of sexual relations which are becoming more acceptable possibly due to TV and Music celebrities of both sexes who flaunt their new relationships globally in the media with much younger partners.

Sexual behavior and health in middle-aged and older adults

Sexual dysfunction

Our knowledge is limited regarding sexual behavior in middle-aged and older adults as many surveys on sexual behavior or routine data collection exclude older people. Surveys which did include this demographic suggest that older adults are sexually active and consider sexual function,^[27] performance and ability to have sex as very important.^[28,29] A cross-sectional study in the UK and US showed that more than 80% of 50–90-year-old are sexually active.^[30,31] However, this age group has a higher probability of SD due to aging and development of chronic illnesses. Commonly reported SD problems among middle-aged and older adults include: (i) lack of interest in sex; (ii) arousal problems; (iii) climaxing too early; (iv) inability to achieve an orgasm; (v) experiencing pain during sex; (vi) not finding sex pleasurable; and (vii) anxiety about performance.^[32,33]

The prevalence of these issues varies according to the country. The National Social Life Health and Ageing Project in the US indicates that more than half of the people between 57 and 65 years and about a third of those 75–86 years are sexually active, about half (of both age groups) self-reported at least one bothersome sexual problem; one-third report at least two.^[34] In a global European study (Sweden, the UK, Belgium, Germany, Austria, France, Spain and Italy) on sexual activity, dysfunction, health-seeking attitudes and behavior, 83% of the men and 66% of the women aged 40–80 years are sexually active.^[35] SDs frequently reported were early ejaculation (11%) and ED (8%) in men and a lack of sexual interest (18%), an inability to reach orgasm (13%), and lubrication difficulties (11%) in women.^[35] Higher frequencies for these were seen in Spain, with early ejaculation (31%) and lack of sexual interest (17%) the most commonly reported male sexual problems and a lack of sexual interest (36%) and an inability to reach orgasm (28%) the most commonly

reported female sexual problems.^[36] Recent pharmaceutical developments have provided options such as “wonder drugs” for sexual performance enhancement, for example, Viagra or Cialis, which aim to improve sexual experiences for those with ED. In addition, several widely available varieties of lubricants and mood enhancers aim to address dryness, stimulation, and interest for both sexes.

Sexually transmitted infections

In addition to SD, sexually transmitted infections (STIs) are an increasing public health issue among middle-aged^[37] and older adults.^[38] One in four people living with a diagnosed HIV infection is now aged 50+ years, likely due to improved survival and continued transmission.^[39] In the UK, adults aged 50+ years accounted for 9.0% of all new HIV diagnoses in 2006 and 17% in 2015, which almost doubled over the period.^[40,41] The median age at diagnosis was 55 years; 73% were diagnosed between the age of 50 and 59 years, with the rest diagnosed aged 60+ years.^[40] Although this is a perceptibly low proportion to the entire 50+ population, this is not a group traditionally considered at risk and signals the need to develop services accommodating the older population. In addition, people diagnosed 50+ years were more likely to be diagnosed late compared to those diagnosed under 50-year-old (58% compared to 39%).^[38,39] Late diagnoses can be attributed to low levels of awareness of later life sexual health issues among GPs which contributes significantly as a barrier to discussions relating to sexuality in consultations with older patients.^[42] In addition, STIs in middle and old age are not considered a priority for national surveillance in sexual healthcare mainly because countries are mandated to report on global indicators for the prevalence of STIs such as HIV between the age group of 15 and 49 years.^[43] The burden of disease among those aged 50+ years is frequently ignored, and this represents a significant blind spot in the global response to the epidemic of HIV infection and AIDS.^[44] Regardless, part of the combination prevention strategies for HIV infection, diagnosis, and treatment of STIs is one of the biomedical interventions overlooked to patients in middle and old age.^[45] While many older adults remain sexually active and may have concerns about sexual function or STIs, their problems are infrequently addressed by the health sector.^[46]

Sexual healthcare

Middle-aged and older adults are frequent attendees of general practice^[41] and report that this is the favored setting for advice or treatment; however, both patients and physicians find it difficult to discuss sexual health issues.^[27,28] Primary care physicians do not address sexual health proactively with older people, and unless, it is raised by the patient it may not be discussed,^[27] as few will be willing to initiate this discussion with their physician.^[47] This could be a result of the societal emphasis that has linked sexuality almost exclusively to young people and may consequently have discouraged these patients from seeking sexual advice within the primary care setting.^[48] Sexual health promotion materials target young people,^[49] with few exceptions. The “Middle-age Spread,” for example, was

the first sexual health campaign in the UK that targeted people over 45, alerting them of the risk of STIs.^[50] In general, these missed opportunities for prevention or intervention of sexual health issues for over 45 s are exacerbated by the striking absence and underuse of or poor quality sexual healthcare services available to this age group in many countries.^[51] Information from health-care professionals regarding normal age-related changes in sexuality, together with advice on how to continue meaningful sexual relations, may play a key role in altering such negative attitudes.^[8] Sexual lifestyle advice should be a component of holistic healthcare for middle-aged and older patients with chronic ill health.^[45]

CONCLUSIONS AND RECOMMENDATIONS

Globally, those aged 45 years and older represent the second largest population group to whom, positive sexual health promotion is lacking. Although over 45 s present with treatable sexual health conditions, these are often overlooked or dismissed as being a “normal part of ageing.” Commercially available products exist to alleviate some of the issues that can arise due to SD and there are ways of rejuvenating sexuality as one gets older, such as internet dating and sexual performance enhancers. However, the right to the best possible health does not diminish as we age and for this to improve, much research is needed to better understand sexual health as we age and how to develop appropriate services and training for health-care staff. Regarding sexual healthcare in later life, health-care professionals need to be proactive in: Relevant continuing medical education in care and effective sexual health communication, establishing appropriate sexual health-care age-appropriate services. Health-care professionals and policymakers must consider and encourage the promotion of good sexual health-related QOL to create more sustainable and happier relationships, less sexual health burden, and a healthier middle-aged and older population.

Contribution

This paper is part of the doctoral thesis at LSHTM. The first author PR has done the majority of the work including the conception, review, and manuscript preparation. VK reviewed and offered minor suggestions.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2017 Revision, Custom Data Acquired via Website; 2017. Available from: <https://www.esa.un.org/>

- unpd/wpp/. [Last accessed on 2017 Aug 09].
- World Health Statistics 2016: Monitoring health for the SDGs Annex B: Tables of Health Statistics by Country, WHO Region and Globally. World Health Organization; June, 2016. Available from: http://www.who.int/gho/publications/world_health_statistics/2017/en/. [Last accessed on 2017 Aug 09].
 - Heidari S. Sexuality and older people: A neglected issue. *Reprod Health Matters* 2016;24:1-5.
 - World Health Organisation. Sexual and Reproductive Health News. World Health Organisation Europe; 2011. Available from: <http://www.euro.who.int/en/what-we-do/health-topics/Life-stages/sexual-and-reproductive-health/news/news/2011/06/sexual-health-throughout-life/definition>. [Last accessed on 2017 Jul 06].
 - Department of Health (UK). Teenage Pregnancy Strategy; 2010. Available from: https://www.education.gov.uk/consultations/downloadableDocs/4287_Teenage%20pregnancy%20strategy_aw8.pdf. [Last accessed on 2017 Aug 01].
 - National Health Service (NHS UK). National Chlamydia Screening Programme (NCSP) Standards. 6th ed.; 2012. Available from: http://www.chlamydia-screening.nhs.uk/ps/resources/core-requirements/NCSP%20Standards%206th%20Edition_October%202012.pdf. [Last accessed on 2017 Aug 01].
 - Department of Health (UK). Framework for Sexual Health Improvement in England; 2013. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/142592/9287-2900714-TSO-SexualHealthPolicyNW_ACCESSIBLE.pdf. [Last accessed on 2017 Aug 01].
 - Hansen L, Mann J, McMahon S, Wong T. Sexual health. *BMC Womens Health* 2004;4 Suppl 1:S24.
 - Meston CM. Ageing and sexuality in successful ageing. *West J Med* 1997;167:285-90.
 - Sarrel PM. Sexuality and menopause. *Obstet Gynecol* 1990;75:26S-30S.
 - Badeau D. Illness, disability and sex in ageing. *Sex Dysfunct* 1995;13:219-37.
 - Danaei G, Finucane MM, Lu Y, Singh GM, Cowan MJ, Paciorek CJ, *et al*. National, regional, and global trends in fasting plasma glucose and diabetes prevalence since 1980: Systematic analysis of health examination surveys and epidemiological studies with 370 country-years and 2-7 million participants. *Lancet* 2011;378:31-40.
 - Shaw JE, Sicree RA, Zimmet PZ. Global estimates of the prevalence of diabetes for 2010 and 2030. *Diabetes Res Clin Pract* 2010;87:4-14.
 - Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Med* 2006;3:e442.
 - Prins J, Blanker MH, Bohnen AM, Thomas S, Bosch JL. Prevalence of erectile dysfunction: A systematic review of population-based studies. *Int J Impot Res* 2002;14:422-32.
 - Hackett G, Shabsigh R, Calomfirescu N, Yasusuke K, Siegfried M, Luis Otavio T. Economic aspects of sexual dysfunction. In: Montorsi F, Basson R, Adakan G, Becher E, Clayton A, Guiliano F, Khoury S, Sharlip I, editors. *Sexual Medicine: Sexual Dysfunction in Men and Women*, 3rd ed. Paris: Health Publications Ltd; 2010. pp.207-28.
 - Penson D, Wessells H. Erectile dysfunction in diabetic patients. *Diabetes Spectr* 2004;17:225-30.
 - Brecher E. *Love, Sex, and Ageing: A Consumer's Union Survey*. Boston (Mass): Little, Brown & Company; 1984.
 - The American Society for Aesthetic Plastic Surgery. Complete Plastic Surgery Statistics Report 2016. The American Society for Aesthetic Plastic Surgery; 2016. Available from: <https://www.plasticsurgery.org/news/plastic-surgery-statistics>. [Last accessed on 2017 Aug 31].
 - Pruit E, James Voloshin P. Refreshing Your Image after 50. *Plastic Surgery.com*; 2017. Available from: <http://www.plasticsurgery.com/eyebrow-lift/refreshing-your-appearance-after-50-a461.aspx>. [Last accessed on 2017 Sep 11].
 - Adams M, Oye J, Parker T. Sexuality of older adults and the internet: From sex education to cybersex. *J Sex Relation Ther* 2003;18:405-15.
 - 50Plus Club (Friends and activity partners over 50); 2017. Available from: <https://www.50plus-club.com/friends-and-activity-partners-over-50.php>. [Last accessed on 2017 Aug 12].
 - 50 Plus Dating Site; 2017. Available from: <http://www.50plusdatingsite.com/>. [Last accessed on 2017 Aug 12].
 - U.S. Census Bureau. The Older Population; 2010. Available from: <http://www.census.gov/prod/cen2010/briefs/c2010br-09.pdf>. [Last accessed on 2017 Aug 12].
 - Kreider RM, Ellis R. Number, timing, and duration of marriages and divorces: 2009. US Department of Commerce, Economics and Statistics Administration, US Census Bureau; 2011.
 - Carstensen LL. Social and emotional patterns in adulthood: Support for socioemotional selectivity theory. *Psychol Aging* 1992;7:331-8.
 - Mitchell KR, Mercer CH, Ploubidis GB, Jones KG, Datta J, Field N, *et al*. Sexual function in Britain: Findings from the third national survey of sexual attitudes and lifestyles (Natsal-3). *Lancet* 2013;382:1817-29.
 - Gott CM. Sexual activity and risk-taking in later life. *Health Soc Care Community* 2001;9:72-8.
 - DeLamater J. Sexual expression in later life: A review and synthesis. *J Sex Res* 2012;49:125-41.
 - Von Simson R, Kulasegaram R. Sexual health and the older adult—Trends show that doctors must be more vigilant. *Stud Br Med J* 2012;20:e688.
 - Mercer CH, Tanton C, Prah P, Erens B, Sonnenberg P, Clifton S, *et al*. Changes in sexual attitudes and lifestyles in Britain through the life course and over time: Findings from the national surveys of sexual attitudes and lifestyles (Natsal). *Lancet* 2013;382:1781-94.
 - DeLamater JD, Sill M. Sexual desire in later life. *J Sex Res* 2005;42:138-49.
 - Derogatis LR, Burnett AL. The epidemiology of sexual dysfunctions. *J Sex Med* 2008;5:289-300.
 - Lindau ST, Schumm LP, Laumann EO, Levinson W, O'Muircheartaigh CA, Waite LJ, *et al*. A study of sexuality and health among older adults in the United States. *N Engl J Med* 2007;357:762-74.
 - Nicolosi A, Buvat J, Glasser DB, Hartmann U, Laumann EO, Gingell C, *et al*. Sexual behaviour, sexual dysfunctions and related help seeking patterns in middle-aged and elderly Europeans: The global study of sexual attitudes and behaviors. *World J Urol* 2006;24:423-8.
 - Moreira ED Jr, Glasser DB, Gingell C; GSSAB Investigators' Group. Sexual activity, sexual dysfunction and associated help-seeking behaviours in middle-aged and older adults in Spain: A population survey. *World J Urol* 2005;23:422-9.
 - Dalrymple J, Booth J, Flowers P, Lorimer K. Psychosocial factors influencing risk-taking in middle age for STIs. *Sex Transm Infect* 2017;93:32-8.
 - Brown AE, Kirwan PD, Chau C, Khawam J, Gill ON, Delpech VC. Towards Elimination of HIV Transmission, AIDS, and HIV-Related Deaths in the UK – 2017 Report. London: Public Health England; 2017. Available from: <https://www.gov.uk/government/publications/hiv-in-the-united-kingdom>. [Last accessed on 2017 Oct 01].
 - Skingsley A, Yin Z, Kirwan P, Croxford S, Chau C, Conti S, *et al*. HIV in the UK – Situation Report 2015: data to End 2014. London: Public Health England; 2015. Available from: <https://www.gov.uk/government/publications/hiv-in-the-united-kingdom>. [Last accessed on 2017 Oct 01].
 - Smith RD, Delpech VC, Brown AE, Rice BD. HIV transmission and high rates of late diagnoses among adults aged 50 years and over. *AIDS* 2010;24:2109-15.
 - Tavoschi L, Gomes Dias J, Pharris A; EU/EEA HIV Surveillance Network. New HIV diagnoses among adults aged 50 years or older in 31 European countries, 2004-15: An analysis of surveillance data. *Lancet HIV* 2017;4:e514-21.
 - Gott M, Hinchliff S, Galena E. General practitioner attitudes to discussing sexual health issues with older people. *Soc Sci Med* 2004;58:2093-103.
 - United Nations. General Assembly. Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on construction of core indicators. In *Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on construction of core indicators* 2008. Available from: http://www.aidsportal.org/repos/ungass_core_indicators_manual_08.pdf. [Last accessed on 2017 Oct 06].
 - Negin J, Martiniuk A, Cumming RG, Naidoo N, Phaswana-Mafuya N, Madurai L, *et al*. Prevalence of HIV and chronic comorbidities among older adults. *AIDS* 2012;26 Suppl 1:S55-63.
 - Chattu VK. Role of biomedical and behavioral interventions and their evidence in prevention of HIV infection: A literature review. *Int J Med Public Health* 2014;4:324-30.

Sexual healthcare knowledge, attitudes, and practices among primary care physicians in Trinidad and Tobago

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ABSTRACT

Background: Our understanding of healthcare professionals' competence level in both their sexual history taking practices and their attitudes in addressing sexual health concerns of patients in middle and old age is lacking. This research aimed to assess primary care physicians' (PCPs) knowledge, attitudes, and sexual healthcare practices toward patients who are ≥45 years in Trinidad and Tobago. **Materials and Methods:** A self-reported survey instrument assessing clinical sexual health knowledge, attitudes, and practices was administered nationwide to all registered PCPs ($n = 155$) in the public healthcare service. Descriptive and inferential statistical analyses were conducted using STATA. **Results:** PCPs, who were foreign medical graduates, middle-aged, male, and worked in urban centers, had improved odds of discussing sexual health with middle-aged and older patients. PCPs with any training in sexual health communication or sexual history taking were three times more likely to initiate a sexual health discussion or take a sexual history. Over 90% of physicians reported taking a sexual history only if the discussion was patient initiated and over 50% of PCPs indicated they will not ask these older patients about their sexual orientation, sexual partners, sexual abuse, or violence. **Conclusions:** Even though PCPs reported having a positive willing attitude toward offering sexual health care to these patients, they had a low level of knowledge of sexual function in later life and inconsistent sexual history taking practices. There is a great need for training physicians' on sexual health communication and history taking and on sexual function in older adults.

Keywords: Caribbean, knowledge attitudes and practices, middle age, old age, primary care, sexual health, sexual history taking, Trinidad and Tobago

Introduction

Primary care (PC) is often the first point of contact for patients with sexual health problems.^[1] With the rising prevalence of sexual dysfunction (SD) in middle- and old-aged persons,^[2] management of such sexual concerns should be covered in PC. However, PC is known to be a resource poor setting with limited availability of sexual healthcare services for older people.^[3] "Youth" is associated with sexuality (conditioned by popular media) which may contribute to the ageist views shared

by some Primary Care Physicians (PCPs) that sex becomes less important with age, and older people are sexually less desirable or incapable.^[4] Sexual ageism is also reinforced by the natural age-based decline in sexual function.^[5] PCPs with such ageist beliefs about sexuality justify why for sexual health, they focus on patients of reproductive age, for pregnancy, sexually transmitted infections (STIs), and contraception.^[6] To them, sexual health is a valid topic to discuss with younger, but not older patients because sexual priorities become irrelevant as patients age.^[7]

Apart from ageist views about sex, PCPs avoid discussing sex with their older patients for further age-related reasons, but these evoke discomfort and fear. Age discrepancy between PCPs and patients can influence a sexual history consultation: with

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younger patients, they perceive them as more likely to expect or be open to discuss sex contrary with an older patient. In fact, some PCPs have rated the experience as unwelcoming, as if interrogating your own parents about their sex life.^[4,6,7] In studies with PCPs who are uncomfortable discussing sex with someone older, they have expressed fear of offending the older patient due to the perception of sex being nonrelevant to them or to the chief complaint.^[4] Some PCPs feel embarrassed or awkward with sexual language and additional fear of the possibility of inciting patient arousal during a consultation.^[6] In addition to the influence of age on worldviews about sexuality, lack of training in sexual health knowledge or communication also discourages PCPs. PCPs have reported that the fear is rooted in their feeling of incompetence due to inadequacy or limited knowledge of sexual health in older age patients or how to take an appropriate sexual history with them.^[6] In contrast, despite the normal decline in sexual functioning with age, older patients wish to maintain a healthy, satisfying sex life well into their later years.^[9,10] PCPs treating older patients should, therefore, be knowledgeable in SD, STIs, and intimacy in later life, and comfortable and proactive in managing these patients' sexual health concerns.^[4,11]

In the last decade, only a small number of population-based studies research sexual health lifestyle preferences or concerns of the middle- and old-aged, such as the large global study in European countries on sexual behavior,^[12] or a few national studies focused on aging and sexuality including the national surveys on sexual attitudes and lifestyles (NATSAL) in the United Kingdom^[13] and the national social life and health ageing project (NSHAP) in the United States.^[14] There are even fewer quantitative surveys reporting on incidence and prevalence of sexual dysfunctions in men and women in this age group,^[15] or on appropriate tools to improve sexual health communication.^[16] Most of the research is patient centered and a dearth of information exists regarding the physician's perspective. Studies that discover the factors that influence PCPs knowledge about sexual function in later life and their attitudes toward sexuality in consultation with middle-aged and older patients and insights about how they address their sexual health concerns is warranted.

This study was conducted with PCPs in Trinidad and Tobago and attempts to fill some of these research gaps. As there have been no other studies to date on this subject in the Caribbean region, this research provides some baseline data and future opportunity for comparative analysis with other Caribbean territories. As Trinidad and Tobago is a very culturally and ethnically diverse country, there is opportunity to discover distinctive culturally specific factors that affect their physicians and older patients and a chance to document any unique healthcare experiences associated with communicating sexual health concerns. This paper aimed to quantitatively identify the characteristics of PCPs that influence their knowledge, attitudes, and practices (and the associations among these variables) in sexual health consultation with middle-aged and older patients.

Materials and Methods

This quantitative paper is part of overarching mixed methods study with a sequential exploratory design that consists of a qualitative and quantitative arm.^[17] The qualitative arm explored PCPs attitudes towards sexuality and sexual health care of middle-aged and older patients and this data was collected by conducting 'one to one' semi structured interviews with 35 PCPs from public and private sector. These interviews generated two types of qualitative data: interviewer field notes and transcripts of the interviews. The data received was analysed using Framework analysis and a grounded theory approach and the results informed the design of the survey instrument.^[18]

Data collection

In April 2012, an anonymous, self-completion questionnaire survey package (with a study questionnaire, study information sheet, and consent form) was manually distributed to 155 PCPs recruited from 106 health centres nationwide. The questionnaire was developed to investigate how PCPs' characteristics were associated with their sexual health knowledge, attitudes and care practices with middle-aged and older patients. The first section of the questionnaire collected demographics, second section probed practitioners' views on six clinical vignettes about sexual health related complaints presented by middle-aged and older patients. Each vignette was followed by at least three questions aimed to assess PCPs knowledge (determine a correct diagnosis), attitudes (comfort level discussing sexual health with the patient) rated on a Likert scale; and practices (preferred diagnostic/treatment approaches) Following were sections 3-4, which were general questions about PCPs attitudes towards sexual health care and sexual history taking and their preferences to undertake further training in sexual health.

Development of survey instrument

As far as could be determined from our review of the literature, there are no existing validated tools for assessing PCPs' KAP towards sexual health in middle-aged and older adults available. Therefore, the survey style, sections especially the clinical scenarios and KAP questions were developed using published literature, and shared experiences in interviews with PCPs,^[19] from the qualitative phase of the study. For section 2, the rationale for using the vignette style to present clinical scenarios followed by a series of relative questions is very similar to the format used in continuing medical education (CME), a style that is familiar with most clinicians. Each clinical scenario contained the following fundamental criteria: a clearly stated patient gender, a patient of middle or old age, and presenting complaints with an identifiable sexual health prognosis.

Originally the researcher initiated an online survey dissemination strategy guided by Cochrane's methodology to increase response rate of research using online or postal services.^[20] The survey tool was printed and manually distributed to each recruited physician. Ethical approval was obtained from the ethics committee of

the London School of Hygiene and Tropical Medicine, and the Ministry of Health, of Trinidad and Tobago.

Data analysis

Multivariable statistical analysis was carried out using SPSS version 21 and Stata12 to answer hypotheses generated for this study. Predictive analyses presented in the form of scores, odds ratios (ORs) and *P* values were calculated by means of logistic regression models.

Results

From a sample of 155 PCPs, the survey achieved a 60% response rate ($n = 93$). Just over 50% of PCPs who participated were male; under 40 years of age and 60% graduated from a locally based medical university. Around 67% of PCPs reported that they had no formal training in sexual function in later life [Table 1].

Knowledge levels of PCPs

Summarized in Table 2, no PCP attained a full knowledge score of 6, in correctly diagnosing every one of the clinical scenarios. The mean knowledge score attained was 2.27 and more than half (57%; $n = 53$) of PCPs scored less than 2 out of 6. PCPs who attained higher than the mean knowledge score were 2.43 times more likely to have had formal postgraduate training in sexual function in later life. Markedly, 19.4% of PCPs indicated that they were never trained in any of the sexual reproductive health (SRH) or sexual health communication topics listed. Furthermore, 42.4% of PCPs were never taught to take a sexual history.

Attitudes of PCPs

Majority of PCPs' agreed that sexual function in later life was important (96%) and support health promotion in this age

group (95%). Yet, a few PCPs agreed that sexual healthcare for those aged 45 + had little relevance to their well-being (11%), not a priority (29%), limited time available to discuss in PC (59%) and not apt taking sexual history from older patients (14%). Data analysis of the first five clinical scenarios (STIs; chronic illness; sexual performance difficulties; surgery; medication), revealed that over 90% of PCPs stated they were generally comfortable discussing sexual health given those patients and their presenting complaints. However, in the sixth clinical scenario only 71% of PCPs were comfortable discussing sex with that patient who presented with a psychosexual problem.

Further analysis [Table 3] into the predictors of PCPs comfort when discussing sex with male middle- and old-aged patients suggests that PCPs must also be male [OR = 4.75; $P = 0.00$], over 40 years of age (at least middle-aged) [OR = 3.1; $P = 0.03$] and educated abroad [OR = 4.14; $P = 0.01$]. When these PCP characteristics were applied in the multivariate model, it was noted that "training in sexual health communication" was also statistically significant and it increased the PCPs odds threefold to be comfortable discussing sexual health with the male patients [OR = 3.19; $P = 0.05$]. Predictors of comfort with increased odds were found similarly with gender and age concurrence, foreign education, and training in sexual health communication.

Practices: Discussing sex with their middle-aged and older patients

PCPs that attained any training in sexual health communication during their medical education or professional career were three times more likely to discuss sexual health matters with their older patients (OR = 3.15; $P = 0.032$). Notably, these odds

Table 1: Characteristics of Study Participants (PCPs)

Characteristics	<i>n</i> =93	(%)	Characteristics	<i>n</i> =93	(%)
Age groups			Graduate school		
<30-year old	12	12.9	Locally based university (UWI)	56	60.3
30-39	44	47.3	Foreign-based university	37	39.7
40-49	20	21.5	Practice location		
50-59	9	9.7	Urban/suburban	66	71.0
≥60-year	8	8.6	Rural area	27	29.0
Gender			Number of years postgraduation		
Female	41	44.1	<10 years	41	44.1
Male	52	55.9	≥10 years and more	52	55.9
Formal training Sexual function in middle and old age (undergraduate level)			Religious Influence		
Yes	30	32.6	Catholic	26	28.0
No	62	67.4	Christian	14	15.2
Sexual function in middle and old age (postgraduate level)			Hindu	33	35.5
Yes	36	39.1	Muslim	13	14.0
No	56	60.9	None	4	4.3
Sexual history taking skills			Other	3	3.3
Yes	53	57.6	Ethnicity		
No	39	42.4	Afro-Trinidadian	7	7.5
			Indo-Trinidadian	45	48.4
			Mixed Heritage	11	11.8
			Tobagonian	1	1.1
			Not from T&T	29	31.2

Table 2: PCPs' knowledge of sexual function and sexual history taking with older patients
Mean knowledge score for sexual function in middle-aged and older patients (out of six questions) = 2.27

	%	n (93)		
PCPs that scored less than the mean	56.99	53		
PCPs that scored more than the mean	43.01	40		
Training in sexual functioning in patients of middle and old age				
PCPs that attained knowledge scores above the mean were more likely to have had formal training in sexual function in later life:				
	Odds ratio	95% CI	P > z	
At any level	1.61	0.70-3.71	0.26	
at the Undergraduate level	0.70	0.29-1.72	0.44	
at the Postgraduate level	2.43	1.03-5.75	*0.04	
Training in sexual history taking with patients in middle and old age				
PCPs with formal training in sexual history taking skills were more likely to be:				
	Odds ratio	95% CI	P > z	
Recently graduated (≤10 years ago)	1.85	0.79-4.32	0.15	
Educated locally and recently graduated	2.48	0.83-7.46	0.12	
Educated abroad and recently graduated	1.5	0.31-7.25	0.16	
Educated abroad (foreign medical graduate)	1.14	0.49-2.64	0.77	

PCP: Primary care physician. *Statistically significant

Table 3: Predictors for comfort when talking about sex

PCPs who were comfortable discussing sexual health with middle-aged or older MALE patients were more likely:							
Characteristics	Odds ratio (OR) [Crude]	95% CI	P > z	Odds ratio (OR) [Adjusted All]	95% CI	P > z	
Trained in sexual health communication	2.28	0.92-5.70	0.08	3.19	1.03-9.89	*0.05	
Male physicians	4.75	1.79-12.6	*0.00	3.60	1.16-11.19	*0.03	
40+ years in age	3.1	1.10-8.67	*0.03	2.40	0.53-10.8	0.26	
Educated abroad for medical school	4.14	1.412.2	*0.01	2.93	0.69-12.6	0.15	
Graduated ≥10 years or more ago	2.39	0.95-5.95	0.06	0.46	0.69-3.12	0.43	
Worked locally for ≥10 years or more	1.74	0.64-4.71	0.27	2.38	0.39-14.7	0.35	
Rural practice setting	1.63	0.58-4.64	0.36	1.37	0.13-1.08	0.07	
PCPs who were comfortable discussing sexual health with middle aged or older FEMALE patients were more likely:							
Characteristics	Odds ratio (OR) [Crude]	95% CI	P > z	Odds ratio (OR) [Adjusted All]	95% CI	P > z	
Trained in sexual health communication	2.61	0.78-8.12	0.12	2.43	0.64-9.30	0.19	
Female physicians	1.31	0.39-4.35	0.66	1.79	0.43-7.41	0.42	
40+ years in age	2.46	0.63-9.64	0.20	4.58	0.78-26.7	0.09	
Educated abroad for medical school	2.46	0.63-9.64	0.20	1.60	0.31-8.32	0.58	
Graduated ≥10 years or more ago	1.10	0.34-3.57	0.87	1.11	0.08-13.90	0.94	
Worked locally for ≤10 years or less	1.78	0.54-5.81	0.34	2.46	0.20-30.8	0.49	
Rural practice setting	1.43	0.36-5.66	0.61	1.42	0.06-10.8	0.65	

PCP: Primary care physician. *Statistically significant

increased to almost four times more likely (OR = 3.74; $P = 0.032$) with multivariable analysis once the other predictors - age, gender, education in abroad, and whether they were recently graduated - were included in the model [Table 4].

Practices: Sexual history taking

Most PCPs commonly asked about their sexual activity and frequency of intercourse (89%), number of sexual partners (93%), condom/contraceptive use, reproductive concerns or history (99%), and STIs and sexual function problems (91%). However, fewer PCPs (≤60%) reported that they would ask their older patients about type of sexual practices, gender, and age of sexual partners and circumstances regarding sexual abuse or violence and markedly <50% of PCPs reported that they would ask about their sexual orientation.

Almost all PCPs (99%) opted to take a sexual history if a sexual health complaint was raised by the patient. Though no statistically significant P values were found in some of the regression models including those that analysed PCPs characteristics and sexual history taking practices, the suggested ORs present the preferred direction of association. Notable PCPs characteristics with stronger directions of association included: training in sexual history taking (OR = 3.37) and working under 10 years in an urban-based clinical practice (OR = 2.32).

Associations found between PCPs knowledge, attitudes, and practices

Analyzed and summarized in Table 5 are the suggested associations based on the hypotheses that emerged from the overarching research question: *What are the associations between PCPs*

Table 4: Predictors for discussing sex

PCPs who are MORE LIKELY to have discussions about sexual health with their middle-aged AND older patients are:						
Characteristics	Odds ratio (OR) [Crude]	95% CI	P > z	Odds ratio (OR) [Adjusted All]	95% CI	P > z
Trained in sexual health communication	3.15	1.10-9.02	*0.03	3.74	1.16-12.06	*0.03
Male physicians	1.19	0.43-3.28	0.74	1.42	0.43-4.75	0.56
40+ years in age	1.64	0.56-4.79	0.37	4.09	0.9617.45	0.06
Educated abroad for medical school	1.16	0.41-3.29	0.79	0.85	0.21-3.43	0.82
Graduated ≤10 years	1.37	0.48-3.89	0.56	3.27	0.51-20.9	0.21
Worked locally for ≤10 years	1.45	0.52-4.09	0.48	1.05	0.19-5.78	0.95
Rural practice setting	1.23	0.39-3.84	0.72	1.07	0.31-3.79	0.91

PCP: Primary care physician. *Statistically significant

Table 5: Associations between PCPs' sexual health knowledge, attitudes, and practices with middle-aged and older patients

Knowledge and attitudes			
PCPs with a higher than average knowledge score are more comfortable discussing sexual health with:			
	Odds ratio	95% CI	P > z
Female middle-aged and older patients	1.24	0.37-4.14	0.72
Male middle-aged and older patients	2.24	0.86-5.82	0.10
Knowledge and practices			
PCPs with a higher than average knowledge score are more likely to:			
	Odds ratio	95% CI	P > z
Discuss sexual health with their middle aged and older patients	1.04	0.37-2.89	0.94
Be educated in sexual history taking	1.59	0.68-3.72	0.28
Take a sexual history annually	3.44	1.14-10.34	*0.03
Take a sexual history at the first visit	1.04	0.33-3.32	0.94
Initiate a sexual history if medical consultation warrants one	3.90	0.43-35.09	0.22
Attitudes and practices			
PCPs who are comfortable talking about sexual health with middle and old age patients are more likely to:			
	Odds ratio	95% CI	P > z
Discuss sexual health with a female patient	2.86	0.8-10.05	0.10
Initiate an annual sexual history with a female patient	1.91	0.37-9.80	0.44
Discuss sexual health with their male patients	2.18	0.78-6.27	0.15
Initiate a sexual history on the first visit with a male patient	3.09	0.63-15.08	0.16
Initiate a sexual history if medical consultation warrants one with a male patient	1.16	0.20-6.80	0.87
Initiate an annual sexual history with a male patient	2.59	0.66-10.18	0.17

PCP: Primary care physician. *Statistically significant

knowledge, attitudes, and practices? The multivariable analysis revealed that PCPs with greater knowledge scores were three times more likely to take a sexual history annually (OR = 3.44; P = 0.03). Other associations were not found to be statistically significant but attained favorable associations as shown in Table 5.

Discussion

Gender and age concordance, training in sexual health communication, and medical training from a foreign-based medical school were statistically significant predictors for a PCP to be generally comfortable when discussing sexual health with an older patient. PCPs with formal training in sexual functioning in later life were 2.4 times (P = 0.04) more likely to identify more of the sexual health conditions presented in the clinical vignettes in the survey. Perhaps, these scores matched as PCPs reported,

19% of them were never trained in SRH, only 32% were trained in sexual functioning in later life at medical school, and 39% after graduating. About 57% of participating PCPs were not able to correctly identify more than two of the six sexual health conditions prevalent in later life. Of clinical importance were predictors such on training. PCPs trained in sexual history taking were three times more likely to be comfortable diagnostically taking a sexual history from older patients. Only just over 50% of PCPs reported that they would ask these patients about sexual violence, type of sex, gender, or age of their sex partners and <50% ask about sexual orientation.

The study achieved a response rate of 60%, which is a major strength as the trend of response rates usually is much lower for clinician surveys in PC.^[21-23] However, a limitation of this study was its relatively small sample size. It should be noted that the

total number of PCPs in the entire population was $n = 175$ and those who were available (on island and at work) when the survey was disseminated was $n = 155$ and they were all targeted and successfully a 60% response rate ($n = 93$) was achieved. When interpreting these results this should be taken into consideration, and therefore, the direction of association (ORs) for those variables that attained nonstatistically significant P values should still be considered. Possibly, the purely private PCPs could not be included only because it was not possible to denote the parameters of their sample, if included may have reduced the effects of type 2 error.

If Cochrane's method remained, the response rate would have been compromised, and as a result, a manual method (though time consuming as it doubled the data collection period as some health centers were in very difficult to access locations and some PCPs just took long to complete the survey) maximized returns and were most effective.^[24]

Other limitations could include the fact that the survey was designed using a CME style as well as the fact that the study was endorsed by the local Ministry of Health; these may have influenced participant reporting bias.^[25] Additionally, as this study focused primarily on the physicians' characteristics, notably the patient perspectives and experience on sexual health consultations were not examined here and warrants further research. Previous researchers have reported that physicians lack knowledge in aging on sexual health.^[26,27] Perhaps, considerations to address curriculum and training in medical school on sexual health in later life to ensure the inclusion of the impact of aging on sex should be reiterated. In the local setting in Trinidad and Tobago, further examination as to why certain sexual health topics are favored, such as the typical STIs and reproductive health needs to be investigated. Sexual health communication and diagnostic sexual history taking skills needs to be reinforced especially since local graduates account for most practicing physicians in the country. Also, specific to Trinidad and Tobago was the factor that being educated was a predictor of comfort to discuss sexual health with these patients. Not statically significant but the direction of association inferred that PCPs working in urban-based practices were more likely to take a sexual history with their older practices. These findings are unique and warrant further research as it can be concerning as previously mentioned most of the PCPs are locally trained and rural-based communities account for about 30% of the population. Also, investigators have qualitatively studied sex issues in a primary care setting and concluded that addressing sexual histories should be part of routine care.^[9] However, in Trinidad and Tobago, this study revealed that <50% of the PCPs ask about sexual orientation and <60% ask about sexual partners and preferences. In addition to the reduced frequency of sexual history taking (as it is dependent on patient initiation), this is coupled with it not being conducted completely as questions are omitted. Not addressing sexual concerns or taking inappropriate diagnostics in sexual health leaves these older patients at greater risk for

sexual dysfunction and poorer sexual health-related quality of life.^[28] STIs may also be often be misdiagnosed or unrecognized in older adult patients when physicians do not discuss sexual health, frequently far less take a sexual history from them.^[29] There is a need to amend primary care policy to include sexual health in later life a priority and future research to attain the private physician sector perspectives as well as the older patients.

Conclusions

Training in sexual health education on sexual health in later life at the local medical schools in their compulsory curriculum is critical. This will inevitably develop graduating physicians' overall knowledge and competence on prevalent sexual health issues among patients in middle and old age. Sessions on sexual health in later life, sexual history taking, and communication need to become available and possibly even mandatory as it is critical for practicing physicians who routinely treat this age group to become up to date. National Health promotion strategies using the media, educational materials, or educational opportunities at the clinics needs to include sex education for those in middle and old age and not only focus on those in reproductive age groups. This may help to decrease taboos associated with sexuality at the community level and decrease the discomfort level faced in the medical consultation as information about sexual concerns at this age become readily available.

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Authors contributions

RP contributed to conception, design and data analysis of the study; RP developed the initial draft, and VC revised the manuscript and provided final draft. The final version is approved by both the authors and agrees to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Conflicts of interest

There are no conflicts of interest.

References

1. Read S, King M, Watson J. Sexual dysfunction in primary medical care: Prevalence, characteristics and detection by the general practitioner. *J Public Health* 1997;19:387-91.
2. Laumann, Edward O. Sexual dysfunction among older

- adults: Prevalence and risk factors from a nationally representative U.S. probability sample of men and women 57-85 years of age. *J Sex Med* 2008;5:2300-11.
3. Sarkadi A, Rosenqvist U. Contradictions in the medical encounter: Female sexual dysfunction in primary care contacts. *Fam Pract* 2001;18:161-6.
 4. Gott CM. Sexual activity and risk-taking in later life. *Health Soc Care Community* 2001;9:72-8.
 5. Andrews CN, Piterman L. Sex and the older man: GP perceptions and management. *Aus Fam Physician* 2007;36:867.
 6. Temple-Smith M, Hammond J, Pyett P, Presswell N. Barriers to sexual history taking in general practice. *Aus Fam Physician* 1996;25:S71-4.
 7. Gott M, Galena E, Hinchliff S, Elford H. Opening a can of worms: GP and practice nurse barriers to talking about sexual health in primary care. *Fam Pract* 2004;21:528-36.
 8. Rabathaly P, Chattu V. An exploratory study to assess Primary care physicians' attitudes towards talking about sexual health with older patients in Trinidad and Tobago. *J Family Med Prim Care* 2018. DOI: 10.4103/jfmpc.jfmpc_325_18.
 9. Lindau ST, Schumm LP, Laumann EO, Levinson W, O'Muircheartaigh CA, Waite LJ. A study of sexuality and health among older adults in the United States. *N Engl J Med* 2007;357:762-74.
 10. Lindau ST, Gavrilova N. Sex, health, and years of sexually active life gained due to good health: Evidence from two US population based cross sectional surveys of ageing. *BMJ* 2010; 340:c810.
 11. Meston CM. Aging and sexuality. *West J Med.* 1997;167:285-90.
 12. Nicolosi A, Buvat J, Glasser DB, Hartmann U, Laumann EO, Gingell C, *et al*. Sexual behaviour, sexual dysfunctions and related help seeking patterns in middle-aged and elderly Europeans: The global study of sexual attitudes and behaviours. *World J Urol* 2006;24:423-8.
 13. Mercer CH, Tanton C, Prah P, Erens B, Sonnenberg P, Clifton S, Johnson AM. Changes in sexual attitudes and lifestyles in Britain through the life course and over time: Findings from the National Surveys of Sexual Attitudes and Lifestyles (Natsal). *Lancet* 2013;382:1781-94.
 14. Galinsky AM, McClintock MK, Waite LJ. Sexuality and physical contact in national social life, health, and aging project wave 2. *J Gerontol B Psychol Sci Soc Sci* 2014;69(Suppl 2):S83-98.
 15. McCabe MP, Sharlip ID, Lewis R, Atalla E, Balon R, Fisher AD, *et al*. Incidence and prevalence of sexual dysfunction in women and men: A consensus statement from the fourth international consultation on sexual medicine 2015. *J Sex Med* 2016;13:144-52.
 16. Maccowall W, Parker R, Nanchahal K, Ford C, Lowbury R, Robinson A, *et al*. 'Talking of Sex': Developing and piloting a sexual health communication tool for use in primary care. *Patient Edu Couns* 2010;81:332-7.
 17. Creswell JW, Plano Clark VL, Gutmann ML, Hanson WE. Advanced mixed methods research designs. In: Tashakkori A, Teddlie C, editors. *Handbook of Mixed Methods in Social and Behavioral Research*. Thousand Oaks, CA: Sage; 2003. p. 209-40.
 18. Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol* 2013;13:117.
 19. Durand M-A, Yen R, Barr PJ, Cochran N, Aarts J, Légaré F, Elwyn G. Assessing medical student knowledge and attitudes about shared decision making across the curriculum: Protocol for an international online survey and stakeholder analysis. *BMJ Open* 2017;7:e015945.
 20. Edwards PJ, Roberts I, Clarke MJ, DiGiuseppi C, Reinhard W, Kwan I, *et al*. Methods to increase response to postal and electronic questionnaire. *Cochrane Database Sys Rev* 2009;3. doi: 10.1002/14651858.MR000008.pub4.
 21. Vangeest JB, Johnson TP, Welch VL. Methodologies for improving response rates in surveys of physicians: A systematic review. *Eval Health Prof* 2008;30:303-21.
 22. Wiebe ER, Kaczorowski J, MacKay J. Why are response rates in clinician surveys declining? *Can Fam Physician* 2012;58:e225-8.
 23. Li A, Cronin S, Bai YQ, Walker K, Ammi M, Hogg W, *et al*. Assessing the representativeness of physician and patient respondents to a primary care survey using administrative data. *BMC Fam Pract* 2018;19:77.
 24. Nardi PM. *Doing Survey Research: A Guide to Quantitative Methods*. Routledge; 2018.
 25. Krumpal I. Determinants of social desirability bias in sensitive surveys: A literature review. *Qual Quant* 2013;47:2025-47.
 26. Smith LJ, Mulhall JP, Devעי S, Monaghan N, Reid MC. Sex after seventy: A pilot study of sexual function in older persons. *J Sex Med* 2007;4:1247-53.
 27. Bouman W, Arcelus D. Are psychiatrists guilty of 'ageism' when it comes to taking sexual history? *Int J Geriatr Psychiatry* 2001;16:27-31.
 28. Williams E, Donnelly J. Older Americans and AIDS: Some guidelines for prevention. *Soc Work* 2002;47:105-11.
 29. Bilenchi R, Poggiali S, Pisani C, DePaola M, Sculco R, DePadova L, *et al*. Sexually transmitted diseases in elderly people: An epidemiological study in Italy. *J Am Geriatr Soc* 2009;57:938-40.

An exploratory study to assess primary care physicians' attitudes toward talking about sexual health with older patients in Trinidad and Tobago

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ABSTRACT

Background: A good quality sex life and interest in sex are positively associated with health in middle-aged and later life. For effective diagnosis of sexual health problems, an appropriate discussion about sexual health issues including a sexual history is advised. The sexual health care delivery and management during consultations by primary care physicians is relatively unexplored, especially for older patients. This paper aims to explore primary health care physicians' (PCPs) attitudes to sexual health care and management of middle-aged and older patients in Trinidad and Tobago. **Methods:** In-depth, semi-structured interviews were conducted with 35 PCPs in Trinidad and Tobago. Topics examined included physician-patient relations, sexual health care management challenges, communication and sexual history taking practices, and training needs of PCPs. The framework analysis method was adopted for analysis. **Results:** Most doctors stated that they were not comfortable with conducting a sexual history with their older patients, and they rarely discussed or initiated talking about sexual health with them. Barriers included time constraints, inappropriate environmental conditions for privacy, inadequate professional referral services, insufficient medical training in sexual function in middle and old age, reluctant patient behavior, conflicting personal beliefs on sexuality, and socio-cultural factors. **Conclusion:** PCPs may be reluctant to raise sexual health-related issues with their older patients, and these older patients may not initiate this discussion because of discomfort and embarrassment. Consequently, physicians' inability to effectively communicate with these patients could result in missed opportunities for interventions and patients' concerns may remain unheard and their sexual problems untreated.

Keywords: Middle-aged, old aged, primary care, sexual health, sexual history taking, sexuality

Introduction

In primary care, sexuality in later life is often neglected.^[1] This is contradictory to the fact that everyone aspires to grow old, the second largest population on earth is over 45 years and older (owing to increased longevity), and people in this age group are still sexually active.^[2] As a result, the same attention

that is given to improve their daily life filled with comorbidities from chronic diseases, improving their sexual health-related quality of life should also be considered. However, health care professionals, researchers, government policies, and even globally agreed sustainable development goals have been known to overlook sexuality, sexual health care, and sexual views of older people.^[3] For sexual health of the middle-aged and beyond to be put on the agenda, the first hurdle to overcome is for people regardless of age to be able to openly talk about sex. Talking about sex is difficult for most, even in

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the medical setting including between physicians and patients of middle and old age.^[4]

Middle-aged and older patients frequent the primary care setting for their general health concerns, which may include sexual health care.^[5] There are very important clinical reasons for addressing sexual health issues during the medical visit such as identifying sexual dysfunction.^[6] In fact, sexual dysfunction should possibly be considered a core sexual health concern particularly with the middle-aged and beyond because of its high prevalence - most often undiagnosed and untreated.^[7] Studies indicate that older adults value sexuality and engage in sexual activity such as the National Social Life, Health, and Aging Project study in the US that indicates more than half of people aged 57–85 and about a third of those aged 75–85 are sexually active.^[8] It is possible that sexual concerns are common among patients; however, there is evidence to suggest that these concerns are not appropriately investigated by clinicians.^[9]

Although patients may want to attain sexual health care, they are rarely forthcoming with expressing their sexual health concerns to their doctors. A review by McAuliffe *et al.* and other population based studies, identified some reasons for these patients' communication barriers with their health care professionals.^[10,11] The study also included the apparent lack of expression of sexuality to their partners indicating that communicating issues regarding sexuality is difficult in general.^[10,12,13] These included attitudinal barriers such as myths around sexuality and aging; physiological barriers such as sexual dysfunction; or physical barriers (loss of partner or lack of privacy or during a medical consultation where a relative or friend may be present, or situations where some patients have developed relationships while residing in nursing homes).^[10,14] Sexual health provision for middle-aged and older patients within primary care appears to be inconsistent and dependent on the attitudes and training of PCPs (some of whom may be too embarrassed to discuss sex).^[15,16]

Diagnosing sexual health concerns

Despite its importance, many health care professionals feel concerned about their ability to take an appropriate sexual history, regardless of how skilled and confident they may be taking a standard medical history.^[17] Research suggests that general practitioners (GPs) do not proactively discuss sexual health with their middle-aged and older patients. Unsurprisingly, as we noted that sexuality in the media and sexual health in our existing care policies and surveillance systems for sexually transmitted infections (STIs) is equated with younger people, the same is true within primary care.^[17] Studies indicate that physicians in primary care (including general practice) appear to have limited knowledge about sexuality in older patients. Specifically, female physicians have less knowledge and had more negative attitudes toward sexuality in this age group. Communication barriers between patients and physicians (among others) have been suggested as one of the main reasons for a low report

rate of sexual dysfunction.^[18] It should be noted that sexual dysfunction such as erectile dysfunction (ED) is indicative of other underlying medical conditions such as diabetes, pituitary tumors, cardiovascular conditions such as atherosclerosis and depression, and hence, should not be ignored.^[19-21]

This paper aims to explore the attitudes of primary health care physicians' (PCPs) in Trinidad and Tobago when discussing sexual health and its care with their middle-aged and older patients.

Methods

A qualitative methodology using in-depth semi-structured interviews was employed. This method allowed the researcher to further explore primary care physicians' perspectives on sexual health care for middle-aged and older adults and their attitudes to discuss sex with these patients.

Sampling

In-depth, semi-structured interviews were conducted with a purposive sample of GPs/PCPs in Trinidad and Tobago. A provisional target of 40 interviews was set with the intention that no new data would arise using the sampling to redundancy or theoretical saturation approach. The researcher narrowed the sampling frame to include PCPs based in two out of five health authority districts nationwide. Trinidad and Tobago is a twin island state, thus, one district in each island was selected. As there is only one in Tobago – the Tobago Regional Health Authority was selected, and the largest of the four Regional Health Authorities (RHAs) in Trinidad namely the North West Regional Health Authority was chosen for Trinidad. The participant criteria were mainly depending on physician gender, years of experience, and whether they worked in the private or public sector. Secondary criteria determined if they were working with rural or urban communities and whether the PCPs had any experience managing special clinics such as sexual health, chronic disease, or gerontology.

Recruitment of PCPs and GPs

The lists of PCPs currently employed and available (not on vacation) were provided by the County Medical Officer of Health for that district enabling the researcher to confirm sample and recruitment. PCPs were mapped using the aforementioned sample criteria as a guide and contacted and offered a participation request. The final list of study participants were recruited according to their response to availability and willingness to participate. GPs were recruited through purposive sampling that met the same sample criteria.

Data collection and analysis

The interviews conducted were part of a wider mixed-methods study that aims to assess PCPs overall knowledge, attitudes, and practices with regard to sexual history taking, communication and management of sexual health care for

middle-aged and older patients. The topic guide employed was not only informed by supporting literature but also according to the questions derived from *a priori* hypotheses being tested in the wider study. The aim of the interview phase was to determine physician's general perception of the sexual healthcare status of patients aged 45 years and older and physicians' views about taking a sexual history and communicating with these patients about sexual health. The topics explored included the physician-patient relationship; sexual health in later life; sexual health care priorities; clinical experience on managing sexual health in older adults, delivery, and challenges in primary care; factors facilitating and hindering effective communication of sexual health including taking a sexual history; and physicians' training needs in sexual health care of older adults.

After getting the consent from the participants, the interviews were conducted in consultation rooms within the health centers where participants worked. Interviews were digitally recorded and transcribed verbatim by the primary investigator. The complete data set was analyzed using framework analysis, a content analysis method that uses a thematic approach to classify and interpret summaries of the qualitative research data.^[22] The backbone of the framework was created using the core themes identified in the literature and *a priori* themes. Using deductive methods, the interview data were coded and classified under these headings and frames in MS Excel. Inductive methods followed to further analyze the emerging themes that arose from the data summaries. The framework coding and analysis were done by the primary researcher, and a sample of transcripts was double coded and others reviewed by the research supervisor.

Ethical considerations

Ethical approvals were attained from the ethics committees of the London School of Hygiene and Tropical Medicine and the Ministry of Health of Trinidad and Tobago. All linkable or identifying details were replaced with a code to identify gender and practice type, e.g., MPV (Male, Private) or FPB (Female, Public) followed by a 2-digit code to protect the participants and maintain confidentiality.

Results

In-depth, semi-structured interviews were conducted with 35 PCPs from private ($n = 19$) and public healthcare practices ($n = 16$) in Trinidad and Tobago. A provisional target of 40 interviews was set, however, it was observed that no new data arose using the sampling to redundancy or saturation approach,^[23] by the 35th interview, as many participants provided repetitive verbatim or similar perspectives on the same questions. During purposive sampling, the researcher aimed to ensure that the range of characteristics and experiences of the PCPs interviewed met the sampling criteria closely. Non-responders, $n = 3$, were because of the unavailability to participate. The PCPs

collective experiences (attitudes and subsequent actions) during sexual health consultations with patients of middle and old age and the socio-cultural factors that may have shaped these behaviors are presented below.

Communication barriers in sexual health consultations with older patients

PCPs described various obstacles responsible for the ineffective communication that ensued during discussions regarding sexual health concerns of middle-aged and older patients. Categorized broadly, these barriers include socio-cultural factors, workplace setting limitations, and the status of the physician-patient relationship. Influenced by PCPs personal beliefs about sexuality, factors such as age, gender, ethnicity, religiosity, education level, socio-economic or professional status, and community locale (rural or urban) impact on the outcome of sexual health discussion.

Socio-cultural factors

PCPs personal beliefs about discussing sex

Discussing sex in the medical setting appeared to be taboo for most physicians in this study. When PCPs were asked to describe how they felt when talking about sexual health with their middle-aged and older patients, the words "reluctant," "reserved," or "uncomfortable" were most common. Notably, during the interviews with the researcher, some PCPs even in their past accounts about older patients, they avoided use of words or phrases with "sex" or "sexual" in them and never mentioned the sexual reproductive organs by name, although these are all appropriate medical sexual jargon.

"Some of the patients complain that they don't feel to... (*PCP whispers*) you know? to go and do... (*PCP nods at researcher to assume understanding of the words omitted*) so I explain that this happens at menopause" FPB01

"What's happening is a normal thing (*PCP refers to menopause*) and they shouldn't stop, you know...? (*PCP looks assumingly at the researcher*). I let them know that they could still have the best..." (*nods his head expectantly at researcher to assume understanding of the words omitted*) MPB03.

Some PCPs even avoided the term "sexual history" and referred to it as "those" questions. Other PCPs were able to articulate the words but felt uneasy about taking a sexual history and that the sexual history itself appeared to be a barrier.

"When you are asking 'those' questions, they start to look away, show signs of anxiety and being uncomfortable. There are some boundaries, you know, (*nods in agreement at researcher*) I do feel uncomfortable" FPB07.

Gender preferences

PCPs reported that when it comes to discussing sexual concerns, their middle-aged and older patients preferred speaking to physicians of their same gender. PCPs shared that they too were more comfortable as they recalled better rapport with the patients in those consultations.

“Most women would prefer to see a female doctor” [Male PCP]

“I have had a couple male patients who were open talking about sex, and I did find it a little bit uncomfortable.” [Female PCP]

“Most women even with a female PCP don’t want to disclose sensitive sexual health info at a clinic where they know the people who work there” [MPV02].

PCPs recommended for future, it should be optional for patient’s not to register their health concern with the other attending health care personnel that they visit prior to consultation with PCP.

Age

PCPs identified “age gap” as a barrier. In their accounts of their sexual health consultations with older patients, “discomfort,” “embarrassment,” and “fear” were common themes resulting from ageist views on who is eligible to ask or talk about sex. PCPs reported that as their patients get older, if they are still sexually active they perceive their own sexuality as something to hide, otherwise they expect it is to be non-existent.

“Personally, it’s a difficult topic (sexual health) to broach especially when you’re dealing with people who could be the age of your parents who might think that this is not something to be discussed” FPB07.

Some PCPs reported a profound anxiety to talk about sexual concerns with a patient with whom there was a vast age difference between them. For instance, PCPs have stated that patients who perceive them as “very young” are more likely to be reluctant to discuss sexual concerns with them regardless of who raised the topic. The PCPs themselves found it difficult to discuss sexual health with older patients because they recognize the patients as elders to whom respect must be shown and discussing sex – the topic or asking an elder about their private experiences, was perceived by some PCPs as invasive, too personal or disrespectful.

“A woman of 70 years is not going to start talking about her sexual health because it might sound disrespectful. Regardless, only if she brings it up, no problem, I will talk about it, but I would not bring it up” MPB08.

Community (Locale)

PCPs reported that in small rural communities they have noticed communal social norms and practices to socialize together and to share about each other’s chronic illnesses except for sexual health matters. PCPs found older patients to be more shy or outright reticent on this topic in such closed societies. PCPs also discovered that some of their older patients preferred to pursue alternative medical routes especially for sexual concerns because they felt it was to taboo to discuss in a formal clinical setting.

“A lot of them will go to the herbalist and buy these things rather than seek professional help. They come to us only after these alternative methods did not work or made their circumstances worse” FPV04.

Religion and ethnicity

PCPs voiced that it is more noticeable that both physician and patient are inhibited from effectively discussing sexual health-related issues (regardless of who raises it), if the patient is of a staunch religion or of a different ethnicity.

“I ask more of the Afro-Trinidadian men. If they are Muslim I wouldn’t dare go there, they are too religious. Very religious people won’t want to discuss this, they don’t want to go there.” [PCP’s ethnicity: Afro-Trinidadian]

“You get more openness from Afro-Trinidadian women than you do from Indo-Trinidadians – to me... African women are far freer with talking casually about these things. Indian women are a lot more cagey...” [PCP’s ethnicity: Mixed Trinidadian]

In most cases, PCPs were more comfortable with speaking with a patient who was of a similar ethnicity as they assumed having possibly more similar cultural stance on sexuality and less likely to offend the patient.

PCPs sexual health training

Almost all PCPs admitted that they did not have sufficient exposure to information about sexual health in general and even less or not all pertaining to middle-aged and older adults during their medical training. They felt this may have disadvantaged them in terms of their level of competence around communication of such sensitive topics and having adequate knowledge to offer appropriate care.

“In med school we did not have much exposure to sexual health; it is not fully integrated into the curriculum as much as what would be needed to make us competent at practicing” FPB06.

PCPs have also admitted that they are just not familiar with prevalent sexual health concerns in middle and old age other than erectile dysfunction, menopause, and sexually transmitted infections (STIs).

Diagnostic sexual history taking skills

PCPs reported that if they do take a sexual history with this age group, it is not done routinely and only because a patient presenting a complaint (mostly STI-related), or as in majority of the cases if the patient initiates the discussion. It was unanimous among PCPs that taking a sexual history with these patients is indeed important, however, not prioritizing it is more common practice

“From my personal experiences I haven’t done a lot of it unless they brought it up” MPB02.

In a sexual history, asking about one’s sexual orientation is the most avoided question, and because of the discomfort, all 35 PCPs interviewed stated that, they had never asked their older patients this question.

“I” would be very uncomfortable, I actually never asked a patient that (referring to sexual orientation) but maybe it is something that we need to consider. Sometimes on their physical appearance you may wonder that, sometimes a lot

of patients become offended if you ask any questions like that, especially in our culture. We do not see asking sexual orientation as a normal question, so I have never considered that to be honest” FPB05.

Few PCPs shared their experiences in consultation with homosexual patients, however, none of these PCPs shared experiences treating a transgendered middle or old aged patient up to the time this data were collected.

Patient's lack of education

Some PCPs described how it was difficult to engage with older patients when they held entrenched beliefs about sex, making it difficult to offer advice such as “being a condom user infers that you have an infection,” “having sex with a virgin can cure HIV,” and “sexual dysfunction means not being able to have sex five and six times a day”

“In terms of an older audience, you cannot teach old dog new tricks it's a little more difficult to change their mind about some things MPB06.

PCPs admitted that they really feel turned away to discuss sexual health with a patient who is ill informed and difficult to accept their counsel. PCPs suggested that there is need for population wide health promotion in sexual health education tailored for patients in middle and old age about the sexual health concerns as they are more likely to face at this point in their lives.

“I think once the public is sensitized that doctors will be asking these questions from time to time they will be more aware and won't think you are minding their business” FPB03.

Workplace limitations

PCPs described that the clinics are oversubscribed by mostly middle and old aged patients of a lower socio-economic status. Although PCPs are encouraged to focus on chronic disease management for this age group, namely diabetes, hypertension, and other cardiovascular diseases, they have recognized that sexual health care is linked to some of these chronic diseases.

“We work in a system that is tremendously overloaded with patients and understaffed with doctors. You try to focus more on the problem they came for than address issues that they have with sexuality” MPB02.

Lack of appropriate preventative care and referral services

PCPs acknowledged that there is no focus on sexual health care of middle-aged and older adults; the current PC system they work in does not foster supportive systems such as genitourinary medicine (GUM) services for sexual dysfunction in women and men in middle and old age and far less for psychosexual therapy. Men rarely attend the health center; they have denial issues when it comes to having health problems, especially impotency. For these patients to be accurately diagnosed, PCPs

refer their patients for secondary care at the nearest hospital for a gynaecologist or a urologist consultant in private health care (if the patient can afford it).

“We need to have the support systems for appropriate referrals and we also need to be competent to investigate. . . . A lot of times we are not, and we cannot inform patients” MPB05.

Resource poor setting

PCPs explained that they work in resource poor settings with a limited manpower, time, and treatment options, which hamper their ability to be more exploratory during their consultations.

“doctors in the community will reiterate that we wish we had more time to actually provide optimal primary healthcare” MPB03.

Even when PCPs do attempt to address sexual health issues they concur that the environment in most public health centers is not conducive in making the patient feel comfortable and, in some cases, there are concerns about maintaining confidentiality.

“Public health centres don't offer privacy for patients, so the patients will be in one room and they will not be a real door, there is just like a curtain and you can come in at any time” FPB04.

Necessary infrastructural changes to the consultation rooms in some primary buildings are needed so that they can install doors or use sealed off rooms for more privacy. In addition, all patients could be given an optional brief sexual health care assessment questionnaire to complete and give directly to their PCP. This technique is successful 3-fold as it offers the opportunity for the patient (i) to identify sexual health issues and keep this confidential to themselves by passing registering this with other health care personnel; if completed it triggers the PCP to initiate a sexual health discussion/take a sexual history and (ii) the patient and PCP can address this concern during the consultation more comfortably as the patient will be expecting the discussion.

Professional barrier

There appeared to be collective beliefs about roles in primary care regarding the expected physician-patient relationship. PCPs reported that older patients view them as a person in authority and part of the elite in society who they should treat with respect (regardless of their age).

“When people come to the clinic or hospital they're expectant, they're needy and they come from a position where they feel you are high up and they're down there” MPB05

“There is a professional barrier; doctor vs. patients, they don't see the doctor as being an equal; they see the doctor as being this person of authority, so they are very cautious about what they say to you” FPB06.

The reality is that hierarchy creates a professional barrier between physician and patient. Patients revere the PCP inculcating professional boundaries and the physicians offer

paternal focused care mostly because of the resource limitations and sometimes because of the patient's education level or lack of compliance to treatment regime or they prefer it.

Physician-patient rapport

PCPs reported that they try to foster better rapport by keeping their questions brief, while letting patients know that sexual health is important and that their issues are common in the attempt to facilitate the discussion and make the patient less uncomfortable (as well as themselves). However, despite the obstacles expressed by most interviewed doctors some of the more experienced PCPs used communicative techniques to empathize and inspire the patient's trust to facilitate a sexual health discussion or even to take a history.

"It has to do with empathy. First, try to calm their fears, convince them that you have their best interests in mind. Educate them, let them know that there's a privacy clause that cannot be broken at all, now they'll open and talk to you. When they start, whenever they come to the clinic, they look for you." MPB03

Discussion

PCPs acknowledged that they have limited medical training in sexual health of older adults and communication skills in sexual health. PCPs also spoke about their "reluctant" patients' behavior that made it difficult to broach or continue a discussion on the topic, as well as how their own beliefs and the above-named socio-cultural influences affect impact on their sexual health care and delivery. All interviews were conducted in primary healthcare settings, some at times when it was extremely busy and this could have been a limitation as interviews had to take place during a space between patient consultations or on the physician's lunch break. Some physicians may have provided socially acceptable answers that may be false because they felt that their position or office could be under examination as the study was permitted by the Ministry of Health.

The PCPs overall attitudes when talking about sex in primary care were discomfort, disinclination to treat sexual health issues of middle-aged and older as a priority, and insecurity with regard to how much they knew about sexual health of this age group. These findings have much similarity with other findings in the literature. For example, Gott *et al.* found that GPs in the UK do not address sexual health proactively with older people and that, within primary care, sexual health is equated with younger people and not seen as a valid topic for discussion with the older age group.^[17] Low level of awareness of later life sexual health issues among GP participants and significant barriers to initiate discussion relating to sexuality in consultations with older patients were similarly identified. The authors also acknowledged the need for continued professional education in sexual health of older adults for physicians.^[17] The reservation among older patients and their healthcare providers regarding the discussion of sexual health, frequently constitutes the main barrier to open and effective

communication. A study conducted by Politi *et al.* concluded that the older patients felt that health care providers should ask about sexual health issues only if questions relate to an associated health problem (e.g., STIs) and in ways that can be answered by all regardless of partner status and follow questions with non-judgmental discussions. If the physician can initiate such a discussion and a good screening sexual history is routinely elicited, much useful information will be obtained.^[24] Furthermore, the patient may become informed to a number of issues of which he or she might not have been aware.^[25] Perhaps a door has been opened so that if concerns or problems about sexual functioning arise in the future, the patient will feel more comfortable discussing them with the doctor.^[25]

Many physicians feel concerned about their ability to take an appropriate sexual history, regardless of how skilled and confident they may be taking a medical history. Similarly, in our study, PCPs voiced their lack of confidence regarding their professional competencies in sexual health care and communication with older adults. These findings may also exist in other countries whose medical school curricula is being taught with a similar socio-cultural influence. Regardless of the uncomfortable situation, or patient's age or gender, a sexual history is very important, and there are core components of a sexual history that every practitioner should ask and discuss.^[25] With reference to the middle-aged and older age group of this study, identifying sexual dysfunction should possibly be considered a core component because of the high prevalence of sexual dysfunction in this general population - most often undiagnosed and untreated.^[26] It should also be identified as a marker of organic or psychiatric disease, e.g., ED, as a risk marker for cardiovascular disease, and as an iatrogenic side-effect of medication or surgery.^[26]

Regarding the professional barriers that exist in the physician-older patient relationship this may be more specific to Trinidad and Tobago and possibly other countries that still promote the paternalistic model of care, specifically because of the resource constraints, lack of sexual healthcare policies on the national level, and strong socio-cultural influences. However, patients have an inbuilt respect for professional roles/office. This society is taught to have respect for people in authority.

This interaction with the PCP embracing a more paternal role is reinforced because most middle-aged and older patients do not have many alternatives (besides unaffordable private care) to seek sexual health care elsewhere. This is because it is unlikely for them to attend family planning clinics as they do not meet the criteria (or interested in contraception or fertility, and seeking antenatal or postnatal care). There are sexual health clinics (GUM services), but a referral is usually required from a health (primary care) center, and these services focus primarily on medicalized sexual health care – HIV and other STIs rather than sexual health-related quality of life and sexual functioning and well-being, which may be more pertinent to this age group. Middle-aged and older patients are more likely

to seek doctors in the primary care setting or the GP (private), both at which they seem to have difficulty acquiring care for their sexual health needs.^[25]

Unfortunately, sexual problems are frequent among older adults, but these problems are infrequently discussed with physicians.^[12] The physicians agree it is their responsibility to initiate discussions about sexual health (putting aside their personal discomfort talking about sex with an older patient), however, because of their resource poor settings and time constraints, some feel it should be a shared responsibility, especially if it is a concern of the patient. This causes controversy over the societal norm of paternalistic care. Although the physicians want to be in control of the consultation (particularly with regard to treatment options), they do not want to exhibit this control when talking about sex with the patient. The patient also does not want to broach the topic as they are also uncomfortable thinking that they will disrespect the physician. Contrary to these needs, if the reverse situation occurs where sexual health is not a primary complaint, and the physician initiates the discussion the patient is even more uncomfortable and feels disrespected.

Existing evidence suggests that discussing later life sexual health issues within medical consultations is problematic both for patients and for professionals. Because of these dilemmas, the suggested way forward will include the promotion of appropriate health education for all, further research and policy development in sexual health and provision of appropriate resources to improve sexual health care for middle-aged and older adults. There is urgent need for up-to-date sexual health education for medical students, present day physicians, and patients. There must be implementation of sexual health policies that include care for the middle-aged and beyond; medical education policies that ensure mandatory continuing medical education in sexual health, sexual history taking, and sexuality of older adults for practicing physicians.^[27] With regard to further research, there is need to determine the middle-aged and older patients' perspective of barriers and facilitators when communicating with physicians, their sexual health needs, and services they require and to compare with the views expressed by physicians.

Conclusions

Primary care physicians may be reluctant to raise sexual health-related issues with their older patients. Their patients' may not initiate this discussion because of discomfort and embarrassment. Consequently, physicians' inability to effectively communicate with these patients result in missed opportunities for health care prevention and intervention, and patients' concerns may remain unheard and their problems untreated. As a result, there is an urgent need to address sexual health care among this vastly increasing middle-aged and older population in our health system with regard to care and treatment, health education, and training policies with our medical physicians in primary care.

Acknowledgments

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Nil.

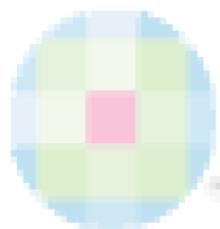
Conflicts of interest

There are no conflicts of interest.

References

1. Kalra G, Subramanyam A, Pinto C. Sexuality: Desire, activity and intimacy in the elderly. *Indian J Psychiatry* 2011;53:300-6.
2. Trompeter S, Bettencourt R, Barrett-Connor E. Sexual activity and satisfaction in healthy community-dwelling older women. *Am J Med* 2012;125:37-43.e1.
3. Balami J. Are geriatricians guilty of failure to take a sexual history? *J Clin Gerontol Geriatr* 2011;2:17-20.
4. Macdowall W, Parker R, Nanchahal K, Ford C, Lowbury R, Robinson A, *et al.* 'Talking of Sex': Developing and piloting a sexual health communication tool for use in primary care Patient Education and Counselling, 2010;81:332-7.
5. Read S, King M, Watson J. Sexual dysfunction in primary medical care: Prevalence, characteristics and detection by the general practitioner. *J Public Health Med* 1997;19:387-91.
6. Rabathaly PA, Chattu V. Emphasizing the importance of sexual health care in middle and old age. A high time to rethink. *J Nat Sci Biol* 2018. [Epub-Ahead of print].
7. Cornwell B, Schumm LP, Laumann EO, Graber J. Social Networks in the NSHAP Study: Rationale, measurement, and preliminary findings. *J Gerontol B Psychol Sci Soc Sci* 2009;64(Suppl 1):147-55.
8. Lindau S, Gavrilova N. Sex, health, and years of sexually active life gained due to good health: Evidence from two US population based cross sectional surveys of ageing. *Br Med J* 2010;340:c810.
9. Burd ID, Nevadunsky N, Bachmann G. Impact of physician gender on sexual history taking in a multispecialty practice. *J Sex Med* 2006;3:194-200.
10. McAuliffe L, Bauer M, Nay R. Barriers to the expression of sexuality in the older person. *Int J Older People Nurs* 2007;2:69-75.
11. Laumann EO, Glasser DB, Neves RC, Moreira ED Jr (for the GSSAB Investigators' Group). A population-based survey of sexual activity, sexual problems and associated help-seeking behaviour patterns in mature adults in the United States of America. *Int J Impot Res* 2009;21:171-8.
12. Lindau ST, Schumm LP, Laumann EO, Levinson W, O'Muircheartaigh CA, Waite LJ. A study of sexuality and health among older adults in the United States. *N Eng J Med* 2007;357:762-74.
13. Robinson JG, Molzahn AE, Molzahn AE. Sexuality and quality of life. *J Gerontol Nurs* 2007;33:19-27.

14. Nicolosi A, Laumann EO, Glasser DB, Moreira ED Jr, Paik A, Gingell C, *et al*. Sexual behaviour and sexual dysfunctions after age 40: The global study of sexual attitudes and behaviours. *Urology* 2004;64:991-7.
15. Kingsberg S. Just ask! Talking to patients about sexual function. *Sex Reprod Menopause* 2004;2:199-203.
16. Marwick C. Survey says patients expect little physician help on sex. *JAMA* 1999;281:2173-4.
17. Gott M, Galena E, Hinchliff S, Elford H. "Opening a Can of Worms": GP and practice nurse barriers to talking about sexual health in primary care. *J Fam Pract* 2004;21:528-36.
18. Hartmann U, Burkart M. Erectile dysfunctions in physician-patient communication: Optimized strategies for addressing sexual issues and the benefit of using a patient questionnaire. *J Sex Med* 2007;4:38-46.
19. Nehra A, Jackson G, Miner M, Billups L, Burnett AL, Buvat J, *et al*. Diagnosis and treatment of erectile dysfunction for reduction of cardiovascular risk. *J Urol* 2013;189:2031-8.
20. Javaroni V, Neves MF. Erectile dysfunction and hypertension: Impact on cardiovascular risk and treatment. *Int J Hypertens* 2012;2012. doi: 10.1155/2012/627278.
21. Hurok N, Lapp DP. Erectile dysfunction as an initial presentation of diabetes discovered by taking sexual history. *BMJ Case Rep* 2012;2012. pii: bcr1220115289. doi: 10.1136/bcr.12.2011.5289.
22. The National Centre for Social Research UK: www.natcen.co.uk. [Last accessed on 2015 Oct 09].
23. Saunders B, Sims J, Kingston T, Baker S, Water field J, Bartram B, *et al*. Saturation in qualitative research: Exploring its conceptualization and operationalization. *Qual Quant* 2018;52:1893-1907.
24. Politi M, Clark MA, Armstrong G, McGarry KA, Sciamanna CN. Patient-provider communication about sexual health among unmarried middle-aged and older women. *J Gen Intern Med* 2009;24:511-6.
25. Cheadle MJ. The screening sexual history: Getting to the problem. [Review] *Clin Geriatr Med* 1991;7:9-13.
26. Wimberly YH, Hogben M, Moore-Ruffin J, Moore SE, Fry-Johnson Y. Sexual history-taking among primary care physicians. *J Natl Med Assoc* 2006;98:1924-9.
27. Karimian Z, Maasoumi R, Javid N, Araban M, Azin SA, Aghayan S, *et al*. Reaching consensus: A review on sexual health training modules for professional capacity building. *Health Promot Perspect* 2018;8:1-14.



9.2 Appendix 2: Research Ethical Approvals

Appendix 2a: LSHTM - Ethical Approval

**LONDON SCHOOL OF HYGIENE
& TROPICAL MEDICINE**

ETHICS COMMITTEE



APPROVAL FORM

Application number: 5851

Name of Principal Investigator **Patrice Alicia Rabathaly**

Faculty **Public Health and Policy**

Head of Faculty **Professor Anne Mills**

**Title: Addressing sexual health needs of middle aged and older adults
accessing primary health care in Trinidad and Tobago**

This application is approved by the Committee.

Chair of the Ethics Committee

Date ..6 December 2010

Approval is dependent on local ethical approval having been received.

**Any subsequent changes to the application must be submitted to the Committee
via an E2 amendment form.**

Appendix 2b: Ministry of Health - Ethical Approval



MINISTRY OF HEALTH Government of the Republic of Trinidad and Tobago

OFFICE OF THE CHIEF MEDICAL OFFICER
627-0014 ext. 616/600 D: (868)-625-0066 F: (868)-623-3755
e-mail: anton.cumberbatch@health.gov.tt

January 24, 2011

Ms. Patrice Rabathaly
London School of Hygiene and Tropical Medicine
Faculty of Public Health and Policy
Department of Social and Environmental Health
15 - 17 Tavistock Place
London

Submission of Project Proposal for Approval by the Ethics Committee, Ministry of Health

Dear Ms Rabathaly,

The Ethics Committee of the Ministry of Health, Trinidad & Tobago has reviewed the proposal for the research study entitled '*Addressing sexual health needs of middle aged and older adults accessing primary health care in Trinidad and Tobago*'. This is a very important and timely study and that the proposal was well presented. We note the limitation of the un-representativeness of the sample and the implications. However, there were no other concerns.

I am therefore pleased to inform you that approval is hereby granted for the conduct of the study. The approval is valid until January 20, 2012 after which you may apply for a continuation, if the research is still incomplete.

Consequently, you are requested to submit an annual progress report or a report at the end of the project, whichever comes first. You are also responsible for immediately informing the Committee of any changes to your research protocol, or of any previous unforeseen risks to the research participants or any unanticipated or serious adverse events.

Best wishes in the conduct of your research.

Regards,


Dr. Mutchinson Melville
Chief Medical Officer (Ag.)

www.health.gov.tt

63, Park Street, Port of Spain, Trinidad. T: (868) 627-0010/12/14

Appendix 2c: Ministry of Health - Ethical Approval Extension



MINISTRY OF HEALTH Government of the Republic of Trinidad and Tobago

OFFICE OF THE CHIEF MEDICAL OFFICER

627-0014 ext. 616/600 D: (868)-625-0066 F: (868)-623-3755
e-mail: akenath.misir@health.gov.tt

March 07, 2012

Ms. Patrice Rabathaly
London School of Hygiene and Tropical Medicine
Faculty of Public Health and Policy
Department of Social and Environmental Health
15 - 17 Tavistock Place
London

Dear Ms. Rabathaly

Re: Request for extension of Ethics Committee approval

The Ethics Committee of the Ministry of Health, Trinidad & Tobago has reviewed your application for extension of ethics approval for the research study entitled '*Addressing sexual health needs of middle aged and older adults accessing primary health care in Trinidad and Tobago*'.

I am therefore pleased to inform you that ethics approval has been extended for an additional twelve (12) months for the conduct of the study. The approval is valid until January 20, 2013 after which you are required to submit a progress report if the project is still ongoing or a final report at the end of the project.

Kindly note that the implications in your original approval letter are still applicable.

Best wishes in the conduct of your research.

Regards

Dr. Akenath Misir
Chief Medical Officer (Ag.)

www.health.gov.tt

63, Park Street, Port of Spain, Trinidad. T: (868) 627-0010/12/14

9.3 Appendix 3: Quantitative Instrument -KAP Questionnaire

A Knowledge Attitudes and Practices (KAP) Questionnaire on
Sexual Health Care of Middle-Aged and Older Patients:
for Physicians in Primary Care in Trinidad & Tobago

2012



This research is being conducted by a National Scholar of Trinidad & Tobago for the purpose of fulfilling her PhD requirements at the London School of Hygiene and Tropical Medicine

About this Study

Little is known about how sexual health is discussed with middle-aged and older patients. This study examines knowledge, attitudes, and practices of Primary Care Physicians (PCPs) and General Practitioners (GPs) with regard to sexual health communication with middle-aged and older patients. As part of this study, all PCPs and GPs are being asked to complete a questionnaire.

This questionnaire contains four sections: Section 1 – About you (demographic information and professional experience); Section 2 – About your Practice (details about practice type and location); Section 3 - Clinical vignettes to examine knowledge, attitudes, and practice relating to middle-aged and older patients' sexual health; and finally Section 4 – Your views about how sexual health care consultations in primary care can be improved.

Your participant packet contains:

- 1 Participant Study Information Sheet
- 1 Self-enclosed Consent Form (with an optional Gift reward section) for you to sign and put in the sealed collection box at your reception desk
- 1 Self-enclosed questionnaire for you to complete and put in the sealed collection box at your reception desk

Your questionnaire will be identified by an ID number. The information you provide in the questionnaire will be anonymous and confidential. Please remember to sign your consent form to indicate your agreement to participate in this study. If this is not signed, even if you submit a completed questionnaire, the information you provide cannot be used. If you have any further questions about this study, please contact:

Researcher

Patrice Rabathaly

Email: Patrice.rabathaly@lshtm.ac.uk or via Tel: 349-0296

Ministry of Health Supervisor

Dr Avery Hinds

Email: averyqhinds@hotmail.com or via Tel. 786-9879

Section 1: About You

Please select only ONE response per question unless otherwise indicated

1. Gender:

- Male
- Female

2. Age:

- under 30 years
- 30 - 39 years
- 40 - 49 years
- 50 - 59 years
- 60 years and older

3. Ethnic background:

- Afro Trinidadian
- Indo Trinidadian
- Mixed Heritage Trinidadian
- Chinese Trinidadian
- Syrian/Lebanese Trinidadian
- White/Caucasian Trinidadian
- Tobagonian
- Other ethnic background (please specify)

4. Religious background?

- Anglican
- Baptist
- Hindu
- Jehovah Witness
- Methodist
- Muslim
- Pentecostal
- Presbyterian
- Roman Catholic
- Seventh Day Adventist
- None
- Other (please specify)

5. Number of years since Medical School Graduation:

- less than 5 years
- 5 - 9 years
- 10 - 14 years
- 15 - 19 years
- 20 - 24 years
- 25 years and more

6. Where did you graduate from Medical School?

- University of the West Indies (UWI), Trinidad
- University of the West Indies (UWI), Jamaica
- Cuban Based Medical School
- St. George's University (SGU), Grenada
- US-based Medical School
- UK-based Medical School
- African based Medical School
- Indian-based Medical School
- Other (please specify)

7. How long have you been practising medicine in Trinidad and Tobago?

- less than 5 years
- 5 - 9 years
- 10 - 14 years
- 15 - 19 years
- 20 - 24 years
- 25 years and more

8. During your undergraduate medical training did you have training in the following topics?

(Tick all the boxes that apply)

- Comprehensive sexual history taking practical skills
- Communication techniques in sexual health
- Medical consultation communication skills
- Sexual function in older adults
- Sexually transmitted infection (STI) management
- HIV care
- Family planning
- Menopause
- Sexuality
- None of the above

9. During your professional career as a physician have you ever had formal training in the following topics?

(Tick all the boxes that apply)

- Comprehensive sexual history taking practical skills
- Communication techniques in sexual health
- Medical consultation communication skills
- Sexual function in older adults
- Sexually transmitted infection (STI) management
- HIV care
- Family planning
- Menopause
- Sexuality
- None of the above

Section 2: About your practice: *This section is about your medical post and practice*

Please tick ALL that apply for each question in this section unless otherwise stated

10. Where is your primary medical practice facility located?

(Tick one response only)

- Private office
- District Health Facility
- Private Hospital
- Health Centre
- Other (please specify)

11. What is your professional position?

- General Practice Physician (Private Practice)
- Primary Care Physician 1 (Public Practice)
- Primary Care Physician 2 (Public Practice)
- District Medical Officer (DMO) (Public Practice)
- Other (please specify)

12. Within which regional health authority (RHAs) is/are your practice/s located?

- North West Regional Health Authority (NWRHA)
- North Central Regional Health Authority (NCRHA)
- East Regional Health Authority (ERHA)
- South West Regional Health Authority (SWRHA)
- Tobago Regional Health Authority (TRHA)
- Private

13. Is your primary practice setting based in a: (Tick one box only)

- urban /sub urban
- rural area

Section 3: Consultation Experiences

This section contains clinical vignettes written in a Continuing Medical Examination (CME) format to help you envisage the medical consultation and enable you to answer the subsequent questions regarding your knowledge, attitudes and practices in each scenario.

Please select only ONE response per question unless otherwise indicated

Consultation 1

A 53-year-old male patient BB presents to your office as a new patient to register with your practice for a check-up. During the consultation he admits that he feels unhappy especially since he was diagnosed 1 year ago with type-2 diabetes. He has also noticed his recent increased appetite and blurry vision.

14) Which of the following would you do? Tick () all the boxes that apply)

- Take a medical history
- Take a routine sexual history
- Take a sexual history if indicated by the medical history
- Recommend antidepressants
- Recommend fasting blood sugar tests
- Counsel the patient about his diagnosis and discuss possible treatment options with the patient
- Initiate a discussion about the implications of sexual dysfunction for diabetics
- Educate the patient about diabetes and sexual health through the use of pamphlets
- Refer the patient to a diabetes specialist
- Other (please specify)

15) Would you do you feel about discussing sexual health with this patient?

- I would be VERY COMFORTABLE
- I would be COMFORTABLE
- I would be UNCOMFORTABLE
- I would be VERY UNCOMFORTABLE

16) What proportion of male patients over 45 years with diabetes is likely to encounter sexual dysfunction problems?

- 10%
- 25%
- 33%
- 50%
- I am not sure

Consultation 2

HM, a 65-year-old woman who over 10 years ago had undergone a total abdominal hysterectomy/bilateral salpingo-oophorectomy (BSO) for menorrhagia presents with a 1-year history of worsening vaginal dryness and inability to have intercourse. She had stopped systemic hormonal therapy 1 year before presentation. She reports decreased sexual desire due to vaginal dryness and a sensation of “tearing” at the introitus with attempted vaginal penetration. She does not report vaginal discharge, bleeding, or odour. The patient describes her 43-year marriage as excellent and hoped to regain sexual intimacy with her husband.

17) On hearing this information what do you think is a probable diagnosis?

- Dyspareunia and Vaginismus only
- Atrophic vaginitis only
- Sexual intimacy problems only
- General problems associated with aging
- Dyspareunia, Vaginismus and Atrophic vaginitis
- Dyspareunia, Vaginismus, Atrophic vaginitis and Sexual intimacy problems
- I am not sure

18) How do you feel about discussing sexual health with this patient?

- I would be VERY COMFORTABLE
- I would be COMFORTABLE
- I would be UNCOMFORTABLE
- I would be VERY UNCOMFORTABLE

19) How would you feel about conducting a physical examination on this patient?

- I would be VERY COMFORTABLE
- I would be COMFORTABLE
- I would be UNCOMFORTABLE
- I would be VERY UNCOMFORTABLE

20) Which of the following would you offer this patient? Tick (☑ all the boxes that apply)

- Counsel the patient about his diagnosis and discuss possible treatment options with the patient
- Initiate a discussion about sexual health practices
- Educate the patient about sexual health and the implications of aging through the use of pamphlets
- Prescribe localized oestrogen and 17-B oestradiol cream
- Recommend use of vaginal dilators
- Refer her to attend QPCC&C (STI Clinic) /Family Planning Clinic for advice
- Discuss treatment options with patient
- I would conduct a vaginal examination
- I would refer her to another physician for a vaginal examination
- Other (please specify)

Consultation 3

CC is a 55-year-old man. His wife is 15 years younger than him and they have 3 teenaged children. At his annual medical visit 6 weeks earlier, he described feeling depressed and lacking interest in many activities; eventually admitting this included sex. The last physician he saw had prescribed some exercise and antidepressants. His physical exam and laboratory assessments were all normal. At the follow-up visit, CC describes feeling overworked. He claims he has been taking the antidepressants reluctantly as prescribed, and although he does feel a little less depressed, he believes that it has reduced his libido even more. In addition, his wife is concerned that he is not paying her enough attention and he says, "I am having a problem satisfying her."

21) Which of the following will you offer this patient? Tick () all the boxes that apply)

- Perform a focused interview (specific to complaint)
- Perform a comprehensive interview (inclusive of complaint but also general sexual health and other relevant issues)
- Counsel the patient about his diagnosis and discuss possible treatment options with the patient
- Schedule an in-depth laboratory evaluation
- Tell him to bring his partner and discuss sexual intimacy issues with both of them
- Prescribe more antidepressants
- Refer him to a psychologist
- Educate the patient about erectile dysfunction through the use of pamphlets
- Recommend Viagra
- Recommend time off from his job
- Other (please specify)

22) How would you feel about discussing sexual health with this patient?

- I would be VERY COMFORTABLE
- I would be COMFORTABLE
- I would be UNCOMFORTABLE
- I would be VERY UNCOMFORTABLE

23) According to the research literature, what percentage of adult men over 40 years of age report sexual dysfunction to a health care professional?

- 15%
- 30%
- 45%
- 50%
- I am not sure

Consultation 4

A 60-year-old, NR, female teacher from a rural community in Rio Claro presents complaining of dysuria and acute onset of bilateral vulval blisters. She is married (to the pastor of that community) and she has 2 teenaged children.

24) Which of the following would you offer this patient? Tick () all the boxes that apply)

- Initiate a discussion about safer sex practices
- Educate the patient about safer sex and STIs through the use of pamphlets
- Recommend a full STI screen
- Ask her to tell her husband to make an appointment
- Refer her to attend QPCC&C (STI Clinic) /Family Planning Clinic for advice
- Counsel the patient about his diagnosis and discuss possible treatment options with the patient
- Prescribe topical medications and/or sitz bath
- Conduct a vaginal examination
- Refer her to another physician for a vaginal examination
- Tell her to come back in a couple of weeks to see if the blisters have healed
- Other (please specify)

25) How would you feel about discussing sexual health with this patient?

- I would be VERY COMFORTABLE
- I would be COMFORTABLE
- I would be UNCOMFORTABLE
- I would be VERY UNCOMFORTABLE

26) On hearing this information what do you think is a probable diagnosis?

- Chlamydia
- Human Papilloma Virus (HPV)
- Genital Herpes
- Urinary Tract Infection
- Hygiene problem
- I am not sure

Consultation 5

A female patient, MN, aged 67 years is being monitored for high blood pressure. She started taking medication for this two months ago. She presents with minor headaches and muscular pain, nothing out of the ordinary. After offering her some pain killers you ask her if there is anything else she wants to discuss. After some embarrassment, she says that she has tried to talk with her husband about this problem. He is angry and frustrated about the diminished frequency of sex, telling her "it's all her problem that she is not interested." MN admits that she often ends up trying to have sex "completely out of guilt," but that just makes things worse. She is not worried that there is something wrong with her as she is healthy and fit.

27) Which of the following would you offer this patient?

- Prescribe new antihypertensive medication
- Educate the patient using medical leaflets about positive sexual health
- Initiate a discussion about medications that may affect sex drive
- Counsel the patient about his diagnosis and discuss possible treatment options with the patient
- Explain to her that there is nothing wrong with reduced sexual desire at her age
- Tell her to bring her partner to have a discussion together about their sexual intimacy problems
- Refer her to a psychologist
- Refer her to QPCC&C (STI Clinic) /Family Planning Clinic
- Ask one of the health centres nurses to talk with her
- Other (please specify)

28) Which of the following criteria must be present for a diagnosis of hypoactive sexual desire disorder (HSDD)?

- Persistent or recurrent extreme aversion to and avoidance of genital sexual contact with a sexual partner
- Persistent or recurrent inability to maintain an adequate lubrication-swelling response
- A sexual disturbance that causes marked distress or interpersonal difficulty
- A sexual disturbance that persists for at least 6 months
- I am not sure

29) How would you feel about discussing sexual health with this patient?

- I would be VERY COMFORTABLE
- I would be COMFORTABLE
- I would be UNCOMFORTABLE
- I would be VERY UNCOMFORTABLE

Consultation 6

A newly registered 54-year-old (recently separated) male patient, FL, who is a senior bank worker, makes an appointment because he is concerned about a sexual fetish problem. He has also lost interest in going to work. He tells you that he plays with sex toys, looks at porn online and masturbates for several hours daily. He thinks his “new addiction” is why his wife has left him and his noted absence from work is now causing a problem with his employers.

30) How do you feel about discussing sexual health with this patient?

- I would be VERY COMFORTABLE
- I would be COMFORTABLE
- I would be UNCOMFORTABLE
- I would be VERY UNCOMFORTABLE

31) Which of the following would you offer this patient?

- Refer him to a psychologist
- Refer him to QPCC&C (STI Clinic) /Family Planning Clinic
- Prescribe serotonergic antidepressant (SSRIs) medications
- Educate the patient through the use of medical leaflets about sexual practices
- Discuss the implications of his problem on his job
- Initiate a discussion about healthy sexual behaviour and practices
- Counsel the patient about his diagnosis and discuss possible treatment options with the patient
- Recommend outdoor extra-curricular activities
- Other (please specify)

32) This patient's problem is most likely:

- psychiatric
- physiological
- behavioural
- I am not sure

Section 4 – General Views

This is about your general views on sexual health care for middle-aged and older adults, the barriers and facilitators to discussing sexual health with this age group, and what, if anything needs to improve consultations with these patients.

Each question has a series of parts; please select only ONE response per part

33) When would you take a sexual history with a middle-aged and older patient?

- | | | | | |
|--|--------------------------|-----|--------------------------|----|
| a. First Visit - when they register | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| b. If the patient has a medical condition that warrants taking one | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| c. Sexual health complaint raised by patient during a consultation | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| d. Annual visit | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| e. Each visit | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| <input type="checkbox"/> Never → please go to Q 35 | | | | |
| <input type="checkbox"/> | | | | |

34) If you were taking a sexual history with a middle-aged or older patient which of the following would you ask them:

- | | | | | |
|---|--------------------------|-----|--------------------------|----|
| a. Frequency of sexual intercourse | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| b. Number of sexual partners | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| c. Type of sex practices (oral, vaginal, anal etc.) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| d. Sexual orientation | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| e. Gender of sexual partners | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| f. Age of sexual partners | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| g. Condom use | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| h. Contraceptive use (male patients) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| i. Contraceptive use (female patients 45 – 55 years where applicable) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| j. Sexually Transmitted Infections (past or present) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| k. Sexual function | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| l. Sexual dysfunction (discomfort, reduced libido or desire) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| m. Reproductive history or concerns (past pregnancies, births, menopause) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| n. Sexual abuse/violence | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

35) Please indicate the extent to which you agree or disagree with the following statements:

Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
a) Sexual health has little relevance to middle-aged and older people's overall well-being.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Sexual health of middle-aged and older people is not a public health priority.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) The middle-aged and older patients I see rarely discuss their sexual health during a consultation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) It is important to discuss sexual function with patients with chronic health conditions, such as diabetes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) General practice is the most appropriate service for providing sexual health care for middle-aged and older adults.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Sexual dysfunction is usually caused by psychological problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) More sexual health promotion targeting middle-aged and older people is needed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Cultural or religious background of a patient often acts as a barrier to discussions about sexual health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Taking a sexual history from a middle-aged or older patient is more time-consuming than taking one with a younger person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j) Doctors need more training on middle-aged and older people's sexual health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k) Effort is better placed improving the sexual health of younger people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l) There is not enough time to discuss sexual health with middle-aged and older patients.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m) Primary Care Nurses are more suitable than Primary Care Physicians to discuss sexual health issues with middle aged and older patients.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n) It would be disrespectful to routinely ask middle-aged and older patients about their sexual health at a routine visit.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

36) Which of the following, if any, would assist discussions on sexual health during consultations with middle-aged and older patients?

Consultation aids	Most Useful	Useful	Somewhat Useful	Not Useful
a) Sexual History Question Checklist to remind me what questions I should ask	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Web based programme that automatically prompts questions to be asked based on patient information/history or diagnosis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) A paper-based Sexual Health flowchart that prompts questions to be asked based on patient information/history or diagnosis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Anatomical diagrams or models to explain sexual matters to patients and for them to identify areas where their problems are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Short list of questions on sexual health for patients to complete in the waiting room to give to me / or for them to tick the things they want discussed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Sexual health information leaflets targeted at middle-aged or older people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Sexual health posters for waiting or consultation rooms targeted at middle-aged or older patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Other please specify <input type="text"/>				

37) Would you be interested in any training on sexual health in middle-aged and older patients?

- Yes - please go to Q. 38
- No - I have already had sufficient training in this area
- No - I am not interested in any further training in this area
-

38) Which of the following training methods do you find useful?

Training options	Most Useful	Useful	Somewhat Useful	Not Useful
a) 3 - 5-day workshop (certificate awarded on completion)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Half-day - one day workshop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Continuing Education Supplements in the form of Self-study: books, reading material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Continuing Education Supplements in the form of Self-Study: (CD/DVD with material/practical exams)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Lunchtime seminar series	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Postgraduate training (diploma level)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Other please specify <input type="text"/>				

Thank you for taking the time to participate in this study, please place your completed questionnaire in sealed envelope and put into the collection box at the reception desk.

9.4 Appendix 4: Study Participants' Documents

Appendix 4a: Study Information sheet



Primary Care/ General Practitioner Participant Study Information sheets

We are doing a research study and would like to invite you to take part. This information sheet explains what the study is about and will help you to decide whether you want to be part of this study. You are free to say no without explanations. It will not be reported to anybody. It will have no influence on your present or future as a medical practitioner at this health centre or any other medical institution.

Introduction and Purpose of the Study

My name is Patrice Rabathaly and I study at the London School of Hygiene and Tropical Medicine - University of London. This study is part of my PhD to find out more about Doctor-Patient relationships.

With regard to Physician-patient communication during the medical consultation process, very little is known about the barriers and facilitators that affect discussions about sexual health, particularly between doctors and middle-aged and older patients. This study aims to take a closer look at the knowledge, attitudes, and practices of Primary care/General practitioners and patients who are 45 years and older with regard to communication about sensitive topics during the medical consultation.

I would like your suggestions, so I can help both patients and doctors benefit even more from their consultation. To achieve this, I want to learn from your experiences as a General/Primary Care Practitioner and about your medical consultations with patients 45 years and older about Sexual Reproductive Health.

Why have you been chosen?

We are keen to speak with Primary care/General Practitioners who work in public or private primary care facilities through-out Trinidad and Tobago. We are particularly interested in those GPs who have some experience with patients who are over 44 years of age and even more so GPs who have experience diagnosing and treating patients of this age group.

What will happen to me if I take part?

If you decide to take part, and once you are satisfied that you understand the purpose of the study and what it will involve, you will be asked to participate in an interview of no more than 60 minutes at a location and date at your convenience with the researcher. This could be in a private room at your health centre before the centre opens or at the end of the day or at another location. With your permission, the interview will be tape recorded. This is so that we can record the interview accurately and to ensure that we do not miss any important information. We may also take written notes if you are happy for us to do so. All recorded and written information will remain confidential.

Do I have to take part?

No, it is entirely up to you whether you want to take part or not. If you decide to take part, you will be asked to sign the consent form. If you sign this form, it means that you understand what the study is about, what we are asking you to do as part of the study, and that you agree to take part. You are still free to withdraw at any time and without giving a reason. You will not be paid for participating in this study but you will be offered refreshments during the interview.

Who will see this information?

The information we collect during your interviews, in the form of digital recordings and notes of what we discuss, will only be seen by us and relevant staff involved with this project. Other clinical staff or patients or staff at the Ministry of Health will not have access to any of this information. Later the research will be published in a series of journals and as a PhD thesis and there will be no information which could identify you, such as your name or address. What you tell us will instead be stored under a study number in order to protect your privacy. The information that we collect about you will be kept for a period of time after the papers and thesis have been published and will then be securely destroyed. Anything you say will remain strictly confidential.

What are the benefits of taking part in this study?

There are no direct benefits of taking part in the study. We hope however that what we learn might help to improve the medical consultation practices of general practitioners by means of trainings, tools, or continuing education materials.

What are the risks of taking part in this study?

Some of the questions that we may ask you about your attitudes and medical practices in sexual health care may be personal and we understand that this might make it difficult to answer. You do not have to answer any questions you do not want to answer.

Who has approved and funded this study?

This study has been approved by the Ministry of Health of Trinidad and Tobago ethics committee as well as the ethics committee of the London School of Hygiene and Tropical Medicine – University of London. This PhD is being funded by the government of Trinidad and Tobago.

Do you have any questions?

If you have any questions about the study, please feel free to ask them now.

If you have questions later, please email me at Patrice.rabathaly@lshtm.ac.uk

Or telephone or text: Patrice Rabathaly at 1-868-307-4455. If you text me, I will call you back. Please feel free to approach me personally at any time.

Do you agree to join the interview? Yes No



Participant Interview Consent Form

STATEMENT OF CONSENT

Tick all that apply.

- I was told the reasons for the interviews.
- I am aware of risks and benefits.
- My questions have been answered.

I understand that:

- I can choose whether or not I want to be part of this study or not.
- I can drop out at any time without giving reasons and without any negative consequences.
- The information I provide will only be shared with others after personal details and names have been removed.
- I authorise use of quotations from the information I have provided in this interview since it has been explained that anything I say will remain anonymous and unlinkable to me

By signing below, I agree to take part in the study.

Participant's name (BLOCK LETTERS)

Signature

Date

Witness's name (BLOCK LETTERS)

Signature

Date

NB: Two copies must be signed. One copy remains with the participant and one must be retained on file by the researcher.



Interview Topic Guide (for Researcher)

Interviewer: Ms. Patrice Alicia Rabathaly

Estimated Interview Time – 60mins

INTERVIEW OBJECTIVES

- ✚ To determine the physician's general perception of the status of Sexual Reproductive Health (SRH) of patients aged 45 years and older in Trinidad and Tobago.
- ✚ To ascertain the physician's views about sexual history taking with patients 45 years and older and communicating with these patients about sexual health issues.
- ✚ To determine the physician's views and knowledge, attitudes and practices (KAP) with management and care of SRH issues among middle aged and older adults.

Opening Interview

- ✓ Introduce self
- ✓ *Explain the purpose of research*
- ✓ *Aim & objectives of interview*
- ✓ Thank interviewee for taking part in the research.
- ✓ Interview will last 1 hour
- ✓ If at any point, you would like to take a break, just let me know
- ✓ Reassure re: confidentiality- nothing you say will be linked to your name
- ✓ Permission for recording
- ✓ Explain importance of interviewee saying what they think, there are no right or wrong answers, all opinions valid and helpful.
- ✓ Check interviewee is comfortable with interview format and subject matter.
- ✓ Any questions?

Respondent Introduction (Approx. 5-10mins)

Tell me a little about yourself...

(Professional experience, current role, experience re: Sexual health & middle aged and older adults)

QUESTION/ TOPIC GUIDE (Approx. 45- 60 mins)

Sexual Health Care
management of
middle aged & Older
patients

1. What comes to mind about this topic?

- What are your thoughts about this topic in terms of?
- Role of primary care health services
- Role of the GP
- From your experience with patients over 45 years tell me about:
- Key prevalent sexual health conditions of this age group

(Probe: infection, fertility, sexual function/dysfunction, relationships, sexuality, anything else?)

- Key conditions/factors that impact on sexual health of this age group in TT

(Probe: Chronic Diseases, cultural factors, SES, behavioural patterns etc.)

- Sexual health as a priority for older patients
 - Sexual health of older patients as a priority for you? Other doctors?
- (Probe differences between middle and old age, men and women)**

- Sexual health needs of older patients vs. younger ones

- Tell me about challenges you face or that you are aware of in addressing sexual health needs of this age group?

(Probe: Other influences (Whose responsible for sexual health care patient/GP, view older people in general, media, cultural factors)

<p>Sexual health communication</p>	<p>2. How do you feel about talking about sexual health matters with middle aged and older patients? How do you think your patients feel about it?</p> <ul style="list-style-type: none"> - Who initiates this discussion? Who is responsible? - How do you prepare yourself to talk about it? - Talk me through examples of what is talked about & what is not - Barriers (for patients and practitioners) what makes it difficult? - What kinds of patients' reactions do you get? How do you deal with that? - How do you deal with reluctant patients? - Talk me through examples in practice <p>(Probe: socio-cultural factors, religious views, body language, age, sex, ses, environment, jargon, slang etc.)</p> <ul style="list-style-type: none"> - Facilitators (for both patients and practitioners) what makes it easier? - Talk me through examples in practice
<p>Sexual History Taking</p>	<p>3. What are your views about conducting a sexual history? (in general and then with this age group)</p> <ul style="list-style-type: none"> - Perception - Importance - When? How? Why? <p>(Probe: new patient, when the patient presents with a sexual health problem/concern, when they have a medical condition that may affect their sexual health, any other times?)</p> <p>4. Talk me through the process of how you take a sexual history in general? How do you do it?</p> <p>5. With this age group? (Do you ever do it differently (criteria) ? How? Why and when?</p>

<p>Sexual health Consultation needs</p>	<p>6. How do you feel about consultation tools during patient visits?</p> <ul style="list-style-type: none"> - Have you ever used a consultation tool? If yes, please describe? - What do you think about the possibility of a consultation tool for sexual health & history taking (general/this age group)? Other practitioner's views? - Pros and Cons - Important components (what do you think it should look like? Purpose? (Probe: format, contents, anything else?)) - Application to sexual history taking - Usefulness (when to use it? Circumstances? How to use it with patient?)
<p>Sexual health Knowledge & Training</p>	<p>7. How do you feel about training you received on the topic of sexual health in middle and old age?</p> <ul style="list-style-type: none"> - Training (Probe: medical school, further education, CE?, what areas specifically?) - Did it meet your needs? - Training gaps?

Summary (Approx. 5- 10mins)

Review what has been discussed throughout the interview

- How important is what we discussed?
- Is there anything else that you'd like to discuss?
- Any questions?

Thank you for your time! I truly appreciate that you have provided me the opportunity to have this interview with you and for supporting my research objectives.

9.6 Appendix 6: Triangulation Matrices

Table 6: Working matrix of triangulated results

BARRIERS					
Meta Themes	Qualitative Findings		Quantitative Statistical findings	Findings show: convergence/ divergence/ silence/ complementarity	Triangulated Interpretation
	PCPs' Attitudes	Excerpt/Data			
The influence of the Patient's reaction or behaviour during sexual consultation on PCP	a. <u>Anxiety</u> & <u>Embarrassment</u> (overall discomfort) felt when patient becomes uncomfortable	<p>“When you are speaking to them and asking ‘those’ questions, you can see them starting to look away, show signs of anxiety and being uncomfortable. There are some boundaries, you know, so yeah I do feel uncomfortable” FPB07.</p> <p>“Some of the patients are just very difficult to speak to as they abruptly close questions when asked about sexual concerns as an attempt to end their own discomfort of having such a discussion” MPB06.</p>	<ul style="list-style-type: none"> 60.2% of PCPs' self-reported they were generally comfortable (<i>Very comfortable or comfortable on the Likert scale of options</i>) with all six sexual consultations in the survey 	Divergence	The qualitative findings may be representative of the 39.8% of PCPs who participated in the survey who experienced some degree of discomfort during sexual health consultations with middle aged and older patients. Though more than half of PCPs expressed that they were generally comfortable discussing sex, counselling the patient about their sexual health diagnosis and even offering couple sexual health therapy these responses were to paper based clinical scenarios and not real-life situations where the patient is tangible. In-depth interviews with a PCP offer more time and opportunity to delve deeper into the issues surrounding their true experience regarding their comfort level discussing sexual health. These surveys were self-reported, and a portion of responses may account for social desirability bias.

BARRIERS (cont'd)

Meta Themes	Qualitative Findings	Excerpt/Data	Quantitative Statistical findings	Findings show:	Triangulated Interpretation
	PCP Attitude/ Behaviour			convergence/ divergence/ silence/ complementarity	
The influence of the Patient's reaction or behaviour during sexual consultation on PCP	b. <u>Avoidance</u> displayed due to fear of disrespecting the patient	"The truth about this is that the less educated like a woman of 70 years, is not going to start talking about their sexual health. I think it's a cultural thing because it might sound disrespectful. If she brings it up, no problem, I will talk about it but I would not bring it up." MPB08	<ul style="list-style-type: none"> 99% of the PCPs reported that they will initiate a sexual history discussion with the patient if the sexual health complaint is raised by the patient during a consultation (n=80). 14% of the PCPs agreed that it would be disrespectful to routinely ask middle-aged and older patients about their sexual health (n=90). 	<p>Convergence</p> <p>Complementarity</p>	<p>During the interviews a large majority of PCPs prefers to protect the patient from feeling uncomfortable as well as themselves by only discussing sex health if the patient initiates it, in that way they will avoid inadvertently disrespecting the patient by asking them sex health questions their patient considers disrespectful. PCPs avoid this type of encounter not only due to the discomfort they feel but fear of potentially losing their patient's trust for 'disrespecting' them.</p> <p>Though only 14% reported on the survey based on other responses more PCPs may also share this worldview that talking about sex with 45+yr old patients (even non-routinely) is in fact disrespectful. Lack of initiation of sex health discussions result from additional factors including lack of confidence and appropriate sex education both which may contribute to this worldview.</p>

BARRIERS (cont'd)

Meta Themes	Qualitative Findings	Excerpt/Data	Quantitative Statistical findings	Findings show:	Triangulated Interpretation
	PCP Attitude/ Behaviour			convergence/ divergence/ silence/ complementarity	
The Patient's reaction or behaviour during sexual consultation	c. <u>Discouraged</u> due to patients' preferences to seek alternative care first	Some of these patients are culturally groomed to seek medical care first via a local traditional herbalist. "A lot of them will go to the local things, the traditional herbal things, whatever. They will probably most of the time go and buy these things rather than seeking our professional help." MPB01	80% of PCPs agreed that general practice is the most appropriate service for providing sexual health care (n=92).	Complementarity	PCPs acknowledged that it is discouraging for them to keep up to date with sexual health care needs and practices in middle and old age partially because they know they are considered plan B for sexual health concerns with this age group and concede to feeling replaced by traditional healers. The other confounding factor is the fact that sexual health for this age group is not a national priority and the PCP and patient focus in a primary care setting is usually known chronic illness (hypertension, diabetes, heart disease stroke, arthritis and cancer). Regardless, the majority of PCPs agrees that primary care is the appropriate place to seek professional medical sexual healthcare and once the patient presents with such a complaint (even after attending a traditional herbalist) they will attend to their needs as best as they can mostly if the patient presents with such a complaint.

BARRIERS (cont'd)

Meta Themes	Qualitative Findings		Quantitative Statistical findings	Findings show: convergence/ divergence/ complementarity / silence/ complementarity	Triangulated Interpretation
	PCP Behaviour	Attitude/ Excerpt/Data			
The influence of the Patient's reaction or behaviour during sexual consultation on PCP	d. <u>Disinterested</u> due to patient's unwillingness to accept doctor's advice	Some PCPs are disinclined to hold a sex health discussion because of some older patients' delusions about sex <i>e.g. 'being a condom user infers that you have an infection', 'having sex with a virgin can cure HIV', 'sexual dysfunction means not being able to have sex 5 and 6 times a day'</i> . PCPs find this off-putting and time consuming to deal with. Some older patients are also headstrong about their inaccurate beliefs and make it difficult to continue a conversation because they refuse the PCP's advice.	<ul style="list-style-type: none"> ▪ 79.1% of PCPs discuss sexual health concerns and treatment options frequently [at least 2 out of every 3-sex health-related consultations] with middle aged and older patients n=72. ▪ PCPs that are more likely to have frequent sexual health discussions with their middle aged and older patients are: <ul style="list-style-type: none"> > 3.74 times more likely to be trained in sexual health communication (p=0.03*) PCPs with a <u>higher than average knowledge score</u> are 4% more likely to discuss sexual health with their middle aged and older patients (OR= 1.04; p=0.94). <p style="text-align: center;"><i>The p values without an (*) are not statistically significant but the OR suggests favourable direction of association.</i></p>	Divergence	<p>Even though the qualitative evidence describes that some may be frustrated with them under educated patients regarding sexual concerns, most PCPs reported that they are more likely to engage in sexual health discussion with the patients described in the clinical vignettes and offer correct advice.</p> <p>The frustration is real but the likelihood of discussing sex health with such patients increases if the PCP is trained in sexual health communication and s/he is knowledgeable about prevalent sexual health conditions in the age group (and comfortable discussing sex health). These characteristics that increase the likelihood of sex health discussions are important as these PCPs will be able to handle ignorant patients as described in the excerpt better than perhaps the 20.9% of PCPs that discuss sex health less frequently.</p>

“In terms of an older audience, it’s true what they say – you will not be able to teach old dogs new tricks. For a lot of them it’s a little more difficult to change their mind about things. MPB06

BARRIERS (cont'd)

Meta Themes	Qualitative Findings	Quantitative	Findings show:	Triangulated Interpretation
	PCP Attitudes / behaviour	Excerpt/Data	Statistical findings convergence/ divergence/ silence/ complementarity	
PCPs limited sexual health education in sexual health conditions in later life	<u>Disadvantaged</u>	<p>“In med school we did not have much exposure to sexual health; it is not a big aspect of our curriculum. We have had exactly three rotations with very little, probably just one class...in the community health rotation, the obstetrics and Gynaecology rotation and very little in the psychiatric rotation. It is not fully integrated into the curriculum as much as what would be needed to make us competent at practicing.” [FPB06 -Locally trained recent graduate ≤10years]</p>	<p>60.3% of the PCPs in T&T have been locally trained in medicine n=56 at the University of the West Indies (UWI). PCPs with training in sexual function of middle and old age are 1.5 times more likely to be educated abroad (p=0.16) and if locally educated in sexual function in middle and old age they are 2.48 times more likely to have been recently graduated (p=0.12).</p> <p>Additionally, the mean knowledge score for recognizing prevalent sexual health conditions of middle aged and older patients = 2.27 (out of 6 consultations). 56.9% of PCPs scored <u>less</u> than the mean n = 53.</p> <p>The PCPs that attained more than the mean knowledge score n=40 were 2.43 times more likely to have had postgraduate level training in sexual functioning in older adults (p=0.04*).</p>	<p>Convergence</p> <p>Almost all local PCPs interviewed admitted that they did not have sufficient exposure to information about sexual health in general and even less or none at all pertaining to middle aged and older adults during their medical training. They felt this may have disadvantaged them in terms of their level of competence around communication of such sensitive topics and having sufficient knowledge to offer appropriate care. From the statistical results, PCPs that have been educated locally are indeed less likely to have the acquired knowledge and mostly those educated outside of UWI have attained higher knowledge scores in recognising sexual health conditions in later life and have had postgraduate level education in Sexual functioning at middle and old age.</p>

“The sexual history was just part of your med history taking skills targeted largely at young people because even the whole ED thing, that’s a fairly recent issue and not really discussed that much. [FPB04 -Locally trained graduate ≥10years]

39.1% of PCPs reported that they attained formal training in Sexual Function in middle and old age n= 36 at postgraduate level.

The p values without a () are not be statistically significant but the OR suggests favourable direction of association.*

BARRIERS (cont'd)

Meta Themes	Qualitative Findings	Quantitative	Findings show:	Triangulated Interpretation
	PCP Attitudes / Behaviour	Excerpt/Data	Statistical findings	convergence/ divergence/ silence/ complementarity
Socio-Cultural barrier – (1) Patient Age	a. <u>Respect (or concur)</u> their patients' ageist views on sexuality	<p>“The (<i>patients</i>) over 60’s, over 70’s tells me, “Why are you asking me that? Look at my age...” MPB07</p> <p>“They don’t think that beyond a certain age they should be engaging in sexual intercourse or they think that if they had a problem in that department, it’s to be expected - a natural part of the aging process.” FBP06</p> <p>Older patients are somewhat ashamed talking about sex almost as if it is something embarrassing or ‘dirty’. MPV03</p>	80% of the PCPs agreed that the middle-aged and older patients they see rarely discuss their sexual health during a consultation (n=88).	<p>Convergence</p> <p>Older patients’ perception of their age and sexuality, makes talking about sex difficult for them and with them. Most PCPs interviewed indicate their patients have an ageist view of sexuality (thinking that engaging in sexual activity has an age limit). Some PCPs may also share this view and some just prefer to respect their patient’s stance instead of educating them about sex because the patient’s reaction makes them both deter from talking about it any further and it could be the reason why sex is rarely discussed in consultations.</p>

b. <u>Reluctant</u> as patient is not comfortable with younger aged physician	“When they see or perceive you as a very young doctor, they may be very reluctant to discuss issues like that” MPB07	60.2% of the PCPs working in primary care in T&T are under 40years old n=56	Complementarity	Majority of PCPs is <40yrs so the age difference between them and their older patients is more obvious. Older patients make PCPs feel their age disqualifies them from discussing sex as if they’re not old enough or experienced. PCPs feel they are reluctant to continue to pursue the topic after that reaction.
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BARRIERS (cont’d)

Meta Themes	Qualitative Findings		Quantitative Statistical findings	Findings show: convergence/ divergence/ silence/ complementarity	Triangulated Interpretation
	PCP Attitudes/ Behaviour	Excerpt/Data			
Socio-cultural barrier (1)Patient Age	c. <u>Age bias</u> -PCPs – <u>discomfort</u> with older age of patient	“Personally, it’s a difficult topic (sexual health) to broach especially when you’re dealing with people who could be the age of your parents who might think that this is not something to be discussed” FPB07	The odds of PCPs being more comfortable discussing sex increased if the PCPs are of similar age group as the patient in each clinical vignette. PCPs that are 40+ years and older were 3.1 times more likely to be more comfortable discussing sex with middle aged and older male patients (p=0.03*) and PCPs 40 + years and older were 4.58 times more likely to be comfortable in sex health consultation with female middle aged and older patients. <i>The p value without a (*) is not statistically significant but the OR suggests favourable direction of association.</i>	Complementarity	PCPs are more comfortable talking with patients of similar age. This could be cultural as it may be easier to relate with someone in a similar age bracket. Hence, in consultation with a patient similar in age to their parents, the younger PCPs feel uncomfortable discussing sex. Consequently, socialisation in T&T trains everyone to treat sexuality very private and elders with respect.

BARRIERS (cont'd)

Socio-cultural barrier – (II)Gender

Gender bias – PCPs & Patient have same sex preferences for sex health consultation

“You will find that it is female patients that open up in general. Very rarely you would find male patients wanting to open up to the female doctors...but I have had a couple male patients who were open, and I did find it a little bit uncomfortable.” [Female physician]

“Most women prefer to see a woman...” [Male PCP]

The odds of PCPs being more comfortable discussing sex increased if the PCPs are of same sex as the patient in each clinical scenario. Male PCPs were 4.75 times more likely to be comfortable discussing sex with a middle aged or older male patient ($p=0.00^*$) and female PCPs were 1.79 times more likely to be comfortable discussing sex with a middle aged or older female patient ($p=0.42$).

The p value without a () is not statistically significant but the OR suggests favourable direction of association.*

Convergence

PCPs comfort level when discussing sexual issues with 45+ yr old patients increased if they were of the same gender. These same sex preferences were heightened by other patient demographics namely religion, age or practice location. Perhaps, it easier to open up to someone of the same gender to discuss sex health-related issues as there is possibly comfort and assumed understanding in having a common ground.

BARRIERS (cont'd)

Meta Themes	Qualitative Findings		Quantitative Statistical findings	Findings show: convergence/ divergence/ complementarity / silence/	Triangulated Interpretation
	PCP Attitudes	Excerpt/Data			
Socio-Cultural Barrier - (iii) Locality (rural communities with cultural taboos about sex)	<u>Reticent & Fearful</u> of losing trust in a rural patient community	<p>“People in rural communities tend not to want to bring these topics up and you have to look at how you’re going to speak about it because if you make a misstep in a small village, in a rural community as a doctor, the patient’s trust in you is lost and it cannot be redeemed.” [FPB08, Trinidadian]</p>	<p>▪ Even though 71% of the PCPs practice in urban settings, PCPs are 1.23 times more likely have discussions about sexual health with their middle aged and older patients in rural practice settings ($p= 0.72$). PCPs are 1.37 times more likely to be comfortable discussing sexual health with middle aged or older male patients ($p= 0.07$) and 1.43 times more likely with the females ($p= 0.61$) in a rural based practice.</p> <p><i>The p values without a (*) are not statistically significant but the OR suggests favourable direction of association.</i></p>	Divergence	<p>Cultural norms in small rural communities promote reticence regarding sex for several reasons mainly because they live like a larger extended family increasing the feeling of a lack of privacy. Sexual health discussions are taboo in these communities and the worst outcome with a patient who feels disrespected in such a community is a loss of trust from them and the whole community. However, rural based PCPs are perhaps just more cautious and consider skillful ways of broaching the topic when necessary as they appear to be more likely to discuss sex health in rural practices more comfortably especially with female patients. Perhaps there are more female PCPs 45+ years working in rural communities. There are more non-Trinidadians posted there and female patients are more open to someone who is not from the community.</p>

BARRIERS (cont'd)

Meta Themes	Qualitative Findings		Quantitative Statistical findings	Findings show: convergence/ divergence/ silence/ complementarity	Triangulated Interpretation
	PCP Attitudes	Excerpt/Data			
Socio-Cultural Barrier - (iv) Religion & Ethnicity	a. <u>Avoidance</u> behaviour and makes assumptions because of patient's religion	<p>"If they are Muslim I wouldn't dare go there; they are too much religious. People who are so religious won't want to talk, they don't want to discuss this, and they don't want to go there." [Afro-Trini, Male PCP]</p> <p>"They (<i>staunch Christians</i>) feel more uncomfortable than the rest discussing this; because of their religion and they worry of how it looks to society and stuff like that." [MPB03]</p>	86% of PCPs agreed that patient's cultural/religious beliefs often act as a barrier in sexual health discussions	Convergence	Some PCPs share the perspective that some religions promote anti sex messages or view that sex is dirty to talk about and this is reinforced by experiences they have had with patients of religions who avoid the topic or make the PCP feel embarrassed for asking. Some PCPs are also from these very same religious backgrounds and possibly do share their patient's religious perspectives on sexuality explaining their reticence and avoidance of the topic.
	b. <u>Doubtful</u> and resorts to stereotyping because of patient's ethnicity	I ask more of the Afro-Trinidadian men and if they were not, I would not ask. [Afro-Trini, Male PCP]			

“You get more openness from Afro-Trinidadian women than you do from Indo-Trinidadian to me. African women are far freer with talking about these things in a very casual way. Indian women are a lot cagier.”
[Mixed – Trini, Male PCP]

preference where it may be easier to relate where there is similarity.

BARRIERS (cont'd)

Meta Themes	Qualitative Findings	Excerpt/Data	Quantitative Statistical findings	Findings show:	Triangulated Interpretation
	PCP Attitudes / behaviour			convergence/ divergence/ silence/ complementarity	
The PCP's Worldview (personal perspective of sexuality)	<p><u>Disapproval</u> about the patient's sexuality choices and presenting complaint</p> <hr/> <p><u>Hesitant</u> and visibly or audibly displaying <u>discomfort</u> to patient</p>	<p>"Personally, it is difficult as a physician to not let your own personal values influence your interaction with the patient and not be judgmental (<i>of the sexual circumstances presented to you by the patient</i>), because you can feel very uncomfortable." FPB06</p> <hr/> <p>"I know it is something that we have to overcome but if I am uncomfortable asking those questions and if that shows the patient will be uncomfortable." FPB02</p>	<ul style="list-style-type: none"> ▪ 60.2% self-reported they were comfortable with all six sexual consultations in the survey ▪ PCPs with higher than average knowledge scores in prevalent sexual health conditions of middle and old age are 1.24 times more comfortable discussing sex health with female patients(p=0.72) and 2.24 times with male patients (p=0.10). ▪ 90.3% of the PCPs chose to counsel the middle-aged male patient with ED about his diagnosis. ▪ 94.6% counsel the old woman about vaginal dryness and painful sexual intercourse and 77.2% offered to discuss her sexual health care treatment options with her. 	Divergence	<p>Personal Boundaries about sex are usually defined by sociocultural taboos which can be resolved by one's knowledge base. Comfort level when discussing sexuality can be influenced by PCPs personal worldview on sexuality. This perspective can define a personal boundary and affect the PCPs ability to effectively discuss and address patients' sexual issues.</p> <p>If the physician is uncomfortable with the sexual discussion this may be picked up by the patient.</p>

- 63.4% chose to offer the middle-aged man with sexual dysfunction an opportunity to discuss his intimacy difficulties with his partner

p values without () are not statistically significant but t OR suggests favourable direction of association.*

The PCP's Attitude (personal perspective of sexuality)

Reluctant uttering the word 'sex' in the interview with the researcher

"I'm going to tell her the fact that what's happening is a normal thing during menopause with them they shouldn't stop... you know?"
MPB03

"All of the patients I have understand that they can talk to me about ... because they complain that they don't feel to ... you know ... to go and do..." FPB01

This finding could not be definitively tested or compared with in the self-reported survey.

Silence

Some PCPs found it difficult to utter the word 'sex' or 'sexual' with the researcher. Consider that they are not really comfortable with any sexual jargon and possibly they are not comfortable talking to patients about sex. The patient brings it up they will oblige though uncomfortable or this response was just the 'correct' answer for the researcher.

BARRIERS (cont'd)

<p>The Physician's Behaviour (personal perspective of sexuality)</p>	<p>(1) <u>Negligent</u> practices – rarely take a sexual history with patients over 45years</p>	<p>“Yes, it is important, because I think we do miss a lot <i>(of information and untreated conditions)</i> sexually and that is our fault because we rarely take sex histories from them” (FPB06) “It’s an often-neglected part” (FPB07)</p>	<p>49% of PCPs agree that taking a sexual history from a middle-aged or older patient is more time-consuming than taking one with a younger person</p>	<p>Convergence</p>	<p>Taking a sexual history is indeed important, however overlooking it is more common practice</p>
	<p>(II) <u>Unwilling</u> -(unless if patient initiates sexual health discussion)</p>	<p>“From my personal experiences I haven’t done a lot of it unless they brought it up” (MPB02).</p>	<p>14% of PCPs agreed it would be disrespectful to routinely ask middle-aged and older about sex health.</p> <p>20% ask on First Visit - when they register=74</p> <p>8% will ask if the patient has a relevant medical condition that warrants taking a sexual history n=79</p> <p>99% will ask if the sexual health complaint raised by patient during a consultation = 80</p> <p>28% will ask on an annual visit n =68</p> <p>2% will ask on each visit n=66</p>	<p>Convergence</p>	<p>Physicians also reported that if they do take a sexual history with this age group, it is not done routinely. When it is taken it is only due to a patient presenting a complaint (mostly STI related) or as in majority of the cases if the patient initiates the discussion.</p>

PCPs who are MORE LIKELY to take a sexual history with their middle aged or older patients are:

-Trained in sexual history taking (OR=3.03; p=0.14; adjusted OR=3.37; p=0.12)

-Male physicians (OR=1.02; p=0.98; adjusted OR=0.93; p=0.93)

-40+ years in age (OR=1.36; p=0.68; adjusted OR=1.71; p=0.59)

-Educated abroad for medical school (OR=1.36; p=0.68; adjusted OR=1.05; p=0.96)

-Graduated ≥ 10 years or more (OR=1.02; p=0.98; adjusted OR=1.53; p=0.76)

-Worked locally for ≤ 10 years or less (OR= 1.60; p= 0.51; adjusted OR=2.25; p= 0.52)

-Urban practice setting (OR= 2.12; p= 0.29; adjusted OR= 2.32; p= 0.26)

Hesitant –Conditional Sexual history taking conducted with middle aged and older patients

“I would be very uncomfortable; I actually never asked a patient that (referring to sexual orientation) but maybe it is something that we need to consider. Sometimes on their physical appearance you may wonder that, sometimes a lot of patients become offended if you ask any questions like that, especially our culture. We may not see asking sexual orientation as a normal question, so I have never considered that to be honest.” FPB05.

99% PCPs ask about Condom use, Contraceptive use (female patients where applicable), STIs, Reproductive history or concerns (past pregnancies, births, menopause). 93% of PCPs ask about number of sexual partners. 91% ask about Sexual function problems (dysfunction, discomfort, libido, desire). 89% ask about Sexual activity and frequency of Intercourse. 82% ask about Contraceptive use in their male patients. Only 60% of PCPs ask about Sexual abuse/violence. 55% ask about Type of sex practices (oral, vaginal, anal etc.) 51% ask about Gender of sexual partners and Age of sexual partners and 48% reported they will ask about sexual orientation.

complementarity

PCPs agreed that the typical questions on a standard sexual history are not adhered to in practice regarding this age group. They take a rather focused version neglecting questions regarding sexual orientation, sexual preferences (type of sex), and contraception (male and female) and for some even number of sexual partners. Sexual orientation is the most avoided question and has never been asked by any of the PCPs interviewed.

BARRIERS (cont'd)

<p>4. Environmental</p>	<p><u>Lack of privacy</u> to discuss sexual health</p>	<p>“Public health centers don't offer privacy for patients, so the patients will be in one room and they will not be a real door, there is just like a curtain and you can come in at any time” FPB04</p>	<p>Not quantitatively assessed</p>	<p>silence</p>	<p>Even when PCPs do attempt to address sexual health issues they concur that the environment in most public health centers is not suitable to make the patient feel comfortable to discuss these issues and in</p>
	<p><u>Limitations</u> of primary care as there is untimely feedback and follow up care</p>	<p>“Primary care goes up to a point. We all know what to do but you have to know and understand the system we work in. If you send them in to see the specialist, you’re dictating that they have a longer time period before they are actually seen. I don’t see the sense in taking 3,4 and 5 months to get back test results then when we get back test results, wait another 3 to 4 months to get an appointment.” MPB02</p>	<p>Not quantitatively assessed</p>	<p>silence</p>	<p>Sexual health issues of this age group may be neglected and not followed up due to lack of appropriate treatment options such as sexual health therapy, psychosexual counselling, some STIs and other hormonal testing and any sexual treatment for conditions or timely feedback for STI or other biochemical or imaging results in primary care</p>

Helplessness – resource poor settings not equipped to adequately support sexual health care regarding appropriate diagnostics tools, testing, referral options etc.

– “There are more issues now than before for e.g. in my day we didn’t have HIV... There is need to have some things in place so that doctors are able to encourage people and be able to communicate with them. We need to have the support systems to investigate in order to inform patients” MPB05

80% of PCPs identified that primary care is the most appropriate service for providing sexual health care

divergence

Though majority of PCPs indicated that primary care is appropriate service for sexual health care because it does offer limited sexual health care to this age group however, PCPs revealed in in-depth interviews that the existing primary health care system they work in does not foster supportive systems for them to accurately diagnose or prevent sexual health issues of this age group. This discourages PCPs to initiate or follow care protocols because at present many leads to incomplete diagnoses (except for STIs).

The PCPs explained that they work in resource poor settings with a limited manpower, time and treatment options which hamper their ability to be more exploratory during their consultations. Additionally, the physicians offer paternal focused care for the issues that the patient present as their primary complaint.

	<p><u>Unable</u> due to time constraints</p> <p>“We work in a system that is tremendously overloaded with patients and understaffed with doctors. You try to focus more on the problem they came for than address issues that they have with sexuality” MPB02.</p> <p>“We wish we had more time to actually provide optimal primary healthcare “MPB03.</p>	<p>59% of PCPs agreed that there is not enough time to discuss sexual health with middle-aged and older patients</p>	<p>convergence</p>	<p>Primary care is a resource poor setting with a limited manpower, time and treatment options which hamper their ability to be more exploratory during consultations. Additionally, the physicians offer paternal focused care for the issues that the patient present with as their primary complaint.</p>
<p>5. Stigma and Discrimination</p>	<p><u>Confidentiality</u> & <u>Trust issues</u></p> <p>“They just don’t want you writing anything down ...It’s a closed society so they don’t want any of that out there. So you have to truly, truly step up and prove to them that everything they do there is in confidence.” MPB05</p> <p>“Most women don’t want to go to a clinic where they may know the people who work in that clinic.” MPV02</p>	<p>Not quantitatively assessed</p>	<p>silence</p>	<p>PCPs are discouraged to take a sexual history because patients have concerns about confidentiality.</p>

BARRIERS (cont'd)

<p>6. Professional barriers</p>	<p>Patient set <u>barrier due to physicians' status</u></p>	<p>"When people come to the clinic or hospital, they're expectant, they're needy and they come from a position where they feel you are high up and they're down there" MPB05. "There is a professional barrier; doctor vs. patients, they don't see the doctor as being an equal; they see the doctor as being this person of authority, so they are very cautious about what they say to you" FPB06.</p>	<p>Not quantitatively assessed</p>	<p>silence</p>	<p>Collective beliefs about roles in primary care regarding the expected physician-patient relations in these settings. PCPs reported that older patients view them as a person in authority that they should treat with respect (regardless of their age) because these patients' place physicians as part of the elite in society. This perception of hierarchy then creates a professional barrier between physician and patient, and it promotes the paternalistic model of care as the patients revere the physician. In addition to an already defined 'top – down' relationship PCPs expressed that some of their patients think that a topic such as sexual health is taboo and therefore disrespectful.</p>
<p>7. Work Culture Sexual health is not a priority for the middle and old aged in primary care Nature of primary care</p>	<p><u>Not a patient priority</u></p>	<p>PC is frequented by a large number of patients 45+ in age who visit for diabetes, high blood pressure as their primary complaint that gets addressed due time constraints or lack of courage from either the physician or the patient to bring up sexual health concerns.</p>	<p>Sexual health has little relevance to middle-aged and older people's overall well-being =11%</p>		

Unbalanced views about sexual orientation

Sexuality is viewed as purely heterosexual. This could be due to the fact that homosexuality was 'illegal' in this country and frowned upon culturally. As a result, there is too much stigma and discrimination associated with addressing such concerns in the public domain and perhaps why it is difficult for it to be addressed by PCPs.

48% of PCPs reported that they would ask their middle aged and older patient about their sexual orientation
n=79

'Macho' men rarely address their sexual health issues in primary care

Striking gender differences in health seeking behaviour are seen in primary care as men rarely attend the health center in general; and they have denial issues when it comes to potency problems and are ashamed to talk about that with the physician especially if it is another male – some will quicker speak with an older female physician about it.

<u>Sexual health is associated with younger patients</u>	“To be honest, it’s only some case when I realized, these old people are doing it!” MPB06	46% of PCPs agreed that effort is better placed improving the sexual health of younger people.	complementar ity	Overall primary care is not equipped to deal with sexual health in the middle and old age except for STIs and reproductive health. Therefore, it is predominantly appropriate for younger age groups, anything else gets referred or it is not considered a priority.
<u>Sexual health care is overlooked</u>	“A priority in our setting? Maybe not a priority but a major element in their health –yes- that is often underestimated and overlooked by primary care physicians” FPB06.	29% of PCPs agreed that sexual health of middle-aged and older people is not a public health priority n=91.	Divergence	Sexual health care for the middle-aged and older is not considered a priority in the primary care setting.
<u>Not a national priority</u>	“It has not been taught to us as a priority (sexual health in older people) so we don’t always have it in the forefront to talk about it.” FPB04.			PCPs acknowledged there isn’t a focus on sexual health care of middle aged and older adults in Trinidad & Tobago. They admit that they have been encouraged to focus on chronic disease management for this age group, namely diabetes, hypertension and other CVDs, even though they do identify that sexual health care is linked to some of these chronic diseases.
Reticence or apprehension as a professional group	“It’s cultural. Probably there is a need for better communication between professional people; it’s a subject the profession brushes aside and the population doesn’t come forward; there are still a lot of taboos.” MPB09	Not assessed quantitatively	silence	PCPs reveal that they are insecure about offering proficient sexual health care for patients 45 years and older and this stems from cultural taboos regarding sexuality.

FACILITATORS

Meta Themes	Qualitative Finding & Examples	Quantitative Finding & Examples	Findings show convergence/ divergence / silence / complementarity	Triangulated Interpretation
8. Consultation tools	Needs PCPs suggested use of communicative consultation tools to help them improve their sexual health discussions and history taking such as paper based tools e.g. sexual health Q&A form for males and female patients to fill out and identify if they should ask the doctor about anything on the form alternatively they can tick what applies and hand it in to the doctor so s/he can ask the patient instead; a sexual health algorithm to follow, 3D models and pictures of the sexual reproductive organs and possible dysfunction.	PCPs agreed that the following tools were useful: 96.7% chose sexual History Question Checklist to remind them of what questions they should ask, n=93 90.1% selected a web based programme that automatically prompts questions to be asked based on patient information/history or diagnosis, n=91 94.5% opted for a paper-based Sexual Health flowchart that prompts questions to be asked based on patient information/history or diagnosis, n=92 92.5% chose anatomical diagrams or models to explain sexual matters to patients and for them to identify areas where their problems are, n=93	convergence	

94.4% selected a short list of questions on sexual health for patients to complete in the waiting room to give to me / or for them to tick the things they want discussed, n=90

100% of PCPs who responded chose sexual health information leaflets targeted at middle-aged or older people, n=91

92.5% opted for sexual health posters for waiting or consultation rooms targeted at middle-aged or older patients, n=93

9. Interview techniques

Reduce patient discomfort level as well as theirs

PCPs have generally reported that they try to keep their questions brief, express to the patient that it is important and also that their issues are common in their attempt to facilitate the discussion and make the patient less uncomfortable (as well as themselves).

Not assessed quantitatively (maybe silence counsel patient about diagnosis?)

Increase patient willingness to participate in sexual discussion by disguising the sexual health components

“I think people in the younger age group would expect you to take a STD kind of history but for the older age group I will bring it alongside the medical problems. Like when I am prescribing medications especially hypertensives, I would say okay, some types may cause a little problem with erectile dysfunction– Are you experiencing any problems in that already? Then I will talk about it in relation to heart disease- Well you know it might be a very early sign of Coronary Artery Disease- It helps to kind of get that question.....especially for the males in that age group..... You are telling them about the heart which should be an okay kind of topic, so saying that it might be a relation to erectile dysfunction and heart disease makes them more readily to talk about it. ”
FPB01

It is important to discuss sexual function with patients with chronic health conditions, such as diabetes.
96%

Convergence

PCPs attempt to facilitate the conversation by disguising the topic among other medical conditions such as chronic diseases

	<p><u>Increase patient willingness</u> to participate in sexual discussion by developing trust</p>	<p>“It has to do a lot with empathy as a doctor. First... you try to calm their fears... let them know you have their best interests in mind. Educate them... let them know that you’re there for them.... and understand that you have not interfered and that there’s a privacy clause that cannot be broken at all; now they’ll open up and talk to you. When they start telling you, whenever they come to the clinic, they are looking for you.” MPB03</p>	<p>Not assessed quantitatively (maybe counsel patient about diagnosis?)</p>	<p>Some of the more experienced PCPs have offered sincere communicative techniques to empathise and inspire the patient’s trust in order to facilitate a sexual health discussion or take a history.</p>
	<p><u>Accept Physician’s responsibility</u></p>	<p>Most PCPs also agreed that it is the responsibility of the physician to initiate these discussions as it is their role, unlike the patient they are aware of what questions should be asked and in most cases the patient will not bring the topic up.</p>	<p>80% of the PCPs reported that middle-aged and older patients they see rarely discuss their sexual health during a consultation.</p>	<p>PCPs also identified that no matter how difficult it seems to discuss sexual health care with a patient it is their responsibility and it should be done, as it is a definitive opportunity to address sexual issues affecting patient’s health if not they will persist or develop.</p>
<p>10. Training & Education</p>	<p><u>Physician Medical Education: Needs</u> – Training in middle and old age sexual health conditions, effective communication strategies and diagnostic sexual history taking to</p>	<p>“Continuous education or training of a physician on how to handle sexual health issues for patients over 45 is very, very important” FBPO1.</p>	<p>96% of PCPs agreed that doctors need more training on middle-aged and older people’s sexual health n=</p>	<p>The PCPs indicated the need for more exposure to sexual health topics and skills at the medical student level, particularly in terms of communication, sexual history taking and sexual function in middle aged and older adults. They felt that increased knowledge in sexual health will make graduates adequately competent to overcome barriers (as they presently experience) when discussing such topics with their future patients. In terms of current training needs, PCPs unanimously agreed that further training at the postgraduate level is important, and they would</p>

improve PCPs competence and confidence discussing and diagnosing sexual health concerns with this age group

Patient Education:
Empowerment and confidence discussing sexual health through patient sexual education

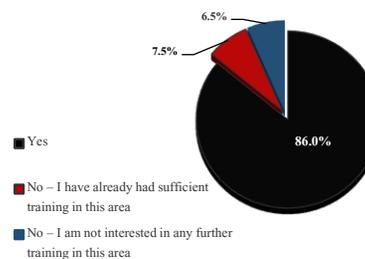
Willingness to learn and improve sexual health communication

“I think once the public is sensitized that doctors will be asking these questions from time to time, they will be more aware and won't think you are minding their business” FPB03.

Training in the form of Continuing Medical Education (CME) workshops in sexual health communication in varied sexual health-related scenarios will be most useful.

95% of PCPs agreed that more sexual health promotion targeting middle-aged and older people is needed n=91.

PCPs Interest in Sex Health Training



Complementary

be interested in participating in such training preferably in the form of continuous professional development courses or lectures. Some PCPs indicated that doctors appreciatively attend workshops as it makes them feel important and they have something else to look forward to than the monotony of the clinic.

PCPs indicated that there is need for population wide sexual education and targeting the middle aged and older age group about their issues and conditions they are more likely to face at this point in their lives. Some ideas included special talks, posters or pamphlets in the waiting room as these will help normalise sexual health within the clinical setting and give patients more confidence to discuss these issues with their doctor. This in turn will increase the populations' overall awareness and the domino effect will be to improve PCPs overall confidence to initiate such discussions with them.

End of Thesis

The gift of my family is incomparable.

You are the foundation of my strength and sustenance.

Thank you for your devotion and for your loyalty, moral support, having faith in me to do this,

I love you unconditionally

Thesis References

- ¹ Country and Lending Groups. World Bank. [Internet].2018 [cited on 2018 July 2]. Available from: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519#High_income
- ² UN. Transforming our world: the 2030 agenda for sustainable development. United Nations A/RES/70/12015. 2015.
- ³ Sustainable Development Solutions Network. Indicators and a monitoring framework for the sustainable development goals launching a data revolution for the SDGs. [Internet]. 2015 [cited on 2017 September 2]. Available from: <http://unsdsn.org/wp-content/uploads/2015/05/FINAL-SDSN-Indicator-Report-WEB.pdf>
- ⁴ Chersich, M. F., Delany-Moretlwe, S., Martin, G., & Rees, H. Advancing STI priorities in the SDG era: priorities for action. *Globalization and Health*, 14, 6. 2018. <http://doi.org/10.1186/s12992-018-0331-3>
- ⁵ United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2017 Revision, custom data acquired via website. [Internet]. 2017 [cited on 2017 August 9]. Available from: <https://esa.un.org/unpd/wpp/>
- ⁶ World Health Statistics. Monitoring health for the SDGs Annex B: Tables of health statistics by country, WHO region and globally. World Health Organisation. [Internet]. 2016 [cited on 2017 August 9]. Available from: http://www.who.int/gho/publications/world_health_statistics/2017/en/
- ⁷ Heidari S. Sexuality and older people: a neglected issue, *Reproductive Health Matters*. 2016; 24:48,1-5.
- ⁸ World Health Organisation (WHO). Sexual and Reproductive Health news. World Health Organisation Europe. [Internet]. 2011 [cited on 2017 July 6]. Available from: <http://www.euro.who.int/en/what-we-do/health-topics/Life-stages/sexual-and-reproductive-health/news/news/2011/06/sexual-health-throughout-life/definition>
- ⁹ Department of Health (UK). Teenage Pregnancy Strategy. [Internet]. 2010 [cited on 2017 August 1]. Available from: https://www.education.gov.uk/consultations/downloadableDocs/4287_Teenage%20pregnancy%20strategy_aw8.pdf
- ¹⁰ National Health Service (NHS UK). National Chlamydia Screening Programme (NCSP) Standards-6th Edition. [Internet]. 2012 [cited on 2017 August 1]. Available from: http://www.chlamydia-screening.nhs.uk/ps/resources/core-requirements/NCSP%20Standards%206th%20Edition_October%202012.pdf
- ¹¹ Department of Health (UK). A framework for Sexual Health Improvement in England. [Internet]. 2013 [cited on 2017 August 1]. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/142592/9287-2900714-TSO-SexualHealthPolicyNW_ACCESSIBLE.pdf
- ¹² Hansen L, et al. Sexual Health. *BMC Women's Health*. 2004; 4 Supplement. 1: S24.
- ¹³ Meston CM. Ageing and sexuality -In: *Successful Ageing*. *Western Journal of Medicine*. 1997; 167:285–290.
- ¹⁴ Sarrel PM. Sexuality and menopause. *Obstetrics and Gynaecology*.1990; 75:265-305.
- ¹⁵ Badeau D. Illness, disability and sex in ageing. *Sexual Dysfunction*. 1995; 13:219-237.
- ¹⁶ Danaei G, Finucane MM, Lu Y, Singh GM, Cowan MJ, Paciorek CJ, et al. National, regional, and global trends in fasting plasma glucose and diabetes prevalence since 1980: Systematic analysis of health examination surveys and epidemiological studies with 370 country-years and 2.7 million participants. *Lancet*. 2011; 378 (9785):31–40.
- ¹⁷ Shaw JE, et al. Global estimates of the prevalence of diabetes for 2010 and 2030. *Diabetes Research and Clinical Practice*. 2010; 87, (1): 4-14
- ¹⁸ Mathers CD, Loncar D. Projections of Global Mortality, and Burden of Disease from 2002 to 2030. *PLoS Medicine*. 2006; 3 (11): e442.
- ¹⁹ Prins, J., Blanker, M.H, Bohnen, A.M., Thomas, S., Bosch J.L.H.R. Prevalence of erectile dysfunction: a systematic review of population-based studies. *International Journal Impotence Research*. 2002; 14: 422–432.

-
- ²⁰ Shabsigh R. Epidemiology of Erectile Dysfunction. In: Male Sexual Function. Current Clinical Urology. Humana Press. [Internet]. 2006 [cited on 2017 September 9]. Available from: https://link.springer.com/chapter/10.1007/978-1-59745-155-0_2
- ²¹ Penson D, Wessells H. Erectile Dysfunction in Diabetic Patients. Diabetes Spectrum. 2004; 17,(4).
- ²² Brecher E. Love, sex, and ageing: A Consumer's Union survey. Boston (Mass): Little, Brown & Company. 1984.
- ²³ The American Society for Aesthetic Plastic Surgery- ASAPS. Complete plastic surgery statistics report 2016. [Internet]. 2016 [cited on 2017 August 31]. Available from: <https://www.plasticsurgery.org/news/plastic-surgery-statistics>
- ²⁴ Pruit E, James Voloshin P. Refreshing your image after 50. Plastic Surgery.com. [Internet]. 2017 [cited on 2017 September 11]. Available from <http://www.plasticsurgery.com/eyebrow-lift/refreshing-your-appearance-after-50-a461.aspx>
- ²⁵ Adams M, et al. Sexuality of older adults and the Internet: from sex education to cybersex. Journal of Sexual and Relationship Therapy. 2003; (18), 3.
- ²⁶ 50 plus club (Friends and activity partners over 50). [Internet]. 2017 [cited on 2017 August 12]. Available from: <https://www.50plus-club.com/friends-and-activity-partners-over-50.php>
- ²⁷ 50 plus dating site. [Internet]. 2017 [cited on 2017 August 12] Available from: <http://www.50plusdatingsite.com/>
- ²⁸ U.S. Census Bureau. "The Older Population". [Internet]. 2010 [cited on 2017 August 12] Available from: <http://www.census.gov/prod/cen2010/briefs/c2010br-09.pdf>
- ²⁹ Kreider, R.M, R.Ellis. "Number, Timing, and Duration of Marriages and Divorces: 2009." Current Population Reports, U.S. Census Bureau. 2011; P70-125.
- ³⁰ Carstensen LL. Social and emotional patterns in adulthood: Support for socio-emotional selectivity theory. Psychology and Ageing. 1992; 7, 331-338.
- ³¹ Mitchell, K. R, et al. Sexual function in Britain: findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). The Lancet. 2013; Vol. 382, Issue 9907, 1817 – 1829
- ³² Gott, C.M. Sexual activity and risk-taking in later life. Health & Social Care Community. 2001; 9:72-8.
- ³³ DeLamater, J. Sexual Expression in Later Life: A Review and Synthesis. Journal of Sexual Research. 2012; Volume: 49:2-3, 125-141
- ³⁴ Von Simson R, Kulasegaram R. Sexual health and the older adult -Trends show that doctors must be more vigilant. Student British Medical Journal. 2012; 20:e688.
- ³⁵ Mercer CH, Tanton C, Prah P, Erens B, Sonnenberg P, Clifton S, Johnson AM. Changes in sexual attitudes and lifestyles in Britain through the life course and over time: findings from the National Surveys of Sexual Attitudes and Lifestyles (Natsal). The Lancet. 2013; 382 (9907), 1781-1794.
- ³⁶ DeLamater J. "Sexual desire in later life". Journal of Sexual Research. 2005; 42:138–49.
- ³⁷ Derogatis LR, Burnett AL. "The epidemiology of sexual dysfunctions". Journal of Sexual Medicine; 2008. 5:289–300.
- ³⁸ Lindau ST, et al. A study of sexuality and health among older adults in the United States. New England Journal of Medicine. 2007; 357(8):762-74.
- ³⁹ Nicolosi A, et al. Sexual behaviour, sexual dysfunctions and related help seeking patterns in middle-aged and elderly Europeans: the global study of sexual attitudes and behaviours. World Journal of Urology. 2006. Vol. 24, Issue 4, pp. 423-428.
- ⁴⁰ Moreira Jr. D, Edson et al. Sexual activity, sexual dysfunction, and associated help-seeking behaviours in middle-aged and older adults in Spain: a population survey. World Journal of Urology. 2005; (6): 422-429
- ⁴¹ Dalrymple J, Booth J, Flowers P, Lorimer K. Psychosocial factors influencing risk-taking in middle-aged for STIs. Sexually Transmitted Infections. [Internet]. 2016 [Published Online First: 2016 July 07]. Available from: doi: 10.1136/sextrans-2016-052588

-
- ⁴² Brown AE, Kirwan PD, Chau C, Khawam J, Gill ON, Delpech VC. Towards elimination of HIV transmission, AIDS, and HIV-related deaths in the UK – 2017 report. Public Health England, London. [Internet]. 2017 [cited on 2017 October 1]. Available from: <https://www.gov.uk/government/publications/hiv-in-the-united-kingdom>
- ⁴³ Skingsley A, Yin Z, Kirwan P, Croxford S, Chau C, Conti S, Presanis A, Nardone A, Were J, Ogaz D, Furegato M, Hibbert M, Aghaizu A, Murphy G, Tosswill J, Hughes G, Anderson J, Gill ON, Delpech VC et al. HIV in the UK – Situation Report 2015: data to end 2014. Public Health England, London. 2015. [Internet]. 2015 [cited on 2017 October 1]. Available from: <https://www.gov.uk/government/publications/hiv-in-the-united-kingdom>
- ⁴⁴ Smith RD, Delpech VC, Brown AE, Rice BD. HIV transmission and high rates of late diagnoses among adults aged 50 years and over. *AIDS*. 2010; 24(13): 2109-15.
- ⁴⁵ Tavošchi, L., Schmid, D., et al. New HIV diagnoses among adults aged 50 years or older in 31 European countries, 2004–15: an analysis of surveillance data. *The Lancet*, HIV, 4; (11): e514 - e521. [Internet] 2017 [cited on 2017 October 1] Available from: DOI: [http://dx.doi.org/10.1016/S2352-3018\(17\)30155-8](http://dx.doi.org/10.1016/S2352-3018(17)30155-8)
- ⁴⁶ Gott, M., et al. General practitioner attitudes to discussing sexual health issues with older people. *Social Science & Medicine*. 2004; 58, 2093–2103.
- ⁴⁷ UNAIDS. The Joint United Nations Programme on HIV/AIDS, Monitoring the Declaration of Commitment on HIV/AIDS: Guidelines on Construction of Core Indicators: 2008 Reporting, UNAIDS/07.12E / JC1318E (English original, April 2007), UNAIDS, Geneva. 2007,144pp. [Internet] 2008 [cited on 2017 October 6] Available from: http://www.aidsportal.org/repos/ungass_core_indicators_manual_08.pdf
- ⁴⁸ Negin J, Martiniuk A, Cumming RG, Naidoo N, Phaswana-Mafuya N, Madurai L, Kowal P. Prevalence of HIV and chronic comorbidities among older adults. *AIDS*. 2012; 26(01), S55–S63. 2012.
- ⁴⁹ Chattu VK. Role of biomedical and behavioural interventions and their evidence in prevention of HIV infection: A literature review. *International Journal of Medicine and Public Health*. 2014; 4 (4):324-330.
- ⁵⁰ Foley, S. Older Adults, and Sexual Health: A review of the Current Literature. *Current Sexual Health Reports*. 2015; 7:70-79.
- ⁵¹ Field, N. et al. Associations between health and sexual lifestyles in Britain: findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *The Lancet*. 2013; 382, (9907): 1830 – 1844.
- ⁵² Henry J., McNab W. Forever Young: A Health Promotion Focus on Sexuality and Ageing. *Gerontology & Geriatrics Education*. 2003; 23 (4), 57-74.
- ⁵³ Taylor, A., Gosney, M.A... Sexuality in older age: essential considerations for health care professionals. *Age Ageing*. 2011; 40:538–43.
- ⁵⁴ The Family Planning Association (FPA) UK. The Middle –aged Spread – Information for Professionals. [Internet] 2010 [cited on 2017 October 6]. Available from: <http://www.fpa.org.uk/middle-age-spread-stis-over-50s/-information-for-professionals>.
- ⁵⁵ Glasier A, et al. “Sexual and reproductive health: a matter of life and death”. *The Lancet: Sexual and Reproductive Health Series – Sexual and Reproductive Health*. 2006; 1, pp. 11-21.
- ⁵⁶ 2018 World Population Review. Trinidad and Tobago Population (2018-06-16). 2018. Retrieved 2018-06-24, from <http://worldpopulationreview.com/>
- ⁵⁷ Central Statistical Office (CSO). Ministry of Planning and Sustainable Development, Trinidad & Tobago. 2018 [Accessed on 2018 August 16]. Adapted from: <http://cso.gov.tt/data/?productID=32-Mid-Year-Estimates-of-Population-by-Age-Group>
- ⁵⁸ World Bank. Country data: Trinidad & Tobago. 2016. Available from: <http://data.worldbank.org/country/trinidad-and-tobago> [Accessed on 2016 August 16].
- ⁵⁹ Organisation for Economic Cooperation and Development (OECD). Country Profile: Trinidad & Tobago. 2016 [Accessed on August 16]. From: <http://www.oecd.org/countries/trinidadandtobago/>
- ⁶⁰ The World Factbook. Washington, DC: Central Intelligence Agency, 2018. [Accessed on: 2018 August 20]. [Available from: <https://www.cia.gov/library/publications/the-world-factbook/index.html>

- ⁶¹ UNDP. Human Development Indices and Indicators: 2018 Statistical Update. Briefing note for countries on the 2018 Statistical Update. 2018 [Accessed on 2018 September 12]. [Available from hdr.undp.org/sites/default/files/Country-Profiles/TTO.pdf] Accessed on July 3. 2018.
- ⁶² Oxford Poverty and Human Development Initiative. "Trinidad and Tobago Country Briefing", Multidimensional Poverty Index Data Bank. OPHI, University of Oxford. [Internet]. 2017 [Accessed on 2018 September 1]. From: www.ophi.org.uk/multidimensional-poverty-index/mpi-country-briefings/.
- ⁶³ Alkire S, Robles G. "Multidimensional Poverty Index 2017: Brief Methodological Note and Results". [Internet]. 2017 [Accessed on 2018 September 1]. From: www.ophi.org.uk/multidimensional-poverty-index/
- ⁶⁴ Alkire S, Santos ME. "Measuring Acute Poverty in the Developing World: Robustness and Scope of the Multidimensional Poverty Index", *World Development* 59, 2014; 251-274. [Internet]. 2014 [Accessed on 2018 September 1]. From: <http://www.ophi.org.uk/wp-content/uploads/ophi-wp-591.pdf>
- ⁶⁵ World Maps. Trinidad & Tobago Caribbean Map. 2016 [Accessed on 2016 March 1]. From: <http://www.worldmap1.com/trinidad-and-tobago-map.asp>
- ⁶⁶ George AA, Richards D. Tourism in Trinidad and Tobago: The Evolving Attitudes and Behaviours and its Implications in an Era of HIV/AIDS Epidemic [Available from: <http://etudescaribeennes.revues.org/5314>]; DOI : 10.4000/etudescaribeennes.5314
- ⁶⁷ King, R.S. Chapter: New Citizens, New Sexualities- Nineteenth century jamaettes; pp 214- 223 in Smith, F.L. Sex and the Citizen: Interrogating the Caribbean. University of Virginia Press. 2011 [Accessed on 2016 August 3]. From <https://books.google.co.uk/books?id=yi2SIDGBfvMC>
- ⁶⁸ Liverpool HU. "Origins of rituals and customs in the Trinidad carnival: African or European". *MIT Press/TDR* 42(3); 1988. DOI: 10.1162/105420498760308427
- ⁶⁹ Weichselbaume D. Sex, romance and the carnivalesque between female tourists and Caribbean men. *Tourism Management*. 2012; 33, 1220e1229.
- ⁷⁰ St. Bernard AL. "Happiest People Alive: An Analysis of Class and Gender in the Trinidad Carnival". Electronic Thesis and Dissertation Repository. 2015; Paper 3368.
- ⁷¹ Forbes-Erickson D. Sexuality in Caribbean Performance: Homoeroticism and the African Body in Trinidad. 2009 [Accessed on 2016 August 2]. From <http://www.academia.edu/14241020/>
- ⁷² Bakhtin M. *Rabelais and his world*. Bloomington: Indiana University Press; 1984, 1968.
- ⁷³ Morris G. "Carnival sex sale", *The Trinidad Guardian*. 2011 March 2 [Accessed on 2016 August 10]. From Website: <http://www.guardian.co.tt>
- ⁷⁴ Orisatoki RO, Oguntibeju OO, Truter EJ. "The contributing role of tourism in the HIV/AIDS epidemic in the Caribbean", *Nigerian Journal of Medicine*, 18(2). 2009 [Accessed on 2016 August 10]. From Website: <http://www.ajol.info/index.php/njm/issue/view/6358> DOI :10.4314/njm.v18i2.45053
- ⁷⁵ Reddock R, Reid S, Smith Cooper T, Nickenig T. Trinidad & Tobago Sexual Culture and HIV Research Brief- from Building Responsive Policy: Gender, Sexual Culture and HIV/AIDS in the Caribbean. 2011 [Accessed on 2016 August 2]. From Website: http://caribbean.unwomen.org/~media/field%20office%20caribbean/attachments/publications/trinidadtobago_brief.pdf
- ⁷⁶ UN Women. Building Responsive Policy: Gender, Sexual Culture and Implications for HIV&AIDS in the Caribbean. Final Country Report, the Trinidad & Tobago Case Study. IGDS, UWI St Augustine; 2011.
- ⁷⁷ Douglas D, Reddock R, Reid S. Gender and sexuality: Behaviour, attitudes and taboos among UWI Students on the St. Augustine Campus, in *Sex, Power & Taboo: Gender and HIV in the Caribbean and Beyond*. Ian Randle Publishers. 2009; 216-238.
- ⁷⁸ Rodriguez-Seijas C. Love the sinner, hate the sin: religious belief does not equate homophobia. *Journal of the Department of Behavioural Sciences; University of the West Indies*. 2016; 3, (1); 2014 [Accessed on 2016 August 3]. From http://journals.sta.uwi.edu/jbs/articles/JDBS_Vol3_No1.pdf

-
- ⁷⁹ Lennox C, Waites M. Human Rights, Sexual Orientation and Gender Identity in The Commonwealth: Struggles for Decriminalisation and Change (London: School of Advanced Study, University of London). 2013; Chapter 16, pp. 429–54.
- ⁸⁰ Gopie R. Tackling homophobia: religion and culture. Trinidad Express Newspaper. 2011 March 27 [Accessed on 2016 August 1]. From http://www.trinidadexpress.com/commentaries/Tackling_homophobia_religion_and_culture-122707054.html
- ⁸¹ Joseph G.. Buggery' and the Commonwealth Caribbean: a comparative examination of the Bahamas, Jamaica, and Trinidad and Tobago. 2014 [Accessed on 2016 August 2]. From Website: http://sas-space.sas.ac.uk/4824/3/16Gaskins_BuggeryCommonwealthCaribbean.pdf
- ⁸² Loutoo J. "Final ruling on gay rights". Trinidad & Tobago Newsday Newspaper. 2018 [Accessed on 2018 September 22]. Retrieved from: <https://newsday.co.tt/2018/07/09/final-ruling-in-gay-rights-case-sept-20/>
- ⁸³ Sexual Offences Act. Laws of Trinidad and Tobago. Ministry of Legal Affairs. Government of Trinidad and Tobago. 2001 [Accessed on September 22]. Retrieved from: <http://www.legalaffairs.gov.tt/>
- ⁸⁴ Howe RK. Abolishing the stigma: the collective struggle and right to sexual self-determination among commercial sex workers in two locations in Trinidad. Journal of the Department of Behavioural Sciences; University of the West Indies. 2014; 3, (1). [Accessed on 2016 August 3]. From http://journals.sta.uwi.edu/jbs/articles/JDBS_Vol3_No1.pdf
- ⁸⁵ Caribbean Community (CARICOM) Secretariat. Prostitution, Sex work and Transactional Sex in the English, Dutch and French speaking Caribbean, a literature review if definitions, laws and research. 2009 [Accessed on 2016 August 1]. From Website: http://www.pancap.org/docs/World_Bank_Studies/Prostitution_Sex_Work_and_Transactional_Sex_Report.pdf
- ⁸⁶ CAFRA. Situation Analysis of Commercial Sex Work in Trinidad and Tobago: Addressing a Vulnerable Group in Trinidad and Tobago. UNAIDS. Trinidad. Cabezas, Amalia Lucía. Economies of Desire: Sex and Tourism in Cuba and the Dominican Republic. Philadelphia: Temple University Press. 2004; 2009.
- ⁸⁷ Campbell P, Campbell A. HIV/AIDS Prevention and Education for Commercial Sex Workers in Jamaica: An Exploratory Study and Need Assessment. National HIV/STI Prevention and Control Programme, Ministry of Health, Jamaica. Kingston; 2001.
- ⁸⁸ Kempadoo K. Freelancers, Temporary Wives and Beach-Boys: Researching Sex Work in the Caribbean. Feminist Review. 2001; 67; 39-62.
- ⁸⁹ Chapkis W. Prostitution, Politics and Policies: An Examination of the Commercial Sex Trade. PhD thesis, The University of the West Indies, St. Augustine, Trinidad; 1995.
- ⁹⁰ Robinson TS. A Legal Analysis of Sex Work in the Anglophone Caribbean. United Nations Development Fund for Women (UNIFEM). Bridgetown, Barbados; 2007.
- ⁹¹ Bombereau G, Allen C. Social and Cultural Factors Driving the HIV Epidemic in the Caribbean: A Literature Review. Caribbean Health Research Council, Trinidad; 2008.
- ⁹² Kempadoo K, Dunn L. Factors that Shape the Initiation of Early Sexual Activity Among Adolescent Boys and Girls: A Study in Three Communities in Jamaica. UNICEF and UNFPA. Kingston; 2001.
- ⁹³ Nelson ED. "Sugar Daddies: "Keeping" A Mistress and the Gentleman's Code." Qualitative Sociology 16, 1: 43-68; 1993.
- ⁹⁴ Pan American Health Organization (PAHO). Health in the Americas, 2017 Edition: Country Volume Trinidad & Tobago Pan American Health Organization. 2017 [Accessed on 2018 September 11]. From <https://www.paho.org/salud-en-las-americas-2017/?p=4311>
- ⁹⁵ UNFPA. Demographics- Trinidad & Tobago. 2015 [Accessed on December 5]. Available From: <http://caribbean.unfpa.org/public/Home>

-
- ⁹⁶ Caribbean Community Secretariat. CARICOM. Heads Adopt Declaration on NCDs. Uniting to Stop the Epidemic of Chronic NCDs. 2007 [Accessed on 2015 January 2]. Available From: http://www.caricom.org/jsp/pressreleases/pres212_07.jsp
- ⁹⁷ World Health Organisation (WHO). Non-communicable Diseases (NCD) Country Profiles, Trinidad & Tobago. 2018 [Accessed on 2018 August 19]. Available From: <http://www.who.int/nmh/publications/ncd-profiles-2018/en/>
- ⁹⁸ World Health Organisation (WHO). Global status report on NCDs – Description of the global burden of NCDs, their risk factors and determinants. 2014 [Accessed on 2018 April 9]. Available From: <http://www.who.int/nmh/publications/ncd-status-report-2014/en/>
- ⁹⁹ Camacho, ME, Reyes-Ortiz CA. Sexual dysfunction in the elderly: age or disease? *International Journal of Impotence Research*. 2005; 17, S52–S56.
- ¹⁰⁰ United Nations General Assembly (UN). High level meeting on Prevention and control of Non-communicable diseases. 2011 [Accessed on 2012 January 2]. Available From: <http://www.un.org/en/ga/ncdmeeting2011/documents.shtml>
- ¹⁰¹ Avery L. What are non-communicable diseases, how do they link with sexual and reproductive health and how do we address them? *The European Magazine for Sexual and Reproductive Health*. 2012;.75 .
- ¹⁰² Lewis RW, Fugl-Meyer KS, Corona G, Hayes RD, Laumann EO, Moreira Jr., ED, Rellini AH, & Segraves T. Definitions/Epidemiology/Risk Factors for Sexual Dysfunction. *The Journal of Sexual Medicine*. 2010; 7: 1598–1607.
- ¹⁰³ Nolen-Hoeksema S. *Abnormal Psychology*. New York McGraw-Hill; 2014. pp. 366–367. ISBN 978-1-259-06072-4.
- ¹⁰⁴ American Psychiatric Association. *Diagnostic and statistical manual of mental disorders: DSM-5*. Washington, D.C: American Psychiatric Association; 2013.
- ¹⁰⁵ Aversa A, Donini LM, Bruzziches R, Lacava R, Mattace Raso F, Sinclair A. Coordinating care aspects related to sexual health in the aging male. *International Journal of Endocrinology*. 2014; (653587).
- ¹⁰⁶ Robertson M. Sexual dysfunction in people with diabetes. *Diabetes Voice*. 2006; 51, 22-25.
- ¹⁰⁷ Marumo K, Murai M. Ageing and erectile dysfunction: The role of ageing and concomitant chronic illness. *International Journal of Urology*. 2001; 8, S50–S57.
- ¹⁰⁸ Johannes CB, Araujo AB, Feldman HA, Derby CA, Kleinman KP, Mckinlay JB. Incidence of Erectile Dysfunction in Men 40 To 69 Years Old: Longitudinal Results from the Massachusetts Male Ageing Study. *Journal of Urology*. 2000; Issue 2. Volume 163:460-463.
- ¹⁰⁹ Kloner RA. Assessment of cardiovascular risk in patients with erectile dysfunction: focus on the diabetic patient. *Endocrine*. 2004; 23: 125–129.
- ¹¹⁰ Rabathaly PA, Chattu VK. Emphasizing the importance of sexual healthcare among middle and old age groups: A high time to re-think? *Journal of Natural Science, Biology & Medicine*, 2018. DOI: 10.4103/jnsbm.JNSBM_128_18
- ¹¹¹ Dharmashankar K, Widlansky ME. Vascular Endothelial Function and Hypertension: Insights and Directions. *Current Hypertension Reports*, 12(6), 448–455. 2010 [Accessed on 2016 August 1]. Available From <http://doi.org/10.1007/s11906-010-0150-2>
- ¹¹² Blumentals WA, et al. Should erectile dysfunction be considered as a marker for acute myocardial infarction? *International Journal Impotence Research*. 2004; 16: 350–353.
- ¹¹³ Ministry of Health Trinidad & Tobago. World Health Day 2013. 2013 [Accessed on 2014 April 4] Available . From: <http://www.health.gov.tt/news/newsitem.aspx?id=417>
- ¹¹⁴ World Health Organisation (WHO). Global report on diabetes. World Health Organization, Geneva. 2016 [Accessed on 2016 August 2]. Available From: <http://www.who.int/diabetes/global-report/en/>
- ¹¹⁵ Wild S, Roglic G, Green A, Sicree R, King H. Global prevalence of diabetes: estimates for the year 2000 and projections for 2030. *Diabetes Care*. 2014; 27(5):1047–1053.
- ¹¹⁶ International Diabetes Federation. *IDF Diabetes Atlas, 8th edition*. Brussels, Belgium: International Diabetes Federation. [Internet] 2017 [Accessed on 2018 September 12]. Available From: <http://www.diabetesatlas.org>

-
- ¹¹⁷ International Diabetes Federation. IDF Diabetes Atlas, 7th edition. Brussels, Belgium: International Diabetes Federation. 2015 [Accessed on 2016 August 1]. From <http://www.diabetesatlas.org>
- ¹¹⁸ Maiorino MI, Bellastella G, Esposito K. Diabetes and sexual dysfunction: current perspectives. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*. 2014; 7, 95–105.
- ¹¹⁹ Seyam RM, Albakry A, Ghobish A, Arif H, Dandash K, Rashwan H. Prevalence of erectile dysfunction and its correlates in Egypt: a community-based study. *International Journal of Impotence Research*. 2003; 15, 237–245.
- ¹²⁰ Feldman HA, Goldstein I, Hatzichristou DG, Krane RJ, McKinlay JB. Impotence and its medical and psychosocial correlates: results of the Massachusetts Male Ageing Study. *Journal of Urology*. 1994; 151(1):54–61.
- ¹²¹ Nicolosi A, Laumann L, et al. Sexual behaviour and sexual dysfunctions after age 40: The global study of sexual attitudes and behaviours. *Urology*. 2004; Volume 64, Issue 5, 991 – 997.
- ¹²² Enzlin P, Mathieu C, Vanderschueren D et al. Diabetes mellitus and female sexuality: a review of 25 years research. *Diabetic Medicine*. 1998; 15: 809-15; 1998.
- ¹²³ Huang PL. A comprehensive definition for metabolic syndrome. *Disease Models & Mechanisms*. 2009; 2(5-6), 231–237.
- ¹²⁴ Tonstad, S.A., Johnston, J., Cardiovascular risks associated with smoking: A review for clinicians. *European Journal of Cardiovascular Prevention & Rehabilitation*. 2006; 13: 507-514.
- ¹²⁵ Lewis RW, Fugl-Meyer KS, Bosch R, Fugl-Meyer AR, Laumann EO, Lizza E, & Martin-Morales A. Epidemiology/Risk Factors of Sexual Dysfunction. *The Journal of Sexual Medicine*. 2004; 1: 35–39.
- ¹²⁶ Costa RM, Peres L. Smoking is Unrelated to Female Sexual Function. *Substance Use & Misuse*. 2015; 50, Issue 2.
- ¹²⁷ Schover LR, Miller SM, Bowen DJ, Croyle RT), Rowland JH . Reduction of psychosexual dysfunction in cancer patients. *Handbook of cancer control and behavioural science: A resource for researchers, practitioners, and policymakers (379-389)*. American Psychological Association. 2009; xxiv, 652.
- ¹²⁸ Schover LR. Sexuality and Fertility after Cancer. *American Association of Haematology*. 2005; 523-527.
- ¹²⁹ Gorbachinsky I, Akpınar H, Assimos DG. Metabolic Syndrome and Urologic Diseases. *Reviews in Urology*. 2010; 12(4), e157–e180.
- ¹³⁰ Fung MM, Bettencout R, Barret-Connor E. Heart disease risk factors predict erectile dysfunction 25 years later: The Rancho Bernardo study. *Journal of American College of Cardiology*. 2004; 43: 1405–1411.
- ¹³¹ Esposito K, Giugliano F, Ciotola M, De Sio M, D'Armiento M, Giugliano D. Obesity and sexual dysfunction, male and female. *International Journal of Impotence Research*. 2008; 20, 358–365.
- ¹³² The Central Intelligence Agency. (2014). Available from https://www.cia.gov/library/publications/the-world-factbook/fields/print_2228.html
- ¹³³ Ministry of Health of Trinidad & Tobago. Overview of the Ministry of Health. 2016 [Accessed on 2016 August 1]. From: <http://www.health.gov.tt/>
- ¹³⁴ Corona G, Rastrelli G, Maseroli E, Forti G. Sexual function of the ageing male. *Best Practice & Research Clinical Endocrinology & Metabolism*. 2013; 27(4), 581-601.
- ¹³⁵ Barrett CM. Auditing organisational capacity to promote the sexual health of older people. *Journal of Applied Psychology*. 2011; 7(1), 31-36.
- ¹³⁶ Orel NA, Stelle C, Watson WK, Bunner BL. No one is immune: a community education partnership addressing HIV/AIDS and older adults. *Journal of Applied Gerontology*. 2010; 29(3), 352-370.
- ¹³⁷ Laumann E, et al. Sexual Dysfunction Among Older Adults: Prevalence and Risk Factors from a Nationally Representative U.S. Probability Sample of Men and Women 57 to 85 Years of Age. *Journal of Sexual Medicine*. 2008.
- ¹³⁸ Nakagawa F, May M, Phillips A. Life expectancy living with HIV: recent estimates and future implications. *Current Opinions in Infectious Diseases*. 2013; 26(1):17–25.
- ¹³⁹ UNAIDS. The gap report- People over 50. 2014 [Accessed on 2016 January 6]. Available From: <http://www.unaids.org/en/resources/campaigns/2014/2014gapreport/gapreport>

-
- ¹⁴⁰ Figueroa P. "Review of HIV in the Caribbean: Significant Progress and Outstanding Challenges". *Current HIV/AIDS Reports*. 2014; 11 (2): 158–167. doi:10.1007/s11904-014-0199-7.
- ¹⁴¹ UNFPA. HIV thematic brief: 2017 September 2 [Accessed on 2018 September 12]. Available From <https://caribbean.unfpa.org/en/news/hiv-thematic-brief>
- ¹⁴² UNAIDS. HIV/AIDS Country Data Trinidad & Tobago. 2017. Available from: <http://www.unaids.org/en/regionscountries/countries/trinidadandtobago>
- ¹⁴³ Poynten IM, Templeton DJ, Grulich AE. Sexually transmissible infections in Ageing HIV populations. *Sexual Health*. 2011; 8(4):508–511.
- ¹⁴⁴ Syme ML. The evolving concept of older adult sexual behaviour and its benefits. *Generations*, 38(1), 35–41; 2014.
- ¹⁴⁵ Drew O, Sherrard J. Sexually transmitted infections in the older woman. *Menopause International*. 2008; 14(3):134–135.
- ¹⁴⁶ Bendavid E, Ford N, Mills EJ. HIV and Africa's elderly: the problems and possibilities. *AIDS*. 26 (Supplement 1): S85–S91; 2012.
- ¹⁴⁷ Mahy M, Autenrieth CS, Stanecki K, Wynd S. Increasing trends in HIV prevalence among people aged 50 years and older: evidence from estimates and survey data. *AIDS (London, England)*. 2014; 28(4), S453–S459 <http://doi.org/10.1097/QAD.0000000000000479>
- ¹⁴⁸ Cahill S, Valadéz R. Growing Older With HIV/AIDS: New Public Health Challenges. *American Journal of Public Health*. 2013; 103(3), e7-e15.
- ¹⁴⁹ Newman J, et al. Older adults accessing HIV care and treatment and adherence in the leDEA Central Africa cohort. *AIDS Research Treatment*. 2012; 725713.
- ¹⁵⁰ Balestre E, et al. Effect of age on immunological response in the first year of antiretroviral therapy in HIV-1-infected adults in West Africa. *AIDS*. 26 (8):951–957; 2012.
- ¹⁵¹ Davis DH, Smith R, Brown A, Rice B, Yin Z, Delpech V. Early diagnosis and treatment of HIV infection: magnitude of benefit on short-term mortality is greatest in older adults. *Age Ageing*. 2013; 42(4):520–526.
- ¹⁵² JP Figueroa. The HIV epidemic in the Caribbean: meeting the challenges of achieving universal access to prevention, treatment and care", *West Indian Medical Journal*, 57(3); 2008.
- ¹⁵³ Ministry of Health. Draft Sexual and Reproductive Health Policy. Government of the Republic of Trinidad & Tobago- Ministry of Health. 2012. [Unpublished].
- ¹⁵⁴ Ministry of Health/United Nations Population Fund (UNDP). Final Report: Assessment of Male Specific Sexual and Reproductive Health Services Provided in the Health Sector. Port of Spain; 2012.
- ¹⁵⁵ Taylor A, Gosney MA. Sexuality in older age: essential considerations for healthcare professionals. *Age Ageing*. 2011; doi:10.1093/ageing/afr049.
- ¹⁵⁶ Curlin FA, Lawrence RE, Chin MH, Lantos JD. Religion, conscience, and controversial clinical practices. *New England Journal of Medicine*. 2007; 356:593-600.
- ¹⁵⁷ Henry Jean, McNab Warren. Forever Young: A Health Promotion Focus on Sexuality and Ageing. *Gerontology & Geriatrics Education*. 2003; Vol. 23(4), pp. 57-74.
- ¹⁵⁸ Gott M, Galena E, Hinchliff S, Elford H. "Opening a Can of Worms": GP and practice nurse barriers to talking about sexual health in primary care. *Journal of Family Practice*. 2004; 21:528-36.
- ¹⁵⁹ Stead ML, Brown JM, Fallowfield L, Selby P. Lack of communication between healthcare professionals and women with ovarian cancer about sexual issues. *British Journal of Cancer*. 2003; 88:666-71.
- ¹⁶⁰ Cheadle MJ. The screening sexual history. Getting to the problem. [Review] *Clinics in Geriatric Medicine*. 7(1):9-13; 1991.
- ¹⁶¹ Hartmann U, Burkart M. Erectile dysfunctions in physician-patient communication: optimized strategies for addressing sexual issues and the benefit of using a patient questionnaire. *Journal of Sexual Medicine*. 4(1):38-46; 2007.
- ¹⁶² Kennedy, J et al. Human sexuality in late life. *International Journal of Mental Health*. 2007; 26 (1) 35-46.

-
- ¹⁶³ Burd ID, Nevadunsky N, Bachmann G. Impact of physician gender on sexual history taking in a multispecialty practice. *Journal of Sexual Medicine*. 2006; 3(2):194-200.
- ¹⁶⁴ Heaphy B. Sexualities, Gender and Ageing, Resources and Social Change. *Current Sociology*. 2007; Vol. 55 no. 2 193-210.
- ¹⁶⁵ Lindau ST, et al. Older women's attitudes, behaviour, and communication about sex and HIV: a community-based study. *Journal of Women's Health*. 2006; 15(6):747-53.
- ¹⁶⁶ Ravitch Riggan. *Reason and Rigor: How Conceptual Frameworks Guide Research*, Thousand Oaks CA: Sage: xiii; 2012.
- ¹⁶⁷ Jabareen Y. Building a conceptual framework: Philosophy, Definitions and Procedure. *International Journal of Qualitative Methods*. 2009; 8(4), 49–62.
- ¹⁶⁸ Launiala A. How much can a KAP survey tell us about people's knowledge, attitudes and practices? Some observations from medical anthropology research on malaria in pregnancy in Malawi. *Anthropology Matters*, 11(1). 2009. Available from http://www.anthropologymatters.com/index.php/anth_matters/article/view/31/53
- ¹⁶⁹ Ratcliffe JW. Analyst biases in KAP surveys: A cross-cultural comparison. *Studies in Family Planning* 7(11), 322-330; 1976.
- ¹⁷⁰ Cleland J. A critique of KAP studies and some suggestions for their improvement. *Studies in Family Planning* 4(2), 42-47; 1973.
- ¹⁷¹ Stone L, Campbell JG. The use and misuse of surveys in international development: An experiment from Nepal. *Human Organization* 43(1), 27-34; 1984.
- ¹⁷² Green CE. Can qualitative research produce reliable quantitative findings? *Field Methods* 13(3), 3-19; 2001.
- ¹⁷³ Giri, P.A., Bangal, V.B., Phalke, D.B. Assessment of attitude component in KAP studies. *North American Journal of Medical Sciences*. 2013; 5(4): 308
- ¹⁷⁴ Raina S. Assessment of knowledge, attitude, and practice in health care delivery. *North American Journal of Medical Sciences*. 2013; 5:249–50.
- ¹⁷⁵ Petty RE, Cacioppo JP. *Attitudes and persuasion-classic and contemporary approaches*. Dubuque, IA: W. C. Brown Co. Publishers; 1981.
- ¹⁷⁶ Yoder PS. Negotiating relevance: Beliefs, knowledge and practice in international health projects. *Medical Anthropology Quarterly*. 1997; 11(2), 131-146.
- ¹⁷⁷ Glover BH. Disorders of sexuality and communication in the elderly. *Comprehensive Therapies*. 1977; 3(6):21-5.
- ¹⁷⁸ Dogan S, Demir B, Eker E, Karim S. Knowledge and attitudes of doctors toward the sexuality of older people in Turkey. *International Psychogeriatrics*. 2008; 20(5):1019-27.
- ¹⁷⁹ Lindau ST, Schumm. A study of sexuality and health among older adults in the United States. *New England Journal of Medicine*. 2007; 357(8):762-74.
- ¹⁸⁰ McAuliffe L., Bauer M., Nay R.. Barriers to the expression of sexuality in the older person. *International Journal of Older People Nursing*. 2007; 2, 1, 69-75(7).
- ¹⁸¹ Robinson J, Molzahn AE. Sexuality and quality of life. *Journal of Gerontological Nursing*. 2007; 33(3):19-27.
- ¹⁸² Price B. Exploring attitudes towards older people's sexuality. [Review] [17 refs] *Nursing Older People*. 21(6):32-8; 2009.
- ¹⁸³ Cheadle MJ. The screening sexual history. Getting to the problem. [Review] *Clinics in Geriatric Medicine*. 7(1):9-13; 1991.
- ¹⁸⁴ Elsevier. *Mosby's Medical Dictionary*, 8th edition. 2009.
- ¹⁸⁵ Nusbaum MR, Hamilton CD. The proactive sexual health history. *American Family Physician*. 2002; 66(9):1705-12.
- ¹⁸⁶ French P. BASHH 2006 National Guidelines--consultations requiring sexual history-taking. *International Journal of Sexually Transmitted Diseases & AIDS*. 2007; 18(1):17-22.
- ¹⁸⁷ Fernandes A, Horn K. Taking a sexual history in Genitourinary medicine. NHS Trust, Royal United Hospital-Bath. 2008.

-
- ¹⁸⁸ CDCA guide to taking a sexual history. [n.d.] [Accessed on 2016 August]. Retrieved from: www.cdc.gov/std/see/HealthCareProviders/SexualHistory.pdf.
- ¹⁸⁹ Ende J, Rockwell S, Glasgow M. The sexual history in general medicine practice. *Internal Medicine*. 1984; 144:558–61.
- ¹⁹⁰ Bickley LS, Szilagyi PG, Bates B. *Bates' pocket guide to physical examination and history taking*, 6th ed., Philadelphia: Lippincott Williams & Wilkins; 2008.
- ¹⁹¹ Tomlinson J. ABC of sexual health: taking a sexual history. *British Medical Journal*. 1998; 5;317(7172):1573-6.
- ¹⁹² Wimberly YH, Hogben M, Moore-Ruffin J, et al. Sexual history-taking among primary care physicians. *Journal of National Medical Association*. 2006; 98(12):1924-9.
- ¹⁹³ William C. A. Sexuality among elder women. *Journal of Women's Health & Gender-Based Medicine*. 2000; (supplement 1): 21-24.
- ¹⁹⁴ Leeper H, et al. A student-designed and student-led sexual-history-taking module for second-year medical students. *Teaching & Learning in Medicine*. 2007; 19(3):293-301.
- ¹⁹⁵ Centre for health and training. [n.d.] [Accessed on 2010 October]. Available from: <http://www.centerforhealthtraining.org/calendar/ce.html>
- ¹⁹⁶ California STD/HIV training centre: A guide to sexual history taking with MSM. [n.d.] [Accessed on 2010 October]. Retrieved from: http://www.stdhivtraining.net/pdf/SS_02_MSM%20Sexual%20History%20Taking.pdf
- ¹⁹⁷ Moira A, Stewart, MA. Effective Physician-Patient Communication and Health Outcomes: A Review. *Canadian Medical Association Journal*. May 1, 1995; 152 (9); 1995.
- ¹⁹⁸ Ong LML, De Haes IJCM, Hoos LAM, Lammes FB. Physician-patient Communication: A Review of the Literature. *Social Science in Medicine*. 1995; Vol. 40, No. 7, pp. 903-918.
- ¹⁹⁹ Ha JF, & Longnecker N. Physician-patient Communication: A Review. *The Ochsner Journal*. 2010; 10(1), 38–43.
- ²⁰⁰ Krupat E, Rosenkranz SL, Carter YM, Barnard K, Putnam SM, Thomas SI. The practice orientations of physicians and patients: the effect of doctor–patient congruence on satisfaction. *Patient Education and Counselling* 39(2000) 49–59; 2000.
- ²⁰¹ Roter DL, Hall JA, Katz NR. Physician-patient Communication: A Descriptive Summary of the Literature. *Patient Education and Counselling*, 12: 99-119; 1988.
- ²⁰² Roter D. The enduring and evolving nature of the patient–physician relationship. *Patient Education and Counselling* 39 (2000) 5–15; 2000.
- ²⁰³ Zandbelt LC, Smets EMA, Oort FJ, Godfried MH, de Haes HCJM. Medical Specialists' Patient-Centered Communication and Patient-Reported Outcomes. *Medical Care*. Volume 45, Number 4; 2007.
- ²⁰⁴ Street Jr. RL, Gordon H, Haidet P. Physicians' communication and perceptions of patients: Is it how they look, how they talk, or is it just the doctor? *Social Science & Medicine*. 2007; 65 586–598.
- ²⁰⁵ Moira A Stewart. Effective Physician-Patient Communication and Health Outcomes: A Review. *Canadian Medical Association Journal*. 1995; 152 (9).
- ²⁰⁶ Politi M, Clark MA, Armstrong G, McGarry KA, Sciamanna CN. Patient–Provider Communication About Sexual Health Among Unmarried Middle-aged and Older Women. *General Internal Medicine*. 2009; 24(4): 511–6. DOI: 10.1007/s11606-009-0930-z.
- ²⁰⁷ Bhaskar R. *A Realist Theory of Science*, 2nd edition. Brighton: Harvester Press. 1978.
- ²⁰⁸ McEvoy P, Richards D. A critical realist rationale for using a combination of quantitative and qualitative methods. *Journal of Research in Nursing*. 2006; 11: 66-78.
- ²⁰⁹ Ackroyd S. Methodology for management and organisation studies: some implications of critical realism. 2004. In: Fleetwood S, Ackroyd S (eds). *Critical Realist Applications in Organisation and Management Studies*. London: Routledge.

-
- ²¹⁰ Olsen W. Dialectical Triangulation and Empirical Research. Paper presented at the 6th IACR Annual Conference, University of Bradford, 2002.
- ²¹¹ Bryman A, Bell E. *Business Research Methods*. Oxford: Oxford University Press; 2003.
- ²¹² Pratschke J. Realistic models? Critical realism and statistical models in the social sciences. *Philosophica* 71:13–38; 2003.
- ²¹³ Mingers J. *The Place of Statistical Modelling in Management Science: Critical Realism and Multimethodology*. Canterbury, Business School, Canterbury. Working Paper Series No. 45; 2003.
- ²¹⁴ Risjord M, Dunbar SB, Moloney MF. A new foundation for methodological triangulation. *Journal of Nursing Scholarship*. 2002; 34:3, 269–275.
- ²¹⁵ Risjord M, Moloney M, Dunbar S. Methodological triangulation in nursing research. *Philosophy of the Social Sciences* 31:1, 40–59; 2001.
- ²¹⁶ Denzin N. *The Research Act*, 3rd edition. Englewood Cliffs: Prentice Hall; 1989.
- ²¹⁷ Blaikie N. A critique of the use of triangulation in social research. *Quality and Quantity* 25: 115–136; 1991.
- ²¹⁸ Rogers, A. Nicolas, G.. Understanding the patterns and process of primary care use: a combined quantitative and qualitative approach. *Sociological Research Online* 3:4. 1998. Available from: www.socresonline.org.uk/socresonline/3/4/5.html.
- ²¹⁹ Gottfredson LS. "Foreword to "intelligence and social policy" Available from: <http://www.udel.edu/educ/gottfredson/reprints/1997specialissue.pdf> *Intelligence* 24 (1): 1–12; 1997. [Accessed on 2015 Aug 6].
- ²²⁰ Peirce CS. *The essential Peirce*. In N. Houser, C. Kloesel, & the Peirce Edition Project. Bloomington, IN: Indiana University Press; 1998.
- ²²¹ Johnson RB, Onwuegbuzie AJ, Turner LA. Toward a definition of mixed-methods research. *Journal of Mixed-methods Research*. 2007; 1(2), 112-133.
- ²²² Bagozzi Richard P, Youjae YI. Multitrait-Multimethod Matrices in Consumer Research. *Journal of Consumer Research*. 1991; 17,4.
- ²²³ Collins KMT, Onwuegbuzie AJ, Sutton IL. A model incorporating the rationale and purpose for conducting mixed-methods research in special education and beyond. *Learning Disabilities: a Contemporary Journal*. 2006; 4(1), 67-100.
- ²²⁴ Creswell JW, Tashakkori A, Jensen KD, Shapley KL. Teaching mixed-methods research: practices, dilemmas, and challenges. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of Mixed-methods in Social and Behavioral Research*. Thousand Oaks, CA.: Sage; 2003.
- ²²⁵ Webb EJ, Campbell DT, Schwartz RD, Sechrest L. *Unobtrusive Measures: Non-reactive Research in the Social Sciences*. Chicago: Rand McNally; 1966.
- ²²⁶ Denzin NK. The logic of naturalistic inquiry. In Denzin, N. K. (Ed.) *Sociological Methods: A sourcebook*. New York: McGraw-Hill; 1978.
- ²²⁷ Jick TD. Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*. 1979; 24, 602-611.
- ²²⁸ Greene JC, Caracelli VJ, Graham WF. Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*. 1989; 11, 255-274.
- ²²⁹ Creswell JW. Mixed-method research: introduction and application. In G. J. Cizek (Ed.), *Handbook of Educational Policy* (pp. 455-472). New York: Academic Press; 1999.
- ²³⁰ Denscombe M. Communities of practice: A research paradigm for the mixed-methods approach. *Journal of Mixed-methods Research*. 2008; 2, 270–283.
- ²³¹ Tashakkori A, Teddlie C (Eds.). *Handbook of Mixed-methods in Social and Behavioral Research*. Thousand Oaks, CA.: Sage; 2003.

-
- ²³² Johnson B, Onwuegbuzie AJ. Mixed-methods research: a research paradigm whose time has come. *Educational Researcher*; 2004, 33(7), 14-26.
- ²³³ Creswell J, Fetters M, Inankova N. Designing a mixed-methods study in primary care. *Annals of Family Medicine*. 2004; 2:7–12.
- ²³⁴ Morgan DL. Practical strategies for combining qualitative and quantitative methods: applications to health research. *Qualitative Health Research*. 1998; 8:362-76.
- ²³⁵ Kutner JS, Steiner JF, Corbett KK, Jahnigen DW, Barton PL. Information needs in terminal illness. *Social Science and Medicine*. 1999; 48:1341–1352.
- ²³⁶ Tashakkori A, Teddlie C. *Mixed-methodology: Combining Qualitative and Quantitative Approaches*. Sage Publications. 1998.
- ²³⁷ Bekhet AK, Zauszniewski JA. Methodological triangulation: An approach to understanding data. *Nurse researcher*; 2012. 2012;20(2):40-3.
- ²³⁸ Alise M, Teddlie C. A continuation of the paradigm wars? Prevalence rates of methodological approaches across the social/behavioural sciences. *Journal of Mixed-methods Research*. 2010; 4(2), 103-126.
- ²³⁹ Bergman MM. On concepts and paradigms in mixed-methods research. *Journal of Mixed-methods Research*. 2010; 4(3), 171-175.
- ²⁴⁰ Bryman A. Barriers to integrating quantitative and qualitative research. *Journal of Mixed-methods Research*. 2007; 1(1), 8-22.
- ²⁴¹ Babones S. Interpretive quantitative methods for the social sciences. *Sociology*, 50(3), 453-469; 2016.
- ²⁴² Yin R. Mixed-methods research: are the methods genuinely integrated or merely parallel. *Research Scholar*. 2006; 13:41–47.
- ²⁴³ Woolley C. Meeting the mixed-methods challenge of integration in a sociological study of structure and agency. *Journal of Mixed-methods Research*. 2009; 3:7–25.
- ²⁴⁴ Kleemann J, Baysal G, Bulley HN, Fürst C. Assessing driving forces of land use and land cover change by a mixed-method approach in north-eastern Ghana, West Africa. *Journal of environmental management*. 2017; 196, 411-442.
- ²⁴⁵ Health.gov.tt, (n.d.). The Ministry of Health - Trinidad and Tobago. [online] Available at: <http://www.health.gov.tt/sitepages/default.aspx?id=6> [Accessed on 2018 Feb 11].
- ²⁴⁶ Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Medical Research Methodology*. 2013; 13:117. doi:10.1186/1471-2288-13-117.
- ²⁴⁷ Kothari CR. *Research Methodology Methods and Techniques* (second revised edition). New Age International; 2008.
- ²⁴⁸ Cargas S, Williams S, Rosenberg M. An approach to teaching critical thinking across disciplines using performance tasks with a common rubric. *Thinking Skills and Creativity*, 26, 24-37; 2017.
- ²⁴⁹ Creswell JW. *Research design: Qualitative & quantitative approaches*. Thousand Oaks, CA: Sage Publications. 1994.
- ²⁵⁰ Poneis S. Using interpretive qualitative case studies for exploratory research in doctoral studies: a case of information systems research in small and medium enterprises. *International Journal of Doctoral Studies*. 2015; 10, 535-550.
- ²⁵¹ Queirós A, Faria D, Almeida F.. Strengths and Limitations of Qualitative and Quantitative Research Methods. *European Journal of Education Studies*. 2017.
- ²⁵² Grimm P. Social desirability bias. *Wiley international encyclopaedia of marketing*; 2010.
- ²⁵³ Kalra G, Subramanyam A, Pinto C. Sexuality: Desire, activity and intimacy in the elderly. *Indian Journal of Psychiatry*. 2011; 53(4), 300–306. <http://doi.org/10.4103/0019-5545.91902>.
- ²⁵⁴ Trompeter S, Bettencourt R, Barrett-Connor E. Sexual Activity and Satisfaction in Healthy Community-dwelling Older Women. *The American Journal of Medicine*. 2012; 125 (1): 37 DOI: 10.1016/j.amjmed.2011.07.036.

-
- ²⁵⁵ Balami J. Are geriatricians guilty of failure to take a sexual history? *Journal of Clinical gerontology and geriatrics*. 2011; Volume 2 (2011), 17e20.
- ²⁵⁶ Macdowall W, Parker R, Nanchahal K, Ford C, Lowbury R, Robinson A, Sherrard J, Wellings K. 'Talking of Sex': Developing and piloting a sexual health communication tool for use in primary care *Patient Education and Counselling*, 81 (3), pp. 332-337; 2010.
- ²⁵⁷ Read S, King M, Watson J. Sexual dysfunction in primary medical care: prevalence, characteristics and detection by the general practitioner. *Journal of Public Health*. 1997; 19(4), 387-391.
- ²⁵⁸ Cornwell B, Schumm LP, Laumann EO, Graber J. Social Networks in the NSHAP Study: rationale, measurement, and preliminary findings. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. 2009; 64(suppl_1), i47-i55.
- ²⁵⁹ Lindau S, Gavrilova N. Sex, health, and years of sexually active life gained due to good health: evidence from two US population based cross sectional surveys of ageing. *British Medical Journal*. 2010; 340:c810 doi:10.1136/bmj.c810.
- ²⁶⁰ Burd ID, Nevadunsky N, Bachmann G. Impact of physician gender on sexual history taking in a multispecialty practice. *Journal of Sexual Medicine*. 2006; 3(2):194-200.
- ²⁶¹ Laumann EO, Glasser DB, Neves RCS, Moreira Jr. ED. (for the GSSAB Investigators' Group). A population-based survey of sexual activity, sexual problems and associated help-seeking behaviour patterns in mature adults in the United States of America. *International Journal of Impotence Research*. 2009; 21, 171–178; doi:10.1038/ijir.2009.7.
- ²⁶² Kingsberg S. Just ask! Talking to patients about sexual function. *Sexuality, Reproduction & Menopause*; 2004, 2(4):199-203.
- ²⁶³ Marwick C. Survey says patients expect little physician help on sex. *JAMA*. 1999; 281:2173-2174.
- ²⁶⁴ Hartmann U, Burkart M. Erectile dysfunctions in physician-patient communication: optimized strategies for addressing sexual issues and the benefit of using a patient questionnaire. *Journal of Sexual Medicine*. 2007; 4(1):38-46.
- ²⁶⁵ Nehra A, Jackson G, Miner M, et al. Diagnosis and Treatment of Erectile Dysfunction for Reduction of Cardiovascular Risk. *Journal of Urology*. 2013; pii: S0022-5347(13)00009-8. doi: 10.1016/j.juro.2012.12.107
- ²⁶⁶ Javaroni V, Neves MF. Erectile dysfunction and hypertension: impact on cardiovascular risk and treatment. *International Journal of Hypertension*. 2012; 627278. doi: 10.1155/2012/627278. Epub 2012 May 9.
- ²⁶⁷ Hirooka N, Lapp DP. Erectile dysfunction as an initial presentation of diabetes discovered by taking sexual history. *BMJ Case Rep*. 2012; pii: bcr1220115289. doi: 10.1136/bcr.12.2011.5289
- ²⁶⁸ The National Centre for Social Research UK: www.natcen.co.uk [Accessed on 2015 October 9].
- ²⁶⁹ Saunders B, Sim J, Kingstone T, et al. Quality & Quantity. 2018; 52: 1893. <https://doi.org/10.1007/s11135-017-0574-8>
- ²⁷⁰ Cheadle MJ. (1991). The screening sexual history. Getting to the problem. [Review] *Clinics in Geriatric Medicine*. 7(1):9-13.
- ²⁷¹ Wimberly YH, Hogben M, Moore-Ruffin J, et al. Sexual history-taking among primary care physicians. *Journal of National Medical Association*. 2006; 98(12):1924-9.
- ²⁷² Lindau ST, et al. A study of sexuality and health among older adults in the United States. *New England Journal of Medicine*. 2007; 357(8):762-74.
- ²⁷³ Karimian Z, Maasoumi R, Javid N, Araban M, Azin SA, Aghayan S, Merghati Khoie E. Reaching consensus: a review on sexual health training modules for professional capacity building. *Health Promotion Perspective*. 2018; 8(1):1-14. doi: 10.15171/hpp.2018.01.
- ²⁷⁴ Green E. "Can Qualitative Research Produce Reliable Quantitative Findings?" (2001): *Field Methods*. 13.1 3-19. [Accessed on 2017 December 8].

-
- ²⁷⁵ Choy LT. The strengths and weaknesses of research methodology: Comparison and complimentary between qualitative and quantitative approaches. *IOSR Journal of Humanities and Social Science*. 2014; 19(4), 99-104.
- ²⁷⁶ Atieno OP. An analysis of the strengths and limitation of qualitative and quantitative research paradigms. *Problems of Education in the 21st Century*, 13(1), 13-38; 2009.
- ²⁷⁷ Thomas RM. *Blending qualitative and quantitative research methods in theses and dissertations*. Corwin Press; 2003.
- ²⁷⁸ Creswell R. *Research design: qualitative, quantitative, and mixed methods approaches*. USA: Sage Publications; 2014.
- ²⁷⁹ Mellenbergh G.J. Chapter 8: Research designs: Testing of research hypotheses. In H.J. Adèr & G.J. Mellenbergh, A. *Devising on Research Methods: A consultant's companion* (pp. 183-209). Huizen, The Netherlands: Johannes van Kessel Publishing; 2008.
- ²⁸⁰ Everitt, B. *The Cambridge Dictionary of Statistics*. Cambridge, UK New York: Cambridge University Press; 1998, ISBN 0521593468.
- ²⁸¹ Moore, D., McCabe, G. *Introduction to the Practice of Statistics* (4 ed.). New York: W.H. Freeman and Co.; 2003, p. 438. ISBN 9780716796572.
- ²⁸² Shuttleworth, M., Wilson, L.T. Type I Error and Type II Error. 2008 [Accessed on 2018 Sep 22, Available from Explorable.com: <https://explorable.com/type-i-error>]
- ²⁸³ Li V, Clayton S, Cheng-Zhang C, Zian Z, Guang-Jen, Mei G. AIDS and sexual practices: Knowledge, attitudes, behaviours, and practices of health professionals in the People's Republic of China. *AIDS Education and Prevention*, 4, 1-5; 1992.
- ²⁸⁴ Albert D, Ward A, Ahluwalia K, Sadowsky D. Addressing tobacco in managed care: a survey of dentists' knowledge, attitudes, and behaviours. *American Journal of public health*.2002; 92(6), 997-1001.
- ²⁸⁵ Wu Z, Detels R, Ji G, Xu C, Rou K, Ding H, Li V. Diffusion of HIV/AIDS knowledge, positive attitudes, and behaviours through training of health professionals in China. *AIDS Education and Prevention*, 14(5), 379-390; 2002.
- ²⁸⁶ Al-Owaish R, Moussa MA, Anwar S, Al-Shoumer H, Sharma P. Knowledge, attitudes, beliefs, and practices about HIV/AIDS in Kuwait. *AIDS education and prevention*, 11(2), 163; 1999.
- ²⁸⁷ Friedman AL, Sheppard H. Exploring the knowledge, attitudes, beliefs, and communication preferences of the general public regarding HPV findings from CDC focus group research and implications for practice. *Health Education & Behaviour*, 34(3), 471-485; 2007.
- ²⁸⁸ Kotronoulas G, Papadopoulou C, Patiraki E. *Support Care Cancer*. 2009; 17: 479. doi:10.1007/s00520-008-0563-5
- ²⁸⁹ Curran V, Lockyer J, Sargeant J, Fleet L. Evaluation of learning outcomes in Web-based continuing medical education. *Academic Medicine*, 81(10), S30-S34; 2006.
- ²⁹⁰ Harris JM, Sklar BM, Amend RW, Novalis-Marine C. The growth, characteristics, and future of online CME. *Journal of Continuing Education in the Health Professions*. 2010; 30(1), 3-10.
- ²⁹¹ Stancic N, Mullen PD, Prokhorov AV, Frankowski RF, McAlister AL. Continuing medical education: what delivery format do physicians prefer? *Journal of Continuing Education in the Health Professions*. 2003; 23(3), 162-167.
- ²⁹² Curran VR, Fleet LJ, Kirby F. A comparative evaluation of the effect of internet-based CME delivery format on satisfaction, knowledge and confidence. *BMC medical education*, 10(1), 1; 2010.
- ²⁹³ Wellings K, Zhihong Z, Krentel A, Barrett G, Glasier A. Attitudes towards long-acting reversible methods of contraception in general practice in the UK. 2007. *Contraception*, 76(3), 208-214.
- ²⁹⁴ Haist SA, Katsufakis PJ, Dillon GF. The evolution of the United States Medical Licensing Examination (USMLE): enhancing assessment of practice-related competencies. *JAMA*, 2013. 310(21), 2245-2246;
- ²⁹⁵ *First aid for the USMLE step 1: A student-to-student guide*. Norwalk, Conn: Appleton & Lange; 1995.
- ²⁹⁶ Matell MS, Jacoby J. Is there an optimal number of alternatives for Likert scale items? *Study. Educational and psychological measurement*, 31, 657-674; 1971.
- ²⁹⁷ Brooke J. SUS-A quick and dirty usability scale. *Usability evaluation in industry*, 189(194), 4-7; 1996.

-
- ²⁹⁸ Zhang L, Helander MG, Drury CG. Identifying factors of comfort and discomfort in sitting. *Human Factors: The Journal of the Human Factors and Ergonomics Society*. 1996; 38(3), 377-389.
- ²⁹⁹ Edwards PJ, Roberts I, Clarke MJ, DiGuiseppe C, Wentz R, Kwan I, Cooper R, Felix LM, Pratap S. Methods to increase response to postal and electronic questionnaires. *Cochrane Database of Systematic Reviews*, Issue 3. Art. 2009; No.: MR000008. DOI: 10.1002/14651858.MR000008.pub4
- ³⁰⁰ Hajian-Tilaki K. Sample size estimation in diagnostic test studies of biomedical informatics. *Journal of Biomedical Information*. 2014; doi: 10.1016/j.jbi.2014.02.013. S1532-0464(14)00050-1. [Epub ahead of print] [PubMed].
- ³⁰¹ Faber J, Fonseca LM. How sample size influences research outcomes. *Dental Press Journal of Orthodontics*. 2014; 19(4), 27–29. <http://doi.org/10.1590/2176-9451.19.4.027-029.ebo>
- ³⁰² Case LD, Ambrosius WT. Power and Sample Size. In: Ambrosius W.T. *Topics in Biostatistics. Methods in Molecular Biology™*, vol 404. Humana Press; 2007.
- ³⁰³ Gliem JA, Gliem RR. Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. *Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education*; 2003.
- ³⁰⁴ Jick, Todd D. "Mixing qualitative and quantitative methods: Triangulation in action." *Administrative science quarterly*. 1979; 24.4: 602-611.
- ³⁰⁵ Read S, King M, Watson J. Sexual dysfunction in primary medical care: prevalence, characteristics and detection by the general practitioner. *Journal of Public Health*. 1997; 19(4), 387-391.
- ³⁰⁶ Laumann, E. O, et al. Sexual Dysfunction among Older Adults: Prevalence and Risk Factors from a Nationally Representative U.S. Probability Sample of Men and Women 57–85 Years of Age. *Journal of Sexual Medicine*, 2008, 5, Issue 10, 2300 – 2311.
- ³⁰⁷ Sarkadi A, Rosenqvist U. Contradictions in the medical encounter: Female sexual dysfunction in primary care contacts. *Family Practice*, 18, 161–166; 2001.
- ³⁰⁸ Andrews Catherine N, Leon Piterman. "Sex and the older man: GP perceptions and management." *Australian family physician*; 36.10 867; 2007.
- ³⁰⁹ Rabathaly PA, Chattu V. An exploratory study to assess Primary care physicians' attitudes towards talking about sexual health with older patients in Trinidad and Tobago. *Journal of Family Medicine and Primary Care* 2019. DOI: 10.4103/jfmprc.jfmprc_325_18
- ³¹⁰ Lindau S.T. et al. "A Study of Sexuality and Health among Older Adults in the United States." *The New England journal of medicine*. 2007; 357.8 762–774. PMC. Web. 3 June 2015.
- ³¹¹ Lindau S.T., GavriloVA. N. "Sex, Health, and Years of Sexually Active Life Gained due to Good Health : Evidence from Two US Population Based Cross Sectional Surveys of Ageing." *BMJ: British Medical Journal*. 2010; 340 c810. PMC.
- ³¹² Gott CM. Sexual activity and risk-taking in later life. *Health & Social Care Community*; 9:72-8; 2001.
- ³¹³ Meston CM. Ageing and sexuality -In: *Successful Ageing. Western Journal of Medicine*. 1997; 167:285–290.
- ³¹⁴ Nicolosi A, et al. Sexual behaviour, sexual dysfunctions and related help seeking patterns in middle-aged and elderly Europeans: the global study of sexual attitudes and behaviours. *World Journal of Urology*. 2006, Volume 24, Issue 4, pp 423-428.
- ³¹⁵ Mercer CH, Tanton C, Prah P, Erens B, Sonnenberg P, Clifton S, Johnson A.M. Changes in sexual attitudes and lifestyles in Britain through the life course and over time: findings from the National Surveys of Sexual Attitudes and Lifestyles (Natsal). *The Lancet*. 2013; 382(9907), 1781-1794.
- ³¹⁶ Galinsky AM, McClintock MK, Waite LJ. Sexuality and physical contact in national social life, health, and ageing project wave 2. *Gerontology Series B Psychological Sciences and Social Sciences*. 2014; 69 Supplemental 2: S83-98. DOI: 10.1093/geronb/gbu072. [Accessed from: PubMed on 2016, January 2]
- ³¹⁷ McCabe, Marita P, et al. Incidence and Prevalence of Sexual Dysfunction in Women and Men: A Consensus Statement from the Fourth International Consultation on Sexual Medicine. *The Journal of Sexual Medicine*. 2015; Volume 13, Issue 2, 144 – 152.

- ³¹⁸ Macdowall W, Parker R, Nanchahal K, Ford C, Lowbury R, Robinson A, Sherrard J, Wellings K. 'Talking of Sex': Developing and piloting a sexual health communication tool for use in primary care *Patient Education and Counselling*, 81 (3), pp. 332-337; 2010.
- ³¹⁹ Creswell JW, Plano Clark VL, Gutmann ML, Hanson WE. Advanced Mixed-methods research designs. *Handbook of Mixed-methods in social and behavioural research*, 209-240; 2003.
- ³²⁰ Gale NK, Heath G, Cameron E, Rashid S, Redwood S. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Medical Research Methodology*. 2013; 13:117. doi:10.1186/1471-2288-13-117.
- ³²¹ Durand MA, Yen R, Barr PJ, Cochran N, Aarts J, Légaré, Elwyn G. Assessing medical student knowledge and attitudes about shared decision-making across the curriculum : protocol for an international online survey and stakeholder analysis. *BMJ Open*. 2017; 7(6), e015945. <http://doi.org/10.1136/bmjopen-2017-015945>.
- ³²² Edwards PJ, Roberts I, Clarke MJ, DiGuseppi C, Reinhard W, Kwan I, Cooper R, Felix LM, Pratap S. Methods to increase response to postal and electronic questionnaire. *Cochrane Methodology Review Group*. 2009. [Accessed Online: 2017 June 19]. Published by John Wiley & Sons, Ltd.
- ³²³ Vangeest J., Johnson T., Welch V. Methodologies for Improving Response Rates in Surveys of Physicians: A Systematic Review. *Evaluation & the health professions*. 2008; 30. 303-21. 10.1177/0163278707307899.
- ³²⁴ Wiebe ER, Kaczorowski J, MacKay J. Why are response rates in clinician surveys declining? *Canadian Family Physician*, 58(4), e225–e228; 2012.
- ³²⁵ Li A, Cronin S, Bai YQ, Walker K, Ammi M, Hogg W, Wodchis WP. Assessing the representativeness of physician and patient respondents to a primary care survey using administrative data. *BMC family practice*. 2008; 19(1), 77.
- ³²⁶ Nardi, P. M. *Doing Survey Research: A Guide to Quantitative Methods*, 2014. Print. Routledge.
- ³²⁷ Krumpal I. Determinants of social desirability bias in sensitive surveys: a literature review. *Quality & Quantity*, 47(4), 2025-2047; 2013.
- ³²⁸ Smith LJ, Mulhall JP, Deveci S, Monaghan N, Reid MC. Sex after seventy: A pilot study of sexual function in older persons. *Journal of Sexual Medicine*. 2007; 4(5), 1247-1253. doi:10.1111/j.1743-6109-2007.00568.
- ³²⁹ Bouman W, Arcelus D. Are psychiatrists guilty of 'ageism' when it comes to taking sexual history? *International Journal of Geriatric Psychiatry*. 2001; 16(1), 27-31. doi:10.1002/1099166(200101)16:1 <27: AID-GPS267>3.0.CO;2-S
- ³³⁰ Sarkadi A, Rosenqvist U. Contradictions in the medical encounter: Female sexual dysfunction in primary care contacts. *Family Practice*. 2001; 18, 161–166.
- ³³¹ Williams E, Donnelly J. Older Americans and AIDS: Some guidelines for prevention. *Social Work*. 2002; 47(2), 105-111. doi:10.1093/sw/47.2.105
- ³³² Bilenchi R, Poggiali S, Pisani C, DePaola M, Sculco R, DePadova L, Fimiani M. Sexually transmitted diseases in elderly people: An epidemiological study in Italy. *Journal of the American Geriatrics Society*. 2009; 57(5), 938-940. doi:10.1111/j.1532-5415.2009.02249.x
- ³³³ Centre for Disease Control (CDC). A guide to taking a sexual history. 2002 [Available from: www.cdc.gov/std/see/HealthCareProviders/SexualHistory.pdf] [Accessed: 2015 October 5]
- ³³⁴ French P. BASHH 2006 National Guidelines--consultations requiring sexual history-taking. *International Journal of Sexually Transmitted Diseases & AIDS*. 2007; 18(1):17-22.
- ³³⁵ Ende J, Rockwell S, Glasgow M. The sexual history in general medicine practice. *Journal of Internal Medicine*. 1984; 144:558–61.
- ³³⁶ Bickley LS, Szilagyi PG, Bates B. *Bates' pocket guide to physical examination and history taking*, 6th ed., Philadelphia: Lippincott Williams & Wilkins; 2008.
- ³³⁷ Campbell EW JR, Lynn CK. The Physical Examination. In: Walker HK, Hall WD, Hurst JW, editors. *Clinical Methods: The History, Physical, and Laboratory Examinations*. 3rd edition. Boston: Butterworths; 1990. Chapter 4. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK361/> [Accessed on 2018, October 5].

-
- ³³⁸ Leeper H, et al. A student-designed and student-led sexual-history-taking module for second-year medical students. *Teaching & Learning in Medicine*. 2007; 19(3):293-301.
- ³³⁹ Gott M, Hinchliff S. Barriers to seeking treatment for sexual problems in primary care: a qualitative study with older people. *Family Practice*. 2003; 20(6):690–5. [PubMed]
- ³⁴⁰ Cheadle MJ. The screening sexual history. Getting to the problem. [Review] *Clinics in Geriatric Medicine*. 1991; 7(1):9-13.
- ³⁴¹ Peck SA. The importance of the sexual health history in the primary care setting. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*. 2001; 30(3), 269-274.
- ³⁴² Merrill JM, Laux LF, Thornby JI. Why doctors have difficulty with sex histories. *Southern Medical Journal*. 1990; 83(6), 613-617.
- ³⁴³ Lewis CE. Sexual practices: are physicians addressing the issues? *J Gen Intern Med*. 1990; 5, (5): S78–S81. [PubMed]
- ³⁴⁴ Nusbaum M, Gamble G, Pathman D. Seeking Medical Help for Sexual Concerns: Frequency, Barriers, and Missed Opportunities. *Journal of Family Practice*. 2002; 51:8
- ³⁴⁵ Green MG, Adelman RD, Friedmann E, Charon R. (Older patient satisfaction with communication during an initial medical encounter. *Social Science and Med*. 1994; 38(9):1279–88. [PubMed]
- ³⁴⁶ Rabathaly PA, Chattu V. Sexual Healthcare Knowledge, Attitudes and Practices amongst primary care physicians in Trinidad and Tobago. *Journal of Family Medicine and Primary Care* 2019. DOI: 10.4103/jfmpc.jfmpc_322_18
- ³⁴⁷ Hartmann U, Burkart M. Erectile dysfunctions in patient–physician communication: Optimized strategies for addressing sexual issues and the benefit of using a patient questionnaire. *Journal of Sexual Medicine*. 2007; 4:38–46.
- ³⁴⁸ Kelley JM, Kraft-Todd G, Schapira L, Kossowsky J, Riess H. "The influence of the patient-clinician relationship on healthcare outcomes: a systematic review and meta-analysis of randomized controlled trials". *PLOS One*. 2014; 9 (4): e94207. doi: 10.1371/journal.pone.0094207. PMC 3981763. PMID 24718585.
- ³⁴⁹ Hughes AK1, Wittmann D. Ageing sexuality: knowledge and perceptions of preparation among U.S. primary care providers. *Journal of Sex and Marital Therapy*. 2015; 41(3):304-13.
- ³⁵⁰ Street, R. L, et al. "Beliefs About Control in the Physician-Patient Relationship: Effect on Communication in Medical Encounters." *Journal of General Internal Medicine*. 2003; 18.8: 609–616. PMC.
- ³⁵¹ Epstein RM, Morse DS, Frankel RM, Fraey L, Anderson K, Beckman HB. Awkward moments in physician-patient communication about HIV risk. *Annals of Internal Medicine*. 1998; 128:435–42. [PubMed].
- ³⁵² Bradford A., Meston C.M. "Senior sexual health: The effects of aging on sexuality." *Innovations in clinical practice: Focus on sexual health*; 2007, 35-45.
- ³⁵³ Hinchcliffe S, Gott M, Galena E. 'I daresay I might find it embarrassing': general practitioners' perspectives on discussing sexual health issues with lesbian and gay patients. *Health Social Care Community*; 2005,13(4):345–53.
- ³⁵⁴ Lewis C.E, Howard F.E. "The sexual history-taking and counselling practices of primary care physicians." *Western Journal of Medicine*. 1987; 147.2: 165.
- ³⁵⁵ Wimberly, Y.H, et al. "Sexual history-taking among primary care physicians." *Journal of the National Medical Association*. 2006; 98.12: 1924.
- ³⁵⁶ Evans, Spencer C et al. "Vignette methodologies for studying clinicians' decision-making: Validity, utility, and application in ICD-11 field studies." *International Journal of Clinical and Health Psychology: IJCHP* vol. 15,2 (2015): 160-170. doi: 10.1016/j.ijchp.2014.12.001
- ³⁵⁷ Collins English Dictionary – Complete and Unabridged. 12th Edition© HarperCollins Publishers; 1991, 1994, 1998, 2000, 2003, 2006, 2007, 2009, 2011, 2014
- ³⁵⁸ The American Heritage®. Medical Dictionary Copyright © 2004 by Houghton Mifflin Company. Published by Houghton Mifflin Company; 2007. All rights reserved
- ³⁵⁹ Webb EJ, Campbell DT, Schwartz R.D, Sechrest L. *Unobtrusive measures: Nonreactive research in the social sciences*. Oxford, England: Rand McNally; 1966.

-
- ³⁶⁰ Hussein A. The use of triangulation in social sciences research: Can qualitative and quantitative methods be combined? *Journal of comparative social work*. 2015; 4(1).
- ³⁶¹ Morgan DL. Practical strategies for combining qualitative and quantitative methods: applications to health research. *Qualitative Health Research*. 1998; 8:362-76.
- ³⁶² O’Cathain A, Nicholl J, Murphy E. Three techniques for integrating data in mixed-methods studies. *British Medical Journal*. 2010; 341:c4587.
- ³⁶³ Erzberger C, Prein G. Triangulation: Validity and empirically based hypothesis construction. *Quality & Quantity*. Kluwer Academic Publishers. 1997; 31:141-154.
- ³⁶⁴ Padilla RV. Qualitative and quantitative models of social situations: the case for triangulation of paradigms. Paper presented on the international Symposium- the Qualitative Research Process and Computing in Bremen. 1992.
- ³⁶⁵ Greene JC., Caracelli VJ, Graham WF. Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*. 1989; 11, 255-274.
- ³⁶⁶ Farmer T, Robinson K, Elliott SJ, Eyles J. Developing and implementing a triangulation protocol for qualitative health research. *Qualitative health research*. 2006; 16(3), 377-394.
- ³⁶⁷ Bekhet AK, Zauszniewski JA. Methodological triangulation: An approach to understanding data. *Nurse researcher*; 2012.
- ³⁶⁸ Moffatt S, White M, Mackintosh J, Howel D. Using quantitative and qualitative data in health services research— what happens when mixed-method findings conflict? *BMC Health Service Research*. 2006; 6:28.
- ³⁶⁹ Fielding NG, Fielding JL. *Linking data*. Sage; 1986.
- ³⁷⁰ Adami MF, Kiger A. The use of triangulation for completeness purposes. *Nurse Researcher (through 2013)*. 2005; 12(4), 19.
- ³⁷¹ Kelle U. Sociological Explanations between Micro and Macro and the Integration of Qualitative and Quantitative Methods. *Forum: Qualitative Social Research*; 2001, v. 2, n. 1, ISSN 1438-5627.
- ³⁷² Peck BM. Age-Related Differences in Doctor-Patient Interaction and Patient Satisfaction. *Current Gerontology and Geriatrics Research*. 2011; 137492. <http://doi.org/10.1155/2011/137492>
- ³⁷³ Goold SD, Lipkin M. The Doctor–Patient Relationship: Challenges, Opportunities, and Strategies. *Journal of General Internal Medicine*. 1999; 14(1), S26–S33. <http://doi.org/10.1046/j.1525-1497.1999.00267.x>
- ³⁷⁴ Murgic L, Hébert PC, Sovic S, Pavlekovic G. Paternalism and autonomy: views of patients and providers in a transitional (post-communist) country. *BMC Medical Ethics*, 16, 65. <http://doi.org/10.1186/s12910-015-0059-z>
- ³⁷⁵ Jo Delaney L. Patient-centred care as an approach to improving health care in Australia *Collegian*. 2018; 25, (1):119 - 123
- ³⁷⁶ Buchanan, D.R. Autonomy, paternalism, and justice: Ethical priorities in public health. *American Journal of Public Health*. 2008; 98: 15–21
- ³⁷⁷ Komrad MS. A defence of medical paternalism: maximising patients' autonomy. *Journal of Medical Ethics*. 1983; 9(1):38-44.
- ³⁷⁸ Kamatenesi-Mugisha M, Oryem-Origa H. Traditional herbal remedies used in the management of sexual impotence and erectile dysfunction in western Uganda. *African Health Sciences*. 2005; 5(1), 40–49.
- ³⁷⁹ Abdillahi HS, Van Staden JJ. South African plants and male reproductive healthcare: Conception and contracepción. *Ethnopharmacology*. 2012; 143(2):475-80. <https://doi.org/10.1016/j.jep.2012.06.047>
- ³⁸⁰ Smith J, Braunack-Mayer A, Wittert G. What do we know about men's help-seeking and health service use? 2006. *Medical Journal of Australia*. <https://doi.org/10.5694/j.1326-5377.2006.tb00124.x>
- ³⁸¹ Galdas PM, Cheater F, Marshall P. Men and health help-seeking behaviour: literature review. *Journal of advanced nursing*. 2005; 49(6), 616-623.
- ³⁸² Daykin, N. and Naidoo, J. (1995) Feminist critiques of health promotion. In: Bunton, R., Nettleton, S. and Burrows, R., eds. (1995) *Towards a Sociology of Health Promotion*. London: Routledge. [Available from: <http://eprints.uwe.ac.uk/3298>]

- ³⁸³ Clegg M, Pye J, Wylie KR. Undergraduate Training in Human Sexuality—Evaluation of the Impact on Medical Doctors’ Practice Ten Years After Graduation. *Sexual Medicine*. 2016; 4(3), e198–e208. <http://doi.org/10.1016/j.esxm>.
- ³⁸⁴ Klaeson K, Hovlin L, Guvå H, Kjellsdotter A. Sexual health in primary health care – a qualitative study of nurses’ experiences. *Journal of Clinical Nursing*. 2017; 26: 1545-1554. doi:10.1111/jocn.13454
- ³⁸⁵ Anne K, Hughes, Daniela Wittmann. Aging Sexuality: Knowledge and Perceptions of Preparation Among U.S. Primary Care Providers, *Journal of Sex & Marital Therapy*. 2015; 41:3, 304-313, DOI: 10.1080/0092623X.2014.889056
- ³⁸⁶ Estcourt C, Theobald N, Evans D, Lomax N, Copas A, David L, Edwards A, Fisher M. British Association for Sexual Health and HIV Undergraduate Working Group. (2009). *International Journal for STDs and AIDS*; 20(5):324-9.
- ³⁸⁷ Foley S, Wittmann D, Balon RA. Multidisciplinary approach to sexual dysfunction in medical education. *Academic Psychiatry*. 2010; 34:386–389.
- ³⁸⁸ Dubin SN, Nolan IT, Streed CG Jr, Greene RE, Radix AE, Morrison SD. Transgender health care: improving medical students’ and residents’ training and awareness. *Advanced Medical Educational Practice*. 2018; 9:377-391.
- ³⁸⁹ Shindel A. W, et al. Sexual Health in Undergraduate Medical Education: Existing and Future Needs and Platforms. *The Journal of Sexual Medicine*. 2016; 13, (7): 1013 - 1026
- ³⁹⁰ Emanuel EJ, Emanuel LL. Four models of the physician-patient relationship. *Jama*. 1992; 267(16), 2221-2226.
- ³⁹¹ Nusbaum MR, Singh AR, Pyles AA. Sexual healthcare needs of women aged 65 and older. *Journal of the American Geriatrics Society*. 2004; 52(1), 117-122.
- ³⁹² Maes CA, Louis M. Nurse practitioners' sexual history-taking practices with adults 50 and older. *The Journal for Nurse Practitioners*. 2011; 7(3), 216-222.
- ³⁹³ Miller KS, Fasula AM, Dittus P, Wiegand RE, Wyckoff SC, McNair L. Barriers and facilitators to maternal communication with preadolescents about age-relevant sexual topics. *AIDS and Behaviour*. 2009; 13(2), 365-374.
- ³⁹⁴ Lim MS, Hocking JS, Hellard ME, Aitken CK. SMS STI: a review of the uses of mobile phone text messaging in sexual health. *International journal of STD & AIDS*. 2008; 19(5), 287-290.
- ³⁹⁵ Hughes, K.A., Whitman, D. Ageing Sexuality: Knowledge and Perceptions of Preparation Among US Primary Care Providers, *Journal of Sex & Marital Therapy*. 2015; 41:3, 304-313, DOI: 10.1080/0092623X.2014.889056
- ³⁹⁶ Dyer, K., Nair, R. Why don't healthcare professionals talk about sex? A systematic review of recent qualitative studies conducted in the United Kingdom. *Journal of Sexual Medicine*. 2013; 10:2658–2670.
- ³⁹⁷ Wiederman. M.W. Volunteer bias in sexuality research using college student participants, *The Journal of Sex Research*. 1999; 36:1, 59-66, DOI: 10.1080/00224499909551968
- ³⁹⁸ Krumpal I. Determinants of social desirability bias in sensitive surveys: A literature review. *Quality & Quantity*. 2013; 47(4), 2025-2047.
- ³⁹⁹ Waite LJ, Laumann EO, Das A, Schumm LP. Sexuality: Measures of partnerships, practices, attitudes, and problems in the National Social Life, Health, and Aging Study. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. 2009; 64(B), i56–i66. doi:10.1093/geronb/gbp038
- ⁴⁰⁰ Thomson A, Morgan S, Tapley A, van Driel M, Henderson K, Oldmeadow C, Scott J. Prevalence and associations of gender concordance in general practice consultations: a cross-sectional analysis. *European Journal for Person Centered Healthcare*. 2015; 3(4), 470-477.
- ⁴⁰¹ Emergent Field: An Introduction to the Special Issue on "Sexuality and Ageing". *Ageing International*. 36(3), 303-312
- ⁴⁰² Dias R, Alarcão V, da Mata S, Leão Miranda F, Simões R, Carreira M, Rocha E, Galvão-Teles A. Erectile dysfunction in primary care: Sexual health inquiry and cardiovascular risk factors among patients with no previous cardiovascular events. *Revista Portuguesa de Saúde Pública*. 2016; Volume 34, Issue 3, pp. 250-258
- ⁴⁰³ Denzin N. *Sociological Methods: A Sourcebook*, NY: McGraw Hill, 2nd ed.; 1978.

-
- ⁴⁰⁴ Altrichter H, Posch P, Somekh B. Teachers investigate their work; An introduction to the methods of action research. London: Routledge; 1996.
- ⁴⁰⁵ Bogdan RC, Biklen SK. Qualitative research in education: An introduction to theory and methods (2nd ed.). Boston, MA: Allyn and Bacon; 1992.
- ⁴⁰⁶ O'Donoghue T, Punch K. Qualitative Educational Research in Action: Doing and Reflecting. London: Routledge; 2003.
- ⁴⁰⁷ Thurmond VA. The point of triangulation. *Journal of Nursing Scholarship*. 2001; 33(3):253- 8. <https://doi.org/10.1111/j.1547-5069.2001.00253.x>
- ⁴⁰⁸ Saha S, Komaromy M, Koepsell TD, Bindman AB. Patient-physician racial concordance and the perceived quality and use of health care. *Archives of Internal Medicine*. 1999; 159(9), 997-1004.
- ⁴⁰⁹ Kirkman L, Kenny A, Fox C. Evidence of absence: Midlife and older adult sexual health policy in Australia. *Sexuality Research and Social Policy*. 2013; 10(2), 135-148.
- ⁴¹⁰ Sadovsky R, Nusbaum M. Reviews: Sexual health inquiry and support is a primary care priority. *Journal of Sexual Medicine*. 2006; 3(1), 3-11.
- ⁴¹¹ Hillman J. Sexual issues and aging within the context of work with older adult patients. *Professional Psychology: Research and Practice*. 2008; 39(3), 290.
- ⁴¹² Warner PH, Rowe T, Whipple B. Shedding light on the sexual history. *AJN The American Journal of Nursing*. 1999; 99(6), 34-41.
- ⁴¹³ Wylie K. A Global Survey of Sexual Behaviours. *Journal of Family Reproductive Health*. 2009; 3(2):39-49.
- ⁴¹⁴ Van Teijlingen E, Hundley V. The importance of pilot studies. *Nursing standard*. 2002; 16(40).
- ⁴¹⁵ Hardacker CT, Rubinstein B, Hotton A, Houlberg M. Adding silver to the rainbow: the development of the nurses' health education about LGBT elders (HEALE) cultural competency curriculum. *Journal of nursing management*. 2014; 22(2), 257-266.
- ⁴¹⁶ Dentato MP, Orwat J, Spira M, Walker B. Examining cohort differences and resilience among the aging LGBT community: Implications for education and practice among an expansively diverse population. *Journal of Human Behaviour in the Social Environment*. 2014; 24(3), 316-328.
- ⁴¹⁷ Ports KA, Barnack-Tavlaris JL, Syme ML, Perera RA, Lafata JE. Sexual Health Discussions with Older Adult Patients During Periodic Health Exams. *The Journal of Sexual Medicine*. 2014; 11(4), 901–908. <http://doi.org/10.1111/jsm.12448>
- ⁴¹⁸ Hogben M, Paffel J, Broussard D, Wolf W, Kenney K, Rubin S, et al. Syphilis partner notification with men who have sex with men: a review and commentary. *Sexually Transmitted Diseases*. 2005; 32(10): S43-7.
- ⁴¹⁹ Entre Nous. The European magazine for Sexual and Reproductive Health; No.77, 2013.[Available from: <http://www.euro.who.int/en/health-topics/Life-stages/sexual-and-reproductive-health/publications/entre-nous/entre-nous/ageing-and-sexual-health.-entre-nous-no.-77,-2013>]. Accessed on June 21,2019).
- ⁴²⁰ Sexuality Education in Europe: A Reference Guide to Policies and Practices. London: IPPF, EN, 2006. [Available from: <http://www.ippfen.org/en/Resources/Publications/Sexuality+Education+in+Europe.htm>] Accessed on June 29, 2019).