

LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



LSHTM Research Online

Ismail, Siti Irma Fadhilah; (2011) Patterns and risk factors with help-seeking for common mental disorders in an urban Malaysian community. PhD thesis, London School of Hygiene & Tropical Medicine. DOI: <https://doi.org/10.17037/PUBS.00878725>

Downloaded from: <https://researchonline.lshtm.ac.uk/id/eprint/878725/>

DOI: <https://doi.org/10.17037/PUBS.00878725>

Usage Guidelines:

Please refer to usage guidelines at <https://researchonline.lshtm.ac.uk/policies.html> or alternatively contact researchonline@lshtm.ac.uk.

Available under license. To note, 3rd party material is not necessarily covered under this license: <http://creativecommons.org/licenses/by-nc-nd/3.0/>

<https://researchonline.lshtm.ac.uk>

Patterns and factors associated with help-seeking behaviour for common mental disorders in an urban Malaysian community

Siti Irma Fadhilah Ismail

London School of Hygiene and Tropical Medicine

PhD in Epidemiology and Public Health

I, Siti Irma Fadhilah Ismail, confirm that the work presented in the thesis is the candidate's own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.



.....

(Siti Irma Fadhilah Ismail)

Patterns and factors associated with help-seeking behaviour for common mental disorders in an urban Malaysian community

Abstract

Common mental disorders (CMD) is used to describe depressive and anxiety disorders. Community prevalence rates worldwide are estimated between 15%-30%. Mental health services however are mainly geared towards those with the more severe forms of mental disorder. Although the prevalence of CMD is high, little is known about help-seeking behaviour for people with CMD in community settings, particularly in developing countries.

The main aim of this research is to investigate the patterns of help-seeking behaviour for CMD in an urban Malaysian community and identifying the determinants of help-seeking behaviour. A two-stage cross-sectional survey was conducted in a Malaysian urban community. Participants aged between 18-45 years, were randomly selected from an electoral register. A total of 614 participants were interviewed and assessed. In addition to background information and self-reported help-seeking behaviour, all participants were presented with a vignette depicting a person with depression and were questioned to assess level of recognition, causal beliefs of depression, recommended help-seeking behaviour and stigmatizing attitude towards sufferers. All were screened with the General Health Questionnaire (GHQ-12) and probable cases of CMD were further interviewed with the diagnostic Mini International Neuropsychiatric Interview (MINI). Stage 2 was conducted to carry out a descriptive study of pathways to care of participants with diagnosed CMD.

Prevalence of CMD was 8.8%, and the risk factors associated with CMD were age, marital status, ethnicity, unemployment, and status as student. Following adjustment, only age remained significantly associated with CMD.

About one third (33.1%) of the study sample had engaged in general help-seeking behaviour in the past 4 weeks. The types of help sought were namely biomedical and complimentary or alternative medicine (CAM). Those who sought help were more likely to be female, older and diagnosed with CMD ($p < 0.05$). Similar factors were found to be significantly associated with seeking biomedical care ($p < 0.05$). In relation to the study's main interest of the associations between help-seeking and CMD, the results indicated that people with CMD were more than 2 times more likely to utilize biomedical care ($p = 0.016$), where help-seeking may not have specifically addressed CMD in particular.

Explanatory Models for CMD were investigated across domains of recognition levels, causal attributions and stigmatising attitudes. Almost all the participants recognized CMD as a problem (96.9%) although only half (51.8%) believed CMD amounted to an illness. Six different causal attributions to CMD were generated namely psychological, physical, employment, relationship, financial and supernatural.

For help-seeking specifically for CMD, the results were analysed for a hypothetical case via responses to vignette, as well as actual cases based on diagnosis. The major factors predicting biomedical help seeking for the vignette were recognition of depression as a problem, as an illness and financial causal attribution. Of the

confirmed CMD cases, only 42.6% have sought any kind of help for their problems and almost none sought specialised mental health care.

Based on the findings, it is evident that a substantial number of people in the community have CMD and they generally utilize biomedical sources at the primary care level more than those not diagnosed with CMD. Although socio-demographic factors were predictive of help-seeking behaviour in general, they were not predictive of help-seeking for CMD. Results indicated Explanatory Models were predictive of help-seeking behaviour specifically for CMD. Help-seeking behaviour generated for CMD were mostly in line with the biomedical approach, followed by self-help and lastly CAM.

Implementing policies to integrate care for CMD into primary care, promoting awareness, recognizing roles of other sectors, supporting self-help and ensuring accessibility to care would ensure people receive the appropriate care they need.

Table of Contents		
Title Page		1
Declaration of work		2
Abstract		3
Acknowledgements		17
Chapter 1: Introduction		18
	1.1 Common Mental Disorders (CMD)	19
	1.1.1 The Public Health Significance of CMD	26
	1.1.1.1 Prevalence of CMD	26
	1.1.1.2 Social determinants	28
	1.1.1.3 Disability	30
	1.1.1.4 Mortality	34
	1.1.1.5 Interface with other health conditions	35
	1.1.1.6 Economic impact	38
	1.1.2 Treatment	40
	1.1.2.1 Evidence for effectiveness in LAMIC	43
	1.1.2.2 Treatment gap	46
	1.1.3 Summary	47
	1.2 Health-related Behaviour: focus on help-seeking	48
	1.2.1 What is help-seeking behaviour?	49
	1.2.2 Types of help-seeking behaviour	52
	1.2.2.1 Sector based (popular, folk, professional)	52
	1.2.2.2 Formal and informal	54
	1.2.2.3 Biomedical and CAM	54
	1.2.2.4 Medical pluralism	57
	1.2.3 Pathways to care	58
	1.2.3.1 The Filter Model to Care for CMD	59
	1.2.4 Factors determining help-seeking	62
	1.2.4.1 The determinants of help-seeking for CMD: a review	62
	1.2.4.2 Search strategy	63
	1.2.4.3 Results	64
	1.2.4.4 Description of eligible studies	65
	1.2.4.5 Assessment of help-seeking behaviour	66

	1.2.4.6 Types of help sought	67
	1.2.4.7 Review of the determinants of help-seeking behaviour	71
	1.2.4.8 Conclusion of review	75
	1.2.5 Summary	75
	1.3 Mental Health in Malaysia	77
	1.3.1 Brief country background and general health indicators	77
	1.3.2 Mental health indicators	79
	1.3.3 The burden of mental disorders	82
	1.3.4 Health care system in Malaysia: medical pluralism	87
	1.3.4.1 Public and private sectors	87
	1.3.4.2 Primary health care	91
	1.3.4.3 Integration and medical pluralism	93
	1.3.5 Health care for mental disorders	95
	1.3.5.1 Early history and provision of services	95
	1.3.5.2 Mental health care in primary care	96
	1.3.5.3 Mental health law	98
	1.3.5.4 Mental health policy	99
	1.3.5.5 Inter-sectoral links	99
	1.3.5.6 Research	100
	1.3.5.7 Medical pluralism in mental health care	100
	1.3.6 Summary	103
	1.4 Rationale of Study and Strategy	104
	1.4.1 Rationale	104
	1.4.2 Strategy	106
	1.4.3 Conceptual framework	107
	1.4.4 Aims and objectives	110
	1.4.5 Hypotheses	110
	Chapter 2: Methodology	
	2.1 Study Design	111
	2.2 Setting	113
	2.2.1 Geography	120

2.2.2	Demographics	121
2.2.3	Housing	123
2.2.4	Health care	124
2.2.5	Public amenities	126
2.2.6	Summary	127
2.3	Sampling	129
2.3.1	Sampling unit and frame	129
2.3.2	Sample size	130
2.3.3	Inclusion and exclusion criteria	133
2.3.4	Sampling procedure	134
2.3.5	Replacement strategy	135
2.4	Measurement	135
2.4.1	Measurement of exposure	136
2.4.1.1	Stage 1	136
2.4.1.1.1	CMD screening: 12 item General Health Questionnaire (GHQ-12)	136
2.4.1.1.2	EMs on vignette: Short Explanatory Inventory (SEMI)	138
2.4.1.1.3	Stigmatising attitude in relation to vignette	141
2.4.1.2	Stage 2	143
2.4.1.2.1	CMD diagnosis: Mini International Neuropsychiatric Interview (MINI)	143
2.4.1.2.2	EMs on own problem: SEMI for those diagnosed with CMD	145
2.4.1.2.3	Pathways to care for those with a diagnosed CMD	145
2.4.2	Measurement of outcomes	145
2.4.2.1	Stage 1	146
2.4.2.1.1	Help-seeking behaviour	146
2.4.2.1.2	Perceived help-seeking	147
2.4.2.2	Stage 2	147
2.4.2.2.1	Actual help-seeking	147
2.4.3	Measurement of other determinants and confounders	147
2.4.3.1	Socio-demographic	147
2.5	Survey Method	148

2.5.1	Translation	148
2.5.1.1	Aim of translation	148
2.5.1.2	Process of translation	149
2.5.2	Piloting	150
2.5.2.1	Methodological changes following piloting	151
2.5.3	Preparation for fieldwork	153
2.5.3.1	Site	153
2.5.3.2	Dates and major milestones	153
2.5.3.3	Local partnership	154
2.5.3.4	Research team	155
2.5.3.5	Training of interviewers	155
2.6	Fieldwork	158
2.6.1	Quality control procedures	158
2.6.2	Interviewing procedure	159
2.6.2.1	Informing the selected participants	159
2.6.2.2	Data collection procedure	159
2.6.3	Challenges during field work	163
2.7	Data Management and Analysis	164
2.7.1	Variables used in the analyses	164
2.7.1.1	Outcome variables	164
2.7.1.1.1	Any help-seeking	165
2.7.1.1.2	Biomedical care utilization	165
2.7.1.1.3	CAM care	165
2.7.1.1.4	Self-help	166
2.7.1.2	Predictive variables	166
2.7.3	Coding the SEMI data	166
2.7.3.1	Strategy for analyses	167
2.7.4	Descriptive statistics	168
2.7.5	Inferential statistics	168
2.8	Ethical Issues	169
2.8.1	Potential risks of the study	169

	2.8.2 Clarification of the study objectives prior to consent	170
	2.8.3 Confidentiality	170
	2.8.4 Provision of care for refusals or withdrawals	171
	2.8.5 Security of interviewers	171
Chapter 3: Results		
	3.0 Introduction	172
	3.1 Participant Analyses	174
	3.1.1 Acquirement of the study sample	174
	3.1.2 Reasons for replacements	176
	3.1.3 Reasons for refusals	178
	3.1.4 Variables related to participation	180
	3.1.5 Characteristics of sample	182
	3.1.6 Summary	185
	3.2 Prevalence and Determinants of CMD	186
	3.2.1 Prevalence of CMD	186
	3.2.2 Risk factors for CMD	188
	3.2.2.1 Univariate analyses of risk factors for CMD	188
	3.2.2.2 Multivariate analyses of CMD risk factors	191
	3.2.3 Summary	191
	3.3 Patterns and Prevalence of Help-seeking Behaviour	191
	3.3.1 Descriptive analyses of help-seeking behaviour	192
	3.3.1.1 Any type of help-seeking behaviour	194
	3.3.1.1.2 Multivariate analyses of any help-seeking behaviour	196
	3.3.1.2 Help-seeking for biomedical care	196
	3.3.1.2.1 Univariate analyses of factors associated with biomedical care	196
	3.3.1.2.2 Multivariate analyses of factors associated with biomedical care	200
	3.3.1.3 Help-seeking for CAM	200
	3.3.1.3.1 Univariate analyses of seeking CAM	200
	3.3.1.3.2 Multivariate analyses of seeking CAM	202
	3.3.1.4 Summary	202
	3.3.2 Perceived help-seeking behaviour for vignette	203

3.3.2.1	Explanatory Models	203
3.3.2.2	Illness conception	206
3.3.2.3	Causal attribution	209
3.3.2.4	Suggested help-seeking behaviour	217
3.3.2.5	Stigmatizing attitudes	220
3.3.2.6	Summary	221
3.3.2.7	Determinants of seeking biomedical care	223
3.3.2.7.1	Univariate analyses of factors associated with seeking biomedical care	223
3.3.2.7.2	Multivariate analyses of factors associated with seeking biomedical care	228
3.3.2.8	Determinants of seeking CAM	230
3.3.2.8.1	Univariate analyses of factors associated with seeking CAM	230
3.3.2.8.2	Multivariate analyses of factors associated with seeking CAM	235
3.3.2.9	Determinants of self-help	236
3.3.2.9.1	Univariate analyses of factors associated with self-help	240
3.3.2.9.2	Multivariate analyses of factors associated with self-help	242
3.3.2.10	Summary	243
3.3.3	Actual help-seeking behaviour for CMD	243
3.3.3.1	Explanatory Models	243
3.3.3.2	Illness conception	245
3.3.3.1.2	Causal models	248
3.3.3.1.3	Perpetuating factors	251
3.3.3.1.4	Main concerns and impact	253
3.3.3.1.5	Summary	253
3.3.3.7	Actual help-seeking behaviour for CMD	260
3.3.3.8	Pathways to care	265
3.3.3.8.1	Points of first contact	267
3.3.3.8.2	Pathways	265
3.3.3.8.3	Roles and influences in help-seeking behaviour	267
3.3.3.8.4	Services received	267
3.3.3.8.5	Summary	268
Chapter 4: Discussion		

4.0 Introduction	270
4.1 Summary of Main Findings	270
4.1.1 Prevalence and risk factors for CMD	272
4.1.2 Prevalence of CMD in Lembah Pantai	273
4.1.3 Risk factors associated with CMD	276
4.2 Explanatory Models for CMD	282
4.2.1 Explanatory models based on vignette	282
4.2.2 Explanatory models of CMD cases	288
4.2.3 Consensus on the EMs of CMD (vignette and actual)	289
4.3 General Help-seeking Behaviour	291
4.4 Help-seeking Behaviour for CMD	293
4.4.1 Help-seeking for the vignette	294
4.4.2 Help-seeking for CMD sample	296
4.4.3 Pathways to care	297
4.5 Triangulation and Hypotheses Testing	298
4.5.1 CMD is associated with increased utilization of biomedical care	298
4.5.2 Negative association between beliefs in supernatural causal model of CMD and utilization of biomedical care	300
4.5.3 Positive association between recognition of CMD and utilization of biomedical care	303
4.5.4 Negative association between stigmatizing attitudes towards sufferers of CMD and utilization of biomedical care	304
4.6 Strengths and Limitations	306
4.6.1 Strengths	306
4.6.2 Limitations	308
4.7 Implications	311
4.8 Policy	312

4.8.1	Integrating care for CMD into primary care	314
4.8.2	Promote awareness of CMD through sectoral and intersectoral initiatives	315
4.8.3	Recognizing roles of CAM	317
4.8.4	Support for self-help initiatives	317
4.8.5	Accessibility and equity of service	318
4.9	Practice	319
4.9.1	Primary prevention	320
4.9.1.1	Mental Health Literacy Programme	320
4.9.1.2	Promoting Wellbeing	322
4.9.1.3	Expanding roles of NGOs in prevention and promotion of CMD	323
4.9.1.4	Targeting younger adults	323
4.9.1.5	Addressing issues on urbanization and its impact on CMD	324
4.9.2	Secondary Prevention	325
4.9.2.1	Strengthening skills of primary care providers	325
4.9.2.2	Screening for early signs and vulnerability to CMD	328
4.9.2.3	Access to essential psychotropic medication in primary care	330
4.9.2.4	Roles of other institutions – the workplace	331
4.9.2.5	Collaboration with CAM service providers	332
4.9.3	Tertiary prevention	333
4.9.3.1	Outreach programme to monitor CMD within the community	333
4.10	Research	334
4.10.1	The role of ethnicity in determining help-seeking	334
4.10.2	Does mental health literacy lead to improved help-seeking?	335
4.10.3	What is the true extent of the CAM sector's contribution in providing services for people with CMD	335
4.10.4	What is the true extent of CMD morbidity in primary care?	336
	4.11 Conclusion	336
References		341
Appendix		

1	Socio-demographic background	374
2	Help-seeking behaviour	375
3	SEMI questionnaire for vignette	376
4	Vignette	377
5	Stigma Questionnaire	378
6	GHQ-12	379
7	MINI	380
8	SEMI for own CMD	386
9	Pathways to care questionnaire	387
10	Introductory letter	388
11	Consent form	389
List of Tables		
1.1	Key diagnostic symptoms for depression	21
1.2	Depressive disorders (ICD-10 Classification)	22
1.3	Key diagnostic symptoms for anxiety disorders	23
1.4	Anxiety disorders (ICD-10 Classification)	24
1.5	The burden of depression: a cost matrix	39
1.6	Review of studies with outcomes on help-seeking for CMD	68
1.7	Top 10 causes of DALYs by sex, Malaysia 2000	83
1.8	Top 10 causes of DALYs by sex in the 15-29 years age group, Malaysia 2000	85
2.1	Distribution of squatters in Kuala Lumpur	124
2.2	Dates and major milestones	154
3.1	Replacement in relation to location	177
3.2	Refusals in relation to location	179
3.3	Details of reason for refusals	180
3.4	Participants' response rate in relation to gender, ethnicity and location	181
3.5	Socio-demographic variables of sample population	182
3.6	Details of screening and diagnoses of CMD	187
3.7	Socio-demographic risk factors for CMD	189
3.8	Help-seeking behaviour among the sample population	192
3.9	General help-seeking in the past 4 weeks	193

3.10	The association of socio-demographics variables and CMD with any help-seeking in the previous 4 weeks	195
3.11	The association of socio-demographic variables and CMD with help-seeking for biomedical care in the previous 4 weeks	198
3.12	The association of socio-demographic variables and CMD	201
3.13	Narratives of illness conception	208
3.14	Summary of perceived causal attribution of CMD vignette	209
3.15a	Narratives of psychological causal attributions of CMD	211
3.15b	Narratives of physical causal attribution of CMD	213
3.15c	Narratives of employment causal attribution of CMD	214
3.15d	Narratives of relationship causal attribution of CMD	215
3.15e	Narratives of financial and supernatural causal attribution of CMD	216
3.16	Summary of perceived help-seeking behaviour in relation to vignette	217
3.17	Narratives of perceived help-seeking behaviour	219
3.18	Attitudes towards person in the vignette	220
3.19	Summary of perceived help-seeking behaviour and EM of CMD	222
3.20	The association of socio-demographic variables and CMD with perceived biomedical service utilization	225
3.21	The association of EM and stigma with perceived biomedical service utilization	226
3.22	Multivariate analyses of factors associated with perceived help-seeking for biomedical care	229
3.23	Socio-demographic variables and perceived CAM service utilization	231
3.24	Association of EMs and stigma with perceived CAM service utilization	233
3.25	Multivariate analyses of factors associated with perceived help-seeking for CAM service utilization	235
3.26	Socio-demographic variables in relation to perceived self-help	237
3.27	The association of EMs and stigma with perceived self-help	238
3.28	Multivariate analysis of factors associated with self-help	241
3.29	Illness conception and recognition of CMD	244
3.30	Onset of CMD	245
3.31	Narratives of causal attribution	247
3.32	Narratives of perpetuating factors	250
3.33	Main concerns of problem	252

3.34	Actual help-seeking behaviour for CMD	254
3.35	Self-help narratives	255
3.36	Characteristics of CMD cases in relation to help-seeking	257
3.37	EM of current mental health in relation to actual help-seeking for CMD	259
3.38	Sequential pathways to biomedical CAM care	261
3.39	The association of socio-demographic variables with type of pathway to care	262
3.40	The association of EMs of current problem(s) with type of pathway to care	264
List of Figures		
1.1	Goldberg and Huxley's Pathways to care model	61
1.2	Determinants of help-seeking behaviour for CMD	109
2.1	Map of Kuala Lumpur and its communities	114
2.2	Data Collection Procedure	161
3.1	Acquiring the study sample	175
3.2	Pathways diagram for those who sought help for their CMD	265

ACKNOWLEDGEMENTS

I would like to take this opportunity to extend my deepest gratitude to the following people , without whom, I would never have completed this process.

To my supervisor, Prof Dr. Vikram Patel, of the London School of Hygiene and Tropical Medicine: Thank you for your patience, clarity and flexibility in guiding and directing me as I ventured to complete this project. I am thankful to have had the opportunity to learn from you.

To my colleagues and friends: I appreciate the kindness, camaraderie and the open-hearted willingness to bounce off ideas and provide assistance. Thank you for the inspiring conversations and the countless mugs of coffee.

To my family: You are invaluable and without whom, I would not have the motivation to progress. I love you all dearly.

Special acknowledgements to the Public Services Department of the Malaysian Government, and the Faculty of Medicine and Health Sciences, University Putra Malaysia, for funding and supporting this research project.

Lastly, to the people of Lembah Pantai: Thank you for allowing us to talk to you and for sharing with us such vital information.

1.0 Introduction

It is generally accepted that mental health plays an integral role in defining overall health. It is the foundation for the well-being and effective functioning of individuals. The importance of the mental health component is stressed in WHO's definition of health as "A state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity". Mental health care covers a wide range of activities related to the promotion of well-being, the prevention of mental disorders, and the treatment and rehabilitation of people affected by mental disorders (WHR, 2001).

The impact of mental disorders on communities is large and manifold. In 1993, the first Global Burden of Disease report was published and demonstrated, for the first time, the large burden due to mental disorder (GBD, 2000). In 2001, mental health was the focus of the WHO's annual World Health Report (WHR, 2001) and effort has been made to increase the awareness of the burden of mental disorders as well as spurring action to address it.

These efforts culminated in the publication of the Lancet series on Global Mental Health in 2007 and the launch of the Movement for Global Mental Health [www.globalmentalhealth.org]. The 2001 WHR focuses on the fact that the mental health sector has been neglected for far too long. The report advocates policies that are urgently needed to ensure effective prevention and treatment strategies to be put in place as well as ensuring stigma and discrimination are seriously tackled. The 2001 WHR was accompanied within the same year by the Institute of Medicine Report (IOM, 2001) on neurological, psychiatric and development disorders in the

developing world. The report discusses the profound economic and personal toll worldwide of mental disorders and highlighted the lack of attention given to these disorders, especially in the developing world. Both reports clearly demonstrated the considerable burden and treatment gap of mental disorders. The enormity of the disease burden is driven by the relatively high prevalence of Common Mental Disorders (CMD) which are the focus of this dissertation, and the often chronic nature of the course and the severity of disability associated with mental illnesses. Low rates of recognition and the unavailability of effective treatment further compounds the problem, particularly in developing countries.

In summary, these reports suggest that mental and behavioural disorders affect one out of four people during their lives (World Health Report, 2001) and worldwide there are more than 450 million people with mental, neurological or behavioural problems. Mental disorders are universal, affecting people irrespective of status, race, age, gender, and geographical location and its impact can be felt at both the individual and societal level.

1.1 Common Mental Disorders (CMD)

The term 'common mental disorder' (CMD) is used to describe disorders characterised by prominent anxiety or depression or both. CMD do not include more severe illnesses such as psychotic and bipolar disorders which although profoundly disabling, are relatively rare. CMD also represent the majority of the burden of mental disorders in communities (Goldberg and Huxley, 1992; Fryers et al, 2003).

There are currently two established systems that classify mental disorders - Chapter V of the International Classification of Disease (ICD-10), produced by the WHO (WHO, 2005), and the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) produced by the American Psychiatric Association. The ICD-10 is the tenth revision of the international diagnostic classification for health conditions. The DSM-IV is the most recent version of the American classification of mental disorders. The APA and WHO have deliberately converged their classificatory systems in recent revisions so that the manuals are now broadly comparable, although some differences remain. A few country specific classification schemes, for example the Chinese Classification of Mental Disorders, exist but such systems are rare. For the purpose of the study, the ICD-10 is utilized for classification of CMD as it has been field tested in international settings and has more flexibility to use in non-clinical settings.

The specific ICD-10 categories that were included as CMD in this study F-32 for depressive episodes, F-40 for phobic anxiety disorder and F-41 for other anxiety disorders.

The key depressive symptoms can be grouped into three clusters: mood, somatic or behavioural and cognitive symptoms (Table 1.1). A useful symptom to distinguish depressive symptoms from normal sadness is the presence of anhedonia. Anhedonia describes lack of enjoyment from usually pleasurable activities.

Table 1.1: Key diagnostic symptoms for depression	
Mood symptoms	Low/depressed mood Anhedonia
Somatic/behavioural symptoms	Sleep disturbance Appetite disturbance/weight loss Tiredness/fatigue Psychomotor retardation Agitation Loss of libido
Cognitive symptoms	Suicidal thoughts Poor concentration Hopelessness Worthlessness

In the ICD-10 classification of depressive disorders, low or sad mood and anhedonia are the core symptoms that are identified as being of key importance. One of these core symptoms must be present for a diagnosis of depressive disorder. A number of other depressive symptoms may then be added, and symptoms of anxiety and nervousness are frequently present. A minimum of 2 weeks is usually set to exclude transient stress-related adjustment disorders. There are 3 broad categories of patients presenting with depressive disorders as presented in Table 1.2.

Disorder	Core symptoms
Depressive episode (F32)	
Mild depressive episode (F32.0)	2 or 3 of the symptoms in Table 1
Moderate depressive episode (F32.1)	4 or more of the symptoms in Table 1 Significant distress or impairment
Severe depressive episode without psychotic symptoms (F32.2)	Several of the symptoms in Table 1 Significant distress or impairment Typically loss of self-esteem, ideas of worthlessness/guilt Suicidal ideation/acts Somatic complaints

The key features of anxiety disorders are marked feelings of fear, worry and apprehension. Many patients will present a number of physical symptoms rather than worry. Panic attacks, which is a sudden surge of fear that comes without reason leaving the sufferer feeling nervous and frightened, may be a feature and hyperventilation may also be present. Symptoms present in anxiety disorders can be grouped as psychological, physical and behavioural as presented in Table 1.3.

Table 1.3: Key diagnostic symptoms for anxiety disorders

Psychological	Anticipatory fear Excessive worry Restlessness, edgy, keyed up Difficulty in concentrating Irritability Tiredness, easily exhausted
Physical	Gastrointestinal: dry mouth, difficulty swallowing; diarrhoea; excess wind; abdominal discomfort Genitourinary: frequent micturition; menstrual pain; erectile dysfunction Neuromuscular: aching muscles, chest pain, headaches, tremor, shaking, tingling sensations Cardiovascular: palpitations; dizziness Respiratory: hyperventilation; difficulty breathing, shortness of breath Other features: sleep disturbance; derealization/depersonalization; sweating
Behavioural	Avoidance of feared situations Rituals to reduce anxiety

A broad distinction in the classification of anxiety disorders is made between anxiety which seems to be present most of the time and anxiety which only occurs in a particular place or is related to an actual event, or in anticipation of an event. OCD and PTSD are also often grouped under the broad category of anxiety disorders as described in Table 1.4 but are not generally considered as part of the concept of CMD.

Table 1.4: Anxiety Disorders (ICD-10 Classification)	
Types of anxiety	Core Symptoms
Phobic anxiety disorders (F40) Agoraphobia (F40.0)	Fears of leaving home Avoidance of situations where escape is difficult/embarrassing Panic disorder frequent feature Depressive and obsessional symptoms common
Social phobias (F40.1)	Fear and avoidance of situations involving potential negative evaluation and scrutiny
Specific (isolated) phobias (F40.2)	Restricted to highly specific situations
Other anxiety disorders (F41)	
Panic disorder (F41.0)	Recurrent unexpected panic attacks Dominant symptoms of palpitations, chest pain, choking sensations, dizziness and depersonalization Secondary fear of dying, losing control
Generalized anxiety disorder or GAD (F41.1)	Generalized and persistent worry about a number of events/activities Not restricted to any particular environmental circumstances
Mixed anxiety and depressive disorder (F41.2)	Symptoms of depression and anxiety both present but neither is clearly predominant

The ICD-10 is an example of a categorical approach to diagnose mental disorders, which classifies mental disorders into types based on criteria sets with defining features. This approach is the traditional method of organizing and transmitting information and has been the fundamental approach used in all systems of medical diagnosis (APA, 2000). The ICD-10 thus implies a discrete system with absolute boundaries dividing one disorder from the next. In applying this system, researchers and clinicians are able to diagnose and interpret conditions and disorders that are distinct from normal functioning and distinguish one mental disorder to another.

However, if we consider the fundamental defining features of mental disorders, there is difficulty in identifying qualitative distinction from normal functioning. A dimensional approach would argue that CMD can be best defined as transition points on a continuum of psychological or mental functioning (Zachar and Kendler, 2007), those that lie on the low or high end of the continuum can be considered legitimate cases. For example, depression can be detected from an early onset of problems with little significant impairment to everyday living and then ranges to problems that are debilitating with serious functional consequences.

The question of whether mental disorders are discrete clinical conditions which can be categorized based on relatively arbitrary distinctions along dimensions of functioning has been a long-standing argument but it is important to note that in practice, and also for the purpose of this study, there is greater use for the categorical system. This is in part due to the need to render complex information into simplified, succinct formats appropriate for clinical use (Widiger and Coker, 2003). Clinical decisions, for example whether to medicate, hospitalize, refer, etc are often made on the basis of categorical distinctions of case-noncase and it is the same approach applied for this study. It is also beneficial in terms of public health, where categories are often required to monitor the quality and impact of services, to facilitate communication between different countries, carry out research projects (Goldberg and Goodyear, 2005). The epidemiologic surveillance of the health of the population at large, health promotion, disease prevention, and access to and evaluation of services (Last & Wallace, 1992) also require the form of succinct and exact information flow provided by categorical systems.

The decision to not use a categorical approach within CMD (as opposed to for CMD), where I decided to mix depression and anxiety, is mainly due to the debate about the validity of a categorical distinction between depression and anxiety presented by Goldberg and Goodyer (2005). They argued that symptoms of common disorders tend to fall into two major groups which may be described as depressive and anxious symptoms. These overlapping symptoms correlated with one another and studies consistently show this across different populations (Clark and Watson, 1991; Watson et al., 1995). Studies also show that comorbidity among depressive and anxiety disorders is high, ranging from 30% to 60% (Kessler et al., 1994; Beekman et al., 2000; Angst, 1996; de Graaf et al., 2002). Studies also suggest that depressive and anxiety disorders share common risk factors and that similar interventions are effective (Brown et al., 1996; Beekman et al., 2000). Given the close relationship and the overlapping symptoms between both disorders, it is recognized that employing both categorical (to diagnose) and dimensional (combining depression and anxiety into CMD) approach is acceptable in studying two of the most burdensome disorder in our society.

1.1.1 The Public Health Significance of CMD

1.1.1.1 Prevalence of CMD

The prevalence of mental health disorders is defined as the number of people with a disorder that are present in the general population. This is usually expressed as a certain number per thousand people or a percentage (Gerstman, 2003). Figures are typically estimated by large-scale surveys of self-reported symptoms up to the time of assessment. Different criteria or threshold of severity or case-ness have sometimes been used.

Although there is no published data for CMD in Malaysia, population surveys from individual LAMIC are available. A recent survey from Lebanon conducted among nationally representative adults reported that 17% were diagnosed with a disorder, the most common being CMD (Karam et al, 2006). A similar study conducted in Iran to determine the mental health status of the adult population reported 23% prevalence rate of mental disorders with depression and anxiety related problems as the most common symptoms (Noorbala et al, 2004) and community prevalence rate for CMD in the South East Asia Region (SEAR) is estimated to be at 5-10% (WHO, 2007).

Prevalence rates of CMD in England from a survey of adults living in private household estimates the prevalence at 16.5% (Singleton et al, 2001). Other community studies in high income countries (HIC) estimate the CMD rate of between 15% and 30% (Goldberg & Huxley, 1992; Meltzer et. al., 1995). In summary, these studies indicate a wide variation in prevalence rates which may, in part reflect methodological factors such as different assessment tools that define caseness (Goldberg and Huxley, 1992), and in part reflect a true difference in prevalence. Social factors are major determinants of mental disorders and these factors do vary considerably across societies (Patel, 2007).

In relation to cross-national comparison of prevalence rate, the WHO established the World Mental Health initiative (WMH) in 1998 so that such comparison can be made possible. The WMH surveys (WMHS) are coordinated surveys on mental disorders and have been implemented in 28 developing and developed countries. A recent WMHS which concentrated on CMD (Wang et al, 2007) was conducted in 17

countries which included 7 LAMIC (Nigeria, China, Colombia, South Africa, Ukraine, Lebanon and Mexico) and 10 high-income countries (Belgium, France, Germany, Italy, Israel, Japan, Netherlands, New Zealand, Spain and USA). All diagnoses in this study were made with CIDI organic exclusion rules which ascertained that the reported symptoms were not due to a physical problem or the use of medication. The average prevalence for CMD in LAMIC for those aged 44 years and below were about 20% and 22.1% in HIC.

Overall, the WHO predicts that one in three people will be affected by CMD in their lifetime (WHR, 2001) and many people suffer from more than one mental disorder at a given time. Community surveys in many countries, including the WMHS have shown that the most common form of mental disorder comprises comorbid symptoms of anxiety and depression, often accompanied by somatic complaints (Goldberg & Huxley, 1992; Meltzer et al, 1995). Thus, most of the burden of mental disorders in the population is attributable to depressive and anxiety disorders or a combination of both (Fryers et al, 2003) and about 25% of all attendees in primary care settings suffer from these mental disorders (WHO, 2001).

1.1.1.2 Social determinants

CMD affects sections of society differently and large scale studies have drawn attention to the variation of rates in terms of urban and rural residence, social classes, gender and other social conditions. In recent years, major epidemiological surveys have been conducted in developed countries such as the UK, the US, Australia and the Netherlands. A systematic review of the surveys on the prevalence rates of CMD by

Fryers and colleagues (2003) found the rate to be significantly more frequent in socially disadvantaged groups. Nine studies were assessed; four from the UK (Annual Health Surveys of England, National Psychiatric Morbidity Survey of Great Britain-household sample, Health and Life-style Survey and the British Household Panel Survey), two from the US (USA National Co-morbidity Study and USA Epidemiologic Catchment Area Program) and the remainder from Australia (Australian National Survey), Canada (Edmonton Survey of Psychiatric Disorders) and the Netherlands (Netherlands Mental Health Survey and Incidence Studies). Prevalence rates were higher in social groups exhibiting less education, unemployment and lower income or material assets.

The distribution of CMD in LAMIC also shows similar risk factors in relation to adverse social conditions. An analysis of mental disorders in LAMIC countries by Patel (2007) found that the main determinants of CMD are poverty, low education, social exclusion, gender disadvantage, conflict and disasters.

Recent LAMIC studies show similar results on the distribution of CMD. The Lebanese Evaluation of the Burden of Ailments and Needs of the Nation study (Karam et al., 2008) found that female gender, being separated, divorced or widowed and exposure to war increased the likelihood of developing CMD. A study from Iran (Noorbala et al., 2004) found that prevalence was associated with increasing age, was higher among those married, widowed, divorced, unemployed and retirees.

The World Bank conducted nationally representative surveys on mental health in five developing countries (Bosnia and Herzegovina, Indonesia, Mexico, India and Tonga)

and reported that individuals who are older, being female, separated, divorced or widowed, and having poor physical health were more likely to have CMD (Das et al, 2008).

Thus, all these studies generally show that women and people living in adverse circumstances with limited resources face the highest burden of vulnerability to common mental disorders

1.1.1.3 Disability

Current disability

The Global Burden of Disease (GBD) study launched by the WHO in 1993 was aimed to assess the burden of diseases using a common, comparable, metric. The DALY is a health metric that extends the concept of potential years of life lost due to premature death to include equivalent years of healthy life lost by virtue of individuals being in states of poor health or disability (Murray, 1996). Thus, the DALY combines in one measure the time lived with disability and the time lost due to premature mortality, combining both mortality and morbidity. One DALY can be thought of as one lost year of healthy life and the burden of disease as a measurement of the gap between current health status and an ideal situation where everyone lives into old age free of disease and disability (WHO, 2007).

Prior to the GBD, mortality alone was used as measurement to inform priority setting for health research, policy implementation and planning; in this context, mental disorders were not ranked on the top ten list of public health significance. Based on

the use of DALYs, however, mental disorders were identified as a leading cause of burden of disease.

Mental disorders overall account for nearly 12% of the global burden of disease. It is estimated that five of the ten leading causes of disability are mental disorders (Lopez et al., 2003) and the burden is greatest in young adults, the most productive section of the population. Globally, neuropsychiatric illnesses are considered the most important cause of disability within the non-communicable disease category (WHO, 2002), and a similar trend have been observed in low income countries (GBD, 2006). Of the neuropsychiatric illnesses, unipolar depressive disorder is the leading contributor followed by alcohol use disorders and schizophrenia.

Depression was found to be of high burden due to the combination of a high prevalence rate, high impact on functioning, chronicity and relapsing course, and early age of onset (Ustun et al., 2004). Traditionally, depression is considered as an acute illness and lasting approximately 6 to 9 months from time of onset to full recovery. Most cases will improve although a significant minority will go on to develop a chronic depressive illness. Depression is the second cause of DALYs in the age range category 15-44 years for both sexes combined. In WHO's depression study for the year 2000 (Ustun et al., 2004), an increase in the proportion in the global burden of disease was reported for both developed and developing countries. Results from the same study also found that apart from Africa, unipolar depressive disorders is one of the top 5 leading causes of DALYs in every other region in the world.

Although anxiety disorders are often viewed as milder than most other psychiatric disorders, its prevalence and chronicity mean they have a marked impact on social and economic functioning and a significant public health impact in terms of DALYs. GAD is associated with high rates of disability, both due to the high prevalence and the chronic course of anxiety disorders; an estimated 80% of patients with generalized anxiety disorder will still have the disorder 3 years later.

In addition to the burden of CMD, sub-threshold cases, ie. Individuals who do not fulfil the criteria of a disorder but still have symptoms, may exceed the burden of illness than that associated with the disorder itself (Goldberg & Huxley, 1992).

Projected disability

It is believed that the attribution of non-communicable diseases to the global burden of disease will increase in the years to come. As the main contributor to this disease category, neuropsychiatric illnesses are also projected to increase in attribution and ranking. A study on projections of burden of disease by Mathers and Loncar (2006) for 2030 provides a comprehensive report using similar methods in the 1990 GBD study but based on updated population. Unipolar depressive disorder is projected to move up places in ranking from fourth place in 2002 to the second leading cause of DALYs in 2030. By 2030, unipolar depressive disorders will be one of the three leading causes of DALY's across all income country levels.

In the coming decades, developing countries are likely to see a disproportionately large increase in the burden attributable to mental disorders (WHO, 2002). As rates of infectious diseases and infant mortality rates decreases, growing numbers of people

will reach the age of vulnerability to mental disorders. And as life expectancies increase, we can expect to see the number of older people suffering from mental disorders to also increase. Aggravated with poor mental health facilities characteristic in most developing countries, it is only inevitable that there will be significant increases of burden attributable to mental disorders.

Some authors have noted that we can expect the global burden of mental disorders to increase along with socio-economic growth, ecological as well as environmental changes. Rapid urbanization is often accompanied by displacement, overcrowding, poverty, pollution and disruption to familial and societal structures, all of which are risk factors for mental disorders (Desjarlais et al., 1995). Continued pattern of global warming suggests further disruption caused by natural disasters creating climate refugees. In addition, an increasing number of people all over the world are exposed to trauma via war, armed conflicts and civil unrest leading to displacement and homelessness as well as poverty, which are all known risks associated with CMD. People exposed to violence are also more likely to suffer from post-traumatic disorder and depression,(WHR, 2001). These developments will play a significant role on the public health implications of CMD.

1.1.1.4 Mortality

Although rare, suicide is one of the tragic outcomes of depression. About 40% of individuals who commit suicide are also clinically depressed. Suicide is a major public health problem with a global mortality rate of 16 per 100, 000. These figures do not include para-suicide or suicide attempts which may be up to 20 times more frequent than completed suicides (WHR, 2001). Traditionally, suicide rates have been highest among elderly men but evidence suggests that rates among young people have been increasing to the extent that it is now among the three leading causes of death among those aged 15-44 years for both sexes (Lopez et. al., 2003). Within 45 years, the proportion of suicides occurring in the 5-45 age group has increased from 40% in 1950 to 55% in 2000 (WHO, 2002) and this upward trend is expected to continue, representing immense loss to communities of their most productive members. An updated burden of disease study provides further evidence of this increasing health problem with self-inflicted injury estimated to increase in rank from 17 in 2002 to the 14th leading cause of DALYs by the year 2030 (Mathers and Loncar, 2007). Effective intervention has been identified and there is compelling evidence indicating that prevention and treatment of depression can reduce suicide rates (WHO, 2002).

1.1.1.5 Interface with other health conditions

The recent Lancet series on global mental health has reviewed the interface between mental health and physical health (Prince et al, 2007). This review concludes that the linkages are so diverse and bi-directional, that there is 'no health without mental health'. In this section, we briefly consider the specific association of CMD with other public health concerns.

Prevalence levels for postnatal depression range between 19.8% to 28% in studies conducted in South Asia (Patel et al, 2002; Chandran et al, 2002; Rahman et al, 2003). Research suggests that malnourished children have a higher risk than non-malnourished children of having a depressed mother (Patel et al, 2002; Chandran et al, 2002; Rahman et al, 2003). A recent study in developing countries found a relation between high maternal CMD and poor child nutritional status in Asia (Harpham et al, 2005) providing support to the importance of maternal mental health as a component of child nutrition programmes.

Ickovics et al (2001) found that depressive symptoms among women with HIV are associated with disease progression. In terms of treatment management, most programmes require patients to adhere to long-term therapy with multiple drugs which may have negative side effects. Studies have found that mental disorders are significant impediment to adherence to antiretroviral therapy (Hinkin et al, 2002; Ammassari et al, 2004). Adherence issues are also salient in managing diseases such tuberculosis (highly related to HIV), malaria and other diseases that involves treatment plans that require important component of adherence.

Evidence from population based systematic review reports associations between CMD and coronary heart disease (Kuper et al, 2002). Another systematic review linking depression and depressive symptoms with coronary disease outcomes (Frasure-Smith and Lesperance, 2005) was conducted on publications between the years 2001-2003. The review found consistent support of depression as a risk factor for the development of as well as the worsening of coronary heart disease.

Major depression occurs in one in four patients with type I and type II diabetes (Anderson et al., 2001) and several studies have demonstrated that individuals with diabetes experienced up to threefold incidence of depression compared to those without diabetes. Studeis from LAMIC also yields similar associations between diabetes and depression (Khamseh et al., 2007).

Many studies in developed countries show a relationship between gynaecological systems and CMD. A systematic review on the association between mental disorders and gynaecological morbidity was conducted (Latthe et al, 2006) found 122 studies of the association between mental disorders and gynaecological morbidity. A study by Patel et al. (2005) adds further evidence to the link between CMD and gynaecological complaints. The South Asian study was conducted among a representative sample of women from the community and the results indicated that high CMD and somatoform disorder symptom scores were associated with vaginal discharge. Another study from a developing country was conducted in Nigeria with the aim of assessing psychiatric morbidity among women attending a gynaecology clinic (Abioudun et al, 1992). Psychiatric morbidity was at 35%, the most common diagnoses being depression and

anxiety and significantly associated with a history of induced abortion, complaints of menstrual abnormalities and chronic pelvic pain, a similar pattern found in literature related to developed countries.

Natural disasters and emergencies cause death, physical harm, destruction of infrastructure as well as causing deep emotional impact on the exposed population. One of the main problems resulting from these occurrences are mental disorders and it is estimated that prevalence rates for CMD including post-traumatic-stress disorder (PTSD) are expected to increase by about 5-10% (WHO, 2007). A study on the December 2004 Tsunami affected areas found a 12-month prevalence rate for CMD at 20% which is expected to reduce over the years to 15

A recent study on the relationship between multiple pains and mental disorders was conducted based on results of the WMHS which obtained data from 18 surveys carried out in 17 countries in the Americas, Europe, the Middle East, Asia and the South Pacific. Results indicated that the presence of multiple pain conditions was strongly and comparably associated with CMD (Gureje et al., 2007). The study also provides the first general population data that addresses the relationship between chronic pain and CMD in both developed and developing countries; chronic pain and CMD are commonly associated across diverse cultural settings.

1.1.1.6 Economic impact

The most obvious economic impact is that of direct treatment cost for CMD. The overall cost of mental health problems in developed countries is estimated to be between 3% to 4% of the GNP (WHO, 2003). The estimated economic burden of depression alone in the U.K. amounts to £3.4 billion, and between \$30-\$40 billion in the U.S. (Kind & Sorensen, 1993; Rice and Miller, 1995) with an estimated 200 million days lost from work each year. Comparative estimates of treatment costs from developing countries are not easily available (WHO, 2007) but these costs are probably substantial. An example of Chile indicates that based on local prevalence and treatment costs, estimate of direct treatment for CMD is nearly \$74 million, which amounts to half the mental health budget of the entire country (Araya et al., 2001).

The burden of CMD can be quantified in monetary terms and economic as well as social perspectives. Depression for example imposes a range of costs across several spectrums that effects individuals at the personal and societal level (Dawson and Tylee, 2001) as presented in Table 1.5. First, there are a range of direct and indirect costs associated with treatment and care mentioned at the beginning of this section. Next, loss of productivity resulting from work disability and impaired work performance also contribute to the overall economic cost. Finally, there are further costs related to the loss of productive time of caregivers which cannot be quantified due to it not having any monetary value (WHO, 2006),

Table 1.5: The burden of depression: a cost matrix

		A	B	C
		Care costs	Productivity costs	Other costs
1	Depressed individuals	Treatment and service fees/payments	Work disability and lost of earnings	Anguish/suffering, treatment side effects, suicide
2	Family and friends	Informal care-giving	Time off work	Carer burden
3	Employers	Contributions to treatment and care	Reduced productivity	N/A
4	Society	Provision of mental health and general medical care (taxation/insurance)	Reduced productivity	Loss of lives, untreated depression (unmet need)

From Depression: social and economic timebomb (Dawson and Tylee, 2001)

In considering the relationship between CMD and workplace related issues, apart from the substantial loss of productivity, other effects can be summarised into several workplace consequences; absenteeism, work performance, staff attitude and behaviour, and relationships at work (Harnois and Gabriel, 2000). Absenteeism indicates an increase in overall sickness absence, poor health which includes depression, stress and burnout, and poor physical health. Work performance is affected as documented in reduction in productivity and output, increase in error rates as well as accidents at work, poor decision making and deterioration in planning and control of work. Staff attitude and behaviour shows loss of motivation and

commitment and increasingly long hours but for diminishing returns and high labour turnover. Relationships at work are usually tense with high levels of conflicts among co-workers, poor relationships with clients and increasing disciplinary problems.

1.1.2 Treatment

Effective treatment of CMD should be judged primarily on the efficacy of its clinical management of cases. Treatment can be categorized into pharmacological and other somatic treatments, psychological, and psychosocial types of intervention. The World Health Report (2001) presented evidence for the effectiveness of various treatments for various disorders. For depression, it is reported that it can be effectively treated by antidepressant medications. Psychotherapy is also as effective as antidepressants in mild to moderate depression

Pharmacological

Depression is often a chronic disorder and relapse is common, at least 50% after one episode, increasing to 90% after three episodes (Falloon and Fadden, 1995). The relapse rate of depression is found to be effectively reduced by use of long-term maintenance antidepressants. Anxious and depressive symptoms usually go hand in hand, and drugs effective in the treatment of depression are also effective in the treatment of anxiety (Brown et al., 1996; Beekman et al., 2000).

New antidepressant drugs are effective treatments for severe depressive episodes, with fewer unwanted effects and greater patient acceptance, but their availability

remains limited in many developing countries (WHO, 2001). Altogether, about two-thirds of patients will be better within 8 weeks of receiving antidepressants.

Psychological treatments

Specific psychological treatments are as effective as medication for depression and anxiety of mild and moderate severity. Three main strategies have been studied: activity scheduling, cognitive restructuring, and interpersonal skills training (WHO, 2001).

The Ward study which was conducted in London and Manchester compared cognitive behavioural therapy (CBT), counselling and treatment as usual by the general practitioner (GP) for patients with anxiety and depression. Both CBT and counselling were more effective than usual treatment at 4 months, but no differences were found at a year. Another study by Chilvers (2001), found generic counselling to be as effective as antidepressant medication at 12 months for the treatment of major depression in primary care.

In practice, drug treatments are usually given with at least some supportive psychotherapy; indeed, the most effective treatment of CMD involves a targeted combination approach – general medical intervention for specific medical conditions; antidepressants for sleep, appetite, agitation and retardation; cognitive restructuring for unrealistic thinking and negative thoughts; activity scheduling for lack of constructive or pleasurable activities; interpersonal skills training for enhancing self-management, sense of mastery and improved social interaction. A US study which looked at use of CBT by GPs along with drug treatment found that at 1 month, up to

40% reported that psychological recommendations were utilised and this was associated with better adherence to the recommended drug treatment (Robinson et al., 1995).

In more recent developments of evidence of effective psychological treatments, we can refer to the National Institute of Clinical Excellence (NICE) guidelines to the treatment of depression in primary and secondary care (NICE, 2007). The guideline draws evidence from the best current and available treatment of depression, and it underlines several key priorities of treatment, one of them being utilization of psychological treatments for depression. Short-term psychological treatment in both mild and moderate depression is recommended, specifically problem-solving therapy, brief CBT and counselling. For patients presented with severe depression as well as those with treatment-resistant depression, a combination of antidepressants and individual CBT should be considered.

A clinical guideline for depression in Malaysia was developed (CPG, 2007) between the Ministry of Health, The Malaysian Psychiatric Association and the Academy of Medicine of Malaysia. Developed for management of major depressive disorders in adults, within the primary or secondary care setting, the guideline provided evidence for psychological treatment and follows similar review approach as the NICE guidelines, with similar findings in reference to psychological treatment. Recommendations of psychological treatment for major depression of mild severity were supportive therapy, problem-solving therapy, counselling and CBT. For both mild and severe depression, the psychological intervention of choice was CBT. Evidence for the efficacy of brief psycho-dynamic psychotherapy was presented for

patients with complex comorbidities. While a combined treatment of antidepressants and CBT was recommended for patients who are treatment resistant.

The efficacy of CBT for anxiety among adults has been supported as a consistent and empirically validated form of psychological treatment for GAD in the Consensus Statement on Generalized Anxiety Disorder from the International Consensus Group on Depression and Anxiety (Ballenger, 2001). Research demonstrates that it is more effective than no treatment and non-specific psychological methods for GAD, and the benefits are comparable to those reported in studies of antidepressant drugs. The NICE clinical guideline for the management of anxiety for adults in primary, secondary and community care (NICE, 2007) recommends the use of psychological interventions, specifically CBT. Evidence for the efficacy of CBT includes treatment for both panic disorders and GAD.

1.1.2.1 Evidence for effectiveness in LAMIC

Most evidence for the effectiveness of interventions to treat and prevent mental disorders are derived from studies in high-income countries. The Lancet series on global mental health has systematically reviewed the evidence for the treatment of CMD in LAMIC (Patel et al, 2007). The Disease Control Priorities Project estimated the cost-effectiveness of treatments for depression and panic disorders (Hyman et al, 2006). Based on some of the studies reviewed, I now consider the consensus on the effective treatment of CMD for LAMIC.

In a randomised controlled trial, in Chile, adult female primary-care patients with major depression were allocated stepped care or usual care. Stepped care was a 3-month, multicomponent intervention led by a non-medical health worker, which included a psychoeducational group intervention, structured and systematic follow-up, and drug treatment for patients with severe depression. Results indicated that despite few resources and marked deprivation, women with major depression responded well to a structured, stepped-care treatment programme (Araya et al., 2003).

In a study on the efficacy of treatment of CMD, a randomised, placebo-controlled trial (double-blind for the antidepressant group) among general outpatient clinics in two district hospitals in Goa, India was conducted (Patel et al., 2003). Adults were randomly assigned to antidepressant (fluoxetine), placebo, or psychological treatment. Results from the study indicated that psychiatric outcome was significantly better with antidepressant compared to placebo, and antidepressants were significantly more cost effective than placebo in the short term and long term treatment. Psychological treatment however was not more effective than placebo for any outcome during either period. Implication of the results is that affordable antidepressants should be the treatment of choice for CMD in general health-care settings in India.

Another study that looked at the effectiveness of treatment for CMD via counselling by minimally trained community counselors, in Pakistan was conducted (Ali et al., 2003). Women with CMD, were randomly assigned to intervention or control groups, results indicated significant reduction of CMD levels. The results imply that counselling, even by minimally trained counsellors was successful in reducing levels of depression and anxiety.

Recent trials conducted following the Lancet series on the effectiveness of intervention in LAMIC includes another trial conducted in Chile, which investigated effectiveness of a multicomponent intervention with usual care to treat postnatal depression in low-income mothers in primary-care clinics (Rojas et al., 2007). The multicomponent intervention involved a psychoeducational group, treatment adherence support, and pharmacotherapy if needed. Usual care included all services normally available in the clinics; including antidepressant drugs, brief psychotherapeutic interventions, medical consultations, or external referral for specialty treatment. Results showed that significant improvement among women in multicomponent group.

Rahman and colleagues (2008) conducted a study on the effects of psychological intervention on perinatal depression. Women in their third trimester were randomly allocated to either an intervention group (primary health workers were trained to deliver the psychological intervention) or control group (untrained health workers made an equal number of visits to the depressed mothers). The primary outcomes were infant weight and height at 6 months and 12 months, and secondary outcome was maternal depression. Maternal depression rates were significantly lower in the intervention group at 6 and twelve months.

Based on the above trial results, we can safely say that there is strong evidence that both pharmacological and psychological interventions are effective to treat CMD in LAMIC.

1.1.2.2 Treatment gap

In the previous sections, I have described the evidence base showing that CMD is not only a highly prevalent condition but they are also highly disabling. There is also strong evidence that demonstrates the effectiveness of a variety of treatment approaches. However only a minority of individuals with CMD receive any kind of treatment whether it is in the specialized mental health care system or in the general health care system (Bland et al., 1988, Goldberg and Huxley, 2005).

The treatment gap represents the absolute difference between the prevalence of a disorder and the treated proportion of individuals affected by the disorder. In other words, the treatment gap is the percentage of individuals who require care but do not receive any treatment. A recent WHO report (Kohn et al, 2003) found that the gap is universally large although there are variations across regions. The report found that more than 50% of those affected with CMD did not receive care. Much of the evidence, however, was derived from high income countries. Thus, the regional data on treatment gap rates for depression are available only for the Americas (56.9%) and the European Regions of WHO (45.4%).

A 10-year review of community based models in the health outcomes of people with mental disorders in LAMIC was conducted by Wiley (2007). The interventions reviewed from 14 countries showed that community based mental health services can provide effective treatments and that costs can be saved by implementing community models of care.

More recently, a WHO report (WHO, 2008) which was developed jointly with the World Organization of Family Doctors (WONCA) presented a justification of providing mental health services in primary care. One of the key messages of the report is that integrating mental health services into primary care is the most viable way of closing the treatment gap as well as ensuring that people with mental health problems receive the care they need.

1.1.3 Summary

It is evident that there is high prevalence of CMD in the community with varied social determinants. Disability associated with CMD was found to be high and the economic and social burden significant. Research indicates future projection is that of increasing prevalence globally. Recent development in the treatment of CMD indicate ample evidence of the effectiveness and efficacy of psychotropic and psychological treatment, which can successfully conducted in LAMIC where resource and funds are limited. However, treatment gap for CMD is universally large, much more so in LAMIC and developing countries. Recommendations and planning of up-scaling treatment is made more difficult to limited mental health data in LAMIC, indicating the need for more active research.

As CMD is detected more within communities and among primary care attenders, primary care health providers are more likely to continue to manage them in their practise. This magnifies the need for primary care professionals to move from merely providing a gatekeeper function for secondary care specialist services which does not benefit CMD. As recommended, mental health care for CMD be made available

through general health and community mental health services. In addition, social interventions and basic psychological support interventions should be made available in the community.

1.2 Health-Related Behaviour: focus on help-seeking

Health related behaviours are amongst the most important elements in ensuring well-being. Diseases that were once incurable such as cholera and dengue, can now be easily controlled or prevented by addressing specific behavioural practices. Unsurprisingly, health related behaviour has become an important component of public health. Behavioural factors play a role in each of the 10 leading causes of death (GBD, 2001). The most common behavioural contributors to disability in 2001 included the use of alcohol, tobacco, motor vehicles, diet and activity patterns, sexual behaviour, use of illicit drugs. The social and economic costs related to these behaviours can all be greatly reduced by changes in individuals' behaviours.

There has been a rising interest in preventing disability and death through changes in health related behaviour, particularly in changes in lifestyle and participation in screening programmes. Both public health workers and researchers continue to attempt to understand the nature and causes of the different health related behaviours across a wide field of studies. In the broadest sense, health behaviour refers to actions of individuals, groups, and or organizations, as well as the determinants, correlates and consequences of these actions. It is similar to the definition of health behaviour proposed by David Gochman which includes not only observable, overt actions but mental processes and emotional states that can be reported or measured. Gochman

defined health behaviour as “those personal attributes such as beliefs, expectations, motives, values, perceptions and other cognitive elements; personality characteristics, including affective and emotional states and traits; and overt behaviour patterns, actions, and habits that relate to health maintenance, to health restoration, and to health improvement”.

Illness behaviour is a specific type of health-related behaviour, which ranges from any form of search to define ill health to seeking remedy from different sources. It includes any activity undertaken by individuals who perceive themselves to be ill and discovering a suitable intervention. Gochman’s concept of illness behaviour was further categorised by Kasl and Cobb (1966) into three distinct categories; *preventive behaviour* which involves any activity undertaken by individuals who believe themselves to be healthy for the purpose of preventing or detecting illness; *illness behaviour* which is any activity undertaken by individuals who perceive themselves to be ill for the purpose of defining their state of health and discovering a suitable remedy; and *sick-role behaviour* which involves any activity undertaken by those who consider themselves ill for the purpose of getting better.

1.2.1 What is help-seeking behaviour?

What do individuals do when they are ill? Does illness behaviour entail seeking professional care and do individuals act rationally when they suspect that something is wrong by: identifying the problem, assessing whether or not to seek help, obtain information and regimen and adhere to treatment until well?

Help-seeking is a highly adaptive behaviour that has a positive ongoing impact on an individual across the lifespan (Lee, 1999); thus it has received much interest across a wide variety of disciplines. There are few theories in the area of help-seeking behaviour and those that have been applied tend to be descriptive rather than explanatory, or have a macro-level focus on social and economic factors that affect access to services (Pescosolido and Boyer, 1999). Several theories were developed to explain why some individuals are more likely to seek medical treatment, the most basic ones namely: the theory of reasoned action (Fishbein & Ajzen, 1975), the theory of planned behaviour (Ajzen, 1988), and the health belief model (Becker and Maiman, 1975; Janz and Becker, 1984).

The theory of reasoned action assumes that most socially relevant behaviours are under volitional control and that a person's intention to carry out a specific behaviour is both the immediate determinant and the best predictor of that behaviour. Intention to conduct a particular behaviour is influenced by social norms, and attitudes towards the action, including both positive and negative beliefs and evaluations of the outcome of the intended behaviour.

The theory of planned behaviour is an extension of the theory of reasoned action by addressing the fact that behaviour may not always be under volitional control and there is an impact of past behaviour on current behaviour. Under this theory, behavioural control (perceived ease or difficulty of performing the behaviour) is assumed to have direct influence on intention. One of the main critiques of these two theories is that they are mainly dependent on rational processes and do not allow for

the impacts of emotions or religious beliefs on behaviour, which may be especially relevant to stigmatised illnesses (Mullen et al, 1987).

The health belief model similarly views behaviour change as a result of rational appraisal, though this time through the assessment of the balance between the benefits and barriers of a particular behaviour. The model relates mainly to the cognitive factors predisposing a person to a health behaviour and the belief in the individual's self-efficacy to the health behaviour, thereby incorporating the need to feel competent before performing a particular action or behaviour. One of the main criticisms of this theory is that it does not explain the factors that reinforce behaviour (Mullen et al, 1987). Important determinants of health behaviour such as social influences and unconscious motivations are not included in this model.

The common themes of all three theories imply that the help-seeking process begins with the awareness of symptoms and appraisal of having a problem that may require intervention. This awareness and problem-solving appraisal must then be able to be articulated or expressed in ways that can be understood by others and which the potential help-seeker feels comfortable expressing. Sources of help must be available and accessible. Finally, the help-seeker must be willing and able to disclose their inner state to the source.

Help-seeking behaviour ranges from seeking formal and informal medical help, talking to family and friends, self-medication, exercising and so forth. But it is also about behaviour of actively seeking help from other people. It is about communicating with other people to obtain help in terms of understanding, seeking

advice, information, treatment and general support in response to a problem or distressing experience. Because it is a form of coping that relies on other people, it is therefore often based on social factors such as relationships and interpersonal skills. The interplay between social factors and coping is described by Pescosolido in her social organization theory strategy (1999). The theory asserts that an event or sickness triggers a coping process that is embedded within a structured system of social relations. Coping therefore is negotiated at the micro level and is constrained by the social structure.

Help-seeking is one of the numerous ways of coping with adversity and distress and is considered as one of the 'approach' styles of coping. Approach coping styles are where a problem is acknowledged and actively addressed in some way or another. These are in general considered to be effective coping strategies (Frydenberg and Lewis, 1993) and, as with any type of human behaviour, many cognitive, social and psychological factors interplay in determining the type of behaviour expressed.

1.2.2 Types of help-seeking behaviour

1.2.2.1 Sector based (popular, folk, professional)

As previously mentioned, help can be sought from varied and diverse sources, thus when people feel unwell, there are various health care options that they can access. Kleinman (1978) suggested that in looking at any complex society, one can identify three overlapping and interconnected sectors of health care that people will access: the popular sector, the folk sector and the professional sector.

The popular sector includes all the therapeutic options that people utilize, without payment and without consulting any folk healers or medical practitioners. Among these options is self-treatment or self-medication, advice or help given from any lay person, self-help groups and support organizations or consultation with another lay person who has special experience of a particular disease.

The folk sector, which is especially large in non-industrialized societies, is a system where certain individuals specialize in a form of healing that are either sacred or secular or a mixture of both. Folk medicine includes all forms of complementary and traditional care and is often used concurrently with bio-medicine. Complementary medicine includes a large number of practices and systems of health care from a variety of cultural sources. Folk healers are not part of the official medical system and tend to play an intermediary role between the popular and professional sectors (ibid). The WHO reports that most of the population of most developing countries regularly use traditional medicine in the form of traditional practitioners and birth attendants. This situation is especially true in countries where reliable access to biomedical services is limited.

The professional sector comprises of organized and legal healing professions or what is sometimes referred to as orthodox medicine, as practiced by medical doctors and by their allied health professionals, such as physical therapists, psychologists and registered nurses. Other terms that are used are mainstream medicine, Western medicine and bio-medicine.

1.2.2.2 Formal and informal

Another way of looking at the health sector is by the different levels of formality; formal and informal. Informal help-seeking is from non-professional relationships or informal social relationships such as friends and family. Formal help-seeking is from professional sources of help. This includes people who have a recognized role and appropriate training in providing treatment, help or advice. Thus, it encapsulates both health and non-health related professionals such as doctors, counsellors, teachers, youth workers, appointed religious leaders or advisors and so forth.

1.2.2.3 Biomedical and CAM

Biomedical science, also known as health sciences is the application of scientific knowledge into a physical environment. There are basically two approaches to biomedical science: (i) the study and research of food that we eat; (ii) the study of health related issues to understand how humans function, and the application of that knowledge to improve health and to prevent and cure diseases (WHO, 2000). The second approach is appropriate with efforts in understanding help-seeking behaviour. Examples of biomedical care is the use of formal science or the use of natural science to solve a health problem. Simply put, biomedical care is what we know as conventional (allopathic) Western practices which includes medicine, nutrition, nursing, occupational therapy, pharmacy, psychology, counselling and many other conventional western therapy. Public health has traditionally relied on conventional medicine in preventing and treating diseases (WHO, 2000).

In contrast, Complementary and alternative medicine (CAM) can be defined as modalities employed in place of, or in conjunction to biomedical therapies (WHO, 2000). CAM modalities includes acupuncture, aromatherapy, Ayurveda, bio-feedback, chiropractic medicine, herbalism, homeopathy, hypnosis, massage therapy, Qi gong, Tai Chi, traditional Chinese medicine, yoga, spiritual or faith healing and so forth. CAM is widely supported among mainstream health practitioners as reflected in the increased integration of CAM services in primary care services. This integration is due to the fact that the CAM concept is supportive of complementary practise as an adjunct to standard medical practise (BMA, 1993).

It is widely acknowledged that the use of CAM is widespread and increasing. National surveys indicate that more than 40% of the American public use CAM (Eisenberg et al, 1998) and that CAM are used by people who are better educated, have higher income and poor health (Astin, 1998). As a term, it is more inclusive and includes the overlap between folk and popular health sectors. Recently the term was defined and utilized by the British Medical Association and large scale population studies on CAM is slowly becoming more available. The term also avoids judgemental labels that implies CAM approaches as un-scientific, un-professional, or unproven.

Much of what constitutes CAM is related to the roots of a community's traditions and beliefs; thus the healer is able to forge a closer social or physical understanding of the presented illness. CAM practitioners are perceived to be more accessible, have fewer procedures prior to consultation and spend more time in consultation. In fact, the

therapeutic benefit of lengthy consultations by CAM practitioners may actually be the reason why people are increasingly turning to this form of treatment (Madge, 1998).

Another characteristic of CAM is the underlying principle of the person-centred rather than disease centred treatment approach (IMR, 1999). Associated with this are elements of natural process which the body and spirit undergo. Thus therapy will generally combine socially sanctioned medicines with psychological and spiritual intervention. This goes well for communities that place as much value of spiritual and religious revival with adherence to regular health checks and compliance to medication regime, in their effort to maintain a healthy life.

CAM is becoming increasingly mainstream with about half of the population of industrialised countries using its services (Bodeker, 2001) and the growth of consumer demand and availability of services will continue. This highlights issues on the need of a regulatory system. Many countries, especially in Asia, have addressed this issue by integrating CAM into national health care (Bodeker, 2001), although, apart from serving a regulatory function, this serves the objective also increasing resources available for primary care. But irrespective of the existence of official integration, the practice of integrated health care among the lay public is widespread. In Taiwan for example, 60% of the public use multiple health care systems. This use of multiple forms of health care is better known as medical pluralism.

1.2.2.4 Medical Pluralism

It is evident that the choices of care faced by those who are ill can be diverse. Different practitioners may be consulted based on the patient's past experience, the advice of those around them and their experiences with bio-medical services and CAM services. However, it cannot be assumed that patients can be neatly divided into those who consult bio-medical practitioners and those who consult CAM practitioners. In fact, patients may move freely between the different sectors and their choices depend on a range of factors such as the chronicity of the complaint, socio-demographic background and the recommendations and advice of family and friends (Vincent and Furnham, 1997; Spencer and Jacobs, 1999).

It is widely assumed that there is a high level of medical pluralism in contemporary society, in the United States for instance, approximately 40% of adults in the United States use CAM each year (Barnes et al, 2002), and is even higher (53%) among American women (Wade et al., 2008). Looking at developing countries, the consensus of CAM use is even higher, approximately 80% (Shaikh and Hatcher, 2005). A major criterion for choice of sector is the perceived efficacy of that sector for a particular problem. Both lay and professional people acknowledge that different therapies appear particularly able to cure particular problems, and are more or less acquainted with the associated risks and side-effects (Vincent and Furnham, 1997). But overall, studies have shown that people tend to use a mixture of both bio-medical and CAM care.

1.2.3 Pathways to care

Help-seeking behaviour is a systematic process of identifying need, deciding to seek help and carrying out that decision. At different points along the pathway of deciding to seek care, different factors intervene to prevent or expedite the progression of the help-seeking process. Need for care may not be identified, and if identified it may still not be translated into intention and intention does not always lead to behaviour.

Studies on the pathways are recognised as an important source of information for service planning, provision of training, required referral mechanisms, mental health policy and so forth. Pathway models provide a framework in providing explanations for descriptive data of help-seeking behaviours. It investigates the paths people take until they reach biomedical or health facility. For example, it depicts how paths are taken by individuals from recognition of symptoms to use of different health services following recognition. The role of extended family and friends and other significant groups in illness negotiation and management is also given importance. It is noted that alternative medicine is not to be equated to alternative pathways to care; the latter encompasses all the routes and all sectors of care individuals seek either separately or in conjunction with bio-medical, which will be discussed later in this chapter.

In the case of CMD, the filter model introduced by Goldberg and Huxley (1992) provides a framework in understanding help-seeking behaviour for CMD and the model describes levels of care from which a person passes through starting from developing a mental health problem to reaching specialized care.

1.2.3.1 The Filter Model to Care for CMD

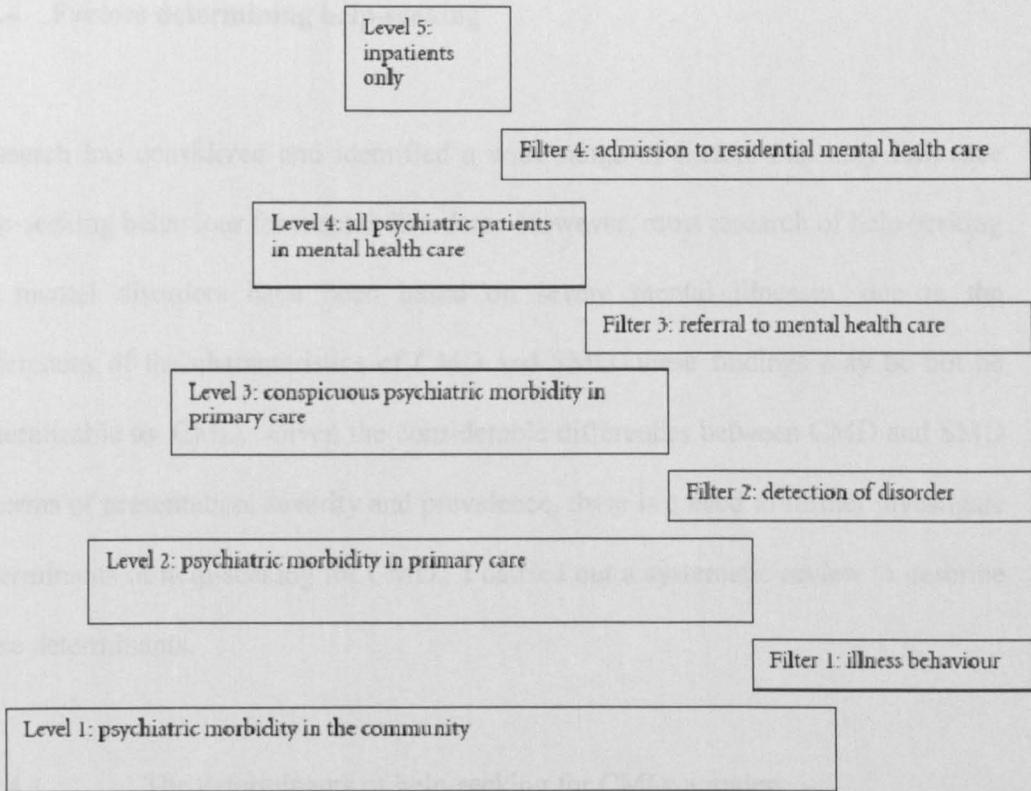
Goldberg and Huxley presented a model with 5 levels and 4 filters (Figure 1.1). The levels represent different populations: people with mental disorders in the general population, those who will be treated in the primary care unit, and those who will be referred to specialized services. The filters represent the transition of care between these populations. Level 1 refers to the prevalence of mental disorders in the general population. Many people in this population are not aware of their problems and if they do seek help, it is mostly treated as a non-psychiatric problem, primarily presented as physical and somatic complaints. Thus sufferers mostly utilize general or primary health care facilities. Some factors that affect patients to consult their GPs in Filter 1 are the severity and type of symptoms affecting patients, patterns of illness behaviour patients have learnt to exhibit, the acceptability of type of illness which is related to the level of stigma attached to the illness, perceived attitude of GPs or other health care professionals, attitude of patient's family and social group. Individual patient characteristics thus play a key role as they engage in help-seeking behaviour to pass through this filter.

Level 2 represents the prevalence of mental health disorders in primary and general care. In cases where GPs recognise the symptoms, patients will then pass through Filter 2. Some factors affecting Filter 2 are characteristics of the GP, training and attitude concerning their ability to diagnose and treat mental disorders, socio-demographic characteristics of patients and how they present their symptoms. At this level, whether or not an underlying psychological problem is detected depends on both individual doctor and patient factors.

Level 3 encompasses all people whose mental disorders have been identified by a GP. Filter 3 concerns referrals made by the GP to specialised mental health care. At this level, most patients will have severe symptoms that may require medication or psychological treatment or both and some patients will go on to have chronic problems. Some factors that influence referrals are GP's ability to treat mental disorders, availability of specialized services, and attitudes towards specialized mental health care of patients and family members.

Level 4 includes all patients in the mental health sector and Filter 4 represents the decision to hospitalise a patient. Factors that influence Filter 4 include the availability of services, patient's symptom patterns and the risks attached to the disorder and how it may affect the patient's wellbeing as well to others in their surroundings. Level 5 refers to the psychiatric in-patients.

Figure 1.1: Goldberg and Huxley's Pathways to care model (Goldberg & Huxley, 1992)



The model was recently modified to depict stages at which the care pathway could be strengthened by the involvement of additional healers, specialist services or liaison from psychiatrists (Bhui and Bhugra, 2002). In the first filter, appraisal of help-seeking at the community level was identified as both from biomedical care as well as other source of care (for example CAM). It also identifies other stages where the care pathway could be improved by the involvement of other carers such as the voluntary sector, traditional healers, specialist services or liaison psychiatrists. Research however indicate that the involvement of the non biomedical sector in the first filter

can either assist or impede appropriate help, depending on the type of disorder and severity levels.

1.2.4 Factors determining help-seeking

Research has considered and identified a wide range of factors that may influence help-seeking behaviour for mental disorders. However, most research of help-seeking for mental disorders have been based on severe mental illnesses, due to the differences of the characteristics of CMD and SMD, these findings may be not be generalizable to CMD. Given the considerable differences between CMD and SMD in terms of presentation, severity and prevalence, there is a need to further investigate determinants of help-seeking for CMD. I carried out a systematic review to describe these determinants.

1.2.4.1 The determinants of help-seeking for CMD: a review

The aim of this review is to systematically review all recent studies exploring the association between any aspect of help-seeking behaviour and CMD in order to provide insight into the determinants of help-seeking. In order to ensure the studies are as homogenous as possible, the review is restricted to studies measuring CMD so that the results can be directly compared to the area of interest from this thesis. But because help-seeking behaviour as argued by Kirkwood is difficult to define, non-specific instruments identifying help-seeking behaviour will be included, which means help-seeking does not need to be measured by a tool.

1.2.4.2 Search strategy

A systematic review of the determinants of help-seeking behaviour for CMD was conducted of recent studies with the review focussed on these questions:

What are the determinants of help-seeking behaviour for common mental disorders?

The search strategy included a general database (PubMed) and the keyword search used to search the electronic database for studies conducted within the past ten years is indicated below:

Box 1.1: Search strategy for determinants of help-seeking for CMD

("Anxiety disorders" MESH OR "Mood disorders" MESH OR "common mental disorders" OR "minor psychiatric disorders" OR "mental distress" OR "somatization" OR "somatoform" OR "stress") AND ("help-seeking" OR "care seeking" OR "service utilization" OR "pathways to care")

Search was restricted within a 10 year span (1997 – 2007)

Studies considered relevant and fulfilled the inclusion criteria included in the review if they report any type of help-seeking behaviour and its determinants in relation to common mental disorders. Help-seeking behaviour is defined as any activity undertaken, formal or informal, to address specific or non-specific mental illness or emotional distress experienced.

Preliminary search revealed that outcome variables vary in terms of actual help-seeking or perceived help-seeking for mental disorders. In studies focusing on the effect of attitudes towards help-seeking behaviour, perception is often measured instead of self-reports. In order to provide an overview of as many possible determinants of help-seeking behaviour the review will not restrict the type of outcome variable.

Inclusion criteria are adults, within the general population, primary care attendees and those seeking help in specialised services for CMD. Both qualitative and quantitative studies were included in the review.

1.2.4.3 Results

Altogether, a total of 148 studies were generated by the search keywords. A total of 119 studies were not selected for the review, the reasons are as follows:

- Studies on help-seeking behaviour for other medical conditions (34 studies)
- Studies on help-seeking behaviour for severe mental disorders (33 studies)
- Studies on populations following trauma or disasters, or studies conducted in emergency settings (24 studies)
- Studies on help-seeking behaviour with the main focus on the effects of acculturation or immigration (10 studies)
- Studies that did not report on help-seeking behaviour (6 studies).
- Studies on the evaluation of intervention or treatment regimen for psychiatric conditions (6 studies)
- Studies on service utilization of post-hospitalization patients (2 studies)

- Articles not available in English (2 studies)
- Studies on other populations, specifically caretakers of SMD patients and male offenders (2 studies)
- Article on theoretical discussion of care-seeking (1 study)

At the final count, 28 studies met the inclusion criteria and were analysed.

1.2.4.4 Description of eligible studies

The characteristics of the studies on help-seeking behaviour for CMD are shown in Table 1.6. All but 4 studies were set in the developed world, of which 37.5% were set in North America, 21% from the UK and Australia respectively with the remainder from Germany, Norway and Hong Kong. Of the 4 studies conducted in the developing world, three-quarters (75%) were conducted in the African continent and the remainder which consists of only one study was conducted in South America. Studies from developing countries from the Asian and South-East Asian region was not represented in this review.

In terms of setting, 22 (78.6%) of the studies were population based studies with the remaining 3 (10.7%) conducted in primary care, and an equal number (10.7%) conducted in specialist setting.

All but 2 of the studies were cross-sectional survey designs. Other study designs were qualitative interview and cohort study, conducted in Uganda and Ethiopia respectively.

Sample sizes varied greatly between types of setting. The largest sample was from the Rovies survey conducted in Norway where 65 648 people were interviewed. The large-scale population surveys on average had a sample size of 11 309 while the urban based surveys have an average sample size of 1768.

1.2.4.5 Assessment of help-seeking behaviour

Only 1 study used a specific assessment tool for help-seeking seeking behaviour (Client Service Receipt Inventory), with the majority of the studies (12) assessed help-seeking based on participants' self-report via varying open ended or specific questions. 4 of the studies utilized vignettes on mental disorders while 3 studies assessed both self-report and reports based on vignettes. 3 studies assessed help-seeking by using records of specific service utilization such as use of mental health services or a community clinic.

The uses of the vignettes were mostly within the general population, where most people have not sought help for specific CMD problems. The rationale of this approach was to gauge the perceived help-seeking behaviour for CMD which has implications on future help-seeking behavioural intentions. Vignettes have long been used to study attitudes, perceptions, beliefs and norms. They are simulations of real events depicting hypothetical situations (Wilks, 2004; Bryman 2001) and they are

used as tools to elicit research participants' responses to hypothetical situations. In quantitative research designs, responses are usually coded into predetermined categories. Use of vignettes has been utilized to measure causal beliefs and belief systems regarding mental illness in a number of studies (Riedel-Heller & Matschinger, 2005; Kurumatani et al, 2003; Edman & Koon, 2000; Jorm et al, 1997). Studies on mental health literacy that measures recognition of mental illness has also been based on the use of vignettes (Lauber et al, 2003; Goldney et al, 2002; Angermeyer & Matschinger, 1996).

However, it is clear that currently there is no specific measure of help-seeking for CMD that is widely used.

1.2.4.6 Types of help sought

Consistent with the knowledge of patterns of help-seeking behaviour, the review revealed that both informal and formal sources of help were utilized. CAM and biomedical sources were also reported and in some studies respondents accessed both, reflecting the practise of medical pluralism in developing and developed country settings. Extending on this, there seems to be an emerging trend in the developed countries of the uses of the internet for basic information search and the more interactive use of specific chat rooms that connects people with similar problems as well as online support from professionals. Also in the developed world, usage of phone lines for mental health problems are considered part of the conventional sources available. This brings to attention of the clear differences of the availability of treatment for CMD within the developing and developed world.

Table 1.6: Review of studies with outcomes on help-seeking behaviour for CMD

	Citation	Setting	Study design	Population	Sample size	Assessment of help-seeking behaviour	Type of help-seeking behaviour reported	Determinants of help-seeking behaviour
1	Okello and Neema, 2007	Uganda, urban, specialist	qualitative interview	referred depressive patients, 18-75	25	Based on EM protocol		Somatization, causal attribution, significant others, burden of infectious disease
2	Mogga et al, 2006	Ethiopia, population based	case cohort study	Adults with major depression compared with no history of depression	major depression (n=694), no depression (n=54173)	Client Service Receipt Inventory	govt hospital, private health care, traditional healer, any health service	
3	Lee et al, 2007	Hong Kong, population based	XS phone survey	adults in general population, 18-65	5004	self-report	mental health specialists, general medical, traditional chinese, human services, self help	severity of major depression
4	Belanger et al, 2005	Canada, urban, primary care	XS	outpatients in 4 randomly selected community clinics, 18+	1110	self-report	GPs, mental health services	GAD cases 5.3 annual visits, compared to 3.4 of non cases
5	Jorm et al, 2006	Australia, population based	XS	national survey of adults, 18+	1001	vignette		self-limiting view of depression, personal weakness, substance as way to cope, gender
6	McWilliam et al, 2006	USA, specialist	XS	past year mood, anxiety, alcohol/substance abuse disorder	1750	use of out-patient mental health services		personality traits
7	Barney et al, 2006	Australia, urban, primary care	XS	adults in a community sample	1312	vignette	professional or non-professional	self and perceived stigma
8	Vasilides et al, 2005	Canada, population based	XS	general population	36984	self-report	specialised MH services, GP, other professional services, voluntary and support networks	need, socio-demographic differences between provinces
9	Fobles and Ogden, 2005	UK, urban, primary care	XS	GP attendees	548	self-report		ethnicity

10	Sareen et al, 2005	Canada, population based	XS	general population, 15+	36816	self-report & vignette	professional or non-professional	severity, social support, gender, age, ethnicity, marital status, education
11	Jorm et al, 2005	Australia, population based	XS	adults, 18+	3998	vignette	1st aid response, various types of professionals, encouragement to seek professionals	gender, recognition, stigma
12	Oliver et al, 2005	UK, population based	XS	adults, 16-64	10842	self-report	GP, friends or relatives	gender, age and living area (less affluent less likely to seek help)
13	Wang et al, 2005	Canada, population based	XS	adults, diagnosed with depression or manic episodes	1956	self-report	conventional, unconventional, natural health products, self help, internet chat rooms, telephone lines	comorbidity, long-term medical conditions
14	Thompson et al, 2004	Australia, urban, specialist setting	survey	new referrals diagnosed with anxiety, mood disorders, with 1 month delay of seeking professional care	233	self-report	GP, specialized MH services, counsellor, social & welfare worker	lack of knowledge, severity
15	Rovies et al, 2005	Norway, population based			65648			
16	Biddle et al, 2004	UK, population based	XS	young adults, 16-24	2664	self-report	GP, counsellor, family, friend, voluntary sector, teacher/employer	severity, gender
17	Saldivia et al, 2004	Chile, population based	XS	general population, 15+	2987	self-report	any health services, specialized services, substance abuse services	severity, stigma, misconceptions of the course of psychiatric disorder,
18	Hugo et al, 2003	South Africa, urban, population based	XS	general population	667	vignette		stigma, misinformation of mental illness
19	Goodwin et al 2002	USA, population based	XS	general population, 25-74	3032	use of specific MH services	use of specific MH services	personality traits
20	Goldney et al, 2002	Australia, population based	XS	adult general population, 15+	3010	vignette	physician, pharmacist, counsellor, social worker, telephone counselling, psychiatrist, psychologists, family, friends, naturapaths/herbalist, clergy/religious leaders	Mental health literacy

21	Schmitz et al, 2002	Germany, population based	XS	general population, 18-65	3726	specific health care utilization and self-report		mental illness
22	Lauber et al, 2001	Population based	XS	general pop., 18-76	1737	vignette	none, specialist service, GP, priest, social worker, CAM, pharmaceutical, hypnotics, ECT, deal alone	perception of crisis or illness
23	Mojtabai et al, 2002	USA, population based	XS	diagnosed cases of depression, anxiety and substance abuse	1792	self-report	contact with professional sources and specific mental health services	age, physical illness, attitudes
24	Meltzer et al, 2000	UK, population based	XS	general population diagnosed with neurotic disorders	1387	self-report	doctor or mental health services	severity, presence of an alcohol problem, employment
25	Roy-Byrne et al, 2000	UK, population based	XS	nationally representative sample, 15-54	8098	self-report	general medical, mental health services, any medical services, social services and self-help groups	comorbidity
26	Van Hook, 1999	USA, low-income urban, primary care	XS	adult, female primary care attendees	321	self-report		stigma
27	Angermeyer et al, 1999	Germany, population based	XS	general population	1564	vignette	mental health services	problems definition, perception, anticipated progress, attitude towards medical professionals
28	Lin et al, 1999	Canada, urban, population based	XS	general population	9953	self-report for formal health care		Attitudinal, no socio-demographic differences between help-seekers and non-help seekers

1.2.4.7 Review of the determinants of help-seeking behaviour

Severity of illness

6 studies from Hong Kong, Canada, Australia and the U.K. identified level of severity of the CMD experienced as a factor that affects help-seeking behaviour. One of the most recent large-scale community study of depression among adults in Hong Kong (Lee et al., 2007) found that respondents with severe levels of depression were more likely to have sought professional help, although they were not more likely than those with milder depression to consider mental health specialists specifically. In two large study of the UK adult population by Biddle et al.(2004) and Meltzer et al. (2000) found that respondents reporting higher levels of psychological symptoms tended to endorse more coping methods and showed greater readiness to seek help. In the Sareen et al. (2005) study, self-evaluated levels of severity was assessed and was found to be related to self-perceived need for professional treatment; higher severity was associated with higher perceived need for treatment. Similarly, the Chilean study (Saldivia et al., 2004) found increasing severity of the psychiatric disorder correlated with increasing frequency of overall help-seeking. Increasing illness severity was also found to facilitate problem recognition and prompts help-seeking (Thompson et al., 2004)

Socio-demographic variables

9 studies from Canada and the U.K. identified varying socio-demographic variables affecting help-seeking behaviour. In a national survey that covered all of Canada's regions, Vasiliadis et al. (2005) found being female as a consistent predictor of health service use among those with depression. This association was also found in one

U.K. (Biddle et al., 2004) and in 2 Australian studies (Jorm et al., 2006, Jorm et al., 2005) where gender was the only socio-demographic determinant. Sareen et al. (2005) found that the availability of social support, being female, of younger age, being white, widowed, having and lower levels of education were more likely to seek help. Oliver et al. (2005) also found similar gender and age variables related to help-seeking, in addition to living area variables, where those living in less affluent areas less likely to seek help. Employment was also found to be a determinant (Meltzer et al., 2000). The study by Lin et al. (1999) found age to be associated with seeking treatment, where those within the youngest and oldest age group more willing to seek help. Ethnicity was also found to be a factor (Febles and Ogden, 2005) where black Caribbean or black African patients were less likely to associate help-seeking with psychological distress compared to White British patients.

Presence of other health problems

6 studies found presence of a diagnosed mental or physical illness and other problems as a determinant of help-seeking behaviour. The presence of a mental health problem such as anxiety or depression (Belanger et al., 2005; Schmitz et al., 2002) or the comorbidity of these conditions are related to increase in help-seeking behaviour (Wang et al., 2005; Roy-Byrne et al., 2000). Experiencing health related problems or long term medical conditions (Wang et al., 2005) and other psychiatric problems such as addiction (Meltzer et al., 2000) was also a determinant factor. In the Uganda study (Okello and Neema, 2007), help-seeking for mental health problems was impeded in situations where sufferers are experiencing heavy burden of infectious diseases.

Personality traits

Only 2 studies found personality traits as a determinant of help-seeking (McWilliams et al., 2006, Goodwin et al., 2002). Those with higher locus of control were associated with increased likelihood of using mental health services. Similarly, increased likelihood of service use was associated among those with neuroticism and adversely among those with conscientiousness and extraversion personality traits.

Mental health literacy: recognition, attribution, knowledge and attitudes towards professional care providers

8 studies found varying components of mental health literacy as determinants of help-seeking behaviour. Mental health literacy at the most basic level means having the skills and knowledge that enables an individual to recognise, undertake appropriate self-care, utilise informal support and to seek professional help if necessary in the event of a mental health problem. Having a self-limiting view of CMD and attributing CMD to personal weakness and endorsing substance use as an appropriate type of self-care were negatively associated with seeking help (Jorm et al., 2006). The inability to recognize CMD (Jorm et al., 2005) and lack of knowledge on CMD which results in misconceptions about the course of disorder (Thompson et al., 2004; Saldivia et al., 2004; Hugo et al., 2003) decreases the likelihood of seeking help. Goldney et al. (2002) indicated having an overall mental health literacy will facilitate help-seeking. The studies found that many members of the public do not recognize specific mental disorders and that they differ in beliefs about causes and effectiveness of treatment when compared with mental health experts. There might also exist differences in public levels of recognition of common mental disorders as opposed to severe mental disorders. Severe mental disorders are prone to be associated with

mental disorder due to their behavioural and emotional symptoms; on the other hand, depression and anxiety may not be considered as mental disorders with implications on help-seeking behaviour.

Stigmatizing attitudes

5 studies in the review found that stigmatising attitudes towards CMD hinders appropriate help-seeking. Many people report that they would feel embarrassed about seeking professional help and believe that people will have a negative reaction to them if they sought help (Barney et al., 2006; Jorm et al., 2005; Saldivia et al., 2004; Van Hook, 1999). Stigmatising attitudes can also discourage people from seeking help for fear of being labelled as lacking in will-power (Hugo et al., 2003) and of being perceived negatively by the professional health provider themselves (Barney et al., 2006).

Explanatory Models of illness

Explanatory Models (EMs) was examined as a strategy in one study. The concept of EM is that people, especially those from different backgrounds, often have very different ways of understanding illness, its consequences and how best to treat it. Aspects derived from patients' EM of depression that effects help-seeking from mental health services were identified in a Uganda study (Okello and Neema, 2007). Somatic presentation of CMD and non-biomedical causal attribution such as adverse life events, failure to perform rituals and witchcraft, influences help-seeking as well as delivery of appropriate help from mental health resources. In addition, the role of significant others and their respective causal attributions to mental disorders determines help-seeking behaviour.

1.2.4.8 Conclusion of review

The 28 studies identified for this review were overwhelmingly (more than three-quarters) population based, with the remainder split evenly between studies conducted in specialist setting and in primary care.

The determinants of help-seeking behaviour for CMD were found to be closely related to socio-demographic variables which are similar across all studies and countries though LAMIC or developing countries was hardly represented. The most consistent socio-demographic determinants were gender, age, and income-related variables. Levels of severity and the presence of other illnesses were also determinants. Stigmatizing attitude and other attitudinal differences were identified to affect help-seeking. Levels of knowledge, beliefs and problem recognition that overlaps with mental health literacy were identified as determinant factors.

1.2.5 Summary

Help-seeking is defined as a process which begins with awareness of symptom and appraisal of the problem to determine whether it may require intervention in the form of help-seeking behaviour. Help is then sought from a variety of sources, but can be dichotomised into either seeking biomedical care or CAM care. There are many factors related to help-seeking making it a complex process. Understanding help-seeking is crucial due to its wide ranging impact on the planning and delivery of health promotion, to services and health policy at both macro and micro levels. Understanding help-seeking behaviour for CMD can partly be understood through

Goldberg and Huxley's filter model to care that points out the different filters that effects people's decision making, the first filter being illness behaviour and its relation to help-seeking behaviour.

The filter model however presents a simplified version of the pathway to psychiatric care, for it considers a specific health system process. In communities where medical pluralism is widely practised, alternative pathways to care have to be taken into consideration, for example, traditional and complementary medical practitioners, which in turn may have a significant impact on symptom presentation and the subsequent identification and prognosis of the disorder.

The review on the determinants of help-seeking behaviour identified some salient variables. There is however a gap of information from developing countries and when information is available, it is restricted to small scale qualitative study with no generalization function. The assessment of the determinants however can be complex as it involves not only objective socio-demographic indicators but subjective readings of cognitive processes which can prove complex to measure.

1.3 Mental Health in Malaysia

1.3.1 Brief country background and general health indicators

Malaysia is developing rapidly and most traditional development agencies have concluded or greatly limited their activity in Malaysia (CCS, 2002). This is mostly due to the country's ability to manage its own development, in close cooperation with its neighbours. It has a good record of economic performance and social progress, and a steady growth between 1980 and 1997 resulted in doubling of real per capita GNP prior to the 1997 South Asian economic crisis which greatly impacted the lower socio-economic groups, particularly in rural areas. Some gains have been made since of current, and a 2006 per capita income of US\$5388 was recorded in comparison to US\$2335 in 1990. Unemployment rates below 4% (JPM, 2006)

Malaysia has a population of 25 million, and is evenly distributed between urban and rural areas with a slight majority staying in the urban areas. It is ethnically diverse, and is comprised of 58% Malay, 25% Chinese, 7% Indian with the remaining 10% consisting of a variety of ethnicities. Social problems arise mostly from the rural-urban shift, an undercurrent of racial sensitivities and the presence of as many as 1 million illegal immigrants.

The overall incidence of poverty decreased sharply from 32.1% in 1980 to 6.8% in 1997 but turning upwards again following the economic crisis to 7.6% in 1998. During this period, the distribution of income to households tended to become more equal and an integrated package of anti-poverty measures is aimed at reducing the

incidence of absolute poverty by 0.5% by 2005. The population is well educated with a 1998 literacy rate of 93.7%, an indication that the status of women is relatively high in Malaysian society. Education at primary and secondary levels are universal and free.

The health status overview of Malaysia in general states that Malaysia enjoys a relatively high overall standard of health. In 2000, infant mortality was 7.9 per 1000 live births and maternal mortality 0.2 per 1000 live births. Life expectancy for men stood at 69.9 years and women at 74.9 years. The gender difference is believed to be a result in the shift to a predominantly non-communicable burden of disease in which men suffer more from the leading causes of death. Leading causes of death are namely heart disease, cerebrovascular disease and cancer. In addition, there is increasing morbidity and mortality from road accidents and diabetes. Current non-communicable mortality patterns are approaching those of high income countries. With the demographic increase in the number of adolescents and young adults, the rise in high risk behaviour among young people is becoming a grave concern.

With regards to communicable diseases, the problem persists especially in rural areas. TB, cholera and hand, foot and mouth disease continue to be a problem in addition to vector borne diseases such as dengue. Malaria remains a challenge in more remote parts of the country, especially in East Malaysia. Sexually transmitted diseases are on the rise with an estimated 38 000 people living with HIV/AIDS at the end of 2006. 74% of HIV/AIDS are spread through intravenous drug use, causing a major challenge in efforts of prevention.

1.3.2 Mental health indicators

According to the second National Morbidity Survey (NMSII), the prevalence rate of psychiatric disorders in Malaysia is 10.7% (Malaysian Ministry of Health, 1996), with differences among socio-economic and gender lines. The NMSII conducted a household survey of 17995 living quarters throughout all states in Malaysia of people aged 16 and above and utilized the GHQ-12 for case identification. There were no significant differences between state prevalence rates, and urban-rural differences were also insignificant.

There were significant gender differences where females had a higher prevalence rate (12.5%) compared to men (8.5%), indicating women to be 1.5 times more likely to experience psychiatric problems compared to men.

The age distribution of psychiatric morbidity in Malaysia follows a J-pattern with higher prevalence rates among the youngest and the oldest group.

Ethnic differences were also detected where prevalence among Indians was the highest at 17.2% as compared to Malay and Chinese with prevalence of 8.1% and 10.6% respectively.

The prevalence among those widowed and divorced were 29.1% and 20.5% respectively. This was significantly higher as compared to those who were single (11.1%) and married (8.7%). Other determinants of psychiatric morbidity were low level of education (22.6%), unemployment (24.9%) and being non Malaysian (18.4%)

who were likely to be immigrant workers. Prevalence was also significantly higher among those with associated physical illnesses such as asthma, cancer, physical disability, and diabetes.

More recently, the Ministry of Health released the third nationwide survey or the National Health Morbidity Survey or NHMS (IPH, 2008) which was carried out in 2006. It provided the latest information on the state of health of the population, one of which is on mental health and was designed to be comparable to the NMSII (1996). It utilized the same General Health Questionnaire but of the 28-item version to screen for prevalence of psychiatric caseness. The overall prevalence rate was 11.2% of adult population with the Chinese population experiencing the highest prevalence rate. The study found several significant factors related to psychiatric morbidity, namely chronic pain, chronic disease, hospitalization, gender, household income, educational level and urbanicity.

Although there was a slight increase of overall prevalence rate from 10.7% to 11.2%, it may be worth to note some of the striking differences between the NHMS and NMS II were the prevalence rate among the Chinese ethnic group which increased from 10.6% to 31.1% urbanicity and the difference between urban and rural areas which was not significant in 1996. These differences may reflect issues in selection bias due to response rates: 85% for the NMS II compared to only 60.7% in the NHMS but may also underline the increasing effects of urbanization on the Malaysian mental health status.

A survey in Malaysia have shown that about 30% of the GPs clinical load would be people with psychiatric morbidity (Maniam et al, 1994), which is comparable to studies from developed countries on rates of mental disorders in primary care. Another study in an urban Malaysian setting estimates the prevalence for depression in primary care at 13.2% (Varma and Azhar, 1995).

Specific studies on the prevalence of mental disorders in the community are scarce one of the reasons could be due to the difficulty of defining a case. There has been only one community survey in Malaysia to date, that of Ramli and colleagues which was conducted in a rural area in 1991 (MOH, 2002). The 2 stage survey was conducted using the Self-Rating Questionnaire followed by an unstructured psychiatric interview. The study found a prevalence rate of 9.7% for all mental disorders, and prior to NMSII, the rate of mental illness in Malaysia was derived from this study. A more recent study in neighbouring Singapore, which has comparable ethnic and cultural composition to Malaysia, found a prevalence of 16.9% in the community (Ng et al., 2003).

In 2001, partly in response to the findings of NMSII, Malaysia's annual Healthy Lifestyle Campaign was devoted to mental health. The year long campaign aimed to improve public awareness on mental health, illness and the treatments available. A wide variety of mental health topics were discussed in the media and added publicity were provided in the form of public distribution of posters, pamphlets and billboards. The impact of this campaign however, has yet to be evaluated (Deva, 2004).

1.3.3 The burden of mental disorders

In 2004, the first burden of disease study was produced for Malaysia. The study indicates that both communicable and non-communicable disease remains a burden but Malaysia has been experiencing a changing pattern in both disease categories. Similar to the disease burden of developed countries, Malaysia's top 5 diseases are now dominated by non-communicable diseases with mental illness becoming an increasing problem (Table 1.7). Overall, unipolar major depression was ranked 9th for men and 3rd for women as the leading cause of DALY.

Table 1.7: Top 10 causes of DALYs by sex, Malaysia, 2000

Rank	Disease	Males		Disease	Females	
		DALYs	%		DALYs	%
1	Ischemic heart disease	164, 846	10	Ischemic heart disease	113, 887	9.2
2	Road traffic accidents	133, 789	8.2	Cerebrovascular disease	86, 372	7
3	Cerebrovascular disease	94, 059	5.7	Unipolar major depression	67, 211	5.4
4	Septicaemia	70, 232	4.3	Septicaemia	57, 483	4.6
5	Acute lower respiratory tract infection	49, 649	3	Diabetes mellitus	56, 390	4.6
6	Diabetes mellitus	47, 060	2.9	Hearing loss	38, 994	3.1
7	Chronic obstructive pulmonary disease	45, 459	2.8	Acute lower respiratory tract infection	37, 890	3.1
8	Hearing loss	44, 566	2.7	Asthma	32, 815	2.6
9	Unipolar major depression	42, 259	2.6	Road traffic accidents	28, 946	2.3
10	Cirrhosis	37, 902	2.3	Osteoarthritis	26, 925	2.2
	Total (111 diseases)	1, 646, 896	100%	Total (111 diseases)	1, 240, 997	100%

Within the young adult aged 15-29 group, apart from traffic accidents, mental disorders are responsible for the top two leading causes of DALYs in both sexes, the full breakdown is illustrated in Table 1.8. Apart from road traffic accidents, the rest of the top five leading causes of DALYs among males are from the mental disorders group with drug dependence as the main disorder, followed by unipolar major depression, alcohol abuse and schizophrenia. For females within the same age group, unipolar major depression is the leading cause of DALYs, followed by schizophrenia, road traffic accident, anxiety disorders and bipolar affective disorders. In both sexes, self-inflicted injury is also within the 10 leading causes of DALYs.

Table 1.8: Top 10 causes of DALYs by sex in the 15-29 years age groups, Malaysia,

2000

Rank	Disease	Males		Disease	Females	
		DALYs	%		DALYs	%
1	Road traffic accidents	70,469	24.9	Unipolar major depression	25,865	18.3
2	Drug dependence/harmful use	17,840	6.3	Schizophrenia	9,924	7
3	Unipolar major depression	16,092	5.7	Road traffic accidents	9,549	6.8
4	Alcohol dependence/harmful use	11,519	4.1	Anxiety disorders	9,454	6.7
5	Schizophrenia	11,416	4	Bipolar affective disorder	6,653	4.7
6	Other unintentional injuries	10,679	3.8	Nutritional anaemia	4,245	3
7	Self-inflicted injuries	8,982	3.2	Asthma	4,192	3
8	Septicaemia	8,036	2.8	Epilepsy	4,012	2.8
9	Falls	7,813	2.8	Skin diseases	3,959	2.8
10	HIV/AIDS	7,639	2.7	Self-inflicted injuries	3,075	2.2
	Total (111 diseases)	284,124	100%	Total (111 diseases)	142,072	100%

For the adults aged 30-59 years group, unipolar major depression is among the top 10 causes of DALYs in both sexes, although in the female group it is the leading cause of DALYs. Also within the female group, anxiety disorders ranked 9th as the leading cause of DALYs.

To summarize, mental disorders was ranked fourth as the leading cause of burden of disease by disease categories. Unipolar major depression accounts for 45% of the total burden of mental disorders and is ranked 10th and 3rd respectively as leading causes of disease burden in males and females. Drug and alcohol dependence are predominantly among males whereas depression and anxiety disorders are common among females. The per capita burden of disease for mental disorders among males predominantly occurs in early adulthood primarily due to drug dependence and substance abuse but changes to depression among male elderly. For females, the per capita burden of disease also occurs predominantly during early adulthood but mostly due to depression and anxiety disorders (CMD).

It is expected that the burden of mental disorders will continue to increase along with estimation of other CMD related problems such as suicide and addiction. Although suicide rate in Malaysia is relatively low compared to other countries, it is likely that this low trend will not continue as the society is undergoing rapid social changes. In general, industrialisation and urbanisation will continue to have an effect on the lifestyle and mental health of the population. In addition, favourable economic conditions in Malaysia have attracted a large number of foreign workers, estimated at 1 million (documented) whose health care needs places an additional burden to the

country. The extended family system has also undergone gradual breakdown and children are subjected to increasing stress in school.

Although a large number of estimates describing the epidemiology of the main diseases in Malaysia are available, for many diseases and injuries there are still very limited information. In the case of mental disorders, due to the lack of available information, the burden of disease study was forced to extrapolate from findings in neighbouring countries (MOH, 2004). Nonetheless, the study provides a first set of results from Malaysia that can be used to quantify the relative contribution of different diseases and injuries and risk factors to the total disease burden of the population.

1.3.4 Health care system in Malaysia: medical pluralism

1.3.4.1 Public and private sectors

In reference to the organization of health care services in Malaysia by Chee (1990), health care is divided into two categories, public and private health care (Chart 1). Public health care in Malaysia encompasses a wide range of concerns from specific measures of disease prevention to provision of food and water. The government maintains the health standards in housing, the environment, work environment and food supply though not necessarily through the Ministry of Health (MOH) as various other ministries and local governments are also involved. The MOH is the major government agency responsible for the delivery of health care through the general and district hospitals as well as the rural health centres. Apart from services, the MOH

also runs other supportive and training programmes, manpower planning, research and development, pharmacy and supplies and bio-engineering.

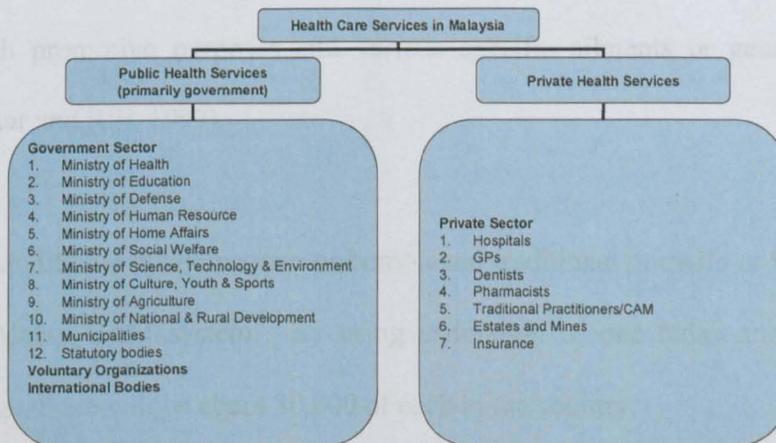
In regards to the overall health expenditure, Malaysia spent about 3% of GDP on health services in 1990, this has increased to 5% in 2006. The expenditure is considered low and is attributed to the emphasis given to the setting up of the rural infrastructure and implementation of promotive and preventive health care programmes which are basically low-cost. The budget of the MOH has experienced an increase in real terms but the allocation remains more or less constant at about 5% of the National Budget. As a percentage of GNP, it shows a declining trend from but private health care spending has also increased during this period (RM9, 2006).

The majority of health and health-related facilities belong to the public sector, funded through general taxation. The fees collected in government clinics and hospitals contribute only about 5% of the total MOH expenditure and fees collected do not reflect the real cost of the services provided. In Malaysia, the Social Security Organization (SOCSO) implements a scheme for the provision of certain benefits to workers in respect of injury, invalidity or disease related to occupation. The scheme covers only those earning less than RM2000 (US\$550) per month in the private sector. Other than this, the Employee Provident Fund (EPF) also allows members to withdraw some of their earnings for medical expenses. In Malaysia, most employers subscribe to medical reimbursement schemes for their workers and their family members but there is deficient information on the sources of financing expenditure by private sector companies (Rohaizat, 2002). Another source of financing is from the

community but community sponsored or initiated health care activities are poorly organized and are short-term.

In terms of access to health care, 88.5% of the estimated total population live within 5 km of a health facility. In comparing location, rural areas especially in the Borneo Island part of Malaysia were poorly served, while urban areas across all states had a higher percentage of the population living within the 5 km radius. In peninsular Malaysia, 92.5% of the population lived within a 5 km radius from a health facility (Maimunah et al., 1999 cited in Rugayah et al., 2000). The most common health facility nearest to the average person was the general practitioner, both in urban and rural areas.

Chart 1.1: Organization of Health Care Services in Malaysia



Private health care service is made up of both bio-medical and traditional practitioners and in many practices there is a lot of overlap and integration. For example, a few private hospitals have separate sections which provide traditional Chinese medical care and a Chinese herbalist shop may also sell a range of bio-medical drugs. Thus to some extent, practitioners of CAM are integrated into what is considered as the formal health sector although a large proportion of traditional practitioners operate in an informal context.

Historically, traditional medicines have been a part of the cultures of the various ethnic groups in Malaysia and have been practised before the introduction of Western medicine. In Peninsular Malaysia there are traditional medicines of the Malays, Chinese, Indians and Orang Asli (indigenous tribes). In Sabah and Sarawak, there are the indigenous medicines of the Iban, Kadazan, Murut and other smaller tribes. Although Western medicine is now widely available and is the main source of care for all sectors of the population, traditional medical practitioners are often visited for health promotive purposes and various specific ailments or generalized maladies (Anuar and Riji, 1997).

The traditional medicine man or bomoh and traditional midwife or bidan is central to the Malay CAM system. By using estimation of one bidan and one bomoh per village, there will be about 30,000 of each in the country.

The Chinese CAM system is perhaps the most organized with a varied range of practitioners such as the sinsehs (physician), acupuncturists, those specializing in orthopaedics and so forth. It is estimated that there are more than 1000 traditional

medical halls and more than 1000 sinsehs in the country not to mention the Chinese version of the bomoh whom specialize a mixture of magic and medicine (Chee, 1990).

There are also practitioners of traditional Indian or Ayuverdic medicine many of whom are herbalists and mix practitioners of magico-religious medicine. It is very diverse and very rich in terms of indigenous knowledge and its use of bio-resources.

In the last 20 years, there has been a 300% increase in the number of private hospitals and institutions but despite this growth, the public sector remains as the major provider and financier of the health services (MOH, 2008). Although only about 54% of all doctors are in the public sector, they treat three and a half times as many inpatients compared to the private sector and treat six to seven times as many outpatients as private hospitals. Thus overall, a large proportion of the population still relies on public health care.

1.3.4.2 Primary Health Care

Primary health care is considered the thrust of the Malaysian health services and as stated in the previous sections, is provided by both the public and private health sectors. The public primary care service is still the main service provider and takes up about 58.4% of the total health care expenditure in 2006 (MOH, Malaysia National Health Accounts, 2006). Services be it in the public or private sector is oriented to acute episodic illnesses as well as maternal and child health (AS Ramli et al., 2008).

In terms of infrastructure, the public sector has 809 health clinics, 1919 community health clinics, 95 maternal and child health clinics and 168 mobile clinics distributed all over the country (AS Ramli et al., 2008). In total there are about 2991 public primary clinics, in comparison to approximately 8000 private general practitioners.

Services at the public facilities are highly subsidised at minimal or no cost to the patients and are delivered by team members consisting of doctors, paramedics, nurses and other support staff. Payment for services in private GPs are largely borne by the patients or their employees. Most private GPs are run by either single-handed or a group of 2-3 general practitioners, often without the support of other allied health care staff (AS Ramli et al., 2008).

A large number of primary care doctors are untrained as legislation does not require a postgraduate qualification before entering into primary care practice (AFPM, 2010). The Academy of Family Physician Malaysia had developed a 2-year Diploma in Family Medicine Course for all private GPs which commenced in 2009 but currently this programme is not government funded and has yet to be made compulsory to all primary care doctors.

A large proportion of public primary health care facilities and less than 10% of private GPs and clinics are not equipped with electronic clinical information system and better quality of data is needed to make any valid comparison between the public and private sectors in relation to morbidity patterns, resource utilisation and practice patterns (IPH, 2006; AS Ramli et al., 2008). There is also no regulation that requires patients to be registered with a primary care doctor, thus patients tend to move around

freely from one practice to another, making data gathering provision of care somewhat fragmented, with possible duplication of care.

1.3.4.3 Integration and medical pluralism

It is widely acknowledged in Malaysia that traditional and complementary medicine continues to be patronised by the public and has made significant contributions to the health care of the population. The NHMSII showed that an estimated 2.3% of Malaysians reported visits to CAM practitioners and 3.8% used both biomedical and CAM. This however could be a gross under-reporting (MOH, 2008) as studies around the world have shown that about 40% of the population in both developed and developing countries are using CAM for their health care needs.

In 2000, the Ministry of Health (MOH) announced the establishment of a council comprising five organizations representing Malay, Chinese and Indian traditional health systems, complementary therapies and homeopathy. The initiative was in support of the integration of CAM with modern medicine and will incrementally introduce CAM, where appropriate, into the mainstream of the public health system. The council will be responsible for the recognition, accreditation, and registration of all CAM practitioners. The council has the specific task to ensure quality and safe use of CAM practices and products. At this point, there is limited documentation on the accurate number and distribution of CAM practitioners. A new law to regulate the use of CAM is currently being drafted by the MOH but as of 2010 the bill has yet to be gazetted (www.tcm.moh.gov.my). Only after the passing of the new bill will registration of CAM practitioners be made compulsory, providing the necessary

information to assess the true extent of CAM utilization and resources. One aspect of the regulation under this new law is that several diseases and illnesses are prohibited from being advertised by CAM practitioners due to lack of evidence of the effectiveness of CAM. The list of disease includes mental health.

It is suggested that due to the existence of multi-system usage of health care, Malaysians practice medical pluralism although the extent may vary depending on disease and type of injury. It is also known that people in both urban and rural areas seek care from CAM practitioners irrespective of racial background. A sample survey in the capital Kuala Lumpur for example showed that most people surveyed used one or more traditional medical services in addition to bio-medical medicine (Armstrong, 1984). Many use it as a last resort but there are those who will utilize CAM as first line medical care. The use of CAM has also been found to cut across ethnic lines although services specifically related to religious leaders, faith healers and temple priests would follow along ethnic lines.

As further reflection of the recognition of medical pluralism, the government approved the formation of integrated hospitals by integrating CAM practices that are evidence based or have proved to be effective (MOH, 2006). Several hospitals were selected to conduct the pilot projects: Hospital Kepala Batas, Pulau Pinang, Putrajaya and Pandan. The main practices identified suitable to be integrated are acupuncture, reflexology, naturopathy and post natal massage, where patients will be given the option to choose CAM based on referral by a medical doctor.

1.3.5 Health care for mental disorders

1.3.5.1 Early history and provision of services

The earliest record of mental health service is the 'lunatic asylum' on the island of Penang, where sailors in the colonial navy who developed mental illness were confined in the 18th century. The asylum site is now the present Penang Hospital, situated in the north of the country. The first purpose built psychiatric hospital however was built outside Ipoh in 1911 and is now known as the Central Mental Hospital. Another large psychiatric hospital was built in 1935 in the south, and two more smaller hospitals followed in the east. After 1971 however, no more new psychiatric hospitals were opened.

The first mental ward within a general hospital was opened in 1958 and for the first time patients were being seen and treated in a non-psychiatric hospital, non-custodial and non-institutionalized setting. Since then, over 30 general hospital psychiatric units have been established. The first attempt at a community-based rehabilitation of the mentally ill was in Ipoh, where a mental health association and day-care-centre were opened in 1967 and 1969 respectively. This development is further supplemented by a newly established primary care mental health service that integrates mental health into primary health care. Further expansion is clearly targeted with the recent Mental Health Act (2001), of which a key feature is the requirement of a mental health service in private hospitals.

For a population of 24 million people, there are just 140 psychiatrists, most working in the public sector. There is also a severe shortage of other professionals such as clinical psychologists and social workers in mental health services (P. Deva, 2004). The lack of other mental health workers implies that most mental health services are only available for those suffering at the severe end of the spectrum. There are also few specialists and specialized services in child, adolescent, forensic, rehabilitative liaison or research fields in mental health (P. Deva 2004; Haque, 2001). In terms of budget allocation, mental health care is allocated about 1.5% of the total health care budget.

Also, at the community level, there exists about 12 mental health associations whose activities include public education, advocacy, community based psychosocial rehabilitation and promotion of mental health activities but most are under-funded and have a small catchment area (Omar, 2001).

1.3.5.2 Mental health care in Primary Care

With de-institutionalization, mental health care has increased in presence at the community care level, which is where CMD can be most likely detected. The integration of mental health services in primary care began in 1996 with the introduction of the National Community Mental Health Programme. Currently, community mental health care is provided in 24% of the 774 health clinics run by the MOH. The focus at the community care level however has been geared towards decentralizing psychiatric care thus services are tailored for after care and follow-up of discharged patients and not towards addressing issues of CMD at primary care.

The majority of primary care consultations in Malaysia occur in the general practice clinics but to date there is no comprehensive documentation of the morbidity and practice activities in this setting (Teng et. al., 2003). Malaysian psychiatric morbidity rates of 30% in GP or primary care setting cited in the NHMS refers to the Maniam and colleague study conducted in 1994. The latest available published data on prevalence in primary care states that the proportion of adult patients in a semi-urban primary care setting was 24.7%, with depression as the main diagnosis (Ruzanna ZamZam et al., 2009).

At this point, there is no available data on recognition rates, management or prescribing rates as well as referral rates of mental health problems in general practice settings. As mentioned in the primary health care section of this chapter (section 1.3.4.2) there exists a problem of acquiring quality data due to the fragmentation and duplication and current practices of data keeping among many practitioners in the health care system. For mental health data, the NHMS (IPH, 2008) discussed on the low level of involvement of GPs in detection of mental health problems itself. This is mainly due to the lack of training of GPs before entering practice. Training following housemanship in mental health components is not a requirement. In addition, requirement for continuing medical education itself is not fully implemented, thus few GPs are able to identify or treat CMD.

Continued medical education for mental health is available and training is conducted by the Malaysian Psychiatric Association in collaboration with the College of GPs, though statistical data is unavailable. The CME programmes acts as an incentive for

health care practitioners to improve their knowledge and skill competencies of mental health care in primary settings. Other incentive currently pursued to attract workers in mental health to primary care includes the creation of posts for specific categories for example clinical psychologists, who are unevenly distributed and mainly in the private health sector. Up to this point, the Ministry of Health is unable to attract clinical psychologists due to the remuneration scheme that does not commiserate with their postgraduate training. Additional post for community psychiatric nurses also needs to be created to support the shift from hospital based treatment to treatment in the community.

1.3.5.3 Mental health Law

Malaysia's mental health laws are based on the British and Indian Mental health laws of the early 1900s (Deva, 2004). The laws underwent revision and were replaced in 2001 by the new National Mental Health Act. Its main features are that it allows for private mental health care, so long as the latter has received permission from and remains under the supervision of the Ministry of Health. It also requires all private general hospitals to provide mental health care which is currently mainly borne by the public sector. Better systems for admission, especially voluntary admission, were also provided for.

1.3.5.4 Mental Health Policy

In 1998, the National Mental Health Policy was approved by the MOH. Mental health is defined in the new policy as follow: the capacity of the individual, the group and the environment to interact with one another to promote subjective well-being and optimal functioning, and the use of cognitive, affective and relational abilities, towards the achievement of individual and collective goals consistent with justice.

The objectives of the new policy are:

- 1.0 To provide a basis from which to develop strategy and direction for all involved in health and mental health planning and implementation, with the aim of improving the mental health and well-being of the entire population
- 2.0 To improve mental health services for the population at risk of developing psychosocial problems
- 3.0 To improve psychiatric services for the mentally disabled, in terms of the care provided by the family, community and relevant agencies

1.3.5.5 Inter-sectoral links

Non-government organizations (NGO) involvement in mental health provision in Malaysia may be traced to the formation of the Perak Society for the Promotion of Mental Health in Ipoh in 1968. This was followed by the Malaysian Mental Health Association in 1970 in Kuala Lumpur. There are currently about 12 mental health associations in Malaysia, whose activities include public education, advocacy, community based psychosocial rehabilitation and promotion of mental health

activities. The MOH and other government agencies have recognized their role and a nominal amount of funding is available to some of them. Most generate their funds through fundraising activities and donations and are able to contribute to the improvement of mental health provision. The Befrienders, a 24-hour telephone as well as face-to-face counselling service was set up in 1970, Kuala Lumpur. It has branches in four cities and its volunteers are trained on a regular basis. Other NGOs care for abused children and women or provide marital counselling services.

1.3.5.6 Research

Most psychiatrists and mental health workers are heavily involved in clinical work and teaching to the extent that few are involved in formal research. This is unfortunate because there is a shortage of research data necessary for effective health care planning and development (MOH, 2004). Few of Malaysia's psychiatrists have any formal research training and most research is currently limited to those institutions with where postgraduate training is conducted (Deva, 2004). Research in hospitals are usually conducted with the support of the pharmaceutical industry thus are limited in focus and with industry specific objectives.

1.3.5.7 Medical Pluralism in mental health care

As discussed earlier, studies in Malaysia have shown that people tend to use a mixture of modern and traditional health care (Edman and Koon, 2000; Chee, 1990) and different types of help is sought for illnesses perceived to be of different causes. Thus, if the cause of the illness was thought to be natural, treatment was sought from the

government or private practitioners of bio-medical medicine; while illnesses thought to be of supernatural causes were presented to bomohs or other CAM practitioners.

In Malaysia, the use of traditional healers for mental illness can be quite extensive and it has been suggested that the bomoh or traditional Malay medicine practitioner, is the largest group dealing with mental illness (Kinziae, Teoh and Tan, 1974). In a study on folk healers and mental health in Malaysia by Razali (1989), about three quarters of Malay psychiatric patients had consulted a *bomoh* first, in comparison to only 25% who sought general outpatient services. Other studies report that between 44%-73% of psychiatric patients in Malaysia have consulted a traditional practitioner prior to using biomedical outpatient services (Salleh, 1989; Rhi et al, 1995; Razali et al, 1996). The large number of patients that sought CAM as the first option prior to bio-medical care when dealing with mental disorders is conspicuous when compared to only 4.8% of other illnesses and injury that seeks CAM as the first source of care (from the NHMS II cited by Chee, 2004). Even among those who have first sought bio-medical care for mental health problems, a significant number also proceed to seek CAM care (Salleh, 1989; Rhi et al, 1995) or report that they will do so if their current treatment regimen failed (Razali, 1989). Typically, traditional treatment is sought before psychiatrists are consulted or a combination of both type of treatments are practised at the same time. A study by Razali and Najib (2000) found 69% of first time attendees of a psychiatric clinic visited traditional healers before consulting a psychiatrist. Similar patterns were also found in another study of a Malaysian population where 62.5% of psychiatric patients had sought magic-religious therapy prior to psychiatric therapy (Rhi et.al, 1995).

The practice of consulting traditional healers in Malaysia is not as widespread as in some developing countries, but the bomoh is an important health-care provider with regard to the treatment of mental illness. Higher use of bomohs and other magico-religious practitioners (more than 50%) was found (Rhi et al, 1995), whereas use of other traditional and complementary practitioners such as Chinese herbalist were at a much lower rate of 6%. These differences emphasize the different approach as well as the complexities to help-seeking when related to problems of psychiatric nature in non-Western societies in general and Malaysia in particular. There is also little direct cooperation between all CAM mental health practitioners and the formal health sector, compounded by the official policy to not recognize CAM as part of the integrated approach of handling mental illness (MOH, 2001) although cross-referral among CAM practitioners themselves is not unknown (Deva, 2004).

More in-depth information on medical pluralism and help-seeking behaviour for CMD is limited as there are little published studies on the area of this study's interest. Information on help-seeking behaviour for mental health in Malaysia concerns mostly SMD and little is known about help-seeking in relation to CMD. The studies by Razali and Rhi for example, addressed specific queries on help-seeking behaviour of schizophrenic patients visiting an outpatient clinic and outpatients of a psychiatric clinic. Currently, there is no known published data on help-seeking behaviour among the general population specifically for CMD and documentation on the rates of CAM and biomedical use is not officially available.

1.3.6 Summary

The biomedical services in Malaysia are provided by both the public and private sectors and non-governmental organizations. For the past 50 years, the formal health care system has expanded and evolved and has shown a consistent trend of improvement reflected by a steady decrease in mortality rate indicators.

The burden of CMD is estimated to be significant and is not being addressed appropriately due to several patients and health care provider factors. The burden of CMD in Malaysia is high and ranked fourth of overall causes of DALYs and second in YLD. The burden is especially high among young adults and women in particular, and we have yet to know the full picture at the community level. Although limited study suggests high prevalence of CMD among primary care attendees, little is known about the prevalence of CMD within the community and to the best of the investigator's knowledge, no known urban community rates exist for CMD.

Despite advancement in health care, mental health care is in general limited for those referred to the specialized services leaving the estimated bulk of mental problems and needs of the population that are not psychotic largely unmet. Services remain understaffed and the mental health sector receives low allocation of the health budget.

Information on patterns of service utilization and other illness behaviour among Malaysians although limited, suggests high utilization of medical pluralism for mental illness. In terms of future direction, even though there is limited availability of specialized care for mental illness, there is an existing structure to integrate varied resources at the primary care level to bolster services that can be offered for CMD.

1.4 Rationale of study and strategy

1.4.1 Rationale

The emphasis on CMD is derived from considerations that CMD is expected to increase similar to global trends as estimated by the GBD 2000 study. With much of the research in mental health in Malaysia being focussed on SMD, adequate information is required to identify and mobilize existing resources as well as fulfilling projected needs.

Considering the high prevalence of CMD and the enormous impact they may have on public health resources, the primary question of this research, viz., the patterns and factors influencing help-seeking for mental health problems acquires particular significance. Despite scientific research showing mental illnesses to be as real and as serious as any other sickness, it remains as one of the most difficult to understand by people in general. Understanding the public's beliefs and perception of mental illness can provide information on misconceptions about this public health problem. Data from the study will be able to inform issues of misunderstandings about the nature of mental illness, and how these influence the help-seeking process specifically.

Research will also provide data from a broad range of determinants of help-seeking behaviour and mental health problems. Such information would eventually help to establish the relationship between what is included in an intervention or prevention programme and how people can respond within different situational contexts.

The study will also provide an estimation of people in different socio-demographic groups who might access services, as well as those who are likely to require access. The study will inform on help-seeking of high risk or vulnerable groups, such as those with low income and the unemployed. Programmes and services for special populations are often distinctly different from those of the general population but across the world, programmes for special populations are limited.

Understanding the dynamics of individual determinants of help-seeking behaviour which includes cognitive processes that are rarely addressed in epidemiological studies is an essential step prior to the design of any community targeted programs. Currently, the training of primary care doctors and nurses has been predominantly in detecting and treating problems among follow up of discharged mental patients. The insight gained from the study can assist in reorienting and training relevant personnel so as to have knowledge on the lay perspective of CMD, the language used to convey distress and other sensitivities attached to mental health. This will only serve to further improve and promote the integration of primary health care provision for CMD intervention.

The issue of stigma which is still widely regarded as the biggest obstacle (WHO, 2001) facing mentally ill people today needs to be addressed. People suffering from mental illness in Malaysia continue to have many of their rights denied and as yet, there exists no legislation to prevent discrimination in housing, education, health care and employment rights for those who suffer mental disorders (Crabtree & Chong, 2001). Thus it can be assumed that most people would avoid being associated with any label of mental disorder.

In relation to investigating patterns and factors that may affect help-seeking behaviour among Malaysians, several important issues on pathway to care for those with CMD needs to be addressed. Firstly, pathways may vary for vulnerable groups and diverse ethnicities thus the need for identification. Secondly, studies of pathways may not only assist in identifying the sources of delay in accessing medical care but may also identify existing support systems that are established and trusted by the community. The pathways will reflect the nature of the services available as well as the popular beliefs about mental illness (Gureje et al, 1995).

There is a blatant scarcity of basic data on mental health in Malaysia as evident in the need to extrapolate data from other countries within the South East Asian region for the Malaysian GBD studies. Thus this study is a purposive effort to contribute to the existing body of research in a neglected area of study which can credibly inform the relevant parties responsible for national legislation, policies and plans for action.

1.4.2 Strategy

Strategy of utilizing the filter care model – by focusing on the first and most basic level, this strategy will automatically yield the numbers to show the extent of problem in the community.

The study will investigate the main determinants of help-seeking behaviour identified in the review and the association of these variables will inform on those who manage to go through the first filter and those who do not. Taking into consideration the

medical pluralism landscape, exploration of non conventional help-seeking practices and sources will be conducted.

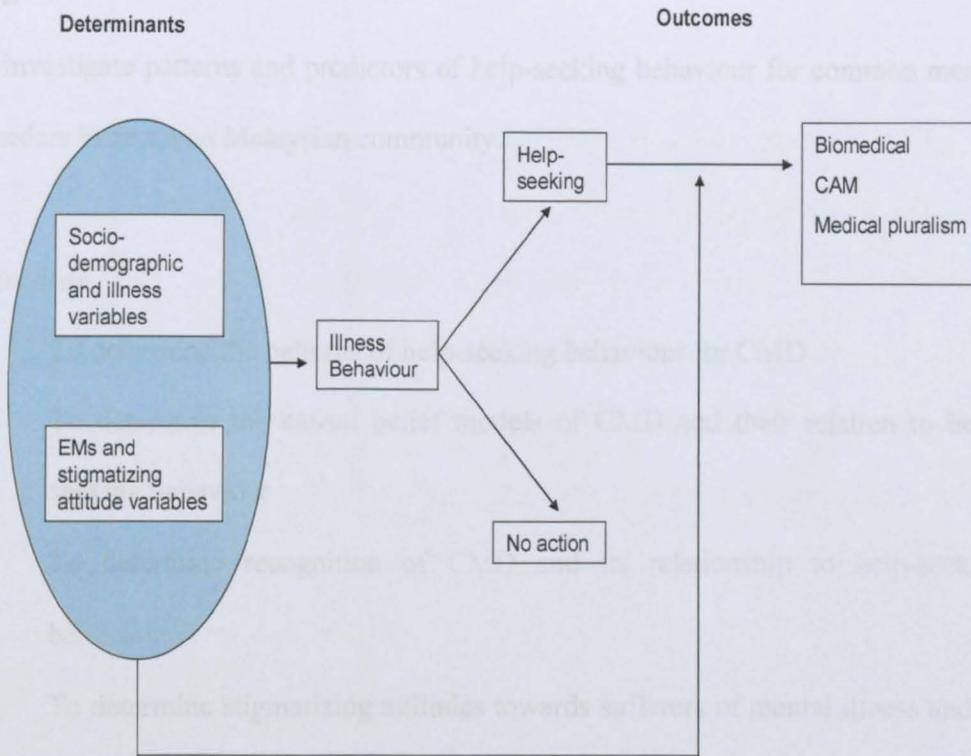
The study's inclusion of socio-demographic, mental health beliefs and attitudes towards mental health influences on help-seeking by using the EM concept will simultaneously address the need to understand contextual and cultural aspects of the decision to seek care as proposed by Pescosolido (Pescosolido & Boyer, 1999) as well as levels of mental health literacy in the community.

1.4.3 Conceptual framework

As shown in figure 1.2, the literature generally characterize the help-seeking process as beginning with individual objective socio-demographic and illness variables and subjective EMs and attitudinal variables. These variables will determine the appraisal on whether the individual is experiencing an illness, a component of illness behaviour which is relevant to the first filter to care. Whether or not individuals perceive CMD as a problem warranting help depends upon their own EMs as well as their personal attitude towards CMD. Thus, appraisal of CMD takes into consideration an individual's repertoire of existing knowledge and personal beliefs and how other socio-demographic variables such as gender (females more open to seek care) and education level (more access to knowledge on health) will modify these appraisals is yet to be known.

Following appraisal, decision to seek help can either be positive or negative. When decision to seek help is taken, type of care provider is directly related to the individual determinants.

Figure 1.2: Determinants of help-seeking behaviour for CMD



1. Hypotheses

- 1.0 CMD is associated with increased utilization of bio-medical health services
- 2.0 There is a negative association between belief in a supernatural cause of mental illness and utilization of biomedical care
- 3.0 There is a positive association between recognition of mental illness and utilization of biomedical care
- 4.0 There is a negative association between stigmatizing attitudes towards individuals with mental illness and utilization of biomedical care

1.4.4 Aims and Objectives

Aims

To investigate patterns and predictors of help-seeking behaviour for common mental disorders in an urban Malaysian community.

Objectives

- 1 To determine the patterns of help-seeking behaviour for CMD
- 2 To determine the causal belief models of CMD and their relation to help-seeking behaviour
- 3 To determine recognition of CMD and its relationship to help-seeking behaviour
- 4 To determine stigmatizing attitudes towards sufferers of mental illness and its relation to help-seeking behaviour for CMD

i. Hypotheses

- 1.0 CMD is associated with increased utilization of bio-medical health services
- 2.0 There is a negative association between beliefs in supernatural causal model of mental illness and utilization of biomedical care
- 3.0 There is a positive association between recognition of mental illness and utilization of bio-medical care
- 4.0 There is a negative association between stigmatising attitudes towards sufferers of mental illness and utilization of bio-medical care

2.0 Methodology

2.1 Study Design

A study design depends mostly on the nature of the research question, or knowing what kind of information the study should collect is a first step in determining how the study is to be carried out. This study's main aim was to investigate the relationship between help-seeking behaviour and CMD. Can we compare the patterns of help-seeking among a population of people diagnosed with CMD and those without CMD? This question inquires on subjects at the same point in time and requires information without having to manipulate the study environment, an approach that is typical of a cross-sectional study (Gordis, 2004).

A defining feature of a cross-sectional study is that it can compare different population groups at a single point in time and findings are drawn from whatever that is captured at that point in time. In relation to this study, I have chosen to identify CMD among the population of urban young adults across several socio-demographic groups between the ages of 18-45, and compare the identified help-seeking behaviour among those with CMD and those without. However, the study did not consider past exposure to CMD, or the effects of past or future help-seeking behaviour and exposure to other variables, for these would fall outside the timeframe. The study would only look at CMD at one point in time.

The benefit of a cross-sectional study design is that it allows the comparisons of many different variables at the same time, for example looking at gender, income and

educational level. However, cross-sectional surveys may not provide information about cause-and-effect relationships. This is because cross-sectional studies do not consider what happens before or after the initial data is collected. Therefore in the case of this study, we are unable to know if help-seeking behaviour is affected due to past exposure to CMD or other variables. We are also unable to find out if current exposures will effect future help-seeking behaviour. Information on cause-effect-relationships can be collected by applying a longitudinal study design.

A longitudinal study, similar to a cross-sectional, is observational. Thus researchers are able to conduct their study without having to manipulate or interfere with their study subjects. However, a longitudinal study conducts several observations of the same subjects over a period of time (Cohen & Manian, 2000). The benefit of such study over a cross-sectional one is that researchers are able to detect developments or changes in the characteristics of the study population, providing a sequence of event and a means to study cause-and-effect (Daly & Bourke, 2000). It would thus seem that a longitudinal study would be the design of choice as it provides a wider scope, but due to its nature some disadvantages are unavoidable. In a longitudinal study, the time span involved may be anywhere between a few months to several years, to a lifetime. It is more expensive, time consuming and repeated measures or observations of the same subjects can contaminate results, and subjects may move away or drop out (Gordis, 2004).

For this study, time was definitely a constraint due to availability of funds and contractual commitments to the PhD sponsors. A cross-sectional study is quick by nature and it also solves some of the problems associated with the longitudinal design

(i.e. drop out rates, cost, practice effect), and most importantly it can answer the research questions of interest as discussed above.

2.2 Setting

Decision on the type of setting selected for this study was based on the principal focus of CMD as the exposure. This study defined CMD as the combination of depression and anxiety, and this condition predominates in community settings (Goldberg & Goodyear, 2005). In medical settings, combinations of anxious depression with somatic symptoms are the commonest form of mental disorders, followed by alcohol related disorders.

Symptom presentation, recognition by patients and GP identification rates are much affected by levels of public awareness as well as GP training, both of which are considered low in Malaysia (Khan et al., 2010; Yeap & Low, 2009). Conducting the study in a community setting will identify cases of CMD that fail to seek biomedical care. It will also include cases that may not have been picked up by biomedical service providers, particularly within primary care.

The study is interested in a wide spectrum of help-seeking behaviour for CMD and takes into consideration the awareness that medical pluralism does occur in the community. Focusing on help-seeking or illness behaviour within the community setting, as described in the filter model to care (Goldberg & Huxley, 1992), will capture the population whose illness behaviour we have little information of, which may include seeking CAM, self-help and so forth.

Figure 2.1: Map of Kuala Lumpur and its communities



The survey was conducted in Lembah Pantai, which is a parliamentary constituency in the city of Kuala Lumpur. Geographically, it is situated 4 km from the city centre, and is one of the 12 communities which comprised the city. It covers an area of 21.4 square kilometres which accounts for 8.8% of the city of Kuala Lumpur (DBKL, 2006). The community is divided into 15 housing areas:

- i. Bangsar Baru
- ii. Bukit Bangsar
- iii. Bukit Kerinchi

- iv. Bukit Travers
- v. Jalan Maarof
- vi. Jalan Tun Sambanthan
- vii. Kampong Bahagia
- viii. Kampong Haji Abdullah Hukom
- ix. Kampong Sentosa
- x. Kawasan Universiti
- xi. Pantai Baharu
- xii. Pantai Dalam
- xiii. Petaling Lama
- xiv. Petaling Selatan
- xv. Taman Lucky

(The following are pictures of some of the above mentioned areas in Lembah Pantai)

Picture 2.1: Bukit Kerinchi



Picture 2.2: Petaling Lama



Picture 2.3: Pantai Dalam



2.2.1

Picture 2.4: Taman Lucky



Picture 2.5: Bangsar Baru



Picture 2.5: Kampung Haji Abdulah Hakim

Picture 2.6: Bukit Travers



Picture 2.7: Jalan Tun Sambanthan



Picture 2.8: Kampung Haji Abdullah Hukom



2.2.1 Geography

Roughly, Lembah Pantai starts from Kerinchi and encompasses both sides of Jalan Bangsar, which is one of the community's main thoroughfares. Lembah Pantai is mostly flat at the southern neighbourhoods such as Bangsar Utama, Off Jalan Bangsar area and Jalan Maarof. The terrain progressively rises towards the north before making a steep drop in elevation. Despite its name, which translates literally into "beach valley", the only waterside is the Klang River which runs between Kampong Haji Abdullah Hukom and Mid-Valley City. Lembah Pantai was originally a rubber plantation with villages around the estate's periphery. One of Kuala Lumpur's earliest Malay settlements, the 200 year old Kampong Haji Abdullah Hukom is the site of the country's oldest university (Universiti Malaya), and the headquarters of the national, and first radio, and television channel known as Angkasapuri. Jalan Tun Sambanthan is another pioneer settlement in Kuala Lumpur and has many colonial structures interspersed with more recent additions.

Lembah Pantai is rapidly evolving from a mostly residential area to a commercial extension of downtown Kuala Lumpur. As a result, massive relocation and development plans are in place and indeed have gradually begun since 1995 (DBKL, 2006). The Kampong Haji Abdullah Hukom for example has been marked for a major development comprising condominiums, office blocks, and shopping complexes.

With the expansion of Kuala Lumpur, one of the earliest planned housing estates in the capital was developed in the Bangsar area in 1969 (DBKL, 2008). The business district in Lembah Pantai is one of the most vibrant in the capital, and the real estate value is estimated to be one of the highest in the country. The development level however varies and village type housing (*kampung*) and squatters can still be found amidst the high-rise modern complexes and low cost flats.

2.2.2 Demographics

According to the latest population census (JPN, 2000), Lembah Pantai has a total population of 155 400. 95.6% have received formal education and the literacy rate is 97.5%. The gender distribution in Lembah Pantai is almost equal. The proportion of persons below the legal working age of 15 is 27%. Those within the 15-59 age group comprises 67% of the population while those age 60 and above comprise 6% (DBKL, 2006)

The distribution of the population by ethnic groups are 54% Malays, 24% Chinese and 20% Indians; the remainder comprise of other smaller ethnic groups and non-Malaysian citizens. Apart from Bangsar Baru and Bukit Bangsar which are not dominated by a single ethnic group, other areas tend to be dominated by specific ethnic groups. For example, Pantai Dalam, Bukit Kerinchi, Kampong Bahagia, Kampong Haji Abdullah Hukom and Kampong Sentosa are Malay-dominated with lower and lower-middle income groups forming the bulk of the population, with a small Indian minority. Jalan Tun Sambanthan is part of what is known as *Little India*,

due to the high proportion of Indians living in this locality. Petaling Lama, Petaling Selatan and Taman Lucky are predominantly Chinese (JPN, 2006).

The average monthly household income in Kuala Lumpur is RM4105 (US\$1173). Officially, 2.3% of the population lives below the poverty line indicated by monthly household income of less than RM750. However, a separate poverty line for urban areas was proposed by the National Economic Planning Unit under the 9th Malaysian Plan (RMK9, 2007). Due to the considerably higher cost of living in the capital, a baseline of less than RM1000 monthly household income was implemented by the Kuala Lumpur City Council as a baseline for low-income earners. According to this index, 8.1% of the population can be categorised as low-income earners. Unemployment rate in Kuala Lumpur as a whole is 3.9% (DBKL, 2008).

The tertiary or services sector is the biggest employer accounting for 83% of the working population. Dominant businesses are the financial services, insurance, real-estate and related businesses, wholesale and commerce, restaurants and hotels, transportation, communication, utilities and government services (RMK9, 2001). The secondary sector, which constitutes the manufacturing and construction industries, contributes to about 16% of the economic activities.

It is important to note that Lembah Pantai is experiencing rapid development and the population is in flux due to ongoing relocation projects as mentioned earlier, which has implications on its demographic characteristics. Relocation has resulted in socio-economic and landscape changes as well as the disintegration of traditional *kampung* communities. It is also the location of transient communities such as the large student

population due to the many higher learning institutions within the area. In addition, the influx of new residents from other states to supply the labour demands of the financial and economic district in Lembah Pantai further effects the demographic composition of the area.

2.2.3 Housing

The type of housing in Lembah Pantai varies widely from luxury apartments and mansions to low-costs flats and zinc-roofed squatter or temporary houses of some of the city's poorest inhabitants.

Single storey and double storey terrace or linked houses are typical of areas such Petaling Lama and Taman Lucky. Bukit Bangsar, Bukit Travers and Bangsar Baru are dotted with bungalows and luxury homes. Jalan Tun Sambanthan and Jalan Maarof are mostly shop houses where family-owned businesses maintain trade on the ground level and residential areas on the first or second floors of the building. The population composition in Kerinchi, Kampong Haji Abdullah Hukom, Seri Sentosa, Petaling Selatan comprise predominantly of blue-collar workers living in flats that had been sold to them under the Hardcore Poor Housing Project (PPRT) when they were resettled from their squatter homes several years ago.

Many more squatters or temporary housing dwellers are living in some areas, for instance in Kampung Kerinchi, and Kampung Bahagia, and are waiting to be relocated under the PPRT project. Of the total 129, 129 squatter or temporary housing residents dispersed among 12 communities in Kuala Lumpur, the highest proportion

(14%) is in Lembah Pantai (PSKL, 2006). The distribution of squatter areas are presented in Table 2.1 Table

Table 2.1: Distribution of squatters in Kuala Lumpur (N = 129129)

Community in KL with squatters	Population	%
Lembah Pantai	18 563	14.4
Wangsa Maju	15 264	11.8
Titiwangsa	15 114	11.7
Cheras	14 887	11.5
Batu	14 256	11
Segambut	13 625	10.6
Kepong	12 864	10
Bandar Tun Razak	11 388	8.8
Bukit Bintang	8 059	6.2
Seputih	5 109	4
Putrajaya	-	-
Total	129129	100

2.2.4 Health care

It is estimated that the entire population live within 3 kms of a health care service (Bakri et al, 2000). The community is serviced by a government, a teaching, and a private hospital. Pantai Medical Center, a private hospital, is situated at Jalan Bukit Pantai and also houses a private college; Pantai Institute of Health Sciences and Nursing. The Universiti Malaya Medical Center, a teaching hospital, is situated

within a five minute drive to the Pantai Medical Center. The main public general hospital, the Hospital Kuala Lumpur is accessible via the Federal Highway and is approximately 7 kilometres from Jalan Bangsar. All 3 hospitals offer mental health services (MOH, 2002). Another major health centre is the Bangsar Public Health Centre, a government primary health care center along Jalan Bangsar which caters to the health needs of the local community.

There are also numerous Non-government organizations (NGOs) that offer support and advisory services operating in the Bangsar area (Haque, 2001) such as the Befrienders and the Malaysian Mental Health Association.

CAM services in Lembah Pantai ranges from pharmacies, traditional Chinese and Malay medical practitioners, homeopathy, acupuncture, and massage. Efforts by the Traditional and Complementary Medicine (T&CM) division of the Ministry of Health to regulate and integrate the CAM sector resulted in plans on the establishment of a centralized electronic database. A new law that will regulate the use of traditional and complementary medicine is currently being drafted by the Malaysian Ministry of Health (T&CM Bill) and is expected to be legalized in 2008. Once the T&CM Bill is gazetted, registration of all traditional and complementary practitioners will be made compulsory. At the time of this study, actual numbers of available CAM practitioners in Lembah Pantai was not available. In preparation of the anticipated bill, the ministry have begun monitoring entry of foreign traditional and complementary practitioners and is in the process of listing all the traditional and complimentary medical practitioners in the country with the assistance of practitioner organizations. Contacts with several practitioner bodies recognized by the Ministry of Health

resulted in some estimates of the number of practitioners in Kuala Lumpur as a whole. The Chinese Physician's Association of Malaysia (MCPA) has 236 registered members; both the Association of Traditional Malay Medical Practitioners of Malaysia (PUTRAMAS) and The Homeopathy Federation of Malaysia (MPHM) estimates 100 members respectively in the Kuala Lumpur City area.

2.2.5 Public amenities

Universally free education is provided in Malaysia until the secondary level and there are a total of 9 primary and 6 secondary public schools in the Lembah Pantai area (KPM, 2008). In addition, Lembah Pantai is home to one public university, two teacher training colleges and six private colleges (MOHE, 2008).

Lembah Pantai is easily accessible from any part of Kuala Lumpur and is a 10 minute drive from the city center. It is also accessible via the Federal Highway, the Kerinchi Link road and the New Pantai Expressway. An elevated light rail transit system serves the community as well as a major transportation hub (Kuala Lumpur Sentral Station).

There are a few parks and playgrounds scattered across the residential areas. The main public sports facility is the Bangsar Sports Complex which is equipped with a swimming pool, multipurpose hall and playing courts.

2.2.6 Summary

The demography in Lembah Pantai is diverse and the juxtaposition between rich and poor can be jarring. The community enjoys reasonable facilities although not in the higher density area which tend to be of a lower income population group composition. An overall observation gives the impression of a community divided into lower and higher income areas and mostly polarised according to ethnicity.

In terms of health facilities, there is an inequity in the distribution of services. For example, although Pantai Dalam and Kerinchi comprise of high density communities, public health services are not available within those specific areas but are available in Bangsar Baru, which is a mix of residential and commercial area with lower population density (DBKL, 2007). This causes problems for those in the lower income groups who live in Pantai Dalam and Kerinchi, and who cannot afford to attend private clinics but live a distance away from the nearest public health resources.

In comparison to the rest of Malaysia, Lembah Pantai is typical of urbanized areas which are going through rapid development and social change. The existing community must cope with the consequent changes, such as the experience of forced relocation from traditional villages to cramped low cost flats. Forced relocation describes situations where community residents are pressured to accept non-negotiable terms of compensation and sale-purchase agreements. Although conditions in Lembah Pantai cannot be generalized to non-urban settings, they are representative of other communities in Kuala Lumpur. Thus, Kuala Lumpur has a

population of similar socio-demographic composition, similar problems of inadequate or inequitably distributed facilities, squatter houses, and issues with relocation.

Thus, this setting was chosen due to its urban demographic characteristics as discussed which can be generalized to most of the communities in Kuala Lumpur (Wangsa Maju, Titiwangsa, Batu, Bandar Tun Razak, Putrajaya) which share almost similar ethnic compositions and sizeable distribution of squatter areas. In addition, the familiarity of the candidate with the area was a key factor influencing choice of setting.

The availability of a diverse range of health care providers and services was another reason of choice of this population, so that the study findings were not confounded with issues of lack of availability of health services. The specific availability of public mental health care facilities and varied providers of mental health care from the NGO sector also addresses ethical issues of the need for referrals for persons with common mental disorders.

It is projected that the communities in Kuala Lumpur will continue to grow in terms of population and change along demographic lines. There is a projected increase in population numbers especially among young adults supplying the demands for labour of the expanding financial district of Lembah Pantai. This also implies an increase of out of state or rural to urban migration and possible changes in ethnic distribution with increases among Malays (the bulk of rural dwellers) and non-citizens which provide the bulk of low-skilled workers. At this point, there is an existing policy to increase the population of Kuala Lumpur from the current 1.58 million to 2.2 million

by 2020. This will require a continued influx of out of state workers and the relocation of existing *kampongs* to make way for commercial industries or cheaper housing areas. This continuing urbanization process presents future challenges to the community, underlying the need to address issues on the ability of the community to cope.

2.3 Sampling

2.3.1 Sampling unit and frame

Most door to door surveys begin by sampling dwellings, or the place where the household lives. Dwellings are easier to find than people as they are static and mostly permanent. Thus it is much easier to sample dwellings, and then interview the individuals who live in those selected dwellings. Door-to-door surveys usually exclude people who do not live in private households, for example troops in barracks, factory workers in hostels, homeless people, and so on. These individuals typically comprise an insignificant proportion of the population in Lembah Pantai, so excluding them should not bias the survey results. In relation to the population of Lembah Pantai, non-private households will exclusively be students living in hostels located within institutional compounds. University housing however is limited and can only accommodate 65% of first year students, thus a vast majority of students (years 2 – 4) in Lembah Pantai live within the non-campus community (UM, 2008).

The electoral register was utilised as the sampling frame for the survey as it is the most complete list of individuals in an area of those aged 18 and above. Registrants

are recorded according to addresses stated in their identification card, and not to their current residential address. Thus registered voters in Lembah Pantai may not necessarily live in Lembah Pantai. Due to the high influx of individuals moving to Lembah Pantai from other states, it was assumed that a high number of residents may not be listed in the register. Despite that, the electoral roll could still be utilized as it can be used as a sample of households since it contains addresses that remain the same even if residents change or move.

The Malaysian electoral register, produced by the Malaysian Election Commission (SPR) applies a bi-annual update system, meaning the list is updated every 6 months. It is also available in soft-copy, providing a convenient medium for computerised random sampling and storage of information. The main information that can be acquired from the register are individual names and identification card number which states the individual's date of birth as the first 6 digits of the full number, sex and address.

2.3.2 Sample size

Several factors were considered in the calculation of sample size. According to Rothman (1986), those factors are:

- 1 The level of statistical significance desired is the alpha-error which specifies the chances of a type 1 error or false positive result occurring when the null hypothesis is true but is falsely rejected
- 2 The chance of missing a true error is the beta-error, which specifies the chance of a type 2 error occurring when the null hypothesis is false but is accepted

- 3 The power of the study is given as the chances of a true positive finding and can be expressed as $1 - \beta$
- 4 The magnitude of the effect being investigated, specifically the smallest meaningful effect size acceptable
- 5 The disease rate in the absence of the exposure of interest

The alpha and beta errors are usually arbitrary and set using conventional values. Usually, the sample size (N) is calculated with the default values of alpha at 0.05, and power at 0.80 to calculate effect size. Thus for the present study, the level of statistical significance (alpha error) was set at 0.05 and the power (beta error) at 0.8.

To obtain estimates for the effect sizes in relation to the main hypotheses, data from published and unpublished data was used. At the time of finalising the PhD topic, no published data on the prevalence rate of health service utilization among people with CMD in Malaysia was available. Following the completion of the upgrading process, unpublished information from a large-scale study across five Malaysian states was made available. Preliminary data elicited from that study indicated that 46% of those with CMD have utilized health services in the last 3 months, compared with 29.5% of those without CMD (Krishnaswamy, personal communication). This supports the primary hypothesis in this PhD that people with CMD have a higher rate of health service utilization.

A number of datasets were considered for the ascertainment of the probable prevalence of CMD. A rural community survey reported a rate of 9.7%. This study was carried out in the East Coast of Malaysia, an area with distinct cultural and social

characteristics (Ramli et al., 1991). The sample of that study were specifically Malays in terms of ethnicity and occupation was almost entirely related to agriculture which renders the available community rate as unsuitable. The prevalence rate from the National Mental Health Survey (NMHSII) data was 10.7% (MOH, 1998), which is an overall rate but rural-urban differences were not available. The most appropriate data for community rates in terms of comparability of setting and socio-demographic make-up, as well as the most recently available, is the Singapore community survey conducted by Ng and colleagues (2003).

Thus, assuming the prevalence of CMD in the community is 16.9% (Ng et al, 2003), it was hypothesized that people with CMD are at least two times more likely to seek biomedical care than people without CMD.

To test Hypothesis 1, the exposure for the current study is having CMD with the outcome of interest is bio-medical service utilization, the following assumptions were considered:

- 3 The ratio (number of exposed : number of unexposed) is 1:4
- 4 Expected frequency of outcome (service utilization) in the unexposed group:
29.5%
- 5 Percent of outcome (service utilization) in the exposed group: 46%

Sample size estimation was done by using the EpiInfo software. Overall, 574 (rounded up to 600) participants was needed to test Hypothesis 1, with 95% confidence and 80% power.

Past surveys on help-seeking behaviour for mental disorders among the general population in the UK and other countries resulted in response rates ranging from 60%-80% (Oliver et al 2005; Singleton et al, 2000; Meltzer et al, 2000; Bland, 1997; Veerhak, 1995). Based on these studies, we expect a 30% refusal rate for the interview; therefore the initial random selection will be inflated to 858 participants.

2.3.3 Inclusion and exclusion criteria

Individuals between 18-45 years of age residing in Lembah Pantai were eligible to be included in the study. The rationale for this age range is that it reflects the group of adults most likely to be in their productive years, and thus the presence of a CMD would result in significant impact to their well-being. It is also known that the age distribution of psychiatric morbidity in Malaysia follows a J-pattern, indicating higher prevalence rates among the youngest and the oldest of the population (NMSII, 1996; NHMS, 2006). Thus a more specialised approach to the older age group may be required as socio-demographic variables such as employment position, as well as psychological impact of recent major life events (i.e. children's marriage, death of loved ones, retirement, physical illnesses) may play a different role in current help-seeking behaviour and would require more complex measurements. It is unclear from the previous surveys which older age groups exhibited significantly higher prevalence rates, thus it was decided that the safest approach was to maintain the age criteria until middle adulthood as defined by developmental theories, before entering late adulthood.

Children or adolescents aged below 18 were excluded due to ethical considerations and because procedures for detection of CMD in this age group are different from those used for adults.

Participants were excluded if they were unable to speak Bahasa Malaysia or English. This exclusion criterion would apply to a small minority of potential participants because the inclusion criteria would have ensured that all participants were born post 1957 and would have been enrolled in national schools with Malay as the medium of instruction. The policy of Bahasa Malaysia or Malay as the national language was implemented in 1957 and English is officially the second language and is a compulsory subject within national schools. In any case, each participant will be asked language of preference, thus a Chinese participant would be interviewed in either Bahasa Malaysia or English, without the need of a translator. Any person who refused consent to partake in the study was excluded.

2.3.4 Sampling procedure

A random sampling procedure was conducted due to the availability of a list of potential households. Following cleaning the dataset of repeated and missing addresses, a random sample of exactly 858 addresses was generated using the SPSS program.

An interviewer visited each selected address. Only one individual out of each selected household was included in the survey. In the event of more than one eligible respondent, simple random sampling was used to select the individual. All eligible household members were listed, and each name was written on slips of paper. The

slips of paper were rolled up and placed in a dark cloth bag, and the name drawn from the bag was selected to participate in the survey.

2.3.5 Replacement strategy

For failed contacts due to any reason apart from direct refusal, replacements were conducted. Contacts were considered eligible for replacement for reasons such as the selected addresses turned out to be derelict or a demolished dwelling, relocated, untraceable, or no longer a residential or occupied dwellings. Such addresses were replaced by another address within the same area and randomly selected from the main list. For areas that were demolished and relocated to a new housing area which was not made available in the sampling frame, a new list of addresses was procured to replace the relocated addresses. The total list of the new addresses was constructed and a random sample of the exact number of relocated addresses was generated.

2.4 Measurement

Measurement was conducted in a 2 stage design. Stage 1 includes the whole study sample of 614. Following screening procedure, those who screened positive continued for diagnosis and further assessment in Stage 2; a sub-sample of 54 participants who were diagnosed with CMD participated in this second stage. Exposure variables related to general help-seeking behaviour and perceived help-seeking behaviour were measured in Stage 1. Exposure variables related to actual help-seeking behaviour for CMD were measured in Stage 2.

2.4.1. Measurement of Exposure

The following variables associated with the prediction of help-seeking behaviour were assessed: CMD status, Explanatory Models, stigmatizing attitude.

2.4.1.1 Stage 1

2.4.1.1.1 CMD Screening: 12 item General Health Questionnaire (GHQ-12)

There are several version of the General Health Questionnaire (GHQ), namely the GHQ-60, GHQ-30, GHQ-28, GHQ-20 and the GHQ-12 (Goldberg et al, 1988) which have been extensively studied, translated into different languages and used in a number of countries including in the NHMSII. The implementation and response rate in community surveys would be much enhanced with a shorter questionnaire; thus for the purpose of this study, the shorter 12 item version of the GHQ was selected.

The GHQ-12 is a self-administered questionnaire which was designed as a screening tool aimed at detecting common mental disorders (CMD) in the community. The questionnaire focuses on breaks in normal function rather than upon life long stable traits. It detects disorders of a few weeks' duration and is sensitive to the detection of transient disorders. Its score can be interpreted in the form of a probability estimate of an individual being a case of CMD (Goldberg, 1978). The score cannot be used to

detect personality disorders, patterns of behavioural adjustments, lifelong phenomena such as stuttering, mental sub-normality, dementia, psychoses or mania.

The GHQ 12 asks participants 12 questions about their mood and related symptoms or experiences of depression and anxiety, in the four-week period before interview. The 12 items sought response with regards to the participant's ability to concentrate on their daily activities, loss of sleep over worries, whether they feel they are doing something meaningful, their capability to make decisions on things, feeling of being constantly under strain, and the ability to overcome difficulties. Other items included questions on whether they were able to enjoy their day-to-day activities, face up their daily problems, feeling unhappy and depressed, losing confidence in self or thinking of self as a worthless person. The final item asked whether the respondent feels reasonably happy, with all things considered. All the questions are followed by a choice of 4 answers, in a modified Likert scale, i.e. a graduated scale of positive to negative responses. A sample of the English version of the GHQ-12 is presented in Appendix 6.

The GHQ-12 has been extensively validated with adults (Tait & French, 2003). It is the most widely used self-report questionnaire to detect psychological disorders in the general population and is recommended for detection of probable cases (Goldberg et al, 1997). Besides its successful administration in community settings, the advantage of using the GHQ-12 is its wide use internationally, facilitating comparison between studies conducted in different populations. The questionnaire can be completed in less than 5 minutes and thus is not taxing on the respondent. It has also been used in recent studies on primary care attenders in Malaysia (Mohd Sidik et al, 2003; Quek et

al, 2001) and was used in the NHMSII study on the general population. The Bahasa Malaysia version of the GHQ-12, translated from the original version for the NMSII study (MOH, 1997), was used in this study. A GHQ-12 score of 2 and above was used as recommended by literature which is the cut-off point to define a probable case of CMD (Tait & French, 2003).

2.4.1.1.2 EMs on vignette: Short Explanatory Model Inventory (SEMI)

The SEMI was used to elicit the EMs of the participants own CMD (as appropriate) and that of the case described in a vignette of depression (see Box 1, page 22).

The SEMI was developed from the explanatory model framework elaborated by Kleinman (1980). It is an interviewer rated semi structured questionnaire amenable to both quantitative and qualitative analysis (Lloyd et al, 1998). It has been used in a number of cultural settings, for example to study the explanatory models of participants with common mental disorders among Whites, African-Caribbean and Asians living in London (Lloyd et al 1998) and in a number of other countries, such as Zimbabwe (Patel et al 1995) and Sri Lanka (Sumathipala et al 2000). The SEMI allows discussion of the participants' own health problems, as well as exploring different ways of explaining mental distress by using vignette material.

The SEMI is structured into five sections; for the purpose of the study, three sections were utilized namely: nature of presenting problem, help-seeking behaviour, and beliefs related to mental illness (Table 2.2).

Table 2.2: Components of the SEMI based on Kleinman's explanatory model questions	
I.. Nature of problem	Reason for consulting Name of problem Perceived causes, consequences and severity Effect on body, emotions, mobility, social network, home life, work, finances
II. Help seeking	Biomedical help seeking Alternative sources (non medical) Role, expectation and satisfaction
III. Beliefs related to mental health and illness	Vignettes on "common mental disorders"

Respondent's beliefs concerning the nature of the presenting problem are elicited by the use of vignettes which describe patients suffering from depression, phobia and somatisation problems. This is then followed by open-ended questions to elicit participant attitude and beliefs regarding the clinical problems. Of particular interest is whether the patient considers the presentation as an illness, the patient's views on causation, help-seeking and the role of the doctor or healer. Each section of the interview is designed to stand alone, allowing flexibility in order of questioning. It also allows for focus on certain aspects of the interview and the omission of others depending on the overall objectives of a specific study (Lloyd, 2002).

Administration of the SEMI begins with the interviewer introducing each key topic with a brief explanation. For example, when asked about the participant's belief in whether depression is an illness, the interviewer began with "Is A suffering from an illness? If yes, what is it?". Any further clarification or explanation required may be offered. The interviewer would then continue to the next question which is presented in Appendix 3. Participants were encouraged to offer as many reasons as they felt appropriate. Responses are recorded verbatim by the interviewer.

Some modification to the use of the SEMI was carried out for the purpose of the current study. Unlike many other studies that utilized the SEMI to study psychiatric cases or patients or patients in primary care (e.g. Bhui, 1998; Lloyd, K.R., et al, 1998; Liu, 2000, Sumathipala; 2000; Lloyd, 2002) the current study's objective is to elicit mental health beliefs among the general population about CMD in particular. The current study also involves a larger number of participants with a limited time scale for interview completion. It was thus decided that a vignette designed for use among non-clinical community based samples would be appropriate.

The use of the SEMI in this study incorporated a vignette of depression (Box 2.1) used in large scale studies of public's mental health beliefs and mental health literacy on CMD by Jorm et al (Jorm et al, 1997; Kua et al, 2000; Jorm et al, 2005). The vignette was translated into *Bahasa Malaysia*, following which the male Christian name was changed into "A". In addition, there is no gender specific pro-noun in *Bahasa Malaysia* thus the translation of the vignette does not specify whether the person depicted in the vignette is male or female, thus ensuring gender neutrality.

Forwards and backwards translation was conducted and the results checked by independent clinical psychologists and psychiatrist to ensure accuracy of the translated symptoms.

Box 2.1: The depression vignette

A is 30 years old. A has been feeling unusually sad and miserable for the last few weeks. Even though A is tired all the time, A has trouble sleeping nearly every night. A doesn't feel like eating and has lost weight. A can't keep A's mind on A's work and puts off making decisions. Even day-to-day tasks seem too much for A. This has come to the attention of A's boss, who is concerned about A's lowered productivity

2.4.1.1.3 Stigmatising attitude in relation to vignette

A questionnaire for the measurement of attitudes towards people with mental illness was piloted in the World Psychiatric Association's anti-stigma schools project in Canada (WPA, 1998). Since this initial use in a single site in Calgary, Canada, the questionnaire has been utilized in similar anti-stigma campaigns in more than 20 countries (Sartorius, 2005). The questionnaire was designed as an evaluative tool to assess self-reported attitude towards sufferers of mental illness; in Canada the emphasis was on schizophrenia while a more recent study in the UK was conducted in relation to broader mental health problems (Pinfold et al, 2005). The items in the scale cover the different factors which influence stigmatising attitudes as discussed by Byrne (2000); negative attitudes to people with mental illness are related to the attributes people apply to persons affected by mental illness (appearance and behaviour), the assumptions about the individual's disorder (perceived responsibility,

perceived severity) and knowledge base about the particular disorder (perceived treatments and perceived danger).

The original Pinfold study, which did not utilize a vignette, posed the following five statements to gauge the participants' general attitudes towards people with mental illness:

- i. People with mental health problems are difficult to talk to
- ii. People with mental health problems are likely to be violent
- iii. People can recover from mental health problems
- iv. People with mental health problems are weak and only have themselves to blame
- v. People with mental health problems are unpredictable

Participants were regarded as having a 'positive' opinion if they agreed with statement (III) and disagreed with the remaining statements. An aggregate attitudinal score may be computed by totalling the five items. The scoring system is as follows:

Agree = 1, Disagree = 2, Unsure = 0 (Reverse scoring for statement III)

Higher scores indicate a more positive attitude towards people with mental disorders (i.e. a less stigmatizing attitude). For univariate analyses, "agree" and "unsure" was merged as a stigmatizing response and "disagree" as non-stigmatizing thus creating a binary determinant.

Measuring stigma is problematic as people tend to downplay their negative attitudes (Byrne, 2001). By utilizing a vignette, it is assumed that this will help to anchor

participants to specific scenarios and reduces reflexive responses and conscious efforts to mask negative attitudes (Bryman, 2001, Murray et al, 2004). One of the main purposes of vignette utilization in research is to provide a less personal and therefore less threatening way of exploring sensitive topics (Neale, 1999) and, in the case of this study, stigma associated with mental disorder.

For the purpose of this study, the leading question was changed to “This person... (i.e. refer to the vignette)

- i. Is difficult to talk to
- ii. Is likely to be violent
- iii. Can recover from his problems
- iv. Is weak and only have himself to blame
- v. Unpredictable

Thus, the stigma questions were appropriately asked even if the subject did not consider the vignette represented a mental health problem.

2.4.1.2 Stage 2

2.4.1.2.1. CMD diagnosis: Mini International Neuropsychiatric Interview (MINI)

The MINI is a standardized diagnostic instrument for the diagnosis of ICD-10 and DSM-IV psychiatric disorders (WHO, 1992). It consists solely of standardized, structured closed-ended questions. Its items are based on ICD-10 and DSM-IV

criteria which were phrased into standardized questions. The interviewer read these questions *ad verbatim* to the participants. Psychiatric diagnosis is then determined according to the affirmative replies to the specific questions.

The MINI is the most widely used structured diagnostic interview instrument for psychiatric disorders in the world (Sheehan et al., 1998). The MINI has been translated into 43 languages and is used by mental health professionals in more than 100 countries. Studies have shown that the MINI is a valid and reliable diagnostic tool. Inter-rater and test-retest reliabilities were high for the majority of mental disorders. Validity, compared against other lengthy structured diagnostic interviews such as the Composite International Diagnostic Interview (CIDI) and Structured Clinical Interview for DSM-IV (SCID) were also high (Lecrubier et al., 1997; Sheehan et. al, 1997). Research has also shown that the MINI can be used as a gold standard of psychiatric diagnosis in multi-centre clinical trials and epidemiological studies (Gabarron et al., 2002; Wojnar et al., 2003). It has also been validated against expert opinion in a large sample in four European countries (France, United Kingdom, Italy and Spain) (Sheehan DV, et al., 1998). In terms of respondent acceptability, studies have shown that participants view the MINI in a positive manner (Pinninti et al., 2003). It was considered comprehensive enough to cover all patient symptoms and at the same time not unduly lengthy, thus making it more practical to incorporate into the community survey schedule.

To reduce the time of the interview, we excluded alcohol abuse and dependence, substance use disorder, psychotic disorders, eating disorders, and antisocial personality disorder sections of the MINI as these disorders were beyond the scope of

the study. Thus the MINI interviews in this study entailed the following modules: depressive disorder, dysthymia, panic disorder, agoraphobia, social phobia and generalized anxiety disorder.

2.4.1.2.2 EMs on own problem: SEMI for those with a diagnosed CMD

Participants who were identified with a CMD were assessed about their own mental health EMs by using the SEMI. Participants were queried on their illness perception, causal attribution, onset of their problem, questions on perpetuating factors and impact of their CMD. Questions posed were:

- What do you think your problem is?
- Do you have a specific name for this problem?
- When did your problem start?
- Why do you think you are experiencing the problems/ What do you think is the cause of your problems?
- How serious is your problem?
- What do you fear most about your problem?
- What can make your problem worse?
- What can make it better?

2.4.1.2.3. Pathways to care questionnaire for those with a diagnosed CMD

Following an affirmative response of actual help-seeking behaviour, questions about each step of help-seeking in sequential order were asked.. Questions posed were related to:

- Their first help source contacted
- The type of each subsequent source of help
- The type of care or help received from respective sources
- Satisfaction of received care
- Cost, if any incurred

The main rationale for the questions is that the information would help identify the reasons for seeking care and their experiences of this care.

2.4.2 Measurement of Outcomes

2.4.2.1 Stage 1

2.4.2.1.1 Help-seeking behaviour

This section contained questions about the history of illness within the previous 4-week recall period and use of any health facilities, or any activity to alleviate any kind of health problem during the same period. The rationale for this section was to elicit the different types of health care seeking behaviour by the participant as a measure of the primary outcome. The types of health facilities were all elicited. Participants who had sought help could endorse more than one source. Those who had sought help within the indicated period were further probed about the specific type of care sought. A table of anticipated responses was prepared to function as a checklist to expedite the data collection process. The checklist was also utilized to allow the investigator to pre-empt certain responses which may require probes in order for it to be elicited.

2.4.2.1.2 Perceived Help-seeking

Perceived help-seeking behaviour was assessed in relation to the vignette. Participants who believed that the vignette presented a person with a problem were probed on what “A” should do in order to handle the problem(s). Participants’ responses were recorded *ad verbatim* and were later analysed to produce quantitative results. The key objective in this approach is to elicit responses on help-seeking behaviour for a hypothetical situation approximating CMD.

2.4.2.2 Stage 2

2.4.2.2.1 Actual help-seeking

Actual help-seeking behaviour was assessed by initially presenting a close-ended question on whether the participant had sought help specifically for their current mental health problem. Following an affirmative response, an open-ended question was presented to identify the types of health care sought by participants with CMD,

2.4.3 Measurement of other Determinants and Confounders

2.4.3.1 Socio-demographic

Socio-demographic variables are important in determining the risk for mental disorders and the needs for mental health intervention. Among the most important variables which were also included in this study are age, gender, marital status, living

condition, ethnic and religious background, level of education, employment status, and monthly income levels. However, an ongoing debate exists on the causal direction between mental illness and socio-demographic factors.

In relation to service use or help-seeking, similar socio-demographic variables also influence whether individuals seek help. Age, gender, minority status, income and educational disparities have been identified in past studies to be associated with help-seeking.

2.5 Survey Method

2.5.1 Translation

Forward translation and expert panel back-translation was conducted on all the instruments apart from the GHQ-12 (whose *Bahasa Malaysia* version was already available).

2.5.1.1 Aim of translation

The aim of the translation process was to achieve a *Bahasa Malaysia* version of the English instrument were conceptually equivalent. Guidelines provided by WHO were considered during the translation process:

1. Aim at the conceptual equivalence, i.e. carry the intended meaning as in the original, not word-for-word or literal translation

2. Strive to be simple, clear and concise. Long sentences with many clauses should be avoided
3. The target language should aim at the most common audience
4. Avoid the use of jargon
5. Avoid any terms that might be considered offensive to the target population

2.5.1.2 Process of translation

Forward translation was conducted by the candidate who is a bilingual clinical psychologist, familiar with terminology covered by the instruments as well as equipped with the interviewing skills required for the task. The candidate is fluent in written and spoken English and is a native speaker of *Bahasa Malaysia*.

Back translation is the process of translating a document that has already been translated into a foreign language back to the original language.

Final consensus version was conducted via a panel. The panel included the original translator, a clinical psychologist and a psychiatrist. Inadequate expressions or concepts of the translation were discussed. In addition, any discrepancies between the forward translation and other comparable versions were discussed. Discrepancies were discussed until a satisfactory version was achieved. Notes and observations of participants' response to questions were compared and difficult phrases or words were identified. Pre-testing of the instrument was carried out during piloting before the final version was used for the survey.

2.5.2 Piloting

Piloting was carried out with a convenience sample of staff and visitors to Universiti Putra Malaysia(UPM) and Universiti Kebangsaan Malaysia (UKM). The objectives of the piloting was:

- a. To test flow of the sequence of questions and duration to complete an interview
- b. To check whether the questions are ambiguous due to lack of clarity
- c. To check clarity of instructions for interviewers
- d. To allow elimination of questions that do not yield relevant data

30 interviews were conducted for the pilot study.

Socio-demographic: The group was largely Malay (67%), female (60%), single (60%), earning more than RM1000 per month (73%) and all were employed. 13% were Chinese, 7% Indians and about 13% belonging to other ethnic groups from Sabah and Sarawak. There was a reasonable balance of those who lived alone (17%), within a nuclear family (17%), with their parents (23%) and with extended families (27%) with the remainder living in house-shares.

Help-seeking Behaviour: About 63% of those interviewed had sought some kind of help in the past 4 weeks for a health problem. Of the types of help used in the past 4 weeks, only GP, hospital, herbalist and massage, were endorsed. Other categories that emerged which were not on the list were “direct seller” and pharmacist for over the counter purchases. “Direct sellers” are independent unsalaried sales people who represent a pharmaceutical or multi-level-marketing company and are rewarded a commission based on volume of sales. The products sold by “direct sellers” includes

vitamins and other health supplements and includes traditional supplements such as ginseng and *jamu* (traditional Malay herbal supplements).

Reasons for seeking help: Reasons for help-seeking were headaches, flu/cold, cough, high BP, diabetes, to lose weight, asthma, antenatal follow-up, sore throat, skin problems and bodily aches. Only one participant did not make their own decision of choice of help and only one participant expressed dissatisfaction with the choice of help.

GHQ-12 and M.I.N.I: The mean score for GHQ-12 is 1.5. Only 3 participants (10%) scored 4 and above and one was diagnosed with major depression.

2.5.2.1 Methodological changes following piloting

The main methodological changes and modification as the consequences of the piloting are as follows:

- *A priori* categories of help-seeking behaviour were prepared to facilitate the interview process while allowing the addition of other forms of help-seeking behaviour. A checklist based on these categories was constructed to facilitate the interviewing process
- Based on observations and comments from participants who requested to read the vignette themselves, a standard procedure of providing vignettes in printed form to participants to read themselves, in place of the interviewer reading the vignette aloud, was developed. Unless the participant is unable to read, a laminated copy of the vignette will be

provided. This reduces the dependence of the response on the participant's recall of the vignette

- A decision to lower the cut-off point of the GHQ-12 from 4 to 2 for the eligibility for the Stage 2 diagnostic interview was made in order to maximize sensitivity. The lower cut-off point of 2 was considered appropriate as the utilization of the GHQ-12 in my study was to identify probable cases and not definite ones. In addition, the lower cut-off point was comparable to the NMSII which utilized the same instrument. The mean GHQ score for the pilot sample of 1.5 also provided a rough guide to the best cut-off point as suggested by Goldberg and colleagues (Goldberg et al, 1998).

The final order of the instruments for the main study was confirmed as shown below.

Stage 1

- Socio-demographic questionnaire (Appendix 1)
- Help-seeking questionnaire (Appendix 2)
- SEMI (Appendix 3) based on vignette (Appendix 4)
- Stigma questionnaire (Appendix 5)
- GHQ-12 (Appendix 6)

Stage 2

- MINI (Appendix 7)
- SEMI for own CMD (Appendix 8)
- Pathways to care questionnaire (Appendix 9)

2.5.3. Preparation for Fieldwork

2.5.3.1 Site

Field visits were conducted to familiarise the research team with the survey areas, particularly in getting to know the geographical structure and accessibility via public transport and housing characteristics of the community. Familiarisation with the site resulted in identifying required arrangement for staff transportation, i.e. arrangement for car to areas with no public transportation

2.5.3.2 Dates and major milestones

The pilot study identified several issues pertaining to the questionnaire and these were discussed with my supervisor during his field visit to Malaysia in December 2005. The main survey began in February 2006 and was completed by the end of August 2006.

Data entry and cleaning was conducted by the candidate and commenced in September 2006 until December 2006. Analyses started in December 2006 and continued until May 2008. Write-up status officially began in November 2007 and is scheduled to end on November 1st 2008.

Table 2.3: Dates and major milestones

	2005					2006					2007					2008												
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
Upgrading seminar	█																											
Preparation for fieldwork, ethics application, piloting, sample selection, supervisor visit	█	█	█	█	█																							
Fieldwork						█	█	█	█	█	█																	
Data entry and cleaning													█	█	█													
Analyses																█	█	█	█	█	█	█	█	█	█	█	█	█
Thesis write-up status																												

2.5.3.3 Local partnership

Support from the administrative staff of the Psychiatry Department, UPM was acquired in the form of assistance for printing, reception for phone enquiries and mailing services. The research team comprised of 2 clinical psychologists, 1 counsellor, and 4 psychology students. Both the clinical psychologists (candidate included) at the time of study served at the Kuala Lumpur General Hospital (HKL), and the counsellor was attached to the Mental Health Center at HKL. All the students were from the Psychology Centre, HELP University College of Kuala Lumpur and were recommended by the centre based on academic and training background as well as involvement in prior community studies conducted by the centre.

2.5.3.4 Research team

A partnership was initially established with a clinical psychologist from Hospital Kuala Lumpur. As the main researcher, the candidate conducted interviews almost exclusively after office hours during weekdays and during the day at weekends to ensure maximum response rate for employed participants. The two other interviewers from HKL worked exclusively during the weekends as both worked full time at the hospital. Although all group members were actively involved in field work, we realized by the end of the first month of fieldwork that we were performing behind the targets. After consulting with my supervisor, it was decided that recruitment of four more interviewers would assist significantly provided that quality of interviews was strictly monitored. Briefing sessions about the survey and support required were conducted and training sessions were completed (see the next section for details). Payment, transportation and communication essentials were agreed upon during the briefing sessions. It is noted that a similar briefing session was conducted for all members of the research team.

2.5.3.5 Training of interviewers

The interviewers consisted of trained clinical psychologists, counsellor and psychology students. The selection procedure of the student interviewers included tests of reading, speaking and comprehension of *Bahasa Malaysia* and competence in following structured interview instructions and carrying out open-ended qualitative interviews. Due to the research team's training and experience, a training period of a

3-day workshop was considered to be sufficient. The main emphases of the training programme were to:

- 3 familiarize researchers with the questionnaires;
- 4 develop their interpersonal communication skills
- 5 Carrying out open-ended interviewing, specifically for the SEMI

Mock interviews were conducted in role play exercises and individual interviewing practice under supervision of the candidate in simulated field settings. Intensive briefing and field training on obtaining community consent and on locating households were also conducted. Confidentiality issues and methods of referring participants to the nearest health facility and providing appropriate information to seek care were also discussed.

Much effort was made to ensure the building of rapport between interviewers and participants. As part of the training, interviewers were instructed to avoid prompts and expressions that may suggest disapproval or disagreement. An introduction to the interview should include the interviewer's own name, the aims of the interview, a reminder that the interview can stop anytime and an opportunity for the participants to ask any questions.

The overview of the interviewers training programme is as follows:

Day 1

- 2 Background information to the study and issues pertaining the survey
- 3 Familiarization with the questionnaire in *Bahasa Malaysia*; the candidate went through each instruction, question and response category in the questionnaire.

The candidate dealt with the various types of questions and response categories (open-ended, closed ended and forced choice). The interviewers role-played as participants in turn, while their colleagues practised being interviewer or observers. Ratings were compared and discrepancies discussed.

4 Interviewers break into pairs and practice with the questionnaire

Day 2

1. Continued familiarization with the questionnaire; the interviewers goes through the questionnaire again with one interviewer reading the questions and other interviewers taking turns as participants in role-play exercises.
2. In-house practice continues
3. Debriefing session discussed difficulties in using the questionnaire

Day 3

1. Field practice; the interviewers disperse into areas around the training venue to recruit at least 2 participants for 2 separate interviews. The participants were recruited by the interviewers by approaching dwellings surrounding the training venue. The purpose of the interviews was not to gather data for the survey, but to familiarize the interviewer with realistic field conditions, and the survey procedure.
2. Debriefing session regarding the field practice experience
3. Preparation for field deployment: distribution of maps, identifying routes, issuances of field kits, allowance and allocation of addresses

2.6 Field work

Field work was planned on a weekly basis which includes distribution of questionnaires, allocation of addresses and addressing any issues that emerged within that week. Supervision was available throughout the week whenever requested.

2.6.1 Quality control procedures

Specific quality checks were made on the following:

- i. Indicators of productivity were monitored on a weekly basis throughout the survey. Indicators of productivity included the average number of successful interviews per interviewer and proportions of refusals.
- ii. Indicators of quality included checking for completeness of every interview through the exchange of questionnaires among the research team.
- iii. All reports of demolished or relocated dwellings were verified by the candidate
- iv. Random supervisory visits of the candidate to the field during the survey were conducted for direct observation of an interview

2.6.2 Interviewing procedure

2.6.2.1 Informing the selected participants

Introductory letters were sent to the randomly selected addresses explaining that a survey is being conducted in their area (Appendix 10). Explanation regarding the random selection of addresses were described to clarify any possible impression that selection was based on any other reason such as their contacts being provided by their GP, place of work, school and so forth, in the effort to reduce any anxiety associated with being approached to participate in a health research project. The letter also specified information about the survey and research team contact details should any other information be required. The letters also explained that participation is completely voluntary and any information will be treated with strict confidentiality.

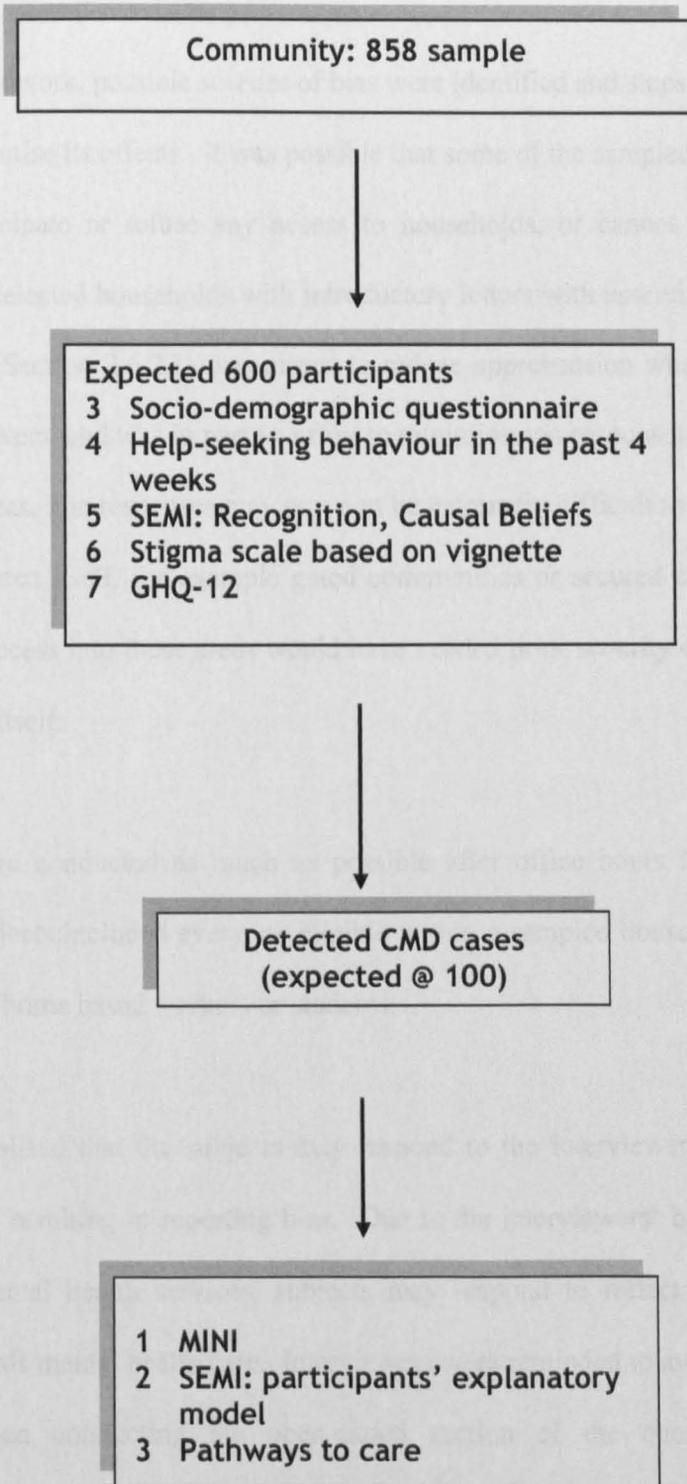
Due to the sensitive nature of the study, it was expected that some participants may feel more assured with options for research interview settings which provided more privacy, this was also clarified in the letter. Arrangements were made with the Universiti Putra Malaysia (UPM), Medical Faculty building to provide a private and secure interview room. The UPM building is situated in central Kuala Lumpur with easy access to the public transport system.

2.6.2.2 Data collection procedure

All selected participants were approached for consent to enter the study. The interviewers visited each address, approximately 1 week after posting the introductory

letter. Upon agreement, participants signed a consent form (Appendix 10), and those who refused were not replaced and their reason for refusal was recorded where forthcoming. Participants who could not be interviewed due to any other reason were replaced by randomly selecting other consenting participants within the same household where possible.

Figure 2.2: Data Collection Procedure



2.6.3 Minimising response and reporting bias

Prior to the fieldwork, possible sources of bias were identified and steps were taken to control or minimise its effects. It was possible that some of the sampled subjects may refuse to participate or refuse any access to households, or cannot be contacted. Providing the selected households with introductory letters with essential information of the survey (Section 2.6.2.1) was aimed to reduce apprehension when approached by the interviewers, and was in part an effort to minimise non responses. However, in some living areas, non responses may prove to be extremely difficult to control due to access to the area itself, for example gated communities or secured condominiums. Any form of access into these areas would have needed prior security clearance from the household itself.

Interviews were conducted as much as possible after office hours in an effort to ensure the subjects included everyone eligible within a sampled household, not only housewives or home based workers or students.

It was also realised that the subjects may respond to the interviewers in a socially desirable way, resulting in reporting bias. Due to the interviewers' background and relation to mental health services, subjects may respond to reflect more positive attitudes towards mental health care. Interviewers were reminded to avoid prompting, especially when conducting the open-ended section of the questionnaires, or providing any form of nonverbal cues.

2.6.4 Challenges during field work

The ability to follow the survey plan was complicated by two challenges: incorrect estimation of the manpower needed to collect the data, and the degree of change in the social and logistical landscape of Lembah Pantai within the first two years of the latest electoral role update. With regards to the first issue, it was clear that not having full time research assistants drastically reduced productivity level as there is an ongoing conflict of commitment between official and part-time work. I addressed this by increasing the number of interviewers. As for the second issue, not being aware of the level of inconsistency between the electoral register and current conditions resulted in the high replacement rates of selected addresses (see Results). The urban resettlement programs around Lembah Pantai had resulted in the replacement of several villages or settlements by new housing complexes, rendering many of the addresses listed in the electoral register as obsolete.

The candidate did not identify a resource person with an in-depth knowledge of Lembah Pantai. Although the information gathered on the area were based on official information and national statistical publications, personal contact with local health officials and other local key-informants would have benefited the survey greatly. This is because a key-informant would have had up to date information on the relocations taking place as well as having direct knowledge of other changes within their community.

The candidate was unable to allocate resources for administrative support for the coordination of the survey which resulted in her performing the multiple tasks of

interviewer-coordinator-supervisor. Fortunately, the survey did receive support for use of facilities given by Universiti Putra Malaysia for training and supervisory purposes. The researcher was also given access to unlimited photo-copying, internet, phone and fax facilities. In addition, reception services were provided to monitor and answer incoming calls for queries and mailings.

2.7 Data management and Analyses

Data entry was performed by the SPSS version 13. Double data entry was randomly performed on 10% of the data to check for errors. Data cleaning was performed by simple frequency counts for each variable. Output tables were checked for any invalid values (mislabelled, out of range, system missing, etc.). Following this process, anomalies were checked referring to original questionnaires.

2.7.1 Variables used in the analyses

2.7.1.1. Outcome variables:

Data collected in the survey were organised to generate four outcomes related to help-seeking.

2.7.1.1.1. Any help-seeking

General health behaviour indicated by utilization of any type of services based on self-report of help-seeking behaviour of all stage 1 participants within the past 4 weeks.

2.7.1.1.2 Biomedical care utilization

Utilization of biomedical care services

- self-report of all stage 1 participants own help-seeking behaviour within the past 4 weeks
- endorsed biomedical help-seeking behaviour of all stage 1 participants for person described in the vignette
- self-report of stage 2 participants diagnosed with CMD for actual biomedical help-seeking behaviour

2.7.1.1.3 CAM care

Utilization of CAM services

- self-report of all stage 1 participants own help-seeking behaviour within the past 4 weeks
- endorsed CAM help-seeking behaviour of all stage 1 participants for the person described in the vignette
- self-report of stage 2 participants diagnosed with CMD for actual CAM help-seeking behaviour

2.7.1.1.4. Self-help

- endorsed help-seeking behaviour of stage 1 participants for the person described in the vignette
- self-report of stage 2 participants diagnosed with CMD for self help behaviour

2.7.1.2 Predictive variables:

- a. Socio-demographic variables
- b. CMD status
 - i. Severity of distress experienced indicated by GHQ-12 scores
 - ii. Diagnosis of CMD indicated by MINI
- c. Explanatory Models of vignette (stage 1 participants) and own CMD (stage 2 participants). EMs were categorized as follows:
- d. Stigma
 - i. Stigmatising attitudes towards sufferers of CMD presented in the vignette

2.7.3 Coding of SEMI data

For the EM variables, data analyses were conducted in 2 steps:

- Qualitative analyses
- Quantitative analyses

In qualitative research, coding is the term used to describe the process whereby the data are examined for underlying categories or themes (Brown & Lloyd, 2001). Interviews are transcribed to produce texts that can be used to generate coding

categories and to test theories. This process is often referred as thematic content analysis and can involve any kind of analysis where narrative content is categorized and classified. It can involve quantitative methods such as enumerating procedures such as counting word frequencies, measuring the number of lines and amount of space given a subject.

The codes for the study were developed on an ongoing basis as the data was examined. The stages of thematic content analysis as described by Green and Thorogood (2004) were followed. First, coding schemes was developed manually by exploring initial data to identify key themes and how they will be labelled (coded). This process was informed by the literature on the subject matter. Next, categories were refined during the process of coding until no new categories emerged and saturation had occurred. Next, the categories were sorted and related categories identified. A final set of categories and codes was arrived at and this was used for all the EM data. Categories could be handled as numerical variables for statistical analyses.

2.7.3.1 Strategy for analysis

The SPSS programme was used to produce frequency counts, cross tabulations, univariate analysis, and multivariate analysis. A p value of 0.05 was used for an effect to be considered statistically significant .All p-values are presented in the results.

2.7.4 Descriptive Statistics

The first step was to examine the frequency distribution of values for each variable. Means, standard deviations, frequencies and proportions were computed for continuous and categorical variables respectively. The prevalence rate of CMD was estimated based on the MINI outcomes, and confidence intervals for the proportion calculated. Following thematic content analysis, descriptive data were generated from the narratives of the explanatory models. Similarly, descriptive data on the pathways to utilization of services was also conducted. Descriptive comparisons between actual and perceived service utilization was conducted to discuss possible dissonance of help-seeking behaviour.

2.7.5 Inferential Statistics

I used logistic regression for my inferential or predictor analyses and present odds ratios and confidence intervals for the associations. The inferential statistics were performed at 2 levels: first univariate analyses, followed by multivariate analyses.

2.7.5.1 Univariate analysis

In univariate analysis, the objective was to assess the magnitude of the effect between each exposure variable and the outcome variables. Univariate analysis was used to look at strength of associations of the determinants of CMD, and of the help-seeking behaviour outcomes.

2.7.5.2 Multivariate analysis

Multivariate analysis was carried out to adjust for confounding variables. Only variables whose univariate association with the outcome reached a statistical significance of p-value of ≤ 0.05 were included. I included CMD status in all multivariate analyses of help-seeking behaviour as my primary hypothesis in this thesis was that CMD status influenced help-seeking.

2.8 Ethical issues

Ethical clearance for the study was obtained from the Ethics Committee of the Faculty of Medicine and Health Sciences, UPM and from the LSHTM Ethics Committee. Several issues related to the study were considered and was addressed.

2.8.1 Potential risks of the study

Due to the sensitive nature of some of the interview questions, arrangements for dealing with any possible distress experienced by the participants were made. The interview procedures may cause discomfort or distress due to questions in relation to the participants' emotional and mental well-being. The identification of participants as experiencing some kind of disorder and relaying that information to the participant may also cause some level of distress. To address these potential risks, all participants were given leaflets explaining where and whom to contact for help. A list of useful contact numbers were provided (Appendix: Participant Information Kit). Extra care was taken in the event of participants with CMD. Interviews were

conducted by clinical psychologists, counsellors and counselling trainees who could provide supportive counselling if required.

2.8.2 Clarification of the study objectives prior to consent

The general understanding of the term “mental health” in Malaysia is that of severe mental disorders, not common mental disorders, which is the main objective of the study.

Thus, information regarding the study needed to be phrased in manner which did not discourage them from participating due to the stigma associated with mental disorders. We used the terminology of “general and mental health problems” in the introductory letter instead of mental health alone. The statement regarding general health was used as to minimise the perception that the study was associated only with mental health problems.

2.8.3 Confidentiality

To maintain confidentiality with respect to the data collected, data was stored in locked filing cabinets and when entered on computer, names of participants or any other information that may allow for identification were not included to ensure confidentiality.

2.8.4 Provision of care for refusals or withdrawals

Study participants were recruited from the general community; thus refusal to take part will not suggest any kind of compromise on ongoing care. In addition, refusals or withdrawal were provided with the same participant information kit given out at the end of interviews.

2.8.5 Security of interviewers

Interviews were conducted in participants' homes thus necessary steps were put into place to protect the researchers. Researchers on the field were required to report to the project leader or the coordinator (candidate) via hand-phone before and after each interview session. Location and date of interviews were also available for the team to keep track of each other.

3.0 Results

Results were presented in three distinct sections; Section 3.1: Participant Analyses, Section 3.2: Prevalence and Determinants of CMD, Section 3.2: Patterns and Prevalence of Help-seeking Behaviour.

Section 3.1 describes the process involved in acquiring the study sample. Initial steps were to examine the frequency of refusals and replacements and the proportion of each response was recorded and its associations with available socio-demographic variables were conducted. Characteristics of the sample population were generated and this allows the investigation on whether the acquired sample is representative of the community of interest.

Section 3.2 comprised of identifying the status of CMD. CMD status of participants diagnosed through the M.I.N.I., and its association with socio-demographic variables were investigated to determine prevalence and risk factors.

Section 3.3 involves investigation the main parameters of interest which is help-seeking behaviour. This was conducted across three different levels. The first level (Section 3.3.1) is related to general help-seeking behaviour for non-specific health related problems within a 4 week span. The outcome and exposure variable at this level is the different types of actual help-seeking behaviour reported by participants. The exposure variables for the analyses in this section are socio-demographic variables identified in Section 3.1 and CMD status identified in Section 3.2. Results of the associations between the outcome and exposure variables in Section 3.3.1 determined the acceptability of the study's main hypothesis, Hypothesis 1..

The second level of investigating help-seeking behaviour (Section 3.3.2) is related to perceived help-seeking based on a vignette of CMD. Thus this section deals with a hypothetical situation instead of the participants' past behaviour but is specific in terms of addressing problems related to CMD and not general health problems as in the previous section. EMs and help-seeking behaviour associated with the CMD vignette were generated and categorical responses of illness perception, causal attribution, stigmatizing attitude and types of perceived help-seeking behaviour were determined based on participants' narratives of the vignette. Thus the outcome variable in this section are the different types of perceived help-seeking behaviour, and the exposure variables were EMs, socio-demographic variables from Section 3.1, and CMD status identified in Section 3.2. Results of the associations between the outcome and exposure variables in Section 3.3.2 determined the acceptability of the study's hypotheses related to EMs, namely hypotheses 2 – 4.

The third level of investigation of help-seeking behaviour (Section 3.3.3) is related to the sub-sample of participants diagnosed with CMD and deals specifically with their actual help-seeking behaviour and EMs of the current problem experienced. Due to the small number of the sub-sample, analyses were limited to descriptive analyses of the associations of types of help-seeking generated with EMs of own problems and socio-demographic variables identified in Section 3.1. Comparisons between perceived and actual help-seeking behaviour were conducted to identify similarities and divergence and the possible underlying factors that may explain the divergence. Further analysis within Section 3.3.3 was conducted to analyze the pathways to care

of CMD cases and the associations between different pathways with EMs and socio-demographic variables.

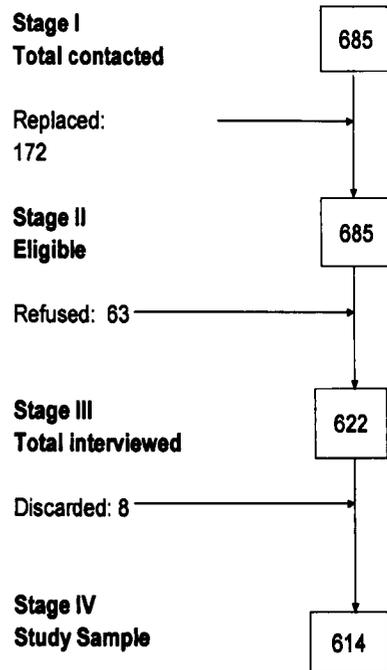
3.1 Participant Analyses

This section presents data on the process of acquiring the study sample and analysis of refusal and replacement rates in relation to available socio-demographic variables. Characteristics of the sample population will also be presented in relation to its representative-ness of the Lembah Pantai community.

3.1.1 Acquirement of the study sample

The survey was designed to yield a representative sample of adults aged 18 to 45 living in the Lembah Pantai community of Kuala Lumpur. The required sample size of 600 was inflated by 30% in anticipation of refusals. Thus, an initial random sampling of 858 was conducted and simultaneous interviews were carried out throughout all the neighborhoods. Interviews were conducted until the required minimal number of 600 participants for the study sample was reached. The process of acquiring the study sample is illustrated in Figure 1.

Figure 3.1: Acquiring the study sample



In Stage I, interviewers sought to make contact with individuals whose addresses were randomly selected from the total population of Lembah Pantai aged 18 to 45 years. Should the selected individual refuse to participate, the interviewer can accept no other replacement for that person. A total of 685 participants were contacted, within which 172 had to be replaced due to ineligibility. Thus, 20.1% of the sample was replaced.

In Stage II, 685 eligible participants were invited to participate in the survey. 63 individuals refused to take part in the study resulting in a refusal rate of 9.2%.

When re-checking for eligibility in Stage III, 8 of the participants who were interviewed could not be included in the survey for not fulfilling the age criteria. Thus, the final study sample came to 614 (Stage IV).

1.3.5 Reasons for replacements

The reason for the 20% replacement rate was due to the high occurrence of selection of invalid addresses into the initial sample.

Invalid address describes areas that have been demolished, de-gazetted or relocated. A demolished area is typically a temporary housing area, a term for many of the wooden link houses and *kampung* or villages, whose residential status have been in suspension for as long as 15 years while awaiting relocation. This corresponds to relocated areas of Kampung Bahagia, Kampung Haji Abdullah Hukom, Kampung Sentosa and Kawasan Universiti-Kampung Awal as presented in Table 3.1. Several addresses in Pantai Dalam and Bukit Kerinchi were demolished to make way for road expansion.

Due to its location along busy thoroughfares and proximity to business centres, several addresses in the Jalan Maarof and Jalan Tun Sambanthan area were also invalid as the owners have renovated their residential dwellings into commercial use. For example, some houses have become shops or rented out as offices or boutiques.

Table 3.1: Replacement in relation to location

Location	Total contacted	Replacements	Rate (%)
Bangsar Baru	81	-	-
Bkt. Bangsar	43	-	-
Bkt. Kerinchi	65	13	20
Bkt. Travers	15	-	-
Jln Maarof	20	8	40
Jln. Tun Sambanthan	22	4	18.1
Kg. Bahagia	19	5	26.3
Kg. Hj. Abdullah Hukom	36	18	50
Kg. Sentosa	195	70	35.9
Kaw. Universiti-Kg. Awal	40	20	50
Pantai Baharu	7	-	-
Pantai Dalam	192	34	17.7
Petaling Lama	24	-	-
Petaling Selatan	57	-	-
Taman Lucky	41	-	-
TOTAL	857	172	20.1

3.1.3 Reasons for refusals

As shown in Table 3.2, refusal rates varied across housing areas with several areas with high refusal rates; viz. those in Bangsar Baru, Jalan Maarof, Taman Lucky and Bukit Travers, presenting double digit refusal rates as compared to the overall refusal rate of 9.1%. More than half of the areas did not result in any refusals.

Table 3.2: Refusals in relation to location

Location	Total Eligible	Refusals	Rate (%)
Bangsar Baru	82	32	39
Bkt. Bangsar	43	-	-
Bkt. Kerinchi	52	2	3.8
Bkt. Travers	15	2	13.3
Jln Maarof	12	4	33.3
Jln. Tun Sambanthan	18	-	-
Kg. Bahagia	14	-	-
Kg. Hj. Abdullah Hukom	18	-	-
Kg. Sentosa	125	-	-
Kaw. Universiti-Kg. Awal	20	-	-
Pantai Baharu	13	-	-
Pantai Dalam	156	7	4.5
Petaling Lama	24	0	-
Petaling Selatan	58	4	6.9
Taman Lucky	41	12	29.3
TOTAL	685	63	9.2

Most participants who declined to be interviewed did not give reasons for their refusals (65%). Of the reasons given, an equal number stated that refusal was due to not being interested or too busy as presented in Table 3.3.

Table 3.3: Details of reason for refusals

Reason for refusal	N (%)
Not interested	11 (17.5)
Busy	11 (17.5)
No reason/flat refusal	41 (65)

3.1.4 Variables related to participation

To assess the representativeness of the final sample, an initial analysis was conducted to compare the responders and refusals with regards to gender, ethnicity and location or housing area. The results are presented in Table 3.4.

Females had a higher response rate (92.5%) compared to males (88.2%).

Comparison between the response rates in terms of ethnicity revealed significant differences. The response rates of Malays (93.4%) and Indians (91.6%) were almost similar, while the rates for Chinese persons were markedly lower (78.4%).

Comparison of response rates between locations show significant differences. The lowest response rate was in Bangsar Baru (60.5%), followed by Jalan Maarof (66.7%) Taman Lucky (70.7%), and Bukit Travers (87.9%) with the remaining areas with more than 90% response rates.

Table 3.4: Participants' response rate in relation gender, ethnicity and location (N = 677)

		Contacted (N = 677)	Interviewed (N = 614)	Response Rate (%)	χ^2	Df	P
Gender	Female	389	360	92.54	3.711	1	0.054
	Male	288	254	88.19			
Ethnicity	Chinese	102	80	78.43	21.88	2	< 0.001
	Indian	179	164	91.62			
	Malay	396	370	93.43			
Location	Bangsar Baru	81	49	60.5	150.00	14	< 0.001
	Bkt. Bangsar	43	43	100			
	Bkt. Kerinchi	52	50	96.1			
	Bkt. Travers	15	13	87.9			
	Jln Maarof	12	8	66.7			
	Jln. Tun Sambanthan	18	18	100			
	Kg. Bahagia	14	14	100			
	Kg. Hj. Abdullah Hukom	18	18	100			
	Kg. Sentosa	125	125	100			
	Kaw. Universiti- Kg. Awal	20	20	100			
	Pantai Baharu	7	7	100			
	Pantai Dalam	156	149	95.5			
	Petaling Lama	24	24	100			
	Petaling Selatan	57	53	93			
	Taman Lucky	41	29	70.7			

3.1.5 Characteristics of the sample

Table 3.5: Socio-demographic variables of sample population (N = 614)

Socio-demographic variables	N	%
Age		
Mean age = 31.4		
18-25	206	33.6
26-35	179	29.2
36-45	229	37.3
Gender		
Female	360	58.6
Male	254	41.4
Ethnicity		
Malay	370	60.3
Indian	164	26.7
Chinese	80	13.0
Marital status		
Not married	343	55.9
Married	271	44.1
Living condition		
Alone	106	17.3
Nuclear family	315	51.3
With parents & extended family	193	31.4
Religion		
Muslim	372	60.6

Buddhist	62	10.1
Hindu	132	21.5
Christian & others	48	7.8
Education level		
Secondary and below	463	75.4
Tertiary/university	151	24.6
Employment status		
Missing = 1		
Employed	364	59.4
Unemployed	16	2.6
Student	113	18.4
Housewife	120	19.6
Monthly income		
Missing = 15		
RM1000 and below	235	39.2
More than RM1000	364	60.8

The mean age of the study sample is 31.4 (95% CI: 30.7, 32.1) and ranged from 18 to 45.

More than half of the participants were female. Nearly two-thirds were of the Malay ethnic group, just over a quarter Indian with the remainder belonging to the Chinese and other minority ethnic groups.

More than half of the participants were not married. Just over half lived with their nuclear family, almost a third lived with their parents or extended family, with the remainder living alone.

Almost a third reported as Muslims and less than a quarter Hindus. Other main religious groups were Buddhists and Christians.

All of the participants had undergone formal education with a quarter having reached a tertiary or university qualification.

Unemployment was slightly below the national rate of 3.1% with substantial proportions of housewives, and students who are currently undertaking tertiary education. In terms of income, more than 60% earned household incomes above the minimum wage of RM1000 (approximately US\$280).

3.1.6 Summary

The replacement rate of 20% was unexpectedly high and was associated with the area of study. About 10-15% of all temporary housing areas in Kuala Lumpur are located within Lembah Pantai, which is also one of the highest concentration levels of such housing in area of the city (DBKL, 2006). Development projects are ongoing and un-updated information results in the many inconsistencies between selected addresses and the validity of those addresses. Replacement rates were high due to the ongoing relocation of *kampongs* as well as road expansion and upgrading projects as mentioned in section 3.12. Replacements were also common in commercialized areas where many dwellings have undergone change in status from households to businesses.

The refusal rate of 9.2% was lower than the expected 30% although there was large variation in response rates between different geographical areas. The four areas (Bangsar Baru, Jalan Maarof, Taman Lucky and Bukit Travers) with the lowest average response rate of 71.4% are part of one of the earliest planned housing development in the capital (DBKL, 1998), considered to be the affluent areas of Lembah Pantai, and comprising of linked single or double storey terrace houses and bungalows. In addition, the above areas fall under designated high cost housing precincts as stipulated in the Kuala Lumpur Structural Plan (DBKL, 2006). This is in contrast to the 97.2% average response rate of Kerinchi, Pantai Dalam Kampong Sentosa areas which have one of the highest concentrations of low cost high rise apartment blocks in the Federal Territory of Kuala Lumpur. The remainder areas are mostly *kampongs* that falls into the temporary housing category, awaiting relocation

(average response rate 99.1%) average response rate. Thus it can be assumed that levels of income associated with housing areas is a possible variable in explaining the differences in response rates.

In terms of the characteristics of the final study sample, women were over represented but not significantly. In comparison to the Chinese representative in Lembah Pantai at 24%, the Chinese proportion for this study were under represented due to the significantly low response rate of this group. There was a significantly higher rate of refusal among those living in the higher income areas.

3.2 Prevalence and Determinants of CMD

This section presents results of the analyses on prevalence of CMD in Lembah Pantai followed by univariate and multivariate analyses of the determinants or risk factors of CMD.

3.2.1 Prevalence of CMD

Based on the screening tool, 12.4% of the participants reported symptoms of mental health problems on the GHQ12, indicating a probable CMD. Based on the second stage diagnostic assessment with the M.I.N.I., the overall prevalence of CMD in Lembah Pantai was 8.8% (95% CI: 6.24, 11.36). Major depression was the most common diagnosis, followed by agoraphobia and generalized anxiety disorder. More than half of those with CMD had more than one diagnosis (Table 3.4).

Table 3.6: Details of screening and diagnoses of CMD (N = 614)

	n	%	95% CI
Screened positive for possible CMD	76	12.4	8.93, 15.87
Diagnosed	54	8.8	6.24, 11.36
Diagnosis			
1 diagnosis	24	3.91	2.71, 5.11
2 diagnoses	16	2.61	1.81, 3.41
>2 diagnoses	14	2.28	1.57, 2.99
Within CMD cases (n = 54)			
Major depression	35	5.7	4.00, 7.40
Agoraphobia	24	3.91	2.71, 5.11
Generalized anxiety disorder	19	3.09	2.11, 4.07
Panic Disorder	15	2.44	1.68, 3.2
Dysthymia	10	1.47	1.02, 1.92
Social phobia	9	1.46	1.01, 1.91
More than 1 diagnosis	30	4.9	3.41, 6.39

1.4.3 Risk factors for CMD

This section presents the results of the analyses of risk factors for CMD in the sample. Univariate analyses of the various variables will be presented first, followed by multivariate analyses.

1.4.3.1 Univariate analyses of risk factors for CMD

Table 3.7 shows the univariate associations between socio-demographic factors and the risk for CMD. Participants in the older group were less likely to have CMD compared to those in the youngest age group. Participants not married had more than double the odds of having CMD compared to those married. Although there was no difference in risk of CMD between the Malays and the Indians, the Chinese had significantly lower risk compared to the Malays. There was a trend among the unemployed and students to be more likely to suffer a CMD compared to those who are employed, although only the comparison between students and those who were employed reached statistical significance. Students were more than 3 times likely to have CMD compared to those who were employed. Participants in the higher income group were less likely to have CMD compared to those in the lower income group.

Table 3.7: Socio-demographic risk factors for CMD (N=614)

Socio-demographic variable	% of CMD cases	Univariate analysis			Multivariate analysis*		
		OR	95% CI	p-value	OR	95% CI	p-value
Age	n (%)						
18-25	33 (16)	1			1		
26-35	8 (4.5)	0.25	0.11,0.5	0.001	0.35	0.13, 0.94	0.037
36-45	13 (5.7)	0.32	0.16, 0.62	0.001	0.50	0.17, .47	0.21
Gender							
Female	36 (10.0)	1					
Male	18 (7.1)	0.69	0.38, 1.24	0.21			
Status							
Married	20 (5.8)	1			1		
Not married	34 (12.5)	2.32	1.30, 4.13	0.004	1.12	0.44, 2.85	0.82
Living condition							
Alone	9 (8.5)	1					
Nuclear family	16 (5.1)	0.58	0.25, 1.35	0.20			
With parents & extended family	29 (15.0)	1.91	0.87, 4.2	0.11			
Ethnicity							
Malay	36 (9.7)	1			1		
Indian	16 (9.8)	1.00	0.54, 1.87	0.99	0.93	0.49, 1.79	0.83
Chinese	2 (2.5)	0.24	0.06, 1.01	0.05	0.25	0.06, 1.08	0.06
Religion							

Muslim	35 (9.4)	1					
Buddhist	2 (3.2)	0.32	0.07, 1.37	0.52			
Hindu	15 (11.4)	1.23	0.65, 2.34	0.12			
Christian & others	2 (4.2)	0.42	0.10, 1.80	0.24			
Education level							
Secondary and below	43 (9.3)	1					
Tertiary/University	11 (7.3)	0.77	0.38, 1.53	0.45			
Employment							
Employed	23 (6.3)	1			1		
			0.91,		1.84	0.44, 7.77	0.40
Unemployed	3 (18.8)	3.42	12.87	0.07			
Student	20 (17.7)	3.19	1.68, 6.06	0.000	1.45	0.60, 3.51	0.41
Housewife	8 (6.7)	1.06	0.46, 2.43	0.89	1.45	0.57, 3.7	0.44
Monthly income							
RM1000 and below	33 (14.0)	1			1		
More than RM1000	21 (5.8)	0.37	0.21, 0.66	0.001	0.74	0.33, 1.67	0.47

* Variables adjusted for the multivariate analyses: age, gender, ethnicity,

employment, monthly income

3.2.2.2 Multivariate analyses of CMD risk factors

After adjustment for other variables whose univariate association with CMD reached statistical significance at $p < 0.05$, only age remained significantly associated with CMD; participants aged 26-35 were less likely to suffer from CMD than participants between the ages of 18-25.

3.2 Summary

Prevalence of CMD within the 18-45 age group in Lembah Pantai is high with 1 in 10 adults experiencing CMD. The risk for CMD is greatest among younger adults.

3.3 Patterns and Prevalence of Help-seeking Behaviour

This section presents the results of analyses of help-seeking behaviour reported by the sample population in the four weeks preceding the interview. Descriptive analysis of all help-seeking behaviour will be presented followed by univariate and multivariate analyses of socio-demographic variables that may influence help-seeking behaviour. Help-seeking behaviour is investigated at three different levels as described in the introduction section of this chapter.

3.3.1. Descriptive analyses of help-seeking behaviour

About one third of the study sample engaged in any kind of help-seeking behaviour for a health reason in the 4 weeks preceding the interview. Various help-seeking behaviours were reported by the study population and responses were categorized as presented in Table 3.8. Altogether a third of the sample consulted any type of help care provider, of whom 28.2% consulted a biomedical, 9.8% consulted CAM care and 4.6% utilized multiple care providers.

Table 3.8: Help-seeking behaviour among the sample population (N = 614)

Help-seeking behaviour	N	%
Any type of care	203	33.1
Biomedical care	173	28.2
CAM care	60	9.8
Both biomedical & CAM	28	4.6

Biomedical care services comprised of visits to medical doctors in clinics or hospitals while CAM care ranged from visiting pharmacies to masseuses as detailed in Table 3.9. The average payment for biomedical services was RM14.95 which included free services in government clinics and token RM1 payments for registration in government hospitals. Also, some employers provided medical care in providing panels of private clinics and hospitals for their employees. Typically, religious leaders or healers do not charge for their service which is an expected function of their community service repertoire. While the services of *bomohs* do not require their

customers to give monetary payments, offerings (i.e. 7 types of flowers, turmeric glutinous rice, a black chicken) are usually determined.

Table 3.9: General help-seeking in the past 4 weeks (N = 203)

Services	n (%)	Average payment	95% CI
Bio-medical			
GP	120 (59.1)	RM24.75	18.90, 30.62
Hospital	63 (31.0)	RM58.03	4.02, 112.25
CAM			
Pharmacy	36 (17.7)	RM24.29	16.52, 32.05
Masseuse	9 (4.4)	RM22.78	8.26, 37.30
Direct-seller	6 (2.9)	RM103.4	16.73, 190.07
Herbalist	4 ((2.0)	RM22.5	8.31, 53.31
Religious leader/healer	3 (1.5)	-	
Homeopathy	1 (0.5)	RM20	
Bomoh	1 (0.5)	-	
Sinseh	1 (0.5)	RM50	

3.3.1.1 Any type of help-seeking behaviour

This section describes the association of socio-demographic variables and common mental disorders (CMD) with any type of help-seeking within the four weeks prior to the interview.

Univariate analyses of factors associated with any type of help-seeking behaviour

As shown in Table 3.10, help-seeking behaviour was associated with age; participants in the older age groups were twice as likely to have sought some kind of help in the past four weeks compared to those in the youngest age group. Gender was also associated with help-seeking, men being less likely to have sought help compared to women. Participants who were not married were less likely to seek any kind of help compared to those married. Chinese participants were 50% less likely to seek help compared to the Malays; this ethnic difference was also reflected in the association of help-seeking behaviour with religion; Buddhists were less likely than Muslims to seek help. Participants in the higher income group were more likely to have sought care compared to those in the lower income group.

A trend between diagnoses of CMD with help-seeking was observed, where CMD cases were more than one and a half times more likely to seek help compared to non-cases. This association however was not significant ($p = 0.12$).

Table 3.10: The association of socio-demographic variables and common mental disorders with any help-seeking in the previous 4 weeks (N=203)

Socio-demographic variable	N (%) sought help	Univariate analysis			Multivariate analysis*		
		OR	95% CI	p-value	OR	95% CI	p-value
Age	N (%)						
18-25	48 (23.3)	1			1		
26-35	70 (34.5)	2.11	1.36, 3.29	0.001	2.19	1.26, 3.80	0.006
36-45	85 (41.9)	1.94	1.28, 2.96	0.002	2.33	1.24, 4.37	0.008
Gender							
Female	133 (65.5)	1			1		
Male	70 (34.5)	0.65	0.46, 0.92	0.01	0.65	0.45, 0.95	0.026
Status							
Married	127 (62.6)	1			1		
Not married	76 (37.4)	0.66	0.47, 0.93	0.02	1.23	0.75, 2.03	0.40
Living condition							
Alone	31 (15.3)	1					
Nuclear family	121 (59.6)	1.51	0.94, 2.43	0.09			
With parents & extended family	51 (25.1)	0.87	0.51, 1.47	0.60			
Ethnicity							
Malay	131 (64.5)	1			1		
Indian	55 (27.1)	0.92	0.62, 1.36	0.68	2.35	0.71, 7.72	0.16
Chinese	17 (8.4)	0.49	0.28, 0.88	0.02	1.24	0.27, 5.70	0.78
Religion							
Muslim	134 (66.0)	1			1		
Buddhist	11 (5.4)	0.38	0.19, 0.76	0.01	0.37	0.11, 1.25	0.11
Hindu	40 (19.7)	0.77	0.50, 1.18	0.24	0.33	0.06, 1.67	0.18
Christian	18 (8.9)	1.07	0.57, 1.98	0.84	0.60	0.16, 2.17	0.43
Education level							
Secondary and below	146 (71.9)	1					
Tertiary/University	57 (28.1)	1.31	0.90, 1.93	0.16			
Employment							
Missing = 1							
Employed	118 (58.1)	1					
Unemployed	4 (2.0)	0.70	0.22, 2.20	0.54			
Student	29 (14.3)	0.72	0.45, 1.16	0.17			
Housewife	51 (25.1)	1.54	1.01, 2.35	0.45			
Monthly income							
Missing=7							
RM1000 and below	65 (32.0)	1			1		
More than RM1000	131 (64.5)	1.47	1.03, 2.10	0.03	1.25	0.81, 1.92	0.32
Severity							
Low	117 (57.6)	1					
Mild	57 (28.0)	1.44	0.97, 2.14	0.07			
High	29 (14.3)	1.43	0.86, 2.39	0.17			
Diagnosed with CMD							
No	180 (88.7)	1			1		
Yes	23 (11.3)	1.57	0.89, 2.76	0.12	1.94	1.06, 3.57	0.032

* Variables adjusted for the multivariate analyses: age, gender, marital status, ethnicity, religion, monthly income and diagnosis

3.3.1.1.2 Multivariate analyses of any help-seeking behaviour

All variables with p-value ≤ 0.05 in the univariate analysis and diagnosis of CMD were considered for multivariate analysis. These results are shown in Table 3.10. The association with gender (males being less likely to seek help), age (older participants more likely to seek help) and diagnosis of CMD (CMD cases more likely to seek help) retained statistical significance after adjustment.

3.3.1.2 Help-seeking behaviour for biomedical care

This section describes the association of socio-demographic variables and common mental disorders with help-seeking behaviour for biomedical care.

3.3.1.2.1 Univariate analyses of factors associated with seeking biomedical care

As presented in Table 3.12, help-seeking for biomedical care was associated with age; participants in the older age groups were more likely to have sought biomedical care, those aged 36-45 more than twice as likely, while those aged 26-35 were almost twice as likely to have sought biomedical care in the past four weeks compared to those in the youngest age group. Gender was also associated with seeking biomedical care, men being less likely to have sought biomedical care compared to women. Participants who were not married were less likely to seek biomedical care compared

to those who were married. Chinese participants were 55% less likely to seek help compared to the Malays; this ethnic difference was also reflected in the association of help-seeking behaviour with religion with Buddhists being less likely than Muslims to seek biomedical care. Participants in the higher income group were more likely to have sought biomedical care compared to those in the lower income group.

A trend between diagnoses of CMD with seeking biomedical care was observed, where CMD cases were more than one and a half times more likely to seek biomedical care compared to non-cases. This association however was not significant ($p = 0.07$).

Table 3.11: The association of socio-demographic variables and common mental disorders with help-seeking for biomedical care in the previous 4 weeks (N = 173)

Socio-demographic variable	Biomedical n (%)	Univariate analysis			Multivariate analysis*		
		OR	95% CI	P-value	OR	95% CI	P-value
Age							
18-25	40 (23.1)	1			1		
26-35	56 (32.3)	1.89	1.18, 3.02	0.008	1.91	1.06, 3.43	0.03
36-45	77 (44.5)	2.10	1.35, 3.27	0.001	2.35	1.22, 4.54	0.011
Gender							
Female	114 (65.9)	1			1		
Male	59 (34.1)	0.65	0.45, 0.94	0.02	0.66	0.44, 0.97	0.035
Status							
Married	110 (63.6)	1			1		
Not married	63 (36.4)	0.64	0.45, 0.92	0.02	1.20	0.71, 2.02	0.49
Living condition							
Alone	28 (16.2)	1					
Nuclear family	104 (60.1)	1.37	0.84, 2.25	0.21			
With parents & extended family	41 (23.7)	0.75	0.43, 1.31	0.31			
Ethnicity							
Malay	110 (63.6)	1			1		
Indian	48 (27.7)	0.98	0.65, 1.46	0.91	1.88	0.51, 6.19	0.30
Chinese	15 (8.7)	0.55	0.30, 1.00	0.05	1.05	0.23, 4.86	0.95
Religion							
Muslim	112 (64.7)	1			1		
Buddhist	9 (5.2)	0.39	0.19, 0.83	0.01	0.47	0.14, 1.59	0.23
Hindu	34 (19.6)	0.81	0.51, 1.26	0.34	0.39	0.07, 2.03	0.26
Christian & others	18 (10.4)	1.39	0.75, 2.60	0.30	0.93	0.25, 3.35	0.91
Education level							
Secondary and	128 (74.0)	1					

below							
Tertiary/Unive							
rsity	45 (26.0)	1.11	0.74, 1.66	0.61			
Employment							
Employed	102 (58.9)	1					
Unemployed	2 (1.1)	0.37	0.08, 1.64	0.19			
Student	25 (14.4)	0.73	0.44, 1.20	0.22			
Housewife	44 (25.4)	1.49	0.96, 2.30	0.08			
Monthly							
income							
Missing=6							
RM1000 and							
below	53 (30.6)	1			1		
More than							
RM1000	114 (65.9)	1.57	1.07, 2.28	0.02	1.33	0.85, 2.11	0.21
Severity							
Low	98 (56.6)	1					
Mild	49 (28.3)	1.45	0.96, 2.19	0.07			
High	26 (15.0)	1.54	0.91, 2.61	0.11			
Diagnosed							
with CMD							
No	152 (87.9)				1		
Yes	21 (12.1)	1.71	0.96, 3.04	0.07	2.15	1.15, 4.00	0.016

* Variables adjusted for multivariate analyses: age, gender, marital status, ethnicity, religion, monthly income and diagnosis

3.3.1.2.2 Multivariate analyses of seeking biomedical care

All variables with p-value ≤ 0.05 in the univariate analysis and diagnosis of CMD were considered for multivariate analysis. These results are shown in Table 3.11. The associations with age (oldest participants more likely to seek biomedical care), gender (males being less likely to seek biomedical care) and diagnosis of CMD (CMD cases more likely to seek biomedical care) retained statistical significance after adjustment.

3.3.1.3 Help-seeking behaviour for CAM

This section describes the association of socio-demographic variables and common mental disorders with help-seeking for CAM care.

3.3.1.3.1 Univariate analyses of seeking CAM care

As presented in Table 3.12, help-seeking for CAM was associated with age; participants in the 26-35 age group were two and half times more likely to have sought CAM care in the past four weeks compared to those in the youngest age group. Ethnicity was also associated with seeking CAM care, Chinese participants being less likely to have sought CAM care compared to Malays. Participants who were housewives were twice more likely to seek CAM care compared to those employed.

Table 3.12: The association of socio-demographic variables and common mental disorders with help-seeking for CAM care (N = 60)

Socio-demographic variable	% CAM N (%)	Univariate analysis			Multivariate analysis*		
		OR	95% CI	p-value	OR	95% CI	p-value
Age							
18-25	12 (20.0)	1			1		
26-35	24 (40.0)	2.50	1.21, 5.16	0.013	2.18	0.89, 5.32	0.09
36-45	24 (40.0)	1.89	0.92, 3.89	0.08	1.67	0.67, 4.23	0.27
Gender							
Female	42 (70.0)	1					
Male	18 (30.0)	0.58	0.32, 1.03	0.06			
Status							
Married	38 (63.3)	1					
Not married	22 (36.7)	0.71	0.41, 1.23	0.22			
Living condition							
Alone	7 (11.7)	1					
Nuclear family	35 (58.3)	1.77	0.76, 4.11	0.19			
With parents & extended family	18 (30.0)	1.46	0.59, 3.60	0.42			
Ethnicity							
Malay	40 (66.7)	1			1		
Indian	18 (30.0)	1.02	0.56, 1.83	1.00	1.11	0.60, 2.05	0.74
Chinese	2 (3.3)	0.21	0.05, 0.89	0.04	0.23	0.05, 0.99	0.048
Religion							
Muslim	40 (66.7)	1					
Buddhist	2 (3.3)	0.28	0.07, 1.18	0.08			
Hindu	13 (21.7)	0.91	0.47, 1.75	0.77			
Christian	5 (8.3)	0.97	0.36, 2.58	0.94			
Education level							
Secondary and below	40 (66.7)	1					
Tertiary/University	20 (33.3)	1.61	0.91, 2.86	0.10			
Employment							
Missing = 1							
Employed	31 (51.7)	1			1		
Unemployed	3 (5.0)	2.48	0.67, 9.17	0.17	2.94	0.74, 11.65	0.12
Student	6 (10.0)	0.60	0.25, 1.48	0.27	0.90	0.31, 2.71	0.87
Housewife	19 (31.7)	2.02	1.10, 3.73	0.02	1.80	0.95, 3.41	0.07
Monthly income							
Missing = 1							
RM1000 and below	18 (30.0)	1					
More than RM1000	41 (68.3)	1.3	0.86, 2.73	0.15			
Severity							
Low	32 (53.3)	1					
Mild	1 (1.7)	1.63	0.90, 2.98	0.11			
High	9 (15.0)	1.50	0.68, 3.28	0.31			
Diagnosed with CMD							
No	55 (91.6)	1			1		
Yes	5 (8.4)	0.94	0.36, 2.45	0.89	1.02	0.37, 2.77	0.97

***Variables adjusted for the multivariate analyses: age, ethnicity, employment and diagnosis**

3.3.1.3.2 Multivariate analyses of seeking CAM care

All variables with p-value ≤ 0.05 in the univariate analyses and diagnosis of common mental disorders were considered for multivariate analyses. These results are shown in Table 3.12. The association with ethnicity (Chinese participants less likely to seek CAM care) retained statistical significance after adjustment.

3.3.1.4 Summary

The survey suggests age as a predictor of help-seeking behaviour where older participants in general were more likely to seek help than younger participants, and specifically for biomedical care. Results also suggest gender as a correlate for help-seeking behaviour, where women are more likely to seek any type of health care, including biomedical care. And men seek health care less than women irrespective of type of care. Trends on ethnic differences can be observed with the Chinese overall presenting lower levels of help-seeking within all types of care utilization although this observation is significant only within CAM when analysing specific sources of care.

In relation to help-seeking behaviour and its relation with CMD, there is a clear and significant trend of participants diagnosed with CMD to seek any type of health care, including biomedical care more than non-cases. Thus, the study's primary hypothesis

of CMD being associated with increased utilization of biomedical health services is accepted.

3.3.2 Perceived help-seeking behaviour for the vignette of CMD

This section will present the analyses of perceived help-seeking behaviour in response to the CMD vignette. Firstly, descriptive analysis of participants' explanatory model will be presented which will yield categories of the study population's illness perception, causal beliefs and attitudes towards CMD. Quantitative data are then presented in relation to suggested help-seeking behaviour. Univariate analyses of the socio-demographic factors and explanatory models and stigmatizing attitude variables will be presented, followed by the multivariate analyses.

3.3.2.1 Explanatory Models

The study populations' explanatory model (EM) regarding CMD was investigated. Content analysis of the transcribed qualitative interviews of EMs was conducted, an approach that seeks to quantify content in terms of predetermined categories and in a systematic and replicable manner (Bryman, 2001). Categorizing and coding of the data is a crucial process and there are a few main elements to a content analysis primarily developing categories, designing a coding scheme and manual. Categories were partly informed from the pilot study and partly inductively from raw data. When working inductively from raw data, themes are first identified, and responses with similar themes are later grouped into discrete categories. For the EM, a total of 26 different themes of causal attribution to CMD were identified. These themes were

then further analysed to see if they belong to similar concepts such as psychological causes to CMD, physical and so forth.

When doing this process, constant comparative method (Glasser and Strauss, 1967) was applied to ensure the differences between the categories. Comparisons were made of each text assigned to a category with each of those already assigned to that category.

All possible categories were made available, regardless on the low number for example of the causal belief section, the total number for the supernatural belief was 1 but a category was still created as it's a discreet theme of its own in comparison to the others. Categories that merged from the identified themes for each EM domain are as follows:

<u>Themes for causal attribution</u>	<u>Categories</u>
1. Non-specific mental health problems 2. Non-specific stress 3. Related to emotional disturbances or turmoil 4. Related to cognition 5. Self-esteem 6. Related to discipline/self management 7. Inability to express/communicate 8. Related to having experienced a major life event 9. Related to addiction	Psychological (Themes 1-9)
10. Non-specific physical illness 11. Related to lack of energy, tiredness or lethargy 12. Related to sleep 13. Diet and weight 14. Sedentary lifestyle 15. Specific illness 16. Physical imbalance	Physical (Themes 10-16)
17. Non-specific work related 18. Workload 19. Inter-personal problems at the workplace 20. Workplace environment 21. Unemployment	Employment (Themes 17-21)
22. Familial relationships and related issues 23. Love 24. Peer pressure or problems related to peers	Relationship (Themes 22-24)
25. Non-specific financial problems	Financial
26. Supernatural	Supernatural

Each participant's response was categorized and coded in terms of either the positive or negative in whether they believe CMD is a problem, and whether that problems amounts to an illness (assessment of illness conception). They are then categorised to one or more of the six categories of causal attribution of CMD (psychological, physical, employment, relationship, financial and supernatural). These then became the independent variables.

The above processes were all conducted in Bahasa Malaysia. Translation to English only took place when all the categories were completed and ready for analysis. They were then entered into the main data file as categories and codes in English. The same process was conducted on all data acquired from the S.E.M.I. semi-structured questionnaire.

3.3.2.2 Illness conception

CMD as a problem

Participants were asked whether they recognize the vignette of CMD as a problem. Almost all the participants felt that the vignette depicted a person experiencing a problem (97.6%). A summary of frequencies of the categories of problems and the examples are detailed in Table 3.15.

More than half of the participants (53.1%) believed that the problem was psychological and several themes where derived from the narratives under this category. The most common theme was non-specific stress related problems. Themes related to psychiatric or psychological problems ranged from specific

disorders such as severe depression and addiction to the more vague terms such as mentally disturbed.

The next most common view was that the vignette depicted a person with a physical problem (20.4%). Physical problems due to sleep deprivation was most cited, followed by physical problems related to weight fluctuations, lack of nutrients or imbalance due to poor diet and lack of appetite.

A combination of both psychological and physical problem as well as other problem categories (9.8%) was derived from the narratives. A general theme of emotional problems was combined with either a health, sleep or diet related problem.

Participants also elicited a list of employment problems (7.5%), most of it related to performance pressure which results in the sufferer experiencing stress at the workplace. This is followed by work burden or work overload, not having any job at all and dissatisfaction with salary.

Problems related to relationship issues were generated (6.4%) and ranged from conflicts with family, friends and significant others. Lack of social support and social skill was also mentioned by participants.

Participants also believed that the problem was financially related (2.9%). Most associated financial problem as the result of economic instability. Several also mentioned having debt and owing money to *Ah Long* as the problem. *Ah Longs* are money lenders often associated with the Chinese triad.

Table 3.13: Narratives of illness conception (N=614)

Categories	N	Narratives
Physical		
Somatic problems	30	Health problem..diabetes; "some kind of chronic illness"; "a serious sickness..."; "a health problem"; "something physically wrong..that's why keep falling asleep at work"; "problems with blood pressure"; "fever"; "sickness"; "body is weak..."; "not healthy"; "not well"
Sleep-related	40	"can't sleep..problems with sleep, appetite, rest"; "very tired...can't sleep well"
Lethargy	19	"physically tired...effecting sleep" can't get enough rest"
Wight/appetite related	36	weight issues; .lack of appetite"; "weight increase...not healthy"; "problems with eating...affecting sleep"
Mixed physical and psychological		
Health & emotional problems	32	Problems with health and emotions; "mental and health problems"; "health problems...and feeling a lot of tension"; "lack of nutrition and feeling depressed"; "health problems and feeling very emotional, sad"; "lack of focus, poor health"; "body health and emotional problems"; "sickness and pressure"; "too much thoughts, physically sick"; "sad and body easily gets tired"; "some kind of personal and health problem"; "low in spirit and sick".
Sleep & emotional problems	16	sleep problems...experiencing some kind of pressure; "not eating and sleeping well..seems to have some kind of problem with confidence"; "sleep and stress problems".
Diet & emotional problems	12	sad..problems with appetite and sleep; "not taking the time to eat properly...experiencing emotional pressure"; "feeling sad, feeling pressure, tired and can't concentrate, problems with appetite"
Psychological or emotional		
Psychiatry related problems	68	addicted to drugs;"depressive problems"; "mental problems"; "depression, sadness and low mood"; "experiencing some kind of personal problem..maybe he got addicted to drugs"; "mentally disturbed"; "severe depression"; "addicted to cigarettes"; "having low self-esteem and feeling depressed"
Stress related	166	stress; "personal and problems with stress"; "feeling pressured"; "stress..too much worries"; "tension"; " stress related problems"; "over-tension and stress".
Negative emotions	65	Emotional problems;"personal problems that is affecting his mental stability"; "psychological problems"; "feeling really sad and low"; "sadness...emotional disturbances"; "follows his emotion/feelings too much"; "too emotional"; "prolonged sadness"; "problems of matters with the heart...causing problems within".
Mental symptoms/ related to cognition	26	look at things negatively, keep thinking of bad things"; "cannot focus on his past and present, no mood"; "over-worried"; "he's feeling older"; "thought disturbances".
Relationship		
Conflict with family/relatives/friends	29	Problems with family and relatives; "family related problems"; "no close family member to talk to"; "family not close"; "argued with friends"; "pressure from parents.."
Love related	5	Relationship problems; "break-up of relationship"; "girlfriend trouble"; "love related problem"; "lovelorn"; "problems of the heart"; "lovesick".
Lack of a social life	5	don't have any friends.; "don't know how to socialize".
Employment		
Unemployment	8	Jobless
Work burden	8	too much work
Performance pressure	27	work pressure; "work related stress"; "pressure at work"; "can't concentrate on work"; "not able to do the work";
Dissatisfaction	3	not satisfied with pay, salary
Financial		
Debt	4	debt problem; "money problem"; "owe Ah Lungs"
Economic instability	14	Financial problems; "economic crisis"; "problems with business"; "economic problems";
Not specified	5	"Manifestation of something"; "some kind of problem, can't say".
No Problem	15	"Not having any problem"; "None"; "no problem".

CMD as an illness

Participants who felt the vignette described a ‘problem’ were then probed on whether they believed the problem depicted in the vignette amounts to an illness. The response to the vignette indicated that more than half of the participants believed that the vignette depicted a person suffering from an illness. Thus, although almost all participants believed that the vignette of a person suffering from a CMD is a problem, only 51.8% believed that this represented an illness. Details of the frequencies and samples of narratives of illness conception are presented in Table 3.19.

3.3.2.3 Causal attribution

Psychological causes accounted for almost half of the study population causal attribution to the vignette. As presented in Table 3.14 this is followed by physical causes accounted for about a quarter of participants. This is followed by employment and relationship causal attributions and other attributions relating to financial and supernatural causes. Each causal attribution category generated different types of sub-categories and the contribution of this will be presented under the following sections.

Table 3.14: Summary of perceived causal attribution of CMD vignette (N = 614)

	N	%
Causal attribution (missing = 8)		
Psychological	295	48
Physical	153	24.9
Employment	124	20.2
Relationship	111	18
Financial	35	5.7
Supernatural	1	0.16

Psychological causal attribution

As can be observed in Table 3.15a, about a third of those who described a psychological causal attribution felt that non-specific mental problems were the primary cause. An almost similar proportion of participants felt that non-specific stress were the main cause. Causal attribution related to emotional disturbances or turmoil accounted to 19.7%. Participants also attributed the vignette problem to cognition (9.1%) that ranged from excessive thinking, inability to concentrate and general confusion. Lack of self-esteem (4.7%), lack of discipline and low self-management (3.7%) as well as loneliness (2%) were also felt to the causes of depicted problems. Inability to express feelings and lack of communication accounted for 1.7% of causal attribution with a similar proportion believing it to be caused by major life events and a remaining 0.7% felt addiction to drugs was the main cause.

Table 3.15a: Narratives of psychological causal attributions of CMD (N = 295)

Categories	Subcategories	N	Narratives
Psychological	Non-specific mental problems	90	"Mental problems"; "psychological problems"; "disturbed mental state"; "some kind of trauma"; "a mental problem but not enough detail to say what it is.."; "personal problems"; "personal problems caused by negative influences"; "mental health issues"; "inability to solve personal issues.."; "internal problems"; "lacking in mental health".
	Non-specific stress	87	"Stress"; "personal stress"; "pressure"; "stress and tension with life"; "over-stress"; "feeling really stressed with life"; "stress has taken over life"; "pressure that is long-term"; "mental stress"; "a lot of pressure"; "cannot handle stress"; "lifes' pressures".
	Related to emotional disturbances/turmoil	58	"He is feeling too sad"; "this feeling of terrible sadness"; "emotionally not stable"; "follow his emotions too much"; "emotionally not balanced"; "emotionally sensitive"; "soul is not calm and sad".
	Related to cognition	27	"Thinking about themselves too much..."; "thinking too much"; "cannot concentrate...mind keeps wandering"; "worries too much"; "takes too much time to think.."; "something troubling his mind and thinks too much"; "mind is confused"; "unable to focus and make decisions"; "difficulty in concentrating"; "disturbed thinking".
	Self-esteem	14	"Lack of self-confidence"; "no confidence"; "low in confidence and weak"; "loss of confidence"; "low self-esteem".
	Related to discipline/self management	11	"Not working hard"; "No self-control"; "unable to manage life"; "laziness"; "uncontrolled lifestyle"; "no discipline"; "not taking care of himself"; "have no proper direction or guidance"; "made wrong decisions".
	Loneliness	6	"Might not have a life partner and is lonely"; "does not have someone to speak to"; "nobody gives him any attention..alone"; "need someone to give him understanding"; "no friends"; "he's lonely".
	Inability to express/communicate	5	"Cannot make others understand problem.."; "his attitude of not wanting to talk to others.."; "can't express his feelings"; "inability to be straight-forward"; "keeping things to himself".
	Major life events	5	"Something tragic happened.."; "parents or relatives passed away"; "loss of a loved one"; "break up...wife having an affair".
Related to addiction	2	"Too much into drugs"; "using drugs".	

Physical causal attribution

Physical causal attributions to the vignette were mostly non-specific (40%), with participants stating general ill health as the cause. More than a quarter of those accounting physical causes felt that lack of energy, including general tiredness and lethargy was the main cause. Sleep related cause (16.3%) in which a broad theme of negative effects of sleep deprivation was also generated with a similar proportion of participants believing dietary habits and problems related to weight to be the cause of the problems depicted in the vignette. Lifestyle choices (5.2%) such as a neglect of physical well-being and sedentary lifestyle, bodily states that relate to specific physical illnesses (3.3%) and physical imbalance (3.3%) are also believed to be causal attributions. Physical imbalance relates to the belief that the physical body does not contain normal levels of nutrients or having excessive levels of other properties such as toxins and specific hormones. Details of frequencies and examples of physical causal attributions are presented in Table 3.15b.

Table 3.15b: Narratives of physical causal attribution of CMD (N = 153)

Categories	Subcategories	N	Narratives
Physical	Non-specific illness	62	"He's sick.."; "health problem"; "not healthy"; "not well.."; "declining health.."; "bad health"; "physical problems"; "contracted some kind of disease"; "stricken with disease"; "health related"; "neglect of health..".
	Related to lack of energy, tiredness or lethargy	40	"Extreme tiredness and lethargy"; "a lot of work but not enough rest"; "no rest"; "continuously tired"; "exhaustion"; "tiredness"; "tired and exhausted"; "too tired until it became a physical problem"; "easily exhausted"; "no energy"; "loss of energy"; "listless".
	Related to sleep	25	"Sleeping late"; "not sleeping"; "not enough sleep"; "lack of sleep"; "problems with sleeping".
	Related to diet and weight	25	"Diet"; "not eating properly"; "not eating balanced meals"; "irregular food intake"; "no appetite"; "fat"; "weight loss"; "loss of weight due to loss of appetite"; "weight problems".
	Lifestyle	8	"Lifestyle"; "lack of exercise"; "not active enough"; "can't take care of own health"; "no exercise"; "do not go for medical check-ups".
	Specific illness	5	"High blood pressure"; "malaria or dengue"; "uncontrolled diabetes"; "diabetes"; "cancer".
	Related to imbalance	5	"Chemical imbalance in the brain"; "change of hormones after reaching 30.."; "body imbalance"; "a lot of toxins inside the body"; "lack of vitamins..".

Employment causal attribution

As shown in Table 3.15c, employment as a causal attribution is described as non-specific stress as a result of work by more than half (64.5%) of the participants within this group. 18.5% accounted workload burden as a cause, inter-personal problems with colleagues accounted for 7.2% and other problems related to the physical working environment (4.8%) and unemployment itself (2.4%) were also elicited as a causal attribution.

Table 3.15c: Narratives of employment causal attribution of CMD (N = 124)

Categories	Subcategories	N	Narratives
Employment	Non-specific work related	80	"Pressures at work"; "work"; "work stress"; "work problems"; "very stressed from work".
	Related to workload	23	"Too much workload"; "burden too much"; "too much assignments"; "a lot of work"; "too much work".
	Inter-personnel problems	9	"Conflict with boss"; "conflict with work mates"; "problems with colleagues"; "scolded for not doing job properly";
	Related to environment	6	"Workplace not ideal.."; "noisy"; "work environment not comfortable".
	Related to unemployment	3	"Unemployment"; "no person can live without a job.."; "fear of career not going well...might lose job".

Relationship causal attribution

Relationship causes are made up primarily of family related issues such as the atmosphere at home and the quality of the relationship with family members accounted by more than half of the participants (58.5%). Love related causes are due to conflicts with the spouse or partner or the absence of such relationships such as having no close relationships at all and is accounted by more than a quarter of the participants (27%). Peer pressure (15.3%) was also cited as a probable cause with narratives presenting cumulative descriptions of relationships or interactions with individuals or groups of individuals and how this affects the mental stability of the person depicted in the vignette.

Table 3.15d: Narratives of relationship causal attribution of CMD (N = 111)

Categories	Subcategories	N	Narratives
Relationship	Familial relationship and related environment	65	"Pressure from family"; "family causes problems"; "no family support"; "family has many problems", "family and relatives"; family problems"; "argument and misunderstanding with family"; "family's attitude causes pain"; "too much commitment to family; marital problems".
	Love	30	"Pressure due to love relationship"; "love problems"; "have no special relationship"; "experiencing a break-up"; "girlfriend-boyfriend trouble"; "relationship problems"; "love sick"; "broken up with girlfriend".
	Peer pressure or problems with peers	19	"Do not know how to mix with friends"; "friends giving problems"; "fought with friends"; "no friends"; pressure from friends"; "mixing with the wrong crowd"; "negative influence from friends"; "mix too much with friends"; "unhealthy relationship".

Financial and supernatural causal attribution

Participants stating financial related causes to the problems presented in the vignette described about the stressors related to financial difficulties and the effects of debt and is further detailed in Table 3.15e.

Only one supernatural causal attribution was elicited, the participant described it as *dibuat orang*, literally translated as “to be done by someone”. This relates to a situation in which someone has been affected by a spell cast on them via witchcraft.

Table 3.15e: Narratives of financial & supernatural causal attribution of CMD (N=36)

Categories	Subcategories	N	Narratives
Financial	Non-specific financial problems	35	"Financial problems"; "lack of money"; "no money"; "money problems"; "economically unstable"; "financially broken".
Supernatural		1	"It's a strange illness.... <i>dibuat orang</i> "

3.3.2.4 Suggested help-seeking behaviour

Help-seeking behaviour suggested by participants can be categorized into 3 approaches; biomedical, self-help and complimentary or alternative medical care (CAM). More than half of the participants said biomedical care, self-help accounted for more than a quarter of the participants' response while CAM accounted for 18.1%.

Table 3.16: Summary of perceived help-seeking behaviour in relation to the vignette (N = 614)

	N	%
Perceived help-seeking behaviour		
Any type of help-seeking	546	88.9
Biomedical care	356	58
Self-help	186	30.3
CAM	111	18.1

Biomedical care was further sub-categorized into general medical help or specialist mental health services. Almost three-quarters suggested seeking care from a medical doctor while specific mental health services such as psychiatry, psychology, counselling, drug rehabilitation and therapists accounted for more than a third. Examples of narratives and frequencies are detailed in Table 3.17.

Within participants who suggest self-help, changing personal life accounted for 43% of suggestions which included engaging in activities that can reduce levels of stress. Engaging or starting activities considered constructive was also suggested to improve well-being. Besides that, a range of activities such as exercising, yoga, games and recreation were also considered beneficial or coined as leading a healthy lifestyle.

.Making a personal initiation to seek better or deeper social connections with people around oneself was also suggested and further details are shown in Table 3.17. Taking a break (39.8%) was also highly suggested by participants as a form of self-help with participants recommending taking more rest or slowing down one's daily pace of life. 10.2% recommended different cognitive approaches ranging from controlling negative or unhelpful thoughts and thought diversions. 2.2% recommended prayer as a method to improve level of spirituality as this is believed to be related to levels of personal well-being.

In relation to CAM, family and friends were frequently suggested to be a point of counsel and discussion and was accounted by almost all (95.5%) participants within the CAM group. Support and advice sought were considered crucial to improve or find solutions to the problems experienced by the depressed person. Religious or spiritual leaders were considered to be relevant when seeking help by 6.3%.

About one in ten participants believed that no help is needed in the case of the vignette.

Table 3.17: Narratives of perceived help-seeking behaviour (N=614)

Categories	N	Narratives
Biomedical		
Seek medical help	266	"Seek a doctor.."; "try to get a cure from a doctor"; "see doctor a.s.a.p."; "see a doctor as often as possible"; "go to the doctor"; "go to a government clinic"; "consult a doctor"; "see a physician"; "seek medical advice"; "go for a medical check-up"; "go for a medical consultation"; "get some kind of treatment"; "get medical help...".
Seek psychological or psychiatric help	117	"See a psychiatric doctor"; "see a psychiatrist and a counselor"; "see a counselor"; "psychologist"; "a counseling expert"; "see a psychologist but...at an early stage of illness...seek later"; "go for counseling"; "seek treatment from a mental health expert"; "see a counselor to fix the...problem"; "seek counseling and see a therapist"; "go to a hospital...shouldn't wait"; "go to a mental doctor"; "see a counselor for guidance"; "get some kind of counseling services"; "meet a shrink".
CAM		
Family and friends	106	"Express feelings with friends"; "talk to friends"; "discuss problems with friends"; "talk to someone he trusts"; "talk to people...family members"; "talk to family"; "discuss with parents"; "open up to friends"; "have to share problem with friends and family"; "parents need to be there for him.."; "talk to family...accept his imperfections"; "ask for advice from family and friends"; "seek love and understanding from people around"; "talk to family..have to intervene"; "needs family"; "seek opinion of elders"; "share feelings with someone close...wife, mother"; "communicate with friends"; "seek counsel from loved ones"; "look for best friend".
Religious or spiritual advisors or leaders	7	"Seek those who are devout"; "sought counsel from those who are well-versed.."; "seek spiritual help"; "go seek an ustaz".
Self-help		
Related to work or finances	20	"Quit job"; "change job"; "enhance work performance"; "seek another job"; "put effort into his job...don't be lazy"; "work more...more money"; "look for a side income"; "confide with boss..discuss"; "talk to employer"; "work harder".
Change personal life	80	"Change lifestyle.."; "get a hobby"; "be more open...sociable...talk more to people"; "don't isolate"; "be more sociable"; "exercise more"; "mix with people more"; "take care of daily activities"; "improve sleep and diet"; "more activities..hobbies"; "travel"; "sleep earlier"; "enroll in a motivation course"; "don't keep to himself...reach out to others"; "control diet"; "focus on his life"; "enroll in an educational programme"; "do yoga"; "organize life"; "go out more"; "healthier lifestyle"; "learn how to manage life"; "practice meditation"; "problem-solve"; "relaxation"; "get into sports"; "learn to express feelings"; "keep self busy"; "lead a balanced life"; "take control of life"; "take stock of life....root of problem"; "get rid of bad habits"; "communicate more..."; "keep fit".
Take a break	74	"Take a vacation"; "rest"; "go on holiday"; "take time off work...rest"; "take a break from work"; "go away for a while.."; "holiday...look for peace and quiet"; "holiday and a rest"; "take a break..rested...face stress better"; "take time off and enjoy life".
Cognitive approach	19	"Keep a calm attitude to control situation"; "calm own thoughts...look for entertainment to keep mind off problem"; "control emotions...don't give in to feelings"; "calm his thoughts"; "don't think too much"; "think more optimistic thoughts"; "stop thinking about problems.."; "balance emotions with rational thoughts"; "think positively...".
Prayer	4	"Get closer to God"; "increase prayer"; "pray...to enlighten heart".

3.3.2.5 Stigmatizing attitudes

Participants were asked specific questions that covered five aspects of stigma in relation to the vignette. Descriptive analyses of the participants' attitude towards a depressive person are presented in Table 3.18. More than half of the participants did not think that depressed patients were difficult to talk to and an almost similar proportion did not think that they were likely to be violent. Half of the participants thought that the person in the vignette was weak and unpredictable, while almost 60% thought that a person could not recover from their problems.

Table 3.18: Attitudes towards the person in the vignette (N = 614)

Attitudes	Agree n (%)	Disagree N (%)	Unsure n (%)
Difficult to communicate	232 (37.8)	307 (50)	72 (11.7)
Likely to be violent	219 (35.7)	324 (52.8)	68 (11.1)
Cannot recover	358 (58.3)	168 (27.4)	85 (13.8)
Weak	327 (53.3)	182 (29.6)	101(16.6)
Unpredictable	330 (53.7)	154 (25.1)	127 (20.7)

The categories “agree” and “unsure” was merged as indication of stigmatizing attitude and the category “disagree” as indication of non-stigmatizing attitude towards mental illness, creating a binary determinant for analyses in the following sections.

3.3.2.6 Summary

Almost all participants believed that the vignette presented someone experiencing problem or crises in life although only about half believed that the problem amounted to an illness. Despite the fact that most participants did not subscribe to the biomedical concept of CMD, the majority endorsed seeking biomedical care.

The concept of self-help as a form of help-seeking was generated only for the perceived help-seeking for the person in the vignette. Similar responses were not observed for help-seeking in general (Section 3.3).

Details of all frequencies and proportions of categories generated from the descriptive study are presented in Table 3.19. These categories provided the basis of the quantitative analysis of perceived help-seeking behaviour as presented in the following section.

Table 3.19: Summary of perceived help-seeking behaviour and explanatory model of CMD of the study population (N = 614)

	N	%
Perceived help-seeking behaviour		
Any type of help-seeking	546	88.9
Biomedical care	356	58
Self-help	186	30.3
CAM	111	18.1
Illness conception & recognition of CMD		
Vignette suggests problem (missing = 4)		
Yes	595	96.9
No	15	2.4
Vignette suggests illness		
Yes	318	51.8
No	296	48.2
Causal Beliefs (missing = 8)		
Psychological	295	48
Physical	153	24.9
Employment	124	20.2
Relationship	111	18
Financial	35	5.7
Supernatural	1	0.16

3.3.2.7 Determinants of seeking biomedical care

This section describes the association of socio-demographic variables, common mental disorders and EMs with perceived help-seeking behaviour for biomedical care in relation to the vignette.

3.3.2.7.1 Univariate analyses of factors associated with seeking biomedical care

As presented in Table 3.20, perceived help-seeking behaviour for biomedical care was associated with education; participants with higher level of education are one and half times more likely to suggest seeking biomedical care for CMD compared to those with lower level of education. Perceived help-seeking behaviour was associated with severity of distress experienced; participants experiencing mild distress were less likely to suggest biomedical care compared to those with low levels of distress. There was no association between personal CMD status and seeking biomedical care in response to the vignette. Although the proportion of CMD cases suggesting seeking biomedical care was higher than non-cases, the difference was not significant

Illness conception was also associated with seeking biomedical care (Table 3.21); participants who recognize the vignette as a problem are nine times more likely to suggest seeking biomedical care compared to those who do not view CMD as a problem. Participants who recognize the vignette as an illness are two and a half times more likely to suggest seeking biomedical care.

As presented in Table 3.21, participants who believe in psychological causal attribution of the vignette are almost one and a half times more likely than those who do not to suggest seeking biomedical care. On the other hand, those who believe in financial causes of the vignette are 50% less likely to suggest biomedical care. Stigmatizing attitude was not associated with seeking biomedical care.

Table 3.20: The association of socio-demographic variables and common mental disorders with perceived biomedical service utilization (N = 356)

Socio-demographic variable	% Biomedical N (%)	OR	95% CI	p-value
Age				
18-25	114 (32.0)	1		
26-35	105 (29.5)	1.14	0.76, 1.72	0.51
36-45	137 (28.5)	1.20	0.82, 1.76	0.34
Gender				
Female	208 (58.4)	1		
Male	148 (41.6)	1.02	0.73, 1.41	0.90
Status				
Married	195 (54.8)	1		
Not married	161(45.2)	1.11	0.80, 1.53	0.52
Living condition				
Alone	66 (18.5)	1		
Nuclear family	178 (50.0)	0.79	0.50, 1.24	0.30
With parents & extended family	112 (31.5)	0.84	0.52, 1.36	0.48
Ethnicity				
Malay	209 (58.7)	1		
Indian	94 (26.4)	1.03	0.71, 1.5	0.86
Chinese	53 (14.9)	1.51	0.91, 2.51	0.11
Religion				
Muslim	208 (58.4)	1		
Buddhist	40 (11.2)	1.43	0.82, 2.51	0.21
Hindu	77 (21.6)	1.1	0.74, 1.65	0.63
Christian	31 (8.7)	1.44	0.77, 2.69	0.26
Education level				
Secondary and below	254 (71.3)	1		
Tertiary/University	102 (28.7)	1.71	1.16, 2.52	0.01
Employment				
Missing = 1				
Employed	203 (57.0)	1		
Unemployed	6 (1.7)	0.48	0.17, 1.34	0.16
Student	72 (20.2)	1.39	0.90, 2.15	0.14
Housewife	74 (20.8)	1.28	0.84, 1.95	0.26
Monthly income				
Missing = 10				
RM1000 and below	136 (38.2)	1		
More than RM1000	210 (59.0)	0.99	0.71, 1.38	0.96
Severity				
Low	238 (66.8)	1		
Mild	75 (21.1)	0.64	0.44, 0.94	0.023
High	43 (12.1)	0.83	0.50, 1.36	0.45
Diagnosed with CMD				
No	324 (91.0)	1		
Yes	32 (9.0)	1.06	0.60, 1.87	0.84

Table 3.21: The association of EMs and stigma with perceived biomedical service utilization (N = 356)

EM Domain	Biomedical			
	n (%)	OR	95% CI	p-value
Illness Perception				
Recognition of problem				
Missing=4				
No	2 (0.6)			
Yes	350 (98.4)	9.29	2.08, 41.52	0.004
Recognition of illness				
No	134 (37.6)			
Yes	222 (62.4)	2.80	2.01, 3.89	< 0.001
Causal Attribution of CMD				
Missing = 6				
Psychological				
No	165 (46.3)	1		
Yes	185 (52.0)	1.49	1.08, 2.06	0.02
Physical				
No	252 (70.8)	1		
Yes	98 (27.5)	1.42	0.97, 2.07	0.07
Relationship				
No	277 (77.8)	1		
Yes	73 (20.5)	1.51	0.98, 2.32	0.06
Financial				
No	336 (94.4)	1		

Employment	Yes	14 (4.0)	0.47	0.23, 0.93	0.03
	No	276 (77.5)	1		
Supernatural	Yes	74 (20.8)	1.10	0.74, 1.65	0.63
	No	349 (98.0)	1		
Stigmatizing attitude	Yes	1 (0.3)	-	-	-
	No	349 (98.0)	1		
Missing = 3					
Difficult to talk to					
	No	178 (50.0)	1		
	Yes	178 (50.0)	0.93	0.66, 1.30	0.66
Likely to be violent					
	No	185 (52.0)	1		
	Yes	171 (48.0)	1.01	0.72, 1.41	0.97
Cannot recover					
	No	198 (55.6)	1		
	Yes	160 (44.9)	1.32	0.95, 1.84	0.10
Weak					
	No	99 (27.8)	1		
	Yes	257 (72.2)	1.12	0.78, 1.60	0.55
Unpredictable					
	No	78 (21.9)	1		
	Yes	278 (78.1)	1.43	0.97, 2.10	0.07

3.3.2.7.2 Multivariate analyses of factors associated with seeking biomedical care

All variables with p-value ≤ 0.05 in the univariate analyses and CMD status were considered for multivariate analysis. These results are presented in Table 3.22. The associations with recognition of problem (recognition as a problem more likely to suggest biomedical care), recognition of illness (recognition as an illness more likely to suggest biomedical care) and financial causal attribution (belief in financial causes less likely to suggest biomedical care) retained statistical significance after adjustment.

Table 3.22: Multivariate analyses of factors associated with perceived seeking of biomedical care (N = 356)

	OR	95% CI	p-value
Education level			
Secondary and below	1		
Tertiary/University	1.45	0.96, 2.17	0.08
Severity			
Low	1		
Mild	0.72	0.48, 1.07	0.11
High	0.76	0.31, 1.88	0.55
CMD			
No	1		
Yes	1.35	0.47, 3.83	0.58
Vignette suggests problem			
No	1		
Yes	5.68	1.24, 26.02	0.025
Vignette suggests illness			
No	1		
Yes	2.59	1.84, 3.66	< 0.001
Psychological causes			
No	1		
Yes	1.17	0.83, 1.66	0.37
Financial causes			
No	1		
Yes	0.47	0.23, 0.98	0.045

3.3.2.8 Determinants of seeking CAM care

This section describes the association of socio-demographic variables, common mental disorders and EMs with perceived help-seeking for CAM care.

3.3.2.8.1 Univariate analyses of factors associated with seeking CAM care

Socio-demographic variables were not associated with seeking CAM care. Although the proportion of CMD cases suggesting seeking CAM care was lower than non-cases, the difference was not significant as shown in Table 3.23.

As presented in Table 3.24, perceived help-seeking behaviour for CAM care was associated with the recognition of the vignette as an illness; such participants were less likely to suggest seeking CAM care. Belief in relationship causes was also associated with seeking CAM care; participants who believe in relationship causal attribution of CMD were almost two times more likely to suggest seeking CAM care.

Belief in employment causes of CMD was associated with seeking CAM care; participants who believe in employment causal attribution of CMD were more than one and a half times likely to suggest seeking CAM care. Details of the causal attributions and CAM care are presented in Table 3.24.

Table 3.23: Socio-demographic variables and perceived CAM service utilization (N = 111)

Socio-demographic variable	% CAM	OR	95% CI	p-value
	N (%)			
Age				
18-25	35 (31.5)	1		
26-35	34 (30.6)	1.15	0.68, 1.93	0.61
36-45	42(37.9)	1.10	0.67, 1.80	0.71
Gender				
Female	67 (60.4)	1		
Male	44 (39.6)	0.92	0.60, 1.39	0.68
Status				
Married	64 (57.6)	1		
Not married	47 (42.4)	0.91	0.60, 1.39	0.67
Living condition				
Alone	18 (16.2)	1		
Nuclear family	61 (55.0)	1.17	0.66, 2.10	0.59
With parents & extended family	32 (28.8)	0.97	0.52, 1.83	0.93
Ethnicity				
Malay	76 (68.5)	1		
Indian	25 (22.5)	0.70	0.42, 1.14	0.15
Chinese	10 (9.0)	0.55	0.27, 1.12	0.10
Religion				
Muslim	76 (68.5)	1		
Buddhist	8 (7.2)	0.58	0.26, 1.26	0.17
Hindu	18 (16.2)	0.62	0.35, 1.07	0.09
Christian	9 (8.1)	0.9	0.41, 1.94	0.79
Education level				
Secondary and below	83 (74.8)	1		
Tertiary/University	28 (25.2)	1.04	0.65, 1.67	0.86
Employment				
Employed	63 (56.7)	1		
Unemployed	3 (2.7)	1.10	0.31, 3.98	0.88
Student	18 (16.2)	0.91	0.51, 1.61	0.73

Housewife	27 (24.3)	1.39	0.84, 2.30	0.21
Monthly income				
Missing = 3				
RM1000 and below	41 (36.9)	1		
More than RM1000	67 (60.4)	1.07	0.69, 1.64	0.76
Severity				
Low	75 (67.6)	1		
Mild	22 (19.8)	0.72	0.43, 1.22	0.22
High	14 (12.6)	0.94	0.50, 1.78	0.86
Diagnosed with CMD				
No	102 (91.9)	1		
Yes	9 (8.1)	0.90	0.42, 1.90	0.78

Table 3.24: The associations of EMs and stigma with perceived CAM service utilization (N = 111)

EM Domain	CAM				
	n (%)	OR	95% CI	p-value	
Illness Perception					
Recognition of problem					
Missing=4					
No	3 (2.7)	1			
Yes	104 (93.7)	0.85	0.23, 3.06	0.8	
Recognition of illness					
No	64 (57.6)	1			
Yes	47 (42.3)	0.63	0.41, 0.95	0.03	
Causal Attribution of CMD					
Missing = 6					
Psychological					
No	46 (41.4)				
Yes	59 (53.1)	1.44	0.94, 2.2	0.09	
Physical					
No	86 (77.5)				
Yes	19 (17.1)	0.60	0.35, 1.03	0.06	
Relationship					
No	76 (68.5)				
Yes	29 (26.1)	1.95	1.20, 3.18	0.01	
Financial					

	No	95 (85.6)			
	Yes	10 (9.0)	2.00	0.93, 4.31	0.07
Employment					
	No	76 (68.5)			
	Yes	29 (26.1)	1.63	1.01, 2.64	0.05
Supernatural					
	No	104 (93.7)	-	-	-
	Yes	1 (0.9)			
Stigmatizing attitude					
Missing = 3					
Difficult to talk to					
	No	61 (54.9)	1		
	Yes	50 (45.0)	0.85	0.55, 1.30	0.45
Likely to be violent					
	No	65 (58.5)	1		
	Yes	46 (41.4)	0.74	0.51, 1.23	0.30
Cannot recover					
	No	59 (53.1)	1		
	Yes	52 (46.8)	1.34	0.88, 2.04	0.17
Weak					
	No	32 (28.8)	1		
	Yes	79 (71.2)	1.09	0.68, 1.75	0.71
Unpredictable					
	No	33 (29.7)	1		
	Yes	78 (70.3)	0.77	0.47, 1.24	0.28

3.3.2.8.2 Multivariate analyses of factors associated with perceived CAM care

All variables with p-value ≤ 0.05 in the univariate analyses, common mental disorders and EMs were included in multivariate analysis. Only belief in the relationship causal attribution of CMD was independently associated with suggested CAM care. Those who believed in relationship causes of CMD were almost twice likely to seek CAM care compared to those who did not.

Table 3.25: Multiple variable analyses for simultaneous effects of determinants of perceived CAM service utilization

CMD		OR	95% CI	p-value
	No	1		
	Yes	0.91	0.46, 2.10	0.96
Recognition of illness	No	1		
	Yes	0.73	0.47, 1.13	0.16
Relationship	No	1		
	Yes	1.95	1.19, 3.20	0.008
Employment	No	1		
	Yes	1.49	0.90, 2.45	0.12

3.3.2.9 Determinants of self-help

This section describes the association of socio-demographic variables, common mental disorders and EMs with perceived self-help.

3.3.2.9.1 Univariate analyses of factors associated with self-help

As presented in Table 3.26, suggested self-help for CMD is associated with age; participants in the oldest age group of 36-45 are less likely to suggest self-help for CMD compared to participants in the youngest age group. The proportion of CMD cases suggesting self-help was lower than non-cases but the difference was not significant

Recognition of illness is associated with suggested self-help for CMD; those who recognize CMD as an illness are 50% less likely to suggest self-help (Table 3.27). Belief in relationship causes of CMD is also associated with self-help; participants who believe in relationship causes are less likely to suggest self-help for CMD as presented in Table 3.27. Stigmatizing attitude is associated with self-help; those who believe that CMD sufferers cannot recover are less likely to suggest self-help. The detailed analyses of stigmatizing attitude and its relation with self-help are presented.

Table 3.26: Socio-demographic variables in relation to perceived self – help (N = 186)

Socio-demographic variable	% self-help N (%)	OR	95% CI	p-value
Age				
18-25	73 (39.2)	1		
26-35	56 (30.1)	0.83	0.54, 1.27	0.39
36-45	57 (30.6)	0.60	0.40, 0.91	0.017
Gender				
Female	115 (61.8)	1		
Male	71 (38.2)	0.83	0.58, 1.18	0.29
Status				
Married	96 (51.6)	1.28	0.90, 1.81	0.16
Not married	90 (48.4)			
Living condition				
Alone	34 (18.3)	1		
Nuclear family	89 (47.8)	0.83	0.52, 1.34	0.46
With parents & extended family	63 (33.9)	1.03	0.62, 1.70	0.92
Ethnicity				
Malay	113 (60.7)	1		
Indian	50 (26.9)	1.00	0.67, 1.49	0.99
Chinese	23 (12.4)	0.92	0.54, 1.56	0.75
Religion				
Muslim	115 (61.8)	1		
Buddhist	18 (9.7)	0.91	0.51, 1.65	0.77
Hindu	39 (21.0)	0.94	0.61, 1.45	0.77
Christian	14 (7.5)	0.92	0.48, 1.78	0.81
Education level				
Secondary and below	145 (77.9)	1		
Tertiary/University	41 (22.0)	0.82	0.54, 1.23	0.33
Employment				
Employed	108 (58.1)	1		
Unemployed	7 (3.8)	1.84	0.67, 5.08	0.24
Student	38 (20.4)	1.20	0.77, 1.88	0.43
Housewife	33 (17.7)	0.90	0.57, 1.42	0.65
Monthly income				
Missing = 3				
RM1000 and below	70 (37.6)	1		
More than RM1000	113(60.7)	1.06	0.74, 1.52	0.74
Severity				
Low	116 (62.4)	1		
Mild	49 (26.3)	1.15	0.77, 1.73	0.49
High	21 (18.9)	0.90	0.52, 1.55	0.70
Diagnosed with CMD				
No	171 (91.9)	1		
Yes	15 (8.1)	0.87	0.47, 1.63	0.67

Table 3.27: The association of EMs and stigma with perceived Self-help (N = 186)

EM Domain	Self-help			
	n (%)	OR	95% CI	p-value
Illness Perception				
Recognition of problem				
Missing=4				
No	5 (2.7)	1		
Yes	177 (95.2)	0.85	0.28, 2.51	0.76
Recognition of illness				
No	112 (60.2)	1		
Yes	74 (39.8)	0.50	0.35, 0.71	< 0.001
Causal Attribution of CMD				
Missing = 6				
Psychological				
No	88 (47.3)	1		
Yes	92 (49.5)	1.15	0.81, 1.63	0.44
Physical				
No	137 (73.6)	1		
Yes	43 (23.1)	0.90	0.60, 1.35	0.62
Relationship				
No	156 (83.9)	1		
Yes	24 (12.9)	0.60	0.37, 0.98	0.04
Financial				
No	167 (89.8)	1		
Yes	13 (7.0)	1.43	0.70, 2.90	0.32

Employment				
No	138 (74.2)	1		
Yes	42 (22.6)	1.28	0.84, 1.94	0.25
Supernatural				
No	180 (96.8)	-	-	-
Yes	0			
Stigmatizing attitude				
Missing = 3				
Difficult to talk to				
No	88 (47.3)	1		
Yes	98 (52.7)	1.16	0.81, 1.66	0.42
Likely to be violent				
No	91(48.9)	1		
Yes	95 (51.1)	1.27	0.89, 1.83	0.19
Cannot recover				
No	121 (65.0)	1		
Yes	65 (34.9)	0.66	0.46, 0.94	0.023
Weak				
No	55 (29.6)	1		
Yes	131 (70.4)	1.06	0.72, 1.56	0.71
Unpredictable				
No	50 (26.9)	1		
Yes	136 (74.7)	0.83	0.55, 1.26	0.38

3.3.2.9.2 Multivariate analyses of factors associated with perceived self-help

All variables with p-value ≤ 0.05 in the univariate analyses and CMD status were considered for multivariate analyses. All the entered variables except for CMD status remained significant as presented in Table 3.28; age (oldest age group less likely to self-help), illness perception (recognition of illness less likely to self-help), causal attribution (belief in relationship causes less likely to self-help), stigmatizing attitude (belief that CMD sufferer cannot recover less likely to self-help).

Table 3.28: Multiple variable analysis for simultaneous effects of determinants of perceived Self-help

	OR	95% CI	p-value
Age			
18-25	1		
26-35	0.86	0.55, 1.35	0.52
36-45	0.62	0.40, 0.96	0.033
CMD			
No	1		
Yes	0.70	0.36, 1.35	0.29
Recognition of illness			
No	1		
Yes	0.52	0.37, 0.75	< 0.000
Relationship causes of CMD			
No	1		
Yes	0.60	0.36, 0.99	0.047
Stigma Cannot recover			
No	1		
Yes	0.61	0.42, 0.88	0.009

3.3.2.10 Summary

Results of the analyses show EMs as a predictor across all types of perceived help-seeking behaviour. Unlike the results in the general help-seeking section which determined several socio-demographic predictors, apart for CAM care, socio-demographic variables do not determine any other type of help-seeking in relation to the vignette. This suggests that different sets of predictors working for general help-seeking behaviour not associated with CMD and help-seeking behaviour for CMD presented in the vignette.

Only financial and relationship causal attribution is associated with perceived help-seeking for CMD and the presence of belief in supernatural causes is almost nil. This renders the study's second hypotheses of a negative association between supernatural causal beliefs and utilization of biomedical care to be rejected and indicating the occurrence of a Type I error.

In terms of illness perception, recognition of problem and recognition of the problem as an illness is associated with increased likelihood of help-seeking behaviour, specifically for biomedical care and decreased likelihood of self-help. Thus the third hypothesis of a positive association between recognition of mental illness and utilization of biomedical care is accepted.

Stigmatizing attitude is not a predictor of biomedical care thus the study's fourth hypothesis of a negative association between stigmatizing attitude and utilization of biomedical care is rejected indicating a Type I error.

3.3.3 Actual help-seeking Behaviour for CMD

This section presents data based on actual help-seeking behaviour by the sub-sample of participants who were diagnosed with CMD. EMs of CMD cases and actual help-seeking behaviour are identified and described and analyses on how EMs and other factors influence actual help-seeking are presented.

3.3.3.1 Explanatory Models

As established in previous research, help-seeking behaviour is associated with explanatory models (EM) of the experienced illness itself. The SEMI was used to assess the participants' EM with regards to their current mental health problems. Results of the EM analyses are presented first, followed by the analyses of their association with help-seeking behaviour.

3.3.3.1.1 Illness conception

Participants were asked whether they equate their current condition to amount to a problem or crisis and not just a normal state. Reactions were mostly affirmative with nearly two-thirds of the CMD cases acknowledging that they were suffering from some kind of problem.

Following acknowledgement of experiencing a problem, participants were further probed regarding their problem. They were questioned on whether they equate their

problem to an illness. More than half (58%) of the CMD cases who thought they had a “problem” believed that the problems experienced amounted to or indicated an illness.

Table 3.29: Illness conception and Recognition of CMD (N = 54)

	n (%)
Presence of problem	
Yes	50 (92.6)
No	4 (7.4)
Recognized illness (n = 50)	
Yes	29 (58)
No	21 (42)

Among those who believed that they were suffering from an illness, only 4 participants identified their illness as depression. Others used terms such as stress, pressure, emotional fluctuations and psychiatric terms such as phobia and low self-esteem. Altogether, more than half gave their illness a label of a specific psychiatric or mental health construct. Of the remaining participants with CMD, only one respondent assigned a somatic medical diagnosis while the remainder, were not able to provide a specific category or diagnostic label to which they could assign their illness.

3.3.3.1.2 Causal models

About one-third of the participants reported that the onset of their problem began more than 12 months prior to the interview. A similar proportion reported onset of problems between more than 6 months but within the previous 12 months while a quarter recalled the onset within the past 6 months of the interview.

Table 3.30: Onset of CMD (N = 50)

Onset	n (%)
Within the past 6 months	12 (24)
> 6 months – 12 months	15 (30)
> 12 months	17 (34)
Don't know	6 (12)

More than a third (36%) of the participants reported that their problem is caused by psychological factors, in particular their general negative outlook on life. For example, one respondent described his condition as generally feeling unhappy about life, feeling *pilu*, a Malay word that describes both sadness and a longing for something or someone. Other psychological factors were considered as “bad habits” such as procrastinating and having excessive negative thoughts. Participants also identified having low self-esteem and no confidence as a cause for their problems. Bereavement was also mentioned, such as the death of a father or of a close friend. Some participants attributed their problem to too much stress and having many “everyday hassles” amounting to unbearable or excessive pressure. Participants reported feeling that they feel rushed to do things, cannot seem to find enough time to get things done and feel like they cannot cope with daily pressures.

About a quarter (26%) of the participants attributed their problems to stem from specific problems with different relationships. Communication breakdown with family members, the pressure from familial expectations and specific conflicts related to the choice of study or work were mentioned. Relationship with peers also caused problems in terms of serious arguments, conflicts and negative influence of peers. Problematic relationship with spouse was also stated as a cause to problems by married participants.

Slightly less than a quarter (24%) of the participants attributed their problems to employment or study related which ranged from excessive studies and workload, to inability to perform or lack of skills. Participants felt that they were overburdened or could not cope with work and study demands.

Other less frequent causal attribution were financial causes related to low income which results in material hardship and associated problems, medical problems, and the environment of their living area.

Table 3.31: Causal attribution (N = 50)

Causal attribution	n	Narratives
Psychological		
Lifestyle/attitude to life	8	"Always procrastinating"; "too trusting..living in a little glass bowl"; "a lot of personal problems"; "bored and can't do work seriously"; "not leading a peaceful life..not happy"; "attitude"; "not happy with life".
Confidence/esteem	5	"I am not confident of myself"; "having no confidence".
Grief/bereavement	3	"Father passed away"; "death of a friend"; "father's death"
Stress/pressure	2	"a lot of stress"; "too much pressure"
Relationship		
Familial	7	"Not listening to my parents.."; "arguments with family"; "increased responsibilities..children growing up"; "arguments with family because I don't want to continue my studies"
Friends/peers	4	Arguments with friends..roommates"; "bad influence of husband's friends.."; "There was a girl...being with her messed up my studies"; "arguments with boyfriend"
Marital	2	"Problems with husband.."; "relationship with husband...problem"
Employment or studies	12	"Work load/everyday hassle"; "the working environment"; "Cumulative grade point average down.."; "arguments with boss"; "too much workload"; "work-related"; "studies"; "have not been studying.."
Financial	3	"No monthly income.."; "money is the main issue"
Physical	2	"Low blood pressure"; "getting older..".
Environment	1	"Living area...drug addicts and burglars, feel scared.."

Several participants however described their problem as a combination of more than one causal category, for example:

There's a lot of pressure at work....I get into a lot of arguments with my boss...also, I'm in my early stage of pregnancy so it can get quite difficult when I'm not feeling so well. My husband works out-station most of the time too. I stay at home with the children but I get very nervous about being a good mother and wife. There is the constant pressure of making sure everything is taken care of....

(Female, 30, Chinese, administrative officer)

Another respondent commented:

My emotions...they are not stable. I think I'm just not happy, especially if, you know, when I feel there's nobody...a lot of things that happened, well...it has not been a peaceful and happy life. Sometimes even the smallest thing makes me feel *pilu*. I've also been having trouble at work...one of the supervisors suspected I've been stealing...so there has been a lot of tension....

(Male, 36, Malay, driver)

The above narratives suggest that the participants employ a pluralistic model of illness conception to explain their mental health experiences.

3.3.3.1.3 Perpetuating factors

Participants were asked regarding possible conditions or situations, which although not necessarily the cause of their current problem, whose presence or occurrence could contribute to the persistence of the current mental health problem.

The most common perpetuating factors reported were psychological. Examples were issues related to cognitive and emotional functioning or the inability to cope emotionally. Other commonly cited factors were lack of social support, economic instability, study or work burden, and confrontations. Lack of social support commonly includes the unavailability of someone to talk to and lack of understanding from family members and significant others.

Economic instability included financial problems and the inability of securing employment. Work and study burden described situations of increasing demands at the work site and having to deal with difficult study participants in institutions of higher education. Confrontational situations maintained the problem in the sense that they increased the probability of communication breakdown and aversive emotional situations which may exacerbate the current problem.

Lack of adherence to medication for physical illness could result in an increase or maintenance of the pain and discomfort experienced. Lack of social support was reported to have contributed to the increase of distress related to CMD. For example, pressure from families and friends who are not helping the situation can also aggravate or maintain the problems. A few of the participants said that the occurrence of major life events or traumas, especially death of a loved one, had further perpetuated problems related to bereavement currently experienced.

A large proportion of the participants were unable to identify any factors that maintains the current problems, mostly stating that they are unaware or do not know if there is anything that can worsen their problem.

Table 3.32: Perpetuating factors (N =50)

Perpetuating factors	n (%)	Narratives
Psychological factors	11 (22)	"Losing control of the situation"; "thinking too much"; "sadness...drained of energy, spirit"; "can't make right decision...fear, no confidence"; "if not happy"; "feel increasingly pressured"; "decrease in confidence"; "added panic"; "getting more scared".
Lack of support	5 (10)	"No one to talk to"; "people start blaming you for everything bad that is happening in your life"; "when family and husband does not understand your feelings"; "nobody to give me support, raise my spirits"; "if I'm not given a second chance".
Economic instability	5 (10)	"Still unable to find a job to cover monthly bills"; "change of job"; "money problems"; "losing job".
Increase study or work burden	5 (10)	"Taking difficult subjects"; "work problems piling...can't handle them"; "problems becoming bigger"; "leading to other problems".
Confrontation or communication breakdown	5 (10)	"Having to face people in public"; "facing people who are fierce and serious"; "getting into fights with parents..."; "fighting, no cooperation with boyfriend"; "talking rudely to husband".
Lack of adherence or neglect	4 (8)	"If problem left unattended...not taking care of the problem"; "not on medication"; "miss medication".
Social pressures	4 (8)	"More pressure...from family and friends"; "Peers...if they put on pressure.."; "friends can make it worse..".
Major life events	2 (4)	"More death.."; "end of the relationship".
Don't know	9 (18)	

3.3.3.1.4 Main concerns and impact

Participants were asked whether they consider their problem to be serious. Almost three-quarters (n=36; 72%) of the CMD cases considered their problem to be serious.

Subjective reports of the impact of CMD on the participants' lives were recorded. The following table (Table 3.33) presents the main concerns of those who acknowledged experiencing problems. It presents main issues or situations that the participants fear most which may occur as a result of the on-going problem and includes both current as well as anticipated future outcomes.

Almost a quarter stated that they are concerned that the current problem may escalate into a more serious condition. A similar proportion of the participants stated fears that the problems may jeopardize future outcomes, such as in finding employment, or in maintaining current employment. Future outcomes of education were mentioned such as possible problems in completing further studies. Not being able to find a partner and the possibility of separation from current spouse or partner was another theme of future impact of the problem.

Another concern was that the problems had negatively affected family members. Apart from fears that the illness experienced had caused undue burden to family members, participants also feared that family members were psychologically affected by their problems. Their problems also affected the level of their physical health, and some participants observed an increase in general problems with health. Another impact of the problem is experiencing difficulties in concentration and in articulating

one's thoughts to others. A few participants were also concerned about the recurrence of past illness.

Table 3.33: Main concerns of problem (N = 50)

Main concerns of problem	N (%)	Narratives
Escalation of problem	12 (24)	"Can't manage.."; "can't control husband"; "need to monitor studies...worried it might get worse"; "darker days ahead.."; "if can't resolve problem...fear of it becoming more and more of a burden"; "pain getting worse"; "when have to face more escalating problems"; "it might get more complicated"; "if I get more depressed...unable to socialize"; "losing control".
Affecting family	5 (10)	"Worry about how it is affecting parents.."; "mother and younger siblings.."; "when it disturbs daily life, might affect my baby"; "children's education"; "disturbances might affect family...coping with it".
Future employment / relationships / studies	4 (8)	"My future...family and financial future"; "will not be able to get a job"; "affecting studies...may not pass exams"; "may not find that someone special".
Separation from partner	4 (8)	"Separate from husband..."; "that my husband will leave.."; "she might get another boyfriend"; "my boyfriend might leave".
Loss of job	4 (8)	"I have to leave my job"; "lose all interest in work"; "lose my job"; "my job might be affected".
Affecting physical health	3 (6)	"I might get a dangerous disease"; "damaging my kidneys"; "might affect my health".
Problem untreatable	2 (4)	"Worried that the problem cannot be treated"; "wonder if it can ever go away".
Cognitive difficulties	2 (4)	"Can't concentrate"; "can't articulate thoughts".
Recurrence of illness	2 (2)	"Recurrence of past illness.."; "in the past...have felt hopeless...people thought I was crazy".

3.3.3.1.5 Summary

In terms of illness perception, almost all of the participants believed that they were experiencing some kind of problem although almost half of those who admitted to a problem did not believe that it accounted to an illness. Thus a significant proportion of the CMD cases do not share a biomedical framework of illness perception for their mental health problem.

The most common attributes to mental health problems among those with CMD is psychological. Similarly, the main perpetuating factor of the current problem is psychological. Thus, CMD cases mostly see the causation and maintenance of the problem within him or herself and not as the result of external factors.

The main impact of the current problem is the fear that the current problem will escalate into something more serious. This implies the belief that the current problem experienced will not resolve with a possibility in increase of severity.

3.3.3.7 Actual help-seeking behaviour for CMD

The participants were asked regarding their help-seeking behaviour in relation the current mental health problem(s) experienced. Details of types of help-seeking behaviour are presented in Table 3.34.

Table 3.34: Actual help-seeking behaviour among CMD cases (N = 54)

Help-seeking behaviour	N	%
Any type	31	57.4%
CAM	17	31.5
Self-help	16	29.6
Biomedical	9	16
Both biomedical & CAM	6	11.1
No action	23	42.6

Of the 54 CMD cases, 31 (57.4%) reported to have sought help for their problems. Help sought were categorised as biomedical (doctor, counsellor, psychiatrist), CAM (friends, family, academic advisor, welfare department, masseuse). In addition, a number of individuals described steps such as prayers, studying harder, distraction techniques and looking for a job, which are categorised as self-help. Within this group of help-seekers (n = 31), the most common action taken was seeking CAM, followed by self-help and seeking biomedical care, while a minority sought a combination of biomedical and CAM.

Narratives were generated for the type of self-help and details are presented in Table 3.35. Participants reported several categories of self-help, the most frequently stated being “self-regulating” which is described as the ability to exert the individual’s own will on his or her personal life, in terms of regulating their behaviour and thought processes. Other types of self help behaviour include rectifying the environment or situation related with employment and seeking a more lucrative employment opportunity. Cognitive approaches used included distraction techniques where the individual sought to divert attention from the problems experienced, or to place attention to more positive aspects of life. Participants reported taking rests, consciously and purposively examining the individual’s own thoughts and feelings as

an exercise of introspection, seeking ways to boost self-confidence and seeking spiritual guidance through personal prayers.

Table 3.35: Self-help narratives for CMD

Self-help	N	Narratives
Self-regulation	11	"Concentrate...work to increase cumulative grade point average"; "have to know how to control myself."; "learn to take care of my problem"; "do things...will feel happy"; "take care of myself better...discipline..."; "look after myself...drink more water"; "study..get another chance to take exams".
Related to employment	5	"Find a permanent job.."; "deal with the office...discuss with work mates for support"; "find a job"; "find a job for more income".
Cognitive approach	4	"Do other things...to distract myself..don't think too much"; "isolate myself, get rid of distractions"; "don't think about problems"; "try to instil interest in a better way..".
Rest	3	"Rest.."; "stay at home more....relax"; "take leave, go for vacation".
Introspection	3	"Understanding myself better.."; "try to understand the people around me..".
Related to confidence	2	"Learn to have confidence with myself"; "gaining some kind of confidence..".
Prayer	2	"Prayers..."; "prayers...calming myself".

Characteristics of formal help-seeking behaviour among CMD cases

Due to small numbers I was unable to analyse the factors associated with help seeking with biomedical or CAM. I merged these two types of help-seeking to create a category of “Formal help-seeking” which comprised all participants who had sought either biomedical or CAM care. I sought to compare the characteristics of those who sought formal care with those who did not. Due to the low numbers of subject in the sub-sample of CMD cases, quantitative analyses were not carried out and an ‘eyeballing analysis’ of the data was conducted.

From frequency observations of the data, except for a few variables (namely ethnicity, religion and education level), in general, the proportion of CMD cases who did not seek formal help were higher if not similar, across most socio-demographic groups.

Most of the Indians and all of the Chinese sought formal help compared to Malays. This pattern is also reflected in terms of ethnicity where all Buddhists and more than half of Hindus sought formal help.

CMD cases with higher levels of education mostly sought formal help compared to those with lower levels of education.

Table 3.36: Characteristics of CMD cases in relation to help-seeking (N = 54)

Socio-demographic variables	Formal help seekers n = 23 n (%)	Did not seek formal help n = 31 n (%)
Age		
Mean age: 26.9	Mean age: 27.2	Mean age: 26.2
18-25	15 (45.5)	18 (54.5)
26-35	2 (25.0)	6 (75.0)
36-45	6 (46.2)	7 (53.8)
Gender		
Female	14 (38.9)	22 (61.1)
Male	9 (50.0)	9 (50.0)
Ethnicity		
Malay	12 (33.3)	24 (66.7)
Indian	9 (56.2)	7 (43.8)
Chinese	2 (100)	-
Marital status		
Not married	16 (47.1)	18 (52.9)
Married	7 (35.0)	13 (65.0)
Living condition		
Alone	5 (55.6)	9 (44.4)
Nuclear family	8 (50.0)	8 (50.0)
With parents & extended family	10 (34.5)	19 (65.5)
Religion		
Muslim	12 (34.3)	23 (65.7)
Hindu	8 (53.3)	7 (46.7)
Buddhist	2 (100)	-
Christian & others	1 (50.0)	1 (50.0)
Education level		
Secondary and below	17 (39.5)	26 (60.5)
Tertiary/university	6 (54.5)	5 (45.5)
Employment status		
Missing = 1		
Employed	10 (43.5)	13 (56.5)
Unemployed	1 (33.3)	2 (66.7)
Student	9 (45.0)	11 (55.0)
Housewife	3 (37.5)	5 (62.5)
Monthly income		
Missing = 15		
RM1000 and below	15 (45.5)	18 (54.5)
More than RM1000	8 (38.1)	13 (61.9)

Note: due to small numbers, statistical tests of significance were not estimated.

EMs of participants with CMD and their association with formal help-seeking behaviour for current mental health problems was analyzed (details presented in Table 3.37). In terms of illness conception, the overall recognition of own problems did not appear to be associated with formal help-seeking. Recognition of the problem as an illness showed that illness perception is related to slightly higher proportion of not seeking formal help. There was no difference of proportions between formal help-seekers and those who did not seek formal help in relation to reported onset. Participants also reported overall higher proportions of not seeking formal help regardless on the level of impact. Belief in psychological causal attribution of their current problem is associated in higher proportion of not seeking formal care while other analyses resulted in single digit frequency and is unable to yield any information that is useful.

Table 3.37: EM of current mental health problem in relation to actual help-seeking for CMD (N = 54)

EM Domain	Formal help seekers n = 23 n (%)	Did not seek formal help n = 31 n (%)
	n (%)	n (%)
Illness Perception		
Recognition of problem		
No	0	4 (100)
Yes	23 (46)	27 (54)
Recognition of illness		
No	11 (52.4)	10 (47.6)
Yes	12 (41.4)	17 (58.6)
Onset (missing = 4)		
< 6 months	9 (50)	9 (50)
> 6 months	13 (40.6)	19 (59.4)
Impact (missing = 4)		
Not Severe	5 (46.7)	7 (58.3)
Severe	17 (44.7)	21 (56.3)
Causal Attribution of CMD		
Missing = 4		
Psychological		
No	9 (52.9)	8 (47.1)
Yes	14 (42.4)	19 (57.6)
Physical		
No	19 (43.2)	25 (56.8)
Yes	4 (66.7)	2 (33.3)
Relationship		
No	18 (41.9)	25 (58.1)
Yes	5 (71.4)	2 (28.6)
Financial		
No	21 (44.7)	26 (55.3)
Yes	2 (66.7)	1 (33.2)
Employment		
No	20 (45.5)	24 (54.5)
Yes	3 (50.0)	3 (50.0)
Environment		
No	23 (46.9)	26 (53.1)
Yes	0 (0)	1 (100)

Note: due to small numbers, statistical tests of significance were not estimated.

3.3.3.8 Pathways to care

This section presents descriptive analysis on the pathways of care followed by participants with CMD who sought formal care. I present data on the care provider consulted first, followed by the frequencies of each care provider as well as the use of multiple types of care provider and a sequential description of the actual pathways from one care provider to the next. Services received were probed in terms of the decision maker for seeking help, the type of help received, level of satisfaction and terms of payments where applicable.

3.3.3.8.1 Point of first contact

The first point of contact was distributed across both biomedical and CAM categories of care, the most frequent being friends, followed by GPs and family members. Almost three-quarters (72%) of formal help-seekers sought CAM care (Table 3.38). The average number of contacts per subject is 1.4 while with 30.4% of the participants seeking more than one source of care.

Table 3.38: Sequential pathways to biomedical and CAM care (N = 23)

Care provider	Order of care of provider				Total Contacts (%)
	1 st contact	2nd contact	3 rd contact	4th contact	
Biomedical	N	N	N	N	N
GP/doctor	6	1			7 (21.9)
Counsellor	1				1 (3.1)
Psychiatrist	1				1 (3.1)
CAM					
Friends	10	1	1	1	13 (40.6)
Family	3	3			6 (18.8)
Welfare Dept	1				1 (3.1)
Academic adviser	1	1			2 (6.3)
Masseuse		1			1 (3.1)
Total Contacts	23	7	1	1	32

Further eye-ball analysis comparing those who sought biomedical and CAM care as the first source of care was carried out. The findings related to socio-demographic variables are presented in Table 3.39 and association with EMs in Table 3.40.

Participants within the youngest age group indicated a higher frequency of initially seeking CAM care. Female participants, and those who were not married indicated a higher frequency of seeking initial CAM care.

Table 3.39: The association of socio-demographic variables with type of pathway to care (N = 23)

Socio-demographic variables	Biomedical (n = 8)	CAM (n = 15)
	n	n
Age		
Mean age: 26.9		
18-25	4	11
26-35	-	2
36-45	4	2
Gender		
Female	2	12
Male	6	3
Ethnicity		
Malay	5	7
Indian	3	6
Chinese	-	2
Marital status		
Not married	4	12
Married	4	3
Living condition		
Alone	1	4
Nuclear family	4	4
With parents & extended family	3	7
Religion		
Muslim	5	7
Hindu	3	5
Buddhist	-	2
Christian & others	-	1
Education level		
Secondary and below	8	9
Tertiary/university	-	6
Employment status		
Employed	3	7
Unemployed	-	1
Student	3	6
Housewife	2	1
Monthly income		
RM1000 and below	5	10
More than RM1000	3	5

EMs of participants with CMD and its association with initial biomedical and CAM help-seeking behaviour for current mental health problems was analyzed. In terms of

illness perception, recognition of own problems indicated higher frequency of seeking CAM while recognition of problem as an illness did not show any difference in frequencies of the type of initial care. Participants who reported experiencing severe impact in relation to their problems showed higher frequency in seeking CAM care.

In terms of participants own causal attribution, results did not yield any patterns that may suggest any association between causal beliefs and initial type of care sought.

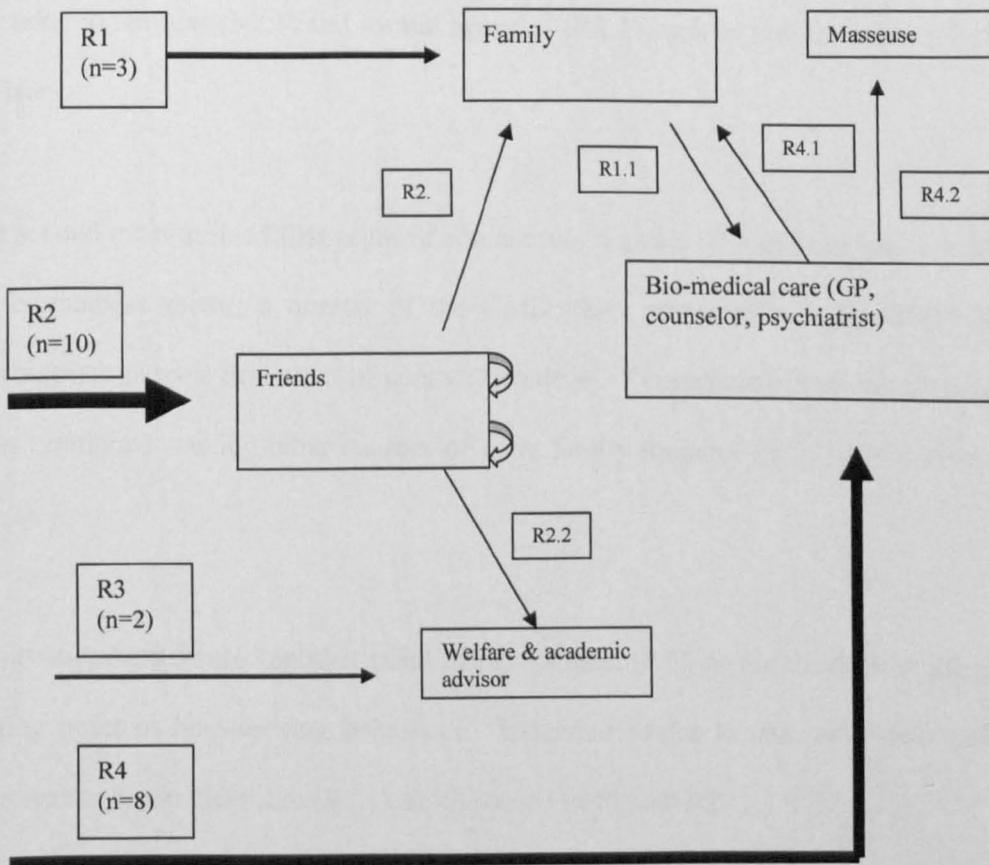
Table 3.40: The association of EMs of current problem(s) with type of pathway to care (N = 23)

EM Domain	Biomedical (n = 8)	CAM (n = 15)
	N	N
Illness Perception		
Recognition of problem		
No	-	-
Yes	8	15
Recognition of illness		
No	2	9
Yes	6	6
Onset		
< 6 months	3	6
> 6 months	5	9
Impact		
Not Severe	2	3
Severe	6	12
Causal Attribution of CMD		
Psychological		
No	3	6
Yes	5	9
Physical		
No	5	6
Yes	3	9
Relationship		
No	8	10
Yes	-	5
Financial		
No	7	14
Yes	1	1
Employment		
No	8	10
Yes	0	5

3.3.3.8.2 Pathways

Routes to care taken by individual cases were combined to produce a pathways diagram (Figure 3.2).

Figure 3.2: Pathways diagram for those who sought help for their CMD (N=23)



After reaching the first point of contact, almost a third of the cases continued seeking help from other sources, which includes both biomedical and CAM sources reflecting a pattern of entertaining medical pluralism among some of the participants.

As illustrated in Figure 3.2 and indicated as route R2, friends are usually the first point of contact and consulting more than one friend was observed within this route. When help is sought outside the friends network, the pathway of help-seeking extended to families (R2.1) and formal agencies (R2.2) such as welfare and academic advisors.

The second most utilized first point of contact was a group of formal agencies within the biomedical sector; a quarter of the CMD cases sought GPs, counsellors and psychiatrists as their first point of contact (Route 4). On reaching biomedical care, 2 cases continued seeking other sources of care; family member (R4.1) and masseuse (R4.2).

Family members formed another point of first contact (R1), as the third most utilized starting point of help-seeking behaviour. Extended routes to care after this initial point was to biomedical care (R1.1) as illustrated in Figure 3.2.

Direct contact with other types of CAM care providers (welfare and academic advisers) are observed in R3; following this type of contact, there were no other types of care provider sought.

3.3.3.8.3 Roles and influences in help-seeking behaviour

A major source of care was friends who provide emotional support and are an important source of information. For example participants reveal that friends provide assistance and guidance in relation to personal and private problems such as marital discord and financial difficulties and may suggest further steps to take (discuss marital problems with family elders or contact the welfare department to apply for financial aid).

The role of family members ranged from providing emotional support to referring a participant to other relevant care providers. For example, a female participant who was experiencing emotional distress which she could not explain initially discussed her problems with her husband. During the discussion, her husband suggested seeking advice from their medical doctor as both of them were unable to identify the cause of her distress.

3.3.3.8.4 Services received

The decisions to seek help were all made by the participants themselves. In terms of type of care given, services ranged from receiving medication or medical check-ups, receiving advice and discussing the problem, specific counselling sessions, as well as receiving financial aid.

Most participants expressed satisfaction with the help received with only 2 who expressed dissatisfaction. The sources identified as providing inadequate services

were a medical doctor and an academic advisor. The former could not alleviate the physical pain experienced by one respondent while the other was unable to address a respondent's emotional problem.

Apart from the masseuse, payment was not involved in the help sought as the formal service providers were either government based or part of an employer's health panel.

3.3.3.8.5 Summary

Analysis of help-seeking behaviour specifically for CMD among the diagnosed CMD cases was hampered due to the low numbers of identified cases. However, several assumptions can be made by observing some of the emerging patterns of behaviour in relation to help-seeking. The study identified a 42.6% of CMD cases that did not seek help, despite the fact that 92.6% admitted to experiencing problems.

About half of the cases sought help, and when they do it was mainly contacting CAM sources as the initial point of care. Biomedical was the second most sought source of care, and within biomedical care, only two participants or 3.7% of CMD cases actually sought specialised mental health care.

Use of multiple care providers and the use of both biomedical and CAM sources of care was not uncommon. Multiple use within one type of care provider was only observed among friends ($n = 2$). Family and friends are identified as lay referral sources to both biomedical care and professional CAM (i.e. welfare and academic advisors). Participants approached biomedical care providers and other formal

agencies not necessarily after exhausting the assistance of friends and family networks, nor as a last resort but after encouragement and suggestions from this network.

Help-seeking pathways can also be extended from biomedical to CAM care providers although it is unclear whether CAM functions as a complimentary approach or as an alternative to biomedical care. Most pathways suggest a linear process of help-seeking. Although the pathways reported multiple sources, multiplicity of movements such as going back and forth among differing sources were not observed

In conclusion, approximately half of CMD cases do seek help, mostly from CAM sources and from biomedical sources to a lesser degree. When biomedical care is sought, hardly anybody contacted specialized mental health care, preferring GPs and other primary care doctors.

4.0 Discussion

The purpose of this study is to better understand the help-seeking behaviours of an urban community in relation to common mental disorders (CMD). It investigates how urban Malaysians' sociodemographic background, explanatory models (EMs) and attitudes act as potential determinants of help-seeking for CMD. While exploring these determinants, this study also investigated the prevalence of and risk factors for CMD in this urban community setting.

This chapter presents the main findings of the study. It begins with a summary of the main findings of the research, based on the research methods utilized (Section 4.1). Next, Section 4.2-4.4 discusses how findings compare with the existing body of knowledge and what new insights are generated. Section 4.5 triangulates results from all sources of data to investigate the hypotheses set out in this dissertation. Next, Section 4.6 considers the strengths and limitations of the study. Finally, Section 4.8 presents the implications of the findings for public health policy (4.9), practice (4.10) and future research (4.11).

4.1 Summary of Main Findings

The first stage of the research included the identification of CMD cases and the sociodemographic variables that may be associated with having CMD, help-seeking behaviour in general as well as perceived help-seeking behaviour for CMD. The overall sample's explanatory model in relation to CMD was also investigated to identify EM characteristics that may be associated with perceived help-seeking for

CMD. Following the screening procedures in the first stage, identified CMD cases were further investigated in stage two, during which, similar investigations (as in stage one) was conducted within this stage. The main outcomes of interest were actual help-seeking for CMD, and the predictors of help-seeking were EMs and attitudes towards actual CMD

Initially, the research sought to determine the prevalence of CMD within the community which was central in the investigation of the hypotheses. The overall prevalence rate of CMD in Lembah Pantai was 8.8% (95% CI: 6.24, 11.36), indicating that approximately 1 in 10 young adults who are between the ages of 18-45 suffer from CMD. The research's primary interest in help-seeking behaviour for CMD yielded information on help-seeking behaviour on 2 different levels (perceived and actual). From our sample, we found that people with CMD (regardless on whether they were aware of having CMD) are at least 2 times more likely to have sought any kind of help in the past four weeks in comparison to others without CMD. Further analysis found similar patterns of help-seeking for biomedical care in particular.

When faced with a hypothetical consultation for CMD, more than half of the participants in the study considered biomedical care as an appropriate source of care for CMD. Significant relationships between EMs and perceived help-seeking behaviour were identified in explaining the outcome of interests in this study. We found that recognition of CMD as an illness, belief in financial causes was significantly related to seeking biomedical care for CMD.

Following screening and diagnosis of CMD cases within the sample, several risk factors were identified. Moreover, it yielded information on the actual help-seeking behaviour of those with CMD which leads to the second stage of the study that explored actual help-seeking behaviour specifically for CMD. In the second stage, those diagnosed with CMD were interviewed, not just on general help-seeking behaviour, but specific probing for their current condition, even if the identified cases do not acknowledge that they are suffering from CMD themselves (about half of those diagnosed did not believe that they are experiencing an illness) It was found that among these identified cases, about half of them have sought some kind of help, out of which less than a quarter sought biomedical services which comprises of general practitioners and those offering specifically mental health services. Pathways to care was also identified providing information on the first and following line of help or services sought by those with CMD.

4.1.1 Prevalence and risk factors for CMD

The health and living conditions of Malaysia have improved greatly since independence in 1957. The average life expectancy has increased by more than 15% from around 63 years in 1970 to 73 years in 2007. The infant mortality rate has come down from 46 per 1000 births to 8.9. The number of the population living below the poverty line has decreased from 64.8% in 1970 to current levels of 5.1%.

It is not known whether the remarkable progress in physical and material wellbeing for most Malaysians has been matched by gains in mental wellbeing as the first

national morbidity survey on psychiatric disorders was only conducted in 1996, National Mental Health Survey (MOH, 1996).

The Malaysian Global Burden of Disease study suggests that mental disorders, and in particular CMD forms a substantial part of the burden of disease in Malaysia (MOH, 2004). Although the number of deaths associated with mental disorders is low compared to other health priority areas, mental disorders appear on the top 5 leading causes of DALYs of both men and women in the younger adult group. Mental disorders account for much disability, incur high direct and indirect costs, and impose a heavy burden suffering which includes stigmatization of people with mental disorders and their families. Having said this, it is important to note that the Malaysian GBD on mental disorders were not derived from Malaysian data but extrapolated from regional numbers available. The prevalence rate and risk factors identified in this study may contribute for future efforts in measuring national GBD for CMD.

4.1.2 Prevalence of CMD in Lembah Pantai

I have discussed the methods used to assess the prevalence of mental disorders in the community earlier. In this research, I used a two-stage methodology involving the screening of the entire sample with a validated screening questionnaire, followed by a second-stage diagnostic assessment of all 'screen-positives'. An earlier decision to lower the screening threshold of the GHQ-12 was aimed to maximize sensitivity and not to increase the number of cases. Different prevalence rates based on the screening

and diagnosis procedures were derived, thus the aim of lowering the threshold was considered achieved.

Based on the study's methodology, one in ten young adults in Lembah Pantai were identified as suffering from a CMD at the time of the survey. This is comparable to CMD community prevalence in the south-east asia region that ranged between 5%-10% (WHO, 2002) but much lower than some of the community surveys in LAMIC such as Lebanon which reported 17% (Karam et al., 2006) and Iran at 23% (Noorbala et al., 2004). Community studies in HIC puts the estimates between 15% to 30% (Goldberg and Huxley, 1992; Meltzer et al., 1995). Such differences of rates may reflect on the different screening and diagnostic procedures or tools utilized in different countries as well as the varied economic and socio-demographic variables of each country. As discussed in the literature review, CMD is associated with many social determinants and may impact people living in different areas differently. It is noted however that the study's rate is comparable to countries in the South East Asia region such as Singapore, Thailand and the Philippines for example (WHO, 2002) which perhaps share more similar socio-economic and geographical composition.

The rate of 8.8% from this study is slightly lower compared with the NMSII (1996) which reported a prevalence rate of 10.7%. It is noted that the NMSII were based on probable psychiatric illness or screening among the general population and not diagnosed mental disorder as in the case of this study, although identical screening tools were utilized in both studies. If based on the screening procedure only, the results of 12.4% probable psychiatric illness for this study, is comparable or slightly higher than the rate of NMSII of 10.7%. Thus, the differences may be attributed to

the selected population in my study (as opposed to a national sample) and because I used a two-stage methodology with confirmation of psychiatric diagnosis, as opposed to a single stage screening methodology.

Recently released Malaysian national prevalence rates of psychiatric morbidity, which was based on a nationwide survey conducted in 2006 (same period when the study's data collection took place), provided some updated information. Based on the 28-item GHQ instead of the GHQ-12 utilized for the nationwide survey in 1996, overall prevalence rate of psychiatric morbidity of adult population in Malaysia is 11.2% (IPH, 2008), which was higher than this study's 8.8%. Significant factors associated with psychiatric morbidity were chronic pain and disease, hospitalization, gender, household income, education level and urbanicity. This in part is similar with the study's findings in terms of education and income but the national survey caught other variables as the scope and population was wider, and the assessment tool utilized was for probable cases and not diagnosis.

The results provide evidence of the problem in the community, specifically within an urban setting. The results however cannot be translated into a different environmental setting, especially for non-urban. Recent data suggests higher community prevalence rates in Malaysia (IPH, 2008), possibly due to increasing rural-urban migration and issues of urban poverty. Results have also to be taken with caution in non urban settings as demographic variables between urban and rural areas in Malaysia are distinct in terms of ethnic composition, culture, economic activities, social and environmental living conditions that warrants its own investigation.

The results are also important as it identified those who could benefit from mental health care among members of the community that are not hospital based or known by primary care services, but also the cases that have not been recognized by the formal services or perhaps have been misclassified by those services. Only about half of the identified cases were aware that they were experiencing a mental health illness and less than 5% have sought specialized mental health care for their condition.

4.1.3 Risk factors associated with CMD

The aetiology of CMD is complex and requires a biopsychosocial model that takes into account the interaction of diverse factors. For example, biochemical changes in the brain may be associated with specific symptoms of CMD, precipitants of these changes may lie in the psychosocial domain, while genetic factors play a role in increasing vulnerability. In this study, I have only assessed psychosocial risk factors for CMD and selected risk factors based on the literature.

The main risk factors identified in this study are younger age, not married, Malay ethnicity, unemployment, status as a tertiary student, and low income. Further analysis to identify the most salient risk factor for this group will be discussed at the end of this section.

Age and its related life events

While both males and females had similar overall prevalence rates, results from the study indicate that CMD is highest among younger adults which is consistent with

findings of recent community surveys among young adults in the UK (Singleton et al., 2001) where younger age was risk factor for CMD.

The youngest age group in this study, i.e. between the ages of 18-25 years, had the highest risk for CMD. Developmentally, this age group faces the main tasks of seeking intimate relationships and getting married and the need to find work and become financially independent. This “transition of early adult life” was described by Goldberg and Goodyer (2005, p. 128) as one of the factors that can consolidate resilience or increase vulnerability to mental illness. According to developmental theories, individuals can be considered as being in the late adolescence stage and early adulthood (Erikson, 1968) life stage. One of the main developmental tasks taking place for this group is *identity formation* which is the development of stable concepts of self, including social, vocational and sexual roles. Thus this stage in life in general can be viewed as a time of great upheaval and turbulence resulting in significant emotional problems. Developmentally, at this stage, young adults are interdependent, seeking their own identity and independence while still partially dependent on the support of family members and caregivers. This developmental stage also involves the personal need for intimacy and much focus is geared towards cultivating relationships that will result in life partnership. Failure to achieve this need, or problems in relationships results in isolation and distress, a causal attribution generated from this study. This is reflective of large-scale studies such as the Dutch Nemesis study (Overbeek et al., 2003) that followed young adults between the ages of 18-35 found that the onset of mood disorders were found to be related to previous relationship difficulties

Adverse social conditions

It was found that being single or not married is associated with vulnerability of having CMD. This suggests that those who are less likely to be married may have limited social network which in turn leads to deficiencies in social support. A review on young adults in LAMIC in relation to social support indicated that many young people are hindered by social exclusion, violence, poverty, prejudice and gender inequalities. The review proposes enhancing social support in order to not exclude this vulnerable population (Barker et al., 2005). For most individuals with a healthy social support network, major stressors in life can be more easily handled. A proper support network consists of a reinforcing family and friends who can help the affected individual to work through any problems, such as adjustment, the death of a family member, loss of a job, major injury, or any of a number of other stressors that can contribute to mental illnesses, such as depression. For individuals with an undeveloped social network, or those with a negatively reinforcing social network, these major life events can cause greater harm to the individual because of a lack of support that most individuals have. An underdeveloped social network cannot handle the pressure of an individual looking for support, and a negatively framed social network can actually reinforce thoughts of hopelessness, failure, and being worthless. Without this support, it is more likely for that individual to develop symptoms of depression (Wada et al., 2007; Wade & Kendler, 2000)

Also in relation to low levels of social support among those who are single and living alone, many are also geographically separated from their families as in the cases of rural to urban migrant workers, as well as out of state students. Studies indicate that family relationships help decrease depression and that families where relationships

were reported to be poor, depressive symptoms were high (Leung, 2009; Wada et al., 2007). In a study on depression and suicide among young adults, being single is one of the determinants of suicide (WHO, 2002). Those who are single go deeper into their depression because they do not have the comfort and support of a loved one provided in intimate relationships. An intimate relationship increases wellbeing in a person by providing the appropriate assistance to decrease the sorrow and states of sadness in a person, just like any reliable support system. It is thus clear that relationships are a way to help prevent loved ones from falling into a deeper depression (Burns, Sayer, & Moras, 1994).

Another factor which may act as a vulnerability factor in this study is ethnicity. Not many relevant studies on ethnicity and its relation to mental health in Malaysia can be found apart from prevalence rates derived from NMHSII (MOH, 1996) which indicated Indians having significantly higher rates of psychiatric morbidity compared to Malays and Chinese. Published studies on ethnicity mental health indicate that globally it is the indigenous populations and minority groups have the highest burden of vulnerability (WHO, 2007). The results of this study however indicate a non minority group (Malays) although considered indigenous, in fact a majority group, as being more at risk of CMD. Perhaps, a more appropriate approach of addressing and analysing the ethnicity issue is by looking at the impact of social circumstances associated with this ethnicity group. Data from the national census (RM9, 2007) indicated high unemployment levels, and migration of rural to urban workers are mostly Malays.

It is known that work and employment plays a major role in determining wellbeing. Being unemployed may result in excessive financial strain which leaves the individual more vulnerable to CMD. This is comparable to other studies that identify unemployment as a factor that places people at risk for poverty and facing access barriers to available resources for their problems (WHO, 2007).

Students in tertiary institutions form a substantial portion of the study sample and their status as suggested by the results makes them prone to experiencing CMD when compared to those who are already working. It is known that students are subjected to different kinds of stressors, in terms of academics, obligation to success, uncertain future and difficulties of integrating into tertiary system (Fish et al., 1996). They may also face social, emotional and physical and familial problems which may affect their ability to learn and perform. Okazaki (1997) found that Asian students are more depressed in a social and academic setting because they have to face more pressure due to the fact that they have distinct culture that puts a high value on academic success, with somewhat limited alternative expression of success. This extreme indicator of stress can lead to fear of failing at succeeding in a competitive environment which may results in mental distress which possibly leads to CMD. The results also reflect findings on stress studies among Malaysian students in tertiary institutions to be high (Mohd Siddik, 2007).

Urban poverty

Another possible factor that can increase vulnerability to CMD is low income, which is an indicator to mental illness in both developed and developing countries (Patel et al., 2007; Fryers et al., 2003). Having low income and living in Lembah Pantai, an

area with one of the highest rent rate in the Kuala Lumpur district (DBKL, 2008) exposes the individual to several adverse social conditions which may include exposure to poor housing, and environmental pollution, which are all associated with urbanization and urban poverty (WHO, 2007). As reported by DBKL, there is limited affordable housing for low income earners within the Lembah Pantai and housing projects for low-income earners and families are riddled with complaints of poor design and management, lack of space and leisure facilities and overcrowding.

The tendency to develop CMD is due to a combination of individuals with risk factors mentioned above. When multivariate analysis was conducted, it was found that age remained significant, indicating that younger adults were significantly at risk of CMD in Lembah Pantai. The younger the individual, the more likely they are to have low income, more likely to be experiencing adverse social conditions such as living alone with limited social support and resources, especially if they come from out of state to either work or study and perhaps more likely to be Malay as it being the most predominant ethnic group in the area.

4.2 Explanatory Models (EMs) for CMD

The study explored how CMD is conceptualized by the lay public by investigating their explanatory model (EM) and how their conceptualization might shape the type of help-seeking behaviour they see fit for CMD. The description of EM was conducted at two levels; perceived CMD in response to the vignette, and actual CMD as experienced by those diagnosed with CMD. This gave me the opportunity to compare the EMs generated for these two contexts. In the following sections, I will first present EMs of the whole sample in response to their narratives on the vignette, followed by EMs on actual experienced CMD. Efforts to triangulate both sources of data will then be presented.

Almost all of the participants interviewed for this study believed that CMD is a problem and almost half of them attributed psychological causes to CMD, making this the commonest causal model. Similar patterns of causal attribution and belief that CMD is a serious problem was also found among CMD cases. About half of all participants believed that CMD is an illness and this proportion was also reflected among those diagnosed with CMD itself.

4.2.1 Explanatory Models based on vignette

One of the major findings with regard to the participants' EM of the CMD vignette was that almost the entire sample recognized CMD as a problem which differentiates it from an everyday occurrence. However, only about half of the persons who believed CMD was a problem felt that it amounted to an illness. This data suggests

that about half of the people in Lembah Pantai do not recognize CMD as an illness, thus not subscribing to the biomedical model of CMD as an illness. This is consistent with studies that show low levels of recognition of mental disorders among the public or lay population. Jorm (2000) found that the many members of the public do not recognize mental disorders and that they also differ in beliefs about causes and effectiveness of treatment when compared with mental health experts. There might also exist differences in public levels of recognition of CMD as the symptoms are dissimilar to SMD which has had more exposure in terms of media coverage or portrayal making it much more recognizable but at the same time, provides a stereotypical presentation of mental disorders. Severe mental disorders are prone to be associated with mental disorder due to their behavioural and emotional symptoms; on the other hand, depression and anxiety may not be considered as mental disorders due to the similarities of the symptoms with normal emotional fluctuations.

The results suggest that participants recognized 6 different etiologies of CMD: psychological, physical, employment, relationship, financial and supernatural factors. These generated categories are similar to studies looking specifically at EMs of mental disorders in both developed and developing countries, main difference being supernatural etiologies or causal attributions to CMD, were not generated in any of the studies from developed countries.

About half of the participants believed in psychological causal attribution of CMD, the examples included stress, emotional turmoil, poor cognitive outlook, poor self-esteem, lack of discipline or willpower, poor communication skills, and experiencing loss. These factors thus reflects current psychological theories (i.e. cognitive outlook,

learned helplessness), personality based explanations as well as the effects of grief or bereavement.

Physical causal factors was the second most mentioned causal attribution with about a quarter of the participants stating physical causes of CMD. The examples given ranged from non-specific illnesses to conditions related to lethargy, sleep, food intake, lifestyle, chemical imbalance and specific illnesses. The examples elicited from the participants reflected both western and eastern concepts of physical illness, the ideas of imbalance and loss of energy (Eskinazi 2001, Helman 1994). Other physical causes identified were related to sleep and lifestyles that do not integrate exercise and annual medical check-ups, which is a reflection of approaches from health promotion bodies (MOH, 2008.) The awareness of the physical component of CMD is similar with surveys on awareness of mental disorders conducted in both developed and developing countries (Okello and Neema, 2007; Mogga et al. 2006; Belanger 2005; Visilides et al., 2005; Sareen et al., 2005; Jorm et al., 2005).

Slightly less than a quarter of the participants attributed employment factors to be the cause of CMD. This included several aspects of the workplace; workload, physical environment and interpersonal relationships. Unemployment was also cited as a causal attribution, not in terms of financial impact but as a loss of profession and skill, the inability of professional upward maneuver, and the loss of the roles associated with employment. This is reflective of other studies that states employment conditions as a causal factor of stress and CMD (WHO, 2007), and that good employment practices are essential for promoting and maintaining the mental health of the workforce. Although the study indicates being employed as a protective factor,

in itself it does not guarantee wellbeing or good mental health because of the many work related conditions that can be detrimental.

Almost a fifth of all participants indicated relationships as a causal factor to CMD, distributed across several subgroup or individual relationships between family members, intimate partners and with peers. Stress has been given some level of prominence in Malaysian studies in the past decade or so several studies have indicated the impact relationships have on stress and CMD. Many attribute the stress of handling family and family dynamics as factor, problems with spouse as the types of relationship issues as the cause of negative mental health. From this study, the more varied patterns of relationship issues is reflective of the relatively young sample, mostly not living with extended families and are single, making peers and intimate relationships more prominent in their lives. The MacArthur's study on relationship issues supports this causal factor impacting adaptive functioning among young adults (2005).

Less than a tenth of the participants attributed financial problems as a causal factor of CMD. Economic instability and lack of funds or income were the main examples elicited from the study and is reflective of studies in both developing and developed countries that confirms relationships between economic hardship and mental disorders (WHO, 2007; Patel, 2003). Financial problems puts people at risk of poverty, unemployment, homelessness as well as social exclusion. Only one participant reported belief in supernatural causes; this finding is very different from those of other studies on EMs in developing countries and causal attributions reported in Malaysian studies on SMD (Parameswara Deva, 2004; Razali and Najib, 2000; Razali

et al., 1996). This perhaps reflects distinct conceptual models between CMD and SMD (SMD in developing countries is largely associated with supernatural causal attribution as suggested by the literature). Unfortunately, apart from studies on SMD, there are no other known published studies on causal attribution of CMD available in Malaysia. In fact, even available studies on SMD were conducted among patients and not from a general or community perspective. The nearest published estimate on causal attribution among non-patients was a study on mental health beliefs among female students and their mothers, looking at generational differences (Edman and Koon, 2000). The study indicated no supernatural causal attribution but elements of belief in utilizing traditional healer to get rid of malevolent spirits. In comparison with other EM studies on CMD from developing or LAMIC countries, the results from this study was distinct in its almost absence of supernatural causal attribution. Studies in China for example reported subjects clearly regarded supernatural causes as one of the causal attributes of CMD (Kua et al., 1993; Kua et al., 2000). This belief ranges from divine retribution or punishment from disturbed spirits, the use of charms.

Other factors that may have contributed to an almost absent level of supernatural causal attribution are desirability bias, age and education level of the sample as well as the urban context of the community. Participants may have reacted to the interviewers which comprised of psychology students, counselor and clinical psychologists, all of whom are representative of a biomedical or non-traditional perspective of illness and the human condition. It is probable that the participants were aware of the interviewers' perception on health and mental health thus responses

may have been influenced by the need to be agreeable to the views of the interviewers.

In relation to the age and education level of the participants, all were adults that have yet to reach midlife, reflecting a fairly young sample and almost all have undergone formal education within the national education system. This age group may represent a break from traditional or indigenous views of illness and maybe more familiar with non biomedical perspectives due to education and exposure to Western concepts in schools and other institutions. This argument also leads us to the urban context of Lembah Pantai which was initially a suburban, an extension of the capital city Kuala Lumpur, but has over the years has become a financial, industrial and educational center. Along with existing and expanding communities the area has become diverse, several educational, communication, broadcasting and health related government institutions are located within Lembah Pantai, thus the community is naturally exposed to any form of dissemination conducted on health and mental health related issues.

Stigmatizing attitudes towards CMD were common; almost all participants (95%) held at least one type of negative attitude towards CMD sufferers. The presence of stigmatizing attitudes was expected as literature from developing countries report that stigma can be quite severe as reflected in the exclusion of sufferers from multiple aspects of everyday life (Cooper et al., 2003; Crisp et al., 2000; Byrne 1997). More than half viewed CMD as an illness that people cannot recover from, or believed that people with CMD are weak and have only themselves to blame and that they can be unpredictable. Most participants however did not believe that people with CMD are

difficult to communicate with or likely to be violent which is different from past studies on SMD which indicated stigma mostly in the form of fear of violence and the need to maintain social distance. Clearly there exists negative stigmatizing attitudes towards CMD sufferers but quite distinct to the stigma fears usually attached to SMD.

4.2.2 Explanatory Models of CMD cases

More than 90% of participants with a CMD acknowledged to experiencing a problem. More than half recognized that problem as an illness and causal attributions generated were similar to those elicited in response to the vignette, including the absence of supernatural causal models. Psychological factors were the most commonly elicited cause of CMD. Only 2 of the 50 CMD cases who acknowledged experiencing a problem, stated their problems in terms of physical complaints (i.e. low blood pressure, aches due to getting older). This is inconsistent with findings of other studies that report the majority CMD patients in developing countries presented their problems in terms of somatic complaints such as fatigue and unexplained physical pain (Parker et al., 2001; Kua et al., 2000; Boey 1998)

The absence of supernatural causal attribution is again different to what was expected in the literature. It is assumed that the study sample responded differently due to similar reasons related to the participant's EMs on CMD based on vignette.

No measure of stigmatizing attitudes was conducted to attitudes towards one's own illness. However, narratives elicited specific fears and anxiety related to the impact of CMD may have on their lives. This includes fear of future employment problems,

separation from spouse and loss of job due to CMD. The results reflect a review of stigma across Asia (Lauber and Rossler, 2007) which revealed that widespread stigma affects marriages, marital separation and divorce as well as other social opportunities including employment.

4.2.3 Consensus on the EMs of CMD (vignette and actual)

There were marked similarities in the EMs elicited in response to the vignette from the whole sample, and from CMD cases about their own condition. Illness conception for perceived and actual CMD was almost identical, as were the major categories of causal attributions. Thus, there does not seem to be any contradiction in the EMs between a participant's personal view of CMD in general, and that of his or her own mental health. This suggests that a vignette based approach to eliciting EMs is likely to generate accurate information about EMs regarding CMD, and also suggests internal validity of the EM data.

While the different causal factors were all distinct from one another, it is notable that multiple endorsements of specific factors were commonly cited for both perceived and actual CMD. This indicates that while participants recognized psychological factors as the primary cause of CMD, they also appear to recognize that multiple other factors contribute to CMD suggesting a pluralistic model of illness. This can also be related to the biopsychosocial model of depression, where biological attributes are presented by the narration of physical causes of illness conception, alongside psychological factors, and the remaining factors (relationship, employment and studies, financial, environment) may be conceptualised together as social factors. In

terms of frequency however, there appears to be much less consensus on biological causal factors of CMD (40% based on the vignette compared to 4% among actual cases). This indicates a lack of biological attributes for actual CMD although the other social factors were present at more or less similar proportion as perceived CMD.

The narratives on causal attribution consistently viewed psychological factors such as the inability to cope emotionally as the main perpetuating factor of their problems. In addition, the combination of lack of social support, economic instability, increases in work related burden and communication problems further exacerbates the condition. The failure to seek any kind of professional help was not mentioned at all as a perpetuating factor of CMD.

Overall stigmatizing attitudes were evident with regards to the vignette although on very different dimensions in comparison to stigma associated with SMD. There was also evidence of genuine fears of the impact of CMD among cases which seemed related to dimension of stigma, and can also be explained in terms of perceived disability related to CMD.

One of the findings of the exploration of illness perception is evidence of differing EMs between biomedical models of CMD utilized by biomedical practitioners and the lay conceptual model of CMD. This situation provides many opportunities for discrepancies between the EMs of biomedical practitioners and patients. Kleinman et al. (1978) noted the risk of problems in health care delivery and accessibility due to gaps in the EMs held by patients and their biomedical health care workers, and proposed for the elicitation of lay EMs as a critical step in improving health care.

4.3 General help-seeking behaviour

The study documented a range of help-seeking behaviour engaged by the community within a 4 week timeframe. The most widely used services were biomedical providers which included GPs in private clinics and government hospitals and clinics, constituting more than three-quarters of all help-seeking behaviour. This is not surprising as the study community is well covered by health services which is free or insured by extensive employer coverage. An estimated 10% of the study sample reported visits to CAM provider, much higher than the 2.3% national rate (NHMSII, 1996) but significantly lower than the estimated 50% - 80% rate of CAM utilization in developing countries (Shaikh and Hatcher, 2005; MOH, 2008). Again, this can be related to the fact that biomedical care is available either free or at comparable prices in Malaysia whereas CAM incur direct cost. Urbanicity may have also played a role in the choices of help made, a high rate of formal education and literacy rate, as well as desirability bias as interviewers were known to be mental health workers or those involved in the formal health care sector.

One of the key findings of this study is that those who sought help in general, and specifically sought biomedical care, were more likely to be female, older and diagnosed with CMD. These indicators are well documented and consistent with the literature (Goldberg and Huxley 1992) the finding of CMD cases being more likely to seek health care, especially for biomedical care supports the studies main hypothesis, and is reflective of research findings in developed and developing countries (Koress-Masfety et al., 2007; WHO, 2007; Veerhak 1995).

The study yielded surprising result of the Chinese being less likely to seek CAM. This is because Traditional Chinese Medicine (TCM), which is part of CAM is an extensive practice in Malaysia and is probably the best organized CAM associations in the country. TCM have been integrated into private hospitals long before the integration policy was adopted by the Ministry of Health in government run hospitals. Such an example is Tung Shin Hospital, founded in 1881 to provide traditional medical care for patients which caters to communities within Kuala Lumpur, including those from Lembah Pantai. The hospital initiated its Western Medicine Department in 1985 and the project was completed in 1989 making it a fully integrated Western and TCM functioning hospital. Personal communication with the Chinese Physician's Association of Malaysia indicated that there are about 1000 TCM practitioners operating within the capital alone. Thus the negative relationship between Chinese and CAM may be due to the selection bias due to under-representation of the Chinese in this study .

In relation to medical pluralism, the study found a slightly higher rate of 4.6% compared to a national rate of 3.8% (MOH, 1996), though again, this rate is not consistent of the 40% global rate of multiple health care system utilization (WHO, 2008). One plausible explanation of this is the fact that most users of medical pluralism tend to be of those with higher income(Tilbert and Miller, 2007) whereas in the sample population, almost 40% were not the main breadwinners of the family or were still continuing their tertiary education, and thus may not have control of their financial status, restricting their choices of health care sources to the most economic (which, in turn, is biomedical care).

Some of the key findings in this study is that age is a determinant of CMD and that mental health status, gender and age is predictive of seeking any care in general, and biomedical care in particular. Younger urbanites are at risk of suffering CMD regardless of gender, education level, ethnicity, income level and living conditions. However, they are not likely to seek help. The next section will further elaborate on the key findings of the main outcome of this study which is help-seeking behaviour for CMD.

4.4 Help-seeking behaviour for CMD

Data on patterns of help-seeking behaviour for specific health conditions are of vital importance for public health. Identification of health resources and of existing services utilized by the public outside the realm of conventional biomedical sources are essential information when assessing the needs of the community. This ensures the adequate allocation of funds and of understanding help-seeking behaviour is of vital importance for the development of policy. The following sections discussed the types of help-seeking, first for the whole sample based on their response to the vignette, followed by actual help-seeking among those with CMD as well as the patterns of actual pathways to care.

4.4.1 Help-seeking for the case vignette

Biomedical and CAM health care and self-help were recommended for addressing the problems described in the vignette. The endorsement of biomedical and CAM categories were consistent with other studies reviewed, and the study identified a proportion that perceives CMD as not requiring any kind of intervention.

The study identified self-help as its own category and not part of CAM as it is distinct from definitions of self-help organized groups, for example Alcoholics Anonymous. Self-help in the current study's context refers to self-motivated activities to reduce one's own distress and does not involve any kind of organized groups or regulated by institutions.

The unwillingness to seek professional help for CMD has been well documented (WHO 2007). One of the main factors identified by recent studies on help-seeking for CMD is that most people with CMD do not recognize it as an illness (Jorm et al., 2005, Thompson et al., 2004; Goldney, 2002). The positive endorsement of biomedical care in this study could possibly be due to recognition of CMD as an illness, assuming it falls under the biomedical framework of a disorder. The study indicated that having a biomedical illness perception of CMD resulted in a higher likelihood of seeking biomedical care, similar with studies on effects of knowledge on mental health or mental health literacy on help-seeking for CMD (Riedel-Heller, 2005; Angermeyer et al., 1996). This perception may also be a reflection of the level of mental health literacy in Lembah Pantai and an indication of greater tolerance and

less stigmatizing attitudes towards CMD. However, as noted later, this endorsement may also be a reflection of desirability bias in reporting.

Having a financial causal attribution for CMD impedes biomedical help-seeking. This is intuitive, as for most people, financial problems would require financial solutions. Relationship causes to CMD were associated with a greater likelihood of seeking CAM and reflects the nature of CAM providers that allows room to discuss non-medically related issues. In addition, unlike biomedical providers that are constrained by short consultation times, CAM providers tend to allow and facilitate longer consultation time (Tilbert and Miller, 2007; Eskinazi 2001).

The oldest age group was less likely to self-help, possibly due to their more stable or higher economic status, they are more able to seek other forms of care which requires payment. There may also be higher levels of co-morbidity with physical health problems in older age groups which independently lead to higher levels for formal health care seeking.

Participants with stigmatizing attitudes, specifically the belief that CMD sufferer cannot recover, are less likely to self-help. This may actually reflect differing definition of recovery itself. If inability to recover here means the inability to spontaneously recover without outside intervention, then participants would be less likely to engage in self-help. For example, an individual with depression believes what he is experiencing is not transient and is not able to recover by himself, he may be less likely to change his lifestyle, tweak conditions at work or try out meditations in order to make himself feel better.

4.4.2 CMD sample

Types of help-seeking generated were CAM, self-help and biomedical care. Within biomedical care, only 2 participants or less than five percent of participants with CMD had accessed specialist mental health services. The study identified a sizeable proportion (42.6%) of persons with CMD who did not seek any kind of help. These participants did not necessarily view themselves as problem free; in fact an overwhelming majority of them acknowledged the presence of a problem and to lesser extent see it as an illness. This is consistent with literature that suggests most mental health sufferers do not seek appropriate help (Wang et al., 2007; Aoun et al., 2004; Bland et al., 1997). This may also be related to the fact that symptoms of CMD were interpreted as not serious enough to warrant intervention. The fear of negative reactions of admitting to a problem may play a role, also the lack of belief that medical interventions can be beneficial, all suggested by the sample's narratives.

When help was sought, most sought CAM compared to biomedical, and self-help was utilized about the same rates as CAM. Consistent with and extending from knowledge of patterns of help-seeking for mental health problems, this research revealed a preference for non-biomedical care for CMD among CMD cases themselves. Just like when investigating perceived help-seeking, self-help in this context is related to self directed activities or efforts.

4.4.3 Pathways to care

Patterns of help-seeking revealed multiple uses of health care resources indicating the practice of medical pluralism among the CMD cases.

For those who actively sought formal help for their current problem, most initially contacted a CAM source. This finding is consistent with the literature on pathways to care for psychiatric problems in Malaysia (Razali, 1996; Rhi et al., 1998) where a majority of cases sought CAM care prior to any biomedical consultation.

There seems to be indication of the existence of lay referral system, where participants, after seeking CAM and family members, continue along the pathway and reached a biomedical care provider. It is speculated that non-biomedical care providers do not impede the access and may have promoted biomedical care judging from the narratives of what transpired during consultation.

4.5 Triangulation and hypotheses testing

I will now triangulate the findings from the 3 major sources of data (the survey with the entire sample; the eliciting of EMs on the CMD vignettes; and the EM and pathways to care data from CMD cases) to examine each of the four major hypotheses I had proposed to test in this research.

4.5.1 CMD is associated with increased utilization of biomedical services

The first hypothesis proposed investigated the relationship between the presence of CMD among the study sample and the increased utilization of biomedical health services. A significant relationship was found between the study sample and seeking biomedical care for perceived CMD depicted by the vignette. More importantly, the relationship was significant when investigating overall help-seeking behaviour among the whole population, we found that people diagnosed with CMD were up to twice as likely to have sought biomedical care within a time frame of four weeks.

In terms of actual help-seeking behaviour for CMD, we found that the most common action taken was CAM, followed by self-help and biomedical care which is the reverse of what is considered the main and least recommended help-seeking behaviour among the study sample based on vignette (the study sample in general mostly recommended seeking biomedical care as the main course of action, followed by self-help and CAM).

The results from the sources suggests commonality between perceived and actual opinions of the types of care attached to CMD but it differed in terms of actual help-seeking behaviour when probed specifically for CMD. Despite their recommendation to seek biomedical care for CMD, and the possibility that they have unknowingly sought biomedical care for CMD, not all people with CMD will consciously seek biomedical care themselves as the main or first source of care.

Studies suggest that consumers in developing countries utilized up to 80% CAM, while in industrialized countries it stands at about 50% (Shaikh and Hatcher, 2005) making it at least comparable or more widely used compared to biomedical services. This situation does not seem to occur in Lembah Pantai, perhaps due to wide availability of free biomedical or health care in Malaysia as discussed earlier and the possibilities of effects of urbanization and the effect of desirability bias, as well as the under-representation of the Chinese.

Consistent with the literature, studies from both developing and developed countries show that CMD would result in an increase of biomedical help-seeking behaviour, although nature of complaints may differ, where somatic complaints is more of the norm in developing or LAMIC countries in comparison to a higher proportion of specific mental health complaints derived from more developed countries.

The study also indicates that CMD is associated with increased service utilization with any type of care, which suggests a consistent pattern of increased utilization of services regardless of the source of care among those with CMD, as well as the use of multiple sources of care or medical pluralism. The rate of medical pluralism for any

health condition among the whole study sample of 4.6% found in this study is considered low compared to global rates. This may reflect the possibility that at the point of interview, participants did not use CAM and biomedical care together, but they may have at other points in their pathways to care beyond the 4 week timeframe. Judging by the pathways to care model among those diagnosed with CMD, it was found that consecutive steps were taken from one source to another and there was no clear indication from the participants that multiple types of care was sought concurrently.

Despite the differing patterns of help-seeking behaviour or care utilization between perceived and actual CMD, biomedical care is still an important source of care and people with CMD do seek biomedical care for their problem. There exist an awareness that CMD benefits from biomedical care in the majority of the study sample. This belief is also present among those with CMD although in actuality they may engage other sources of care prior or in conjunction with biomedical care. Thus it is a truism that CMD status is associated with increased utilization of biomedical care, CMD status is also related to an overall increase in help-seeking behaviour and that there is a possibility of those with CMD to be consecutively engaging in more than one type of help-seeking behaviour.

4.5.2 Negative association between beliefs in supernatural causal model of CMD and utilization of biomedical care

The second hypothesis examined the relationship between beliefs in the supernatural causal model of CMD and utilization of biomedical care. Statistical analysis to test

this hypothesis could not be conducted due to the very low prevalence of supernatural causal attribution to both perceived and actual CMD.

A low proportion of 4% of the whole study sample and none of the CMD cases attributed supernatural causes for CMD. Pathways to care among those with CMD does not indicate any use of sources that may include rituals related to the supernatural. However, self-help strategies among the CMD cases does include prayer which is also a present theme in the whole study sample. Thus although there are no reported supernatural beliefs, the participants do endorse spiritual activities to counter CMD, which is reflective of findings in Malaysia on studies of mental disorder patients (Deva 2004; Razali and Najib, 2000).

It was initially assumed that supernatural causal beliefs of CMD would be present among the study sample. In the context of Malaysian culture, there exist the belief in the supernatural, charm and witchcraft as suggested by the popularity of shamans and *bomohs*. There is also the belief in fate, *karma* and *feng shui* for the less “bizarre” presentations of mental health problems and the prevalence of these beliefs are corroborated by studies in both the peninsular area of Malaysia and in Sarawak in East Malaysia (Crabtree,1999; Crabtree and Chong, 1999; Razali et al., 1996). Supernatural beliefs were also found across ethnic lines, and education level. Thus it is surprising that the study found no association between CMD and supernatural causal beliefs.

There are several arguments on why the second hypothesis was rejected. First, there is a possibility of a rural-urban variation as the studies cited above on supernatural

causal attributes to CMD in Malaysia were conducted in a rural setting and in one of the least developed state in the country. Thus, it is speculated that the effect of urbanization in the current study have influenced beliefs in the causal attributions. There is probably more access to sources of information due to the proximity with educational, medical institutions and mental health NGO's that are concentrated around Lembah Pantai. People living in urban areas are more easily targeted for education and awareness campaigns as well as more access to the internet and other forms of media. Those living in an urban environment are likely to have a higher chance of being exposed to a greater variety of people from different backgrounds, as well as views and perspectives more in line with global consensus.

Second, trust in information relayed by figures of authority (doctors, other medical practitioners and officers) are probably more prominent compared to other key figures in rural settings such as the *penghulu* (village chief) or family elders which in the past have played major roles in shaping perspectives.

Finally, there is the risk of desirability bias in reporting use of supernatural causal models to biomedically oriented researchers.

There is evidence that beliefs in supernatural causal model of CMD among the survey population is extremely low or almost non-existent. What is present is elements of seeking help from higher powers and the function of faith in some aspect of self-help, which do not seem to act as an impediment to utilization of biomedical care.

4.5.3 Positive association between recognition of CMD and utilization of biomedical services

The third hypothesis explored the association between recognition of mental illness and utilization of biomedical care. This study found that the ability to recognize CMD as an illness among the study sample results in increasing the likelihood of help-seeking for biomedical care.

The study found similar proportions (about half) of both the whole study sample and those with CMD recognizing CMD as an illness although not all CMD cases actually sought biomedical care. In relation to perceived CMD reported by the whole sample, the same ideas and understanding of CMD is also reflected in the narratives of participants diagnosed with CMD.

It is noted that the study did not require the participants to specifically name the disorder presented in the vignette, but to clarify whether they recognize the problem described in the vignette as an illness condition. Although more than half of the CMD cases recognized that they were experiencing an illness ($n = 58$), only 4 of them identified this illness in psychiatric terms.

Recognition and increased likelihood of seeking biomedical care is in accordance with the Goldberg and Huxley filter model to care (1992) which describes the patient's recognition of the symptoms as the first filter on the way to treatment. Results also reflect studies that found recognition is an important factor to seek appropriate help (Jorm et al., 2005; Goldney et al., 2002; Angermeyer et al., 1999)

The finding brings to attention that the ability to use appropriate medical labeling, though not necessarily psychiatric labeling, carry significance in leading people to seek appropriate care. This ties into the broader issue of mental health literacy where it is proposed that an increase in literacy in the population may assist prevention, early intervention, effective self-help and support for others in the community (Jorm, 2000).

The consensus of recognition of CMD as an illness for perceived as well as actual CMD leads to the acceptance that recognition does effect the likelihood of seeking biomedical care. In addition, it is enough to recognize CMD as an illness to prompt biomedical help-seeking without having to use psychiatric terms. Recognition of CMD as an illness increases the likelihood of utilization of biomedical care but may not necessarily translate to higher help-seeking for biomedical care among those with CMD. This is due to the fact that although almost half of the cases are aware they have an illness, biomedical care was the least favorable type of help sought. This could be due to some form of fear of stigma, thus a general public awareness may still benefit and facilitate those with CMD to seek appropriate care.

4.5.4 Negative association between stigmatizing attitudes towards sufferers of CMD and utilization of biomedical services

The fourth and final hypothesis explored the relationship between stigmatizing attitudes towards CMD and utilization of biomedical care. The study found no significant relationship between overall stigmatizing attitude towards CMD and decreased utilization of biomedical care.

Analysis was conducted from one source which is perceived as the study did not assess the impact of stigma on CMD cases themselves. Even though participants may have negative views of CMD sufferers, it does not translate to not seeking help from a biomedical service provider. Actual account of CMD cases demonstrated fears and worries of the impact of mental illness (escalation of current problem, emotional impact on family, jeopardizing future employment, relationships and studies, separation from current partner, affecting physical health, problem is untreatable and will reoccur, and substantial impact on cognitive abilities). Elements of blame were also elicited when some participants took on the responsibility for the negative impact that mental illness had incurred on family members and loved ones. Absent were other themes of fear of becoming violent, being unpredictable, and being difficult to talk to which may be more relevant when dealing with SMD as suggested by past studies. However, the presence of negative assumptions about the disorder was clearly evident.

A general stigmatizing attitude towards people with CMD may not influence perceived help-seeking behaviour but at the personal level, those who experience CMD are still wary and may be experiencing fear of stigma, possibly impeding biomedical help seeking.

In contrast to the study's result, much of the research examining this association has found that stigmatizing attitudes towards sufferers of CMD is associated with not seeking professional or biomedical care (Jorm et al., 2005; Saldivia 2004; Hugo et al., 2003; Van Hook 1999). For example, a study in South India reported that depressive symptoms are considered to be dangerous, socially disadvantageous thus should be

kept private (Ragman, Weiss, Channabasavannam, & Devins, 1996), with implications on help-seeking. These narratives relate to the stigma themes described by Byrne (2000), notably of having poor outcome and responding poorly to treatment, as well as forms of social exclusion.

Although stigmatizing attitude did not influence perceived help-seeking behaviour, reported fears of discrimination at work and relationships as well as issues of blame among CMD cases relates a possibly different attitude among sufferers. This provides a more focused approach of dealing and assessing stigma related to CMD.

4.6 Strengths and limitations

4.6.6 Strengths

A major strength of the present study is that this is the first Malaysian community based study which has systematically studied the EMs and help-seeking behaviours associated with CMD in an urban population. The study's methodology had three specific strengths: using a two-stage methodology for the diagnosis of CMD; the use of mixed methods (i.e quantitative and qualitative); the eliciting of data on help-seeking in three ways (help-seeking for any reason in the previous 4 weeks; and help-seeking for CMD as described in a vignette; and help-seeking for persons with a CMD). Each of these strengths is discussed below.

Firstly, there is no previous community study on mental health in Malaysia that has incorporated a diagnostic second stage in the survey. Most surveys that estimate

prevalence rates for mental illness utilize only a single-stage screening tool which identified only probable disorders and is sensitive to transient disturbances. The NMHSII for example utilized the GHQ to identify psychiatric morbidity rates in Malaysia (MOH,1996). Most of the previous studies identifying beliefs, attributions, and attitudes toward mental disorders in Malaysia were conducted with psychiatric outpatients (M.Z.Azhar, 2001, Razali et al 1996, Rhi et al 1996) or with one ethnic group sample (M.Z. Azhar, 2001; Razali et al., 1996) or among selected samples, such as university student samples (Edman & Koon, 1999). This is the first Malaysian study to focus specifically on the help-seeking behaviour for CMD.

The second strength is the use of mixed methods for data collection, i.e. a combination of quantitative and qualitative methods. In interpreting the results, both sets of data were triangulated; thus the study integrated objective epidemiological data with intuitive understanding, beliefs and attitudes towards CMD, providing insight into perceived help-seeking behaviour. Even when complementary evidence was not found, contradictory information was useful for further investigation of findings.

The study utilized quantitative and qualitative research method, combining it to provide a more complete set of findings than could be arrived at administering one method alone, also known as triangulation (Bryman, 2001). By combining, the researcher was able to determine how far the results arrive at convergent findings. Convergent findings greatly reduces the uncertainty of interpretation while divergent findings warrants further research or prompt new lines of enquiry. As in the words of Cohen and Manion (2000), "Triangulation is an attempt to map out, or explain more

fully, the richness and complexity of human behavior by studying it from more than one standpoint” (p. 254)

4.6.2 Limitations

There were a considerable number of non-responders or refusals in this study from the Chinese ethnic group, mostly from the more affluent areas of Lembah Pantai. A possible reason could be related to the social patterns of more affluent neighborhoods reported in many surveys. Abodes in these areas have much higher levels of security and are not as accessible, and interviewers less likely to be successful in making contact with the actual tenant.

Further concerns about the selection bias as a result of the under-representation of the Chinese in this study is related to possibility that ethnicity is a determinant factor in mental health service utilization. The Chinese concept of “shame” and “face” have been known to greatly influence their illness behaviour and help-seeking (Miller, 2005). Research from Singapore, which shares similar ethnic compositions to Malaysia, found ethnicity a significant predictor of mental health service utilization (Tze et al., 2003).

A major limitation of the study was that analyses of actual help-seeking among CMD cases sub-sample was under-powered due to the lower than expected prevalence rate. This is probably due to the two stage assessment approach which led to a lower yield of definite cases.

A potential problem in any survey that requires self-report is the problem of recall bias. To minimize recall bias of the help-seeking behaviour of the study population, information was asked of the previous 4 weeks only and a checklist of all the possible sources of care was provided to facilitate probing.

Reporting bias is also another potential problem, especially when conducting semi-structured interviews that involve face to face interaction. Participants may have reported more socially acceptable information, where the participant may be reluctant to report information he or she is aware of because of social desirability. The social desirability effect refers to the bias that participants' answers to questions are related to their perception of the social acceptability of those answers. An answer that is perceived to be socially desirable or acceptable is more likely to be presented than one that is not, even if this response does not actually represent the participant's beliefs. Participants may have reacted to the interviewers' characteristics, mainly the fact that all are related to mental health services, and responded in a way to reflect more positive attitudes towards psychiatry and psychology. The low rates of supernatural causation and CAM use reporting is possibly a reflection of reporting bias.

A survey cannot make inferences from the associations about causality or temporality due to the cross-sectional study design. In particular, the survey asked about help sought in the previous four weeks but did assess earlier patterns of help-seeking and past experience of CMD as well as past experience of health care providers that may have influenced EMs and attitudes related to CMD. Thus, the strong association between psychological EMs and biomedical help-seeking could have been, at least in

part, attributed to the impact of help-seeking on EMs (as opposed to psychological EMs leading biomedical help-seeking).

Another important limitation of the study is the use of translated measurement tools, particularly for the purpose of diagnosis. Unlike the GHQ-12 which has been translated and validated into *Bahasa Malaysia* (MOH, 1996), the M.I.N.I. diagnosis tool has not been validated in *Bahasa Malaysia*. Although it is considered as a gold standard of psychiatric diagnosis in multi-centre clinical trials and epidemiological studies (Gabarron et al., 2002; Wojnar et al., 2003), its use in Malaysia has been confined to personal practices by practitioners where translations were conducted within members of the department or organization. Similar process was conducted for this study, back-to-back translation was conducted and consensus was reached of the final translated version in house, but did not go through a process of validation. The use of the M.I.N.I. by non-clinicians is widely accepted provided enough training has been conducted, although there are indications that non-clinical users tend to endorse a diagnosis more than clinicians (Pinninti et al., 2003) which may result in higher prevalence rates. Intensive training of interviewers were conducted to control for this effect but despite the limitations of the M.I.N.I, it was decided that it was the most comprehensive diagnosis tool, was not unduly lengthy and practical for survey use.

4.7 Implications

The study provided evidence that CMD exists as a public health problem at levels comparable to global and regional rates. The main risk factors were identified and there is evidence that CMD is related to increase in help-seeking for biomedical care although not specific care sought from mental health specialists. Those with CMD overwhelmingly do not seek care from mental health specialist. Care sources identified are varied and CAM and self-help was highly recommended. It highlights the need to understand variations in the use of health care providers and CAM practitioners by people who have CMD and the perspective views of the lay public. A wide range of viewpoints were expressed and findings have implications on several levels of public health.

The development of a mental health policy usually begins with understanding the mental health needs of a population. It is essential that the formulation of policies be based on facts and sound knowledge of the population needs, thus it is important to have information on prevalence of mental health problems; to know what communities identify as problems; to understand help-seeking behaviour and so on (WHO, 2007). The queries on needs, specifically on CMD, were addressed by this study and we recommend several policies as an expansion on current national policies, which will be further elaborated in the following sections (Section 4.8).

In Section 4.9, implication on practice is presented. By using the best known framework, prevention goals will be illustrated via three general approaches: primary prevention aimed at reducing the incidence of new cases of CMD; secondary

prevention aimed at reducing the prevalence of CMD by early intervention; tertiary prevention which involves efforts to reduce handicaps associated with CMD.

Finally, implications for research will be presented in Section 4.10, where I will discuss further research based on improvements of current findings, other areas of non-convergence revealed in the current study which warrants further clarification as well as other areas of priorities related to help-seeking and CMD that requires further research investment, monitoring and evaluation.

4.8 Policy

The development of policies can define the way society views mental illness, specific needs and provision for services. The findings of this study can be used to inform on programmes in mental health promotion and prevention, and care for CMD which can be put into practice.

Mental health policy is the government's mission statement on mental health and mental health care, thus it represents formal aspirations which will be implemented. The World Health Report 2000, identified three objectives for health policies which can be used as a framework for determining aspirations of mental health policies, presented in Box 4.1.

**Box 4.1: Objectives for health policies
(WHO, 2007)**

- 1 Improving the health of the population: the primary objective of a health system**
- 2 Responding to people's expectations: concerns the way in which individuals or groups wish to be treated by particular facilities or services**
- 3 Providing financial protection against the cost of ill-health: relates to fair-financing**

The following recommendations (Box 4.2) for policy that has emerged from this study are formulated based on outcomes of the Lembah Pantai research and informed by the process of triangulation and hypotheses testing. In addition, the proposed policies are line with the three policy objectives listed in Box 4.1.

Box 4.2: Recommended mental health policies on CMD

- 1. Improving the health of the population**
 - a. Integrating care for CMD into primary care**
 - b. Promote awareness of CMD through sectoral and intersectoral initiatives**
- 2. Responding to people's expectations**
 - a. Recognizing roles of CAM**
 - b. Support for self-help initiatives**
- 3. Providing financial protection**
 - a. Accessibility and equity of service**

4.8.1 Integrating care for CMD into primary care

In 1998, Malaysia's National Mental Health Policy was enacted with the aim of improving the quality of community based psychiatric services and to encourage families, communities and community based agencies to provide all the necessary care and protection of people with mental illness (Jamaiyah, 2000). In collaboration with the WHO, mental health services were integrated into the primary care system in 2004, and community health teams were formed in many mental health centres around the country. Integrated mental health care in primary care however are largely at the moment as following up treatment for mental patients discharged from psychiatric units. This does not address the needs of the population identified in the study; cases of CMD within the general, adult population, with varying levels of awareness of CMD. As the study points out, most would seek help for CMD, as well as other physical health problems, from biomedical care providers, primary care doctors and general practitioners being the main source of care.

Although there are plans to detect mental illness at primary care level, and treat them without routine referral to psychiatrists and psychiatric clinics but as of yet, only three centres, all located within hospitals, where mental health services are integrated into public health care (Deva, 2004). No document exists that represent a comprehensive national mental health plan, thus we are still unaware of the status of these three sites, whether there are plans to expand the integration plan to GP clinics, links between primary to secondary care, as well as links between the general health sector with other key agencies and NGOs.

One of the findings of the study indicate that of all the diagnosed cases of CMD, hardly any actually sought help from a specialised mental health care provider. Awareness level was not low in terms of recognition as most were aware that they were experiencing a problem or an illness. We can assume that part of the reason for this, is the fear that the label mental disorder may bring as it is mostly associated with SMD and is a reflection of the stigma associated with mental disorders. Integrating mental health care into primary care may reduce stigmatization of persons with CMD, by disassociating it with the stereotypical mental health institutions. Integration steps can thus address the stigma issue although concurrent effort to reduce stigma and to increase awareness of CMD must be addressed via specific policies.

4.8.2 Promote awareness of CMD through sectoral and intersectoral initiatives

The appropriate entry point for promotion for CMD is informed from the information gathered from the study. Awareness among the public can be addressed via a mental health literacy programme, while awareness of CMD among health care providers also need to be addressed in which specific actions are taken to strengthen providers within primary care.

Several sectors outside health provide services that affect people's mental health, CMD in particular due to its complex biopsychosocial etiologies. Policy needs to take account of these services and their impact on mental health. This includes services provided by welfare departments, education, housing, employment, religious and other social services. In addition, intersectoral initiatives must also include services within the workplace. Most experts agree that the workplace environment can have a significant influence on stress, personal identity, self-esteem and social recognition.

Mental health policy on CMD should therefore consider the collaboration between the ministry of labour and the ministry of health. Several strategies have been proven effective for increasing the level of mental health of employees indicated in Box 4.3 (WHO, 2007)

Box 4.3: Effective strategies to increase level of mental health of employees (WHO, 2007)

- 1 Promotion of mental health in the workplace,
including specific actions on job stress and the
management of stress
- 2 protection of mental health in unemployed people
by means of social re-employment programmes
- 3 recognition of mental disorders at the workplace,
including employee assistance programmes with
early treatment and reintegration into the work
environment

4.8.3 Recognizing roles of CAM

The study informed that utilization of varied sources of care or medical pluralism is well accepted among the community although most would still solely access biomedical sources due to monetary limitations. But actual observations of those with CMD indicate otherwise, CAM is still the first point on the pathways to care. CAM includes traditional Chinese medicine practitioners which has a vast network across the country and can be a source of support and referral for those in need. Currently, groups of traditional healers are in the process of compulsory registration, providing future opportunities for collaborative work between the biomedical and CAM sectors.

4.8.4 Support for self-help initiatives

Evident from the results, most of the public believe that initiatives to self-help would be beneficial for those with CMD as it increases level of mastery, and ownership of problem, important in determining pro-active efforts in handling mental health problems. Our sample indicated that the general public believes that people with CMD should be actively involved in initiating changes in their own lifestyle. Assistance could be in the form of lifestyle awareness campaigns, distribution of appropriate material for guidance, hotlines for free consultation and so forth which is further discussed in the following sections.

4.8.5 Accessibility and equity of service

Services should be accessible to all, regardless of race, economic status or social condition. Policies must be in place to improve availability, accessibility and quality of mental health services. Promoting wellbeing for all Malaysians requires not just scientific knowledge but a resolve from the government to invest bigger budgets for education and provision of free or affordable medication.

Table 4.1: Policy and specific practices in relation to levels of prevention

Policy	Practice		
	Primary Prevention	Secondary Prevention	Tertiary Prevention
Integrating care for CMD into primary care		1. Strengthening skills of primary care providers 2. Screening for early signs and vulnerability to CMD	1. Outreach programmes to monitor CMD within the community
Promote awareness of CMD through sectoral and intersectoral initiatives	1. Mental Health Literacy Programme 2. Promoting Wellbeing 3. Expanding roles of NGOs in prevention and promotion 4. Targeting transition age group 5. Address issues on urbanization and its impact on CMD	1. Roles of other institutions-the workplace	
Recognizing roles of CAM		1. Collaboration with CAM service providers	
Support for self-help initiatives		1. Patient education and provision on resources for self-help or self management	
Accessibility and equity of service		1. Access to essential psychotropic medication in primary care	

4.9 Practice

There should be clear relationships between proposed policies and its translations into actual practices. Table 4.1 presents the proposed policies which were presented in Section 4.7, translated into actual practices, via the different levels of public health prevention. It is important to note that each prevention level have differing objectives, thus recommendations for practice is presented according to each level of prevention.

Primary prevention for example fall into two categories (Fundukian, 2007). The first category includes actions to protect disease and disability, examples of primary prevention for mental health problems include measures to strengthen family and community support systems, teaching children communication and interpersonal skills, conflict management and other relationship and life skills that enhances or fosters emotional resiliency. The second category within primary prevention is to promote health. For mental health, this includes the basic activities of a healthy lifestyle and education about the other interdependent dimensions of health known as wellness (MOH, 2005). Examples of health education programmes aimed at wellness include stress management and parenting classes.

The goal of secondary prevention is to identify and detect CMD in its earliest stages, before noticeable symptoms develop, when it is most likely to be treated successfully. With early detection and diagnosis, it may be possible to cure CMD, slow its progression, prevent or minimize complications and limit disability. In short, it is to

identify in order to intervene early and prevent development to more serious mental disorders.

Tertiary prevention is aimed towards improving the quality of life via limiting the disabilities, decreasing the severity and progression of CMD and providing rehabilitation. This level of prevention involves actual treatment for CMD.

4.9.1 Primary Prevention

4.9.1.1 Mental Health Literacy Programme

An Australian psychiatrist, Anthony Jorm, coined the phrase mental health literacy in 1997 in reference to knowledge and beliefs about mental disorders that aid in their recognition, management or prevention. Stigma busting and increasing mental health literacy are similar as both methods function to educate the public about mental health problems and illness; mental health literacy programmes are more pro-active as they specifically aim to raise awareness so that people can identify problems and get the help they need. The themes of stigma found in the study correspond with misinformation on CMD which is central to mental health literacy programmes. While enhancing existing EMs, mental health literacy programmes can also address the aspects of recognition which the study confirms to contribute to help-seeking behaviour and tackle specific stigma themes or domains relevant to CMD, namely knowledge on recoverability, addressing the association of personal weakness and unpredictability of behaviour with CMD.

Mental health literacy programmes typically include the following components (Jorm, 2000):

- the ability to recognize specific disorders
- knowledge on how to seek mental health information
- knowledge of risk factors and causes
- knowledge of self-treatment and/or professional help available
- attitudes that promote recognition and appropriate help-seeking

Findings of the study can be utilized to inform the above components to create a mental health literacy programme tailored to Lembah Pantai. For example, the difference between illness and problems may be emphasized to promote help-seeking for CMD, without having to complicate the message with psychiatric terms and labels that can potentially stigmatize sufferers. Education and outreach programmes can focus on correcting misinformation on CMD and highlight salient risk factors relevant to the community, provide checklists and guidelines written in simple format and utilizing narratives generated from the lay public themselves

This approach can also be utilized as an early intervention programme conducted in schools in Lembah Pantai. A mental health literacy programme designed for adolescence may be promoted to educational officers as an important early detection method. Similarly, an education package may be designed for the transition-age group and be disseminated via the numerous higher education institutions in Lembah Pantai, community centers and workplaces with sizeable employees with this age group.

4.9.1.2 Promoting Wellbeing

Mental health promotion aims to promote thoughts, feelings and activities that strengthen wellbeing in individuals. In addition, it aims to ensure that conditions at the community and national level are conducive to positive mental wellbeing. Several emotional and cognitive protective factors for mental wellbeing have been identified by Brown (2005):

- Agency or locus of control
- Capacity to learn, grow and develop
- Interest in life
- Feeling loved, trusted, understood, valued
- Autonomy
- Self-acceptance and self-esteem
- Optimism and hopefulness
- Resilience or problem solving

Some of these factors correspond to one of the self-help steps recommend by the study population to cope with CMD. Participants recommended becoming more physically active, improving sleep and diet, becoming more sociable, talking about feelings, learning new skills, learn management and problem solving, and taking a break as positive steps to take in dealing with CMD. Because these recommendations were generated by the lay public, it is not viewed as something unachievable or impractical. It should inform the promotional approach and be utilized in providing practical and well accepted guidelines to achieve wellbeing.

4.9.1.3 Expanding roles of NGOs in prevention and promotion of CMD

Most of the efforts of mental health associations are geared towards the promotion of mental health through public talks, exhibitions and media. More support should be given to increase their repertoire to include services such as telephone counseling or walk in centers that can disseminate material on psycho-education, and provide referrals to appropriate care providers.

Public psycho-education conducted by NGOs or other non-governmental or non-medically related agencies can fulfill the opportunity for self-help that many people with CMD engage in. People are motivated to seek information and find activities but steps must be taken to ensure provision of appropriate resources and avoid misinformation. The possible existence of a lay referral system as indicated by the study provides argument that conducting large-scale psycho-education programmes can benefit the whole population and it can be done in a sustainable and economical manner by letting it be managed by existing community resources. All in all, community participation must be encouraged and promoted and efforts be made towards efficacy of self-help.

4.9.1.4 Targeting younger adults

The study highlights the need to recognize prevention of mental illness among young people going through transition and the promotion of their mental health and wellness as a public health priority. Perhaps the best approach is to look at the situational factors related to this age group such as having to go through major social, physical

and environmental adjustment, issues with employment and relationship. Mental health promotion can be integrated into agencies that deal with those in this age group; employment centres, youth, sports clubs, faith-based institutions and tertiary education centres. Policies are needed to create funding and support for services that focuses on assisting young adults in completing the tasks of adolescence and taking on the responsibilities of adulthood. These services can be in the form of

- Obtaining vocational support or training
- Finding housing and employment towards independent living
- Develop and maintain social support or mentoring

4.9.1.5 Addressing issues on urbanization and its impact on CMD

The trend towards urbanization suggests that a higher proportion of the Malaysian population with mental health problems will likely reside in urban areas. Beyond this projection, Marsella (1998) noted in his review that “the range of disorders and deviancies associated with urbanization is enormous and includes psychoses, depression, sociopathy, substance abuse, alcoholism, crime, delinquency, vandalism, family disintegration, and alienation”. The formulation of appropriate policies that alleviates the effects of urban poverty which is associated with increased risk of CMD is imperative. High density urban areas should be provided with affordable and accessible housing for low-income earners. At the same time efforts must be made to guard these low-income housing areas from exclusion, exploitation and unsanitary living conditions. Housing then must be of sound construction, with good design to avoid over-crowding and at an affordable rent at par with urban standard of living.

4.9.2 Secondary Prevention

4.9.2.1 Strengthening skills of primary care providers

Work in early treatment for CMD is geared towards enabling staff in primary care settings to carry out treatment for CMD themselves (WHO, 2008). This includes both doctors and other health care providers in primary care such as nurses, social workers, psychologists and so forth. Many people whose illnesses are in the early stage, as well as those unwilling to seek specific mental health care can benefit from this approach. In fact, as this study indicates that people in general view CMD should be mostly treated in the realm of primary care and in actual cases, most do seek help in primary care. It is imperative that primary care providers are able to recognize and manage probable cases, through the following recommendations (WHO, 2008; Jenkins and Ustun, 1998; Patel et al., 2007; Lancet Global Mental Health Group, 2007):

- **Early detection of risk factors and established CMD through screening and improved clinical skills for diagnosis**
- **Provision of evidence based treatments for CMD**
- **Multidisciplinary attempts to help people cope with crises and major life events with teams comprising of GPs, nurse, nutritionist, social worker psychiatrist and psychologist**
- **Emphasis on patient education and support and provide information on resources for self management**
- **Collaboration with CAM service providers**

The above objectives require the existence of a primary care system that is equipped to handle CMD, of which the capacity in Malaysia is still much lacking. Even though the current mental health policy explicitly address primary care and the need to provide mental health care within this setting, there is currently no mental health component of continuing education of primary care staff (Deva, 2004). This situation also applies to basic training for separate cadres of primary care staff at both the undergraduate as well as postgraduate level (MOH, 2008). In order to push for the integration of mental health care for CMD in primary care, the strengthening of skills of primary care providers should be of utmost importance, and crucial before the application of other recommendation for practice in secondary prevention.

The integration effort is mainly informed by one of the major findings of the study in relation to help-seeking for people with CMD, where almost no one sought specialized mental health care but it is evident that CMD will increase the likelihood of seeking biomedical care (from GPs and other primary care providers). Psychiatry should be taught in easily understood version for education to GPs and other health care workers.

Training can be aimed at pre-service and in-service skills enhancement (WHO, 2008; Falloon and Fadden, 1993). For pre-service, the provision of basic education on the epidemiology, identification and treatment of CMD is essential among all primary care workers. Training should include awareness of issues identified in the study; impact of mental health literacy, EM and attitudes towards CMD, the use and influence of CAM as well as medical pluralism.

Appropriate training can in many ways contribute to the early detection and management of emotional problems. Training should provide wider awareness of mental health issues in society at large, including the awareness of psychosocial factors of CMD.

A potential client's or patient's EM is important to understand when beginning treatment and this can be integrated as part of training on the most effective way to discuss information, negotiate treatment and motivate self-management. Understanding a client's or patient's EM for mental distress and psychological disorder is especially important when the client or patient and the primary care provider are from two different ethnic and cultural backgrounds. Malaysia's multi-ethnic population means that there is higher potential of not only differing EMs between doctor-patient but also in terms of language proficiency, religious and cultural beliefs and sensitivities. Understanding the concept of EMs will provide a framework, or at least a frame of mind for care providers to consider when dealing with their patients. To achieve all this, it is also essential that basic communication skills becomes an important aspect of training.

For in-service training, one of the main aims is to consolidate existing knowledge and to provide. Continuous education and training is essential to ensure care providers are updated on changes and new research on mental health issues and treatment. The opportunity to practice must be provided to maintain learnt skills and this can be conducted via collaboration or shared care models (WHO, 2008).

One aspect of providing services in primary care pointed out by WHO and Wonca (2008) is that primary care workers function best when their scope of work is limited and doable. The report goes on to discuss the possibility of restricting the management in primary care to CMD, provided the decision takes into consideration of local conditions. Based on the consensus of this study regarding CMD and primary care (CMD is associated with increased utilization of biomedical care, and that people with CMD seek biomedical help primarily within primary care with almost no one seeking help from mental health professionals), training and education for in-service training can definitely be focused on CMD. In fact, this approach has already been implemented in some developing countries where primary care providers focus on the treatment of CMD and refer complex cases to mental health specialists (WHO, 2008).

In short, the main objective in teaching psychiatry or mental health among primary care workers is to encourage the application of mental health skill and knowledge in general health care, with limited strain on existing resources, with enough sensitivities as to not impose or disregard lay perspectives of mental ill health.

4.9.2.2 Screening for early signs and vulnerability to CMD

With strengthening the skills of primary care workers, we can further develop basic steps in primary care for prevention of CMD. A major opportunity for risk reduction of CMD in primary care involves screening or identifying those who are particularly vulnerable to CMD as pinpointed by the study. United States Preventive Services Task Force (USPSTF, 2002) for example provides guidelines that encourage screening adults for CMD in primary care, provided that a system is in place to assure

accurate diagnosis, effective treatment and follow-up. Increased screening would result in increased detection and improved management of CMD and several screening tests have been identified. The UPSTF recommends screening for depression several tools, namely: Beck Depression Inventory (BDI; Beck, Teer & Brown, 1996), Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) and the Zung Self Rating Depression Scale (SDS; Zung, 1965). For anxiety: Beck Anxiety Inventory (BAI; Beck & Steer, 1993), The Penn State Worry Questionnaire (PSWQ; Meyer et al., 1990) and the Fear Questionnaire (FQ; Marks, 1979). All of the tools mentioned are self-report questionnaires, with items ranging from which is the main screening strategy employed in primary care and can be conducted by any primary care worker should the problem of literacy occur.

Apart from screening for specific CMD conditions (depression or anxiety), there are also screening tools that can be conducted to identify probably psychiatric conditions which can later be diagnosed, one of the most widely used is the GHQ-12, which was also utilized for this study. Other examples of screening tools appropriate for the primary care setting are the Primary Health Questionnaire (PHQ; Spitzer, Williams & Kroenke, 1999), the Kessler Psychological Distress Scale (K10; Kessler & Mroczek, 1994; Clinical Research Unit for Anxiety and Depression, 2001) and the Self-Reporting Questionnaire (SRQ; Harding Arango & Baltazar, 1980). All these tests range from 9-20 items and can also be self administered.

All in all, screening for CMD in primary care settings is recommended because it works. In studies using screening tests, rates of detection increased up to 47%

(Halverson and Chan, 2004). However, screening on its own cannot diagnose but should sufficiently increase suspicion and prompt further investigation.

Despite the recommendations of adopting a universal approach to screening for CMD, there are several implications that must be considered. The clinical practice guideline for managing depression in primary, produced by the Malaysian Ministry of Health (CPG, 2007) stated that routine use of screening instruments to identify depression is not recommended. Although various instruments have been validated and is recommended, as discussed earlier in this section, none of the recommended screening tool has been translated and validated to *Bahasa Malaysia*. The usefulness of the tools in terms of positive predictive values among patients was also questionable (CPG, 2007). In primary care, the use of screening tools may be too time consuming for routine use. To address this, other guidelines do recommend using screening tools for identified high risk group (NICE, 2007) for example those with history of CMD, those experiencing other physical illnesses or other mental health problems. The risk factors identified for the study's sample can also be used as a guideline when screening for high risk groups.

4.9.2.3 Access to essential psychotropic medication in primary care

One of the major challenges of integrating mental health care in primary care is access to essential psychotropic medication in primary care itself (WHO, 2008). There exist problems in supplying and distributing psychotropic medication directly to primary care because of issues of restrictions on the dispensing and prescribing of these medicines in non-psychiatric settings. This issue thus requires the review and

revision of legislation and regulations on primary care providers so as to allow provision and prescription of psychotropic medication. In relation to strengthening the skills of primary care workers, training on subscription of medication must be provided.

4.9.2.4 Roles of other institutions – the workplace

Employers have tended to take the view that work and the workplace are not etiological factors in mental health problems (ILO, 2000). Findings from this study indicate that this view is not shared among the community; thus a significant proportion of participants view work and work related issues are a cause of CMD. This is supported by a major study that suggested a prevalence of 18.2% for any mental health problems at work (Kessler et al., 1997). CMD is a major workplace health issue and employers are beginning to recognize its implications for productivity. Promotion, prevention and treatment programmes can be implemented and good practices guideline have been made available (ILO, 2000). These guidelines highlight the importance of health education in order to increase the awareness of factors affecting mental health and wellbeing; screening programmes to detect risk factors or early signs of stress related illnesses; the importance of communication within the workplace, clear work goals and participation of employees in this process. In addition, implementing promotion and prevention activities in the workplace is enhanced by the provision of employee assistance programmes (EAP). EAPs are company-sponsored programmes designed to alleviate and eliminate workplace problems caused by emotional and personal problems. Government policies to encourage employers to engage an EAP provider will ultimately result in the

increased availability of mental health care resources without having to increase the burden on the public health sector.

4.9.2.5 Collaboration with CAM service provider

Although our study indicates that people in general mostly recommend seeking biomedical care for CMD, in reality people with CMD may not necessarily seek biomedical care as their first option, and mental health specialist consultation is extremely uncommon. In fact, most cases seek CAM as the main or first option when they are experiencing problems. Despite a general level of awareness on the benefits of biomedical care in handling mental health problems, CAM is often the first line of choice. This despite the fact that CAM is a fee for service sector while primary care is widely available free of charge in government health settings.

Currently, we are aware that a large number of CAM practitioners exist in Malaysia, some are organized into formal associations and all are in the process of registering with the Ministry of Health. In line with legislation, it is not legal for CAM practitioners to advertise healing for mental health problems or disorders but we are not aware on whether the rationale and the dissemination of knowledge related to the legislation is carried out. We do know that within the organized groups, there are no reported training schemes that incorporate knowledge of formal care system or of mental health disorders (Deva, 2001). Contact with biomedical practitioners is also not included into known training schemes.

The inclusion of CAM providers or practitioners within secondary prevention strategies is vital as we know that they are in many cases the first sources of care for those with CMD. We can further achieve early detection by setting up a referral line between CAM providers and primary care services. This can be conducted by providing training schemes for mental health education and orientation to the biomedical health sector, highlighting areas of shared care.

4.9.3 Tertiary prevention

4.9.3.1 Outreach programme to monitor CMD within the community

A wide variety of outreach, which includes educational programmes as well as counseling and support groups can be provided through public health facilities. Outreach programmes are specifically created for those who are directly suffering from CMD as well as sufferers' families. Community outreach programmes can come in many forms but generally consist of multidisciplinary teams that share responsibilities for each individual with CMD who is receiving care in the community. Outreach programmes focuses on obtaining and coordinating needed services from a variety of health and non-health agencies. For example resolving problems with employment, housing issues and providing social skills training to improve social functioning as well as self management. A good example of a model outreach programme is the Assertive Community Treatment or ACT (Stovall, 2003) . The ACT team has a high staff to patient ratio and provides the individual with access to support when or where needed. An individual who is at high risk of relapse and

hospitalization requires this type of support, especially when family or social support is limited, as in the case of our at risk groups identified in the study.

Outreach programmes can also take the form of monitoring people with CMD who are living within the community to ensure that they adhere to their specific medication regimen. Studies have shown that tertiary prevention for mental health problems have demonstrated efficacy in reducing acute psychiatric hospital admission and longer institutionalization as well as enabling people with mental disorders to get better.

4.10 Research

4.10.1 The role of ethnicity in determining help-seeking

EMs variables have been found to be crucial in contributing to help-seeking behaviour. This is not to state that socio-demographic variables do not play an important role, and as noted, one of the limitations of this study is the under-representation of the Chinese in the community. Further research should concentrate on the specific objective of investigating ethnic differences on EMs and help-seeking as well as looking at possible ethnic attitudinal differences towards CMD, exemplified by other research on SMD.

There are also needs for ethnic or cultural comparisons in order to improve understanding of the commonalities and differences which will inform in the management of CMD across different cultures.

4.10.2 Does Mental Health Literacy lead to improved help-seeking?

Research should also investigate the appropriateness of mental health literacy programmes that can be applied to the local setting. Factors to assess include content, approach, duration and cost and the assessment of the programme's effectiveness in increasing help-seeking for mental illness and in reducing negative attitudes towards mental illness. Questions on whether mental health literacy facilitates communication during consultation can also be explored.

4.10.3 What is the true extent of the CAM sector's contribution in providing services for people with CMD?

It is assumed that reports on CAM use among the study population was under-reported, possibly due to selection as well as desirability bias discussed in Section 4.6.2.. Further research is needed not only to provide a more accurate epidemiological data on usage, but also the outcomes for CAM practices. This can be done by going to the source itself, CAM practitioners themselves. There may be a need to recognize CAM providers as an available resource, especially as Malaysia is still a developing country, ready resource that can perhaps be included in future policies, provided their ethical and technical responsibilities are clearly defined.

4.10.4 What is the true extent of CMD morbidity in primary care?

Although the study indicates that CMD are more likely to seek help in primary care, the extent of CMD morbidity in primary care is not available. In fact, currently there is no research programme in primary care under the Ministry of Health that conduct research in mental health (Deva, 2004). These types of epidemiological data are essential for setting priorities and act as indicators for evaluating public health intervention, such as the suggested Mental Health Literacy programme.

4.11 Conclusion

Malaysia is a LAMIC with a total population of about 27 million, with a population distribution of about 60% urban, which is a significant change when compared to 70% rural at the time of independence (1957). The rate of urbanization is unknown but it is estimated to continue to increase as the country continues an industrialized nation target for 2020. It has a diverse ethnic composition (Malays and other indigenous groups 53%, Chinese 34%, Indian 9%), a literacy rate of almost 90% and more than 90% of the population have had formal education. In terms of the healthcare, Malaysia has a dichotomous public-private system but is still largely a government-led and funded public service sector. There is a sizeable and thriving public sector, as well a large CAM sector. The use of primary care services is fairly widespread irrespective of cultural or ethnic backgrounds.

In terms of mental health care, psychiatric care is available in over 30 general or district level hospitals and well over 100 out patient primary care centers (within

hospitals) in the country, aside from the 4 mental hospitals. Studies indicate that there exists a strong influence of CAM practitioners, especially ethnic based traditional healers, who play the role of primary care providers for mental disorders, especially severe mental disorders. It is accepted that the belief system of most cultures in Malaysia is that mental illness are caused by spirits or evil individuals using traditional spiritual healer and charms. As such, studies do indicate that the mentally ill and their families use CAM services to overcome mental illness as a first choice, in many cases impending early intervention. The psychiatrists or psychiatric clinic or hospital tend to be a last resort, thus much of the specialist mental health providers are occupied with patients at the severe end of the mental health spectrum. In short, it is known that supernatural beliefs on the causation of mental illness impedes biomedical care for the mentally ill. In terms of stigma related to mental illness, there is no definition of stigma provided in the national mental health policy and there is no available research that has quantified it. At best we know that it exists via practices such as non-acceptance of the mentally ill in job applications as well as it being grounds for divorce.

There is limited information on CMD in Malaysia although in practice, it is assumed that similar explanatory models, health beliefs and attitudes and help-seeking behaviour associated with SMD also apply to CMD. Despite recent research that indicates the need to differentiate CMD from SMD, and to integrate mental health service into primary care, there is no existing policy to address CMD in primary care. It is essential policy and practice for CMD be formulated on the basis of reasonable knowledge of the population; information of the prevalence and risk factors of CMD

within the community, identifying and understanding what the community identify as problems and to understand help-seeking behaviour for CMD.

I hypothesized that as suggested by the literature, CMD is associated with the increased utilization of biomedical care, having a supernatural causal model will decrease the utilization of biomedical care CMD, recognition of CMD will increase the likelihood of seeking biomedical care and that stigmatizing attitudes towards sufferers of CMD will negatively effect the likelihood of seeking biomedical care. A cross-sectional survey was conducted to test the hypotheses in an urban community (Lembah Pantai, Kuala Lumpur). Study sample were randomly selected young adults aged 18-45, residing in Lembah Pantai, were interviewed in a two-stage study design. Screening procedures for possible CMD were conducted at the first stage where probable cases continued to the second stage for diagnostic confirmation of CMD. Explanatory models, attitudes and help-seeking of perceived (stage 1) and actual (stage 2) CMD were gathered, the data then analyzed to identify the associations between

- sociodemographic variables and prevalence of CMD
- sociodemographic variables, explanatory models, stigma attitudes and its effects on help-seeking behaviour

Main findings of the study showed the prevalence rate of CMD in an urban community at 8.8%. The main risk factors identified were younger age, not married, Malay ethnicity, unemployment, status as a tertiary student and low income. After controlling, the only significant factor was age: people of younger age are likely to not be married, are mostly Malays which is reflective of population distribution, still

studying thus having limited financial resources and are the most likely to be unemployed (unemployment rates in Malaysia are highest among newly graduated tertiary students).

In relation to help-seeking behaviour, the study found people with CMD are about twice as likely to have sought biomedical care in comparison to those not diagnosed with CMD. However, following triangulation and further investigations, the study indicated that the biomedical care sought by CMD cases were mostly for non-CMD complaints (for physical medical problems), almost no one sought specialized mental health care, and that CAM sources and self-help were highly recommended. Analysis conducted on the EM indicated that recognition of CMD were significantly related to seeking biomedical care, but that stigmatizing attitudes had almost no impact on help-seeking behaviour. More surprisingly, belief in supernatural causal models of CMD was virtually non-existent.

Although some issues remain, the study has successfully integrated qualitative data elicited in the semi-structured interviews into conventional quantitative outcomes and yielded statistically significant associations that are clinically relevant and have implications on public health. The higher usage of biomedical sources, especially in GP clinics and out-patient clinics in governmental hospitals, as well as almost no help-seeking from specific mental health resources among CMD cases warrants the integration of mental health care into primary care. Naturally, if integration were to take place, strengthening of primary care providers is essential. In addition, because of the value the population places on CAM practitioners and self-help efforts, similar strengthening and support should also be provided for these non-biomedical sectors.

At the same time, continued promotion and awareness campaigns through such means as mental health literacy programmes should be carried out as the study indicates appropriate knowledge and attitudes towards CMD helps to increase utilization of biomedical sources. Lastly, continued and increased commitment from the ministry of health is essential in order to ensure that access as well as quality of biomedical care for CMD be improved.

References:

- AS Ramli & SW Taher (2008). Managing chronic diseases in the Malaysian primary health care – a need for change. *Malaysian Family Physician*, 3:1
- Ali BS, Rahbar M, Gul A, Mubeen S, Iqbal A. (2003). The effectiveness of counseling on anxiety and depression by minimally trained counselors: a randomized controlled trial. *Am J Psychotherapy* 57: 324-326
- Amber Haque (2001). *Mental Health in Malaysia, Issues and Concerns*. University of Malaya Press, 2001.
- Angermeyer MC, & Matschinger H (1996). Public attitude towards psychiatric treatment. *Acta Psychiatrica Scandinavica*, 94, 326-336.
- Angst J (1996). Comorbidity of mood disorders: a longitudinal prospective study. *Br J Psychiatry Suppl* 31-7.
- Araya R, Rojas G, Fritsch R, Gaete J, Rojas M, Simon G, Peters TJ. (2003) Treating depression in primary care in low-income women in Santiago, Chile: a randomised controlled trial. *Lancet* Mar 22;361(9362):995-1000
- Ariff, K. M (2000). Preferential utilization of healthcare systems by a Malaysian rural community for the treatment of musculoskeletal injuries. *Medical Journal of Malaysia*, V55, 4, 451-458.
- Arizona Health Futures. (2005). Mind, Mood and Message: Pathways in Community Behavioural Health
- Astin, J.A. (1998). Why patients use alternative medicine. *JAMA*, 279(19):1548-1553.

- Aoun, S., Pennebaker, D., Wood, C., (2004). Assessing population need for mental health care: a review of approaches and predictors. *Mental Health Serv Res*, 6(1):33-46.
- Ballenger JC, Davidson JRT, Lecrubier Y, et al. Consensus statement on generalized anxiety disorder from the International Consensus Group on Depression and Anxiety. *J Clin Psychiatry* 2001;62 (suppl 11): 53-58
- Banerjee, T. & G. Banerjee (1995). Determinants of help-seeking behaviour in cases of epilepsy attending a teaching hospital in India: an indigenous explanatory model. *Int J Soc Psychiatry* 41(3): 217-30.
- Barbot FM, (1977). A cross-cultural study of attitudes toward seeking professional psychotherapeutic help. *Dissertation Abstract International*, 38, 1875-
- Barker C, Pistrang N, Shapiro DA, & Shaw I (1990). Coping and help-seeking in the UK adult population. *British Journal of Clinical Psychology*, 29, 271-285.
- Barnes, P.M., Powell, G.E., McFann, K., & Nahin, R.L. (2004). Complementary and alternative medicine use among adults: United States, 2002. *Adv Data*, 343, 1-19.
- Barter, C., & Renold, E. (1999). The use of vignettes in qualitative research. *Social Research Update*, 25.
- Beals, J., Novis, D.K., Whitesell, N.R., Spicer, P., Mitchell, C.M. & Manson, S.M. (2005). Prevalence of mental disorders and the utilization of mental health services in two American Indian reservation populations: mental health disparities in a national context. *American Journal of Psychiatry*; 162:1723-1732

- Beals, J., Novins, D.K., et al. (2005). Prevalence of Mental Disorders and Utilization
- Bebbington, P. E., T. S. Brugha, et al. (2000). Neurotic disorders and the receipt of psychiatric treatment. *Psychol Med* 30(6): 1369-76.
- Beck, A.T., & Steer, R.A. (1993). *Beck Anxiety Inventory*. The Psychological Corporation, San Antonio.
- Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Beck Depression Inventory-II*. The Psychological Corporation, San Antonio.
- Becker, M.H. & Maiman, L.A. (1975). Sociobehavioural determinants of compliance with health and medical care recommendation. *Medical Care*, 13: 10-24.
- Beekman AT, de Beurs E, van Balkom AJ, Deeg DJ, van DR, van TW (2000). Anxiety and depression in later life: Cooccurrence and communality of risk factors. *Am J Psychiatry* 157: 89–95.
- Belanger, L., Ladouceur, R., & Morin, C.M. (2005). Generalized anxiety disorder and health care use. *Can Fam Physician*, 51, 1362-1363.
- Berenzon, S., & Juarez, F. (2005). Mental health service to poor patients with affective disorders in Mexico City. *Rev Saude Publica*, 39(4), 619-26.
- Bergeron, E., Poirier, L.R., Fournier, L. & et al. (2005). Determinants of service use among young Canadians with mental disorders. *Can J Psychiatry*, 50, 629-636.
- Besiroglu, L., Cilli, A.S., Askin, R. (2004) The predictors of health care seeking behaviour in obsessive compulsive disorder. *Elsevier Inc*

- Bhui, K & Bhugra, D (2002). Mental illness in Black and Asian ethnic minorities: pathways to care and outcomes. *Advances in Psychiatric Treatment*, vol. 8, 26-33.
- Bhui, K., Stansfeld, S., et al. (2003). Ethnic variations in pathways to and use of specialist mental health services in the UK. *British Journal of Psychiatry*, 182: 105-116
- Biddle, L., Gunnell, D., Sharp, D., & Donovan, J.L., (2004). Factors influencing help seeking in mentally distressed young adults: a cross-sectional survey. *British Journal of General Practice*, 54. 248-253.
- Bland, M. (2000). *An Introduction to Medical Statistics Third Edition*. New York: Oxford University Press.
- Bland, R.C., Newman, S.C., & Orn, H. (1997). Help-seeking for psychiatric disorders. *Can J Psychiatry*, 42, 935-942.
- Bodeker, G. (2001). Evaluating Ayurveda. *Journal of Alternative & Complementary Medicine*, 7, 5, 389-392.
- Boey, KW (1998). Help-seeking pattern of psychiatric outpatients in urban China. *Int J Psychiatry Nurs Res* 4(1): 433-43.
- Boland, R.J., & Keller, M.B. (2002). The course of depression. *Neuropsychopharmacology*, 69.
- Bower, P., & Gilbody, S. (2005). Managing common mental health disorders in primary care: conceptual models and evidence base. *BMJ*, 330, 839-842. Doi:10.1136/bmj.330.7495839. <http://bmj.com/cgi/content/full/330/7495/839> .
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.

- Brown C, Schulberg HC, Madonia MJ, Shear MK, Houck PR (1996). Treatment outcomes for primary care patients with major depression and lifetime anxiety disorders. *Am J Psychiatry* 153: 1293–300.
- Brown, C., Lloyd, K. (2001). Qualitative methods in psychiatric research. *Advance in Psychiatric Treatment*, 7, 350-356.
- Brown, R.I. (2005). The application of quality of life. *Journal of Intellectual Disability Research*, 49,10;718-727.
- Bryman A. (2001). *Social Research Methods*. Oxford University Press: Oxford.
- Bryman, A. (2001). *Social Research Methods*. New York: Oxford University Press Inc. 123, 325, 453.
- Byrne, P. (1997). Psychiatric stigma: past, passing and to come. *Journal of the Royal Society of Medicine* 90, Nov., 618-621.
- Carpentier, N. & D. White (2002). Cohesion of the primary network and sustained service use before the first psychiatric hospitalization. *J Behav Health Serv Res*, 29 (4): 404-18
- Charles Vincent & Adrian Furnham (1997). *Complementary medicine: a research perspective*. Chicester: Wiley.
- Chee H.L. (2004). *Current health care financing issues in Malaysia*. Asia Research Institute: working paper series, No. 18.
- Chee, Heng Leng (1990). *Health and Health Care in Malaysia: Present trends and implications for the future*. *Monograph Series* : SM No. 3 (1990), Institute for Advanced Studies, University Malaya, Kuala Lumpur.
- Chisholm, D., et al. (2006). Economic aspects of the mental health system: key messages to health planners and policy-makers. *World Health Organization*, WHO/MSD/MER/06.2.

- Clark, L.A., and Watson, D. (1991). Tripartite model of anxiety and depression- psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology* 100: 316-36
- Clinical Research Unit for Anxiety and Depression. A WHO Collaborating Center. School of Psychiatry, University of NSW, 2000. (Online) Available at: <http://www.crufad.unsw.edu.au/K10/k10info.htm>.
- Cohen, L., & Manion, L. (2000). *Research methods in education*. Routledge. p. 254. (5th edition).
- Commonwealth Department of Health and Aged Care Australian Institute of Health and Welfare, (1998). Mental health: A Report Focusing on Depression
- Cooper, A.E., Corrigan, P.W., & Watson, A.C. (2003). Mental illness stigma and care seeking. *The Journal of Nervous and Mental Disease*, 191, No. 5, 339-341.
- Crabtree, Sara A., & Chong, Gabriel. Standing at the Crossroads: mental Health in Malaysia Since Independence in Amber Haque, *Mental Health in Malaysia, Issues and Concerns* (University of Malaya Press, 2001).
- Crisp, A.H., Gelder, M.G., Rix, S., Meltzer, H.I. & Rowlands, O.J. (2000). Stigmatization of people with mental illnesses. *Year Book of Psychiatry & Applied Mental Health*. 2002:312-313, 2002, 4-7.
- Daly, L.E., & Bourke, G.J. (2000). *Interpretation and Uses of Medical Statistics Fifth Edition*. United Kingdom: Blackwell Science Ltd.
- Daniel, C. (2006). Dollars, dally and decisions: economic aspects of the mental health system. *World Health Organization*.

- Das, J., Quy, T.D., Friedman, J., & McKenzie, D. (2008) Mental Health Patterns and Consequences: Results from Survey Data in Five Developing Countries. The World Bank, Development Research Group. *Policy Research Working Paper*, 4495.
- Dawson A. & Tylee A. (2001). Depression : social and economic timebomb : strategies for quality care. BMJ Books for WHO Regional Office for Europe.
- Demyttenaere, K., Bonnewyn, A., et al. (2006). Comorbid painful physical symptoms and depression : prevalence, work loss, and help seeking. *Journal of Affective Disorders*, 92, 185-193.
- Department of Health Education at www.moh.gov.my/bpk
- Department of Mental Health and Substance Dependence, World Health Organization Geneva. (2003). Mental and Social Aspects of Health of Populations Exposed to Extreme Stressors
- Department of Statistics Malaysia (2000). *Population and Housing Census of Malaysia*.
- DeSilva, M.J., et al. (2005). Social capital and mental illness: a systematic review. *J. Epidemiol. Community Health*, 59, 619-627.
- Deva, M.P. (2005). Mental health in the developing countries of the Asia Pacific region. *Department of Psychiatry, Perak College of Medicine*, [http://www.apjph.org.my/VOL11_2/Mental health.html](http://www.apjph.org.my/VOL11_2/Mental%20health.html) .
- Drapeau, A., Lesage, A., Boyer, R., (2005). Is the statistical association between sex and the use of services for mental health reasons confounded or modified by social anchorage? *Can J Psychiatry*, 50:599-604

- Edman, J.L., & Koon, T.Y. (2000). Mental illness beliefs in Malaysia: ethnic and intergenerational comparisons. *International Journal of Social Psychiatry*, 46, issue 2, 101-110.
- Eisenberg, D.M., Davis, R.B., et al. (1998) Trends in alternative medicine use in the United States, 1990-1997: Result of a follow-up national survey. *Jama*, 280-18, 1569-1575.
- Elkins, G., Rajab, M.H., & Marcus, J. (2005). Complementary and alternative medicine use by psychiatric inpatients. *Psychol Rep*, 96(1), 163-6.
- Eskinazi, D. (2001). *What Will Influence The Future of Alternative Medicine?: A World Perspective*. Singapore: World Scientific Publishing Co. Pte. Ltd. 79-113.
- Evidence-Based Health Policy. (2004). World prevalence of mental disorders is high but treatment needs are not always met. *Evidence-Based Healthcare & Public Health*, 8, 359-361.
- Fear and Anxiety. Chapter 19 (2006)
- Field, A. (2005). *Discovering Statistics Using SPSS Second Edition: And sex, drugs and rock 'n' roll*. London: Sage Publications Ltd. 219.
- Finlay, L., & Ballinger, C. (2006). *Qualitative Research for Allied Health Professionals: Challenging Choices*. Great Britain: TJ International Ltd, Pastow, Cornwall.
- Fish C, and Nies MA.(1996). Health promotion needs of students in a college environment. *Public Health Nurs*. 1996 Apr;13(2):104-11
- Fishbein, M. & Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An introduction to theory, research and reading*. MA: Addison-Wesley.

- Frydenberg, E. & Lewis, R. (1993). Boys play sport and girls turn to others: age, gender and ethnicity determinants of coping. *Journal of Adolescence*, 16, 253-266.
- Fryers T, Melzer D & Jenkins R. (2003). Social inequalities and the common mental disorders. *Social Psychiatry and Psychiatric Epidemiology*, 38, 229-237.
- Fryers, T., Melzer, D., Jenkins., & Brugha, T. (2005). The distribution of the common mental disorders: social inequalities in Europe. *Clinical Practice and Epidemiology in Mental Health*, 1:14, doi:10.186/1745-1745-0179-1-14.
- Fundukian, LJ (2007). *The Gale Encyclopedia of Mental Health*. Hardcover
- Gaebel, W., Baumann, A.E., & Zaska, H. (2005). Intervening in multi-level network: progres of the German open the doors projects. *World Psychiatry*, 4, 51.
- Gater R & Goldberg D (1991). Pathways to psychiatric care in South Manchester. *British Journal of Psychiatry*, 159, 90-96.
- Gater R., Jordanova V., Maric N., Alikaj V., Bajcs M., Cavic T., Dimitrov H., Iosub D., Mihai A., Szalontay A.S., Helmchen H., & Sartorius N. (2005). Pathways to psychiatric care on Eastern Europe. *British Journal of Psychiatry*. 186, 529-535.
- Gater, R., et al. (2005). Pathways to psychiatry care in Eastern Europe. *British Journal of Psychiatry*, 186, 529-535.
- Gerstman, B.B. (2003). *Epidemiology Kept Simple: An introduction to traditional and modern epidemiology second edition*. New Jersey: Wiley Liss inc.

- Ghaffar, A., Reddy, K.S., Singhi, M. (2004). Burden of non-communicable disease in South Asia. *BMJ*, 328, 807-810.
- Girolamo, G., Polidori, G., & Morosini, P., et al. (2006). Prevalence of common mental disorders in Italy. Results from the European study of the epidemiology of mental disorders (ESEMeD). *Social Psychiatry and Psychiatric Epidemiology*, 41: 853-861.
- Glaser, B.G. & Strauss, A.L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine).
- Gochman, D.S. (1988). *Health Behavior: emerging research perspectives*. New York: Plenum Press.
- Goldberg & Huxley (1992). *Common mental disorders: a bio-social model*. London, Routledge.
- Goldberg D.P., Gater R., Sartorius N., Ustun T.B., Piccinelli M., Gureje O., & Rutter C. (1997). The validity of the two versions of the GHQ in the WHO study of mental illness in general health care. *Psychological Medicine*, Jan;27(1):191-7.
- Goldberg, D. & Goodyer, I. (2005). *The Origins and Course of Common Mental Disorders*. East Sussex: Routledge Publication.
- Goldberg, D., & Huxley, P. (1992). *Common Mental Disorders: A Bio-Social Model*. London: Routledge Publication. 7-9.
- Golden, S.H., Williams, J.E., & Ford, D.E., et al. (2006). Depressive symptoms and the risk of type 2 diabetes: the Atherosclerosis Risk in Communities Study. *Diabetes Care*, 27(2): 429-35 (40 ref)

- Goldney R.D., Fisher L.J., Wilson D., & Cheok F. (2002). Mental health literacy of those with major depression and suicidal ideation: an impediment to help-seeking. *Suicide and Life Threatening Behavior*, 32(4), 394-403.
- Guide to Clinical Practice (GCP) (2007). *Management of major depressive disorder*. Ministry of Health Malaysia.
- Gordis, L. (2004). *Epidemiology – Third Edition*. USA: Elsevier Saunders inc.
- Gravel, R., Beland, Y., (2005). The Canadian Community Health Survey: Mental Health and Well-being. *Can J Psychiatry*, 50:573-579
- Gruenberg, A.M., Goldstein., & Pincus, H.A. (2005). Classification of depression: research and diagnostic criteria: DSM-IV and ICD-10. *Biology of Depression*, 10.01, 11:43.
- Gureje O, Acha RA, Odejide OA (1995). Pathways to psychiatric care in Ibadan, Nigeria. *Tropical and Geographical Medicine*, 47, 3, 125-129.
- Gureje, O., Lasebikan, V.O., Kola, L., & Makanjuola, V.A. (2006) Lifetime and 12 month prevalence of mental disorders in the Nigerian Survey of Mental Health and Well-Being. *British Journal of Psychiatry*, 188, 465-471.
- Gureje, O., Von Korf, M., Simon, G.E., & Gater, R. (1998). Persistent pain and well-being a world health organization study in primary care. *Jama*, 280(2), 147-151.
- Hall, J. (2001). A qualitative survey of staff responses to an integrated care pathway pilot study in a mental health setting. *Journal of Research in Nursing*, 6;696
- Haque, A. (2001). *Mental Health in Malaysia: Issue and Concern*. Malaysia: University of Malaya Press.

- Harding, T.W., Arango, M.V., & Baltazar J et al., (1980). Mental disorders in primary care: A study of their frequency and diagnosis in four developing countries. *Psychological Medicine*; 10:231-41
- Harnois, G. & Gabriel, P. (2000). *Mental Health and Work: impact, issues and good practices*. Nation for Mental Health. Switzerland: World Health Organization.
- Harpham, T et al. (2005). Maternal mental health and child nutritional status in four developing countries. *J. Epidemiol. Community Health*, 59, 1060-1064.
- Harrison, J. et al. (1997). Acces to psychiatric care; the results of the pathways to care study in Preston. *Journal of Public Health Medicine*, 19.1, 69-75.
- Have, M.,(2004) Care Service Use for Mental Health Problems in the General Population: Trends and Explanations
- Helman, Cecil, G. (1994). *Culture, Health and Illness, 3rd Edition*. Oxford: Butterworth-Heinemann.
- Hj. Bakri R., Tun Hussein R.H., Sararaks S., Abu Bakar A., Tiew C.T., Hj. Ibrahim H.L., Ang E.H. & Hj. Salleh N.S. (2000). *Country Report Malaysia. ENHR: An essential link to equity in development*. Institute of Public Health, Ministry of Health Malaysia.
- Hornsten, A., Sandstorm, H., &Lundman, B. (2004) Issues and Innovations in Nursing Practice. Personal understandings of illness among people with type 2 diabetes. *Journal of Advanced Nursing*, 47(2), 174-182.
- Howerton, A., Byng, R., et al. (2007). Understanding help seeking behaviour among: male offenders: qualitative interview study. *BMJ*, 334;303

- Ian Fallon, R.H., & Fadden G. (1993). *Integrated Mental Health Care: A comprehensive community-based approach*. Great Britain: Cambridge University Press. 8, 30-31.
- Ibrahim, M.I. (1996). Treating one's own ailments. *World Health Forum* 17, 4, 409-410.
- Institute of Public Health (IPH) (2008). Psychiatric Morbidity, a report of the Third National Health and Morbidity Survey, 2006. *Ministry of Health, Malaysia*.
- International Labour Organization (ILO) & Gabriel, P. (2000). Mental health in the workplace: situation analysis: United States.
- Islam, MN., (2005). Pluralism, parallel medical practices and the question of tension: the Philippines experience. *Anthropology Matters Journal*, Vol 7 (2)
- Issakidis C., Andrew G. (2003). Rationing of health care: Clinical decision making in a outpatient clinic for anxiety disorders. *Journal of Anxiety Disorders* 17 (2003) 59-74
- Issakidis, C., & Andrews, G. (2006). Who treats whom? An application of the pathways to care model in Australia. *Australian and New Zealand Journal of Psychiatry*, 40, 74-86.
- Jacob, K.S., (2006). The diagnosis and management of depression and anxiety in primary care: the need for a different framework. *Postgraduate Medical Journal*, 82:836-839
- Janz, N.K. & Becker, M.H. (1984). The Health Belief Model: a decade later. *Health Educ. Beh.*, 11:1-47

Jenkins, R., & Ustun T.B. (1998). *Preventing Mental Illness: Mental Health Promotion in Primary Care*. Great Britain: Biddles Ltd, Guildford and King's Lynn. 7-27, 123-207, 291.

Jamaiyah, H. (2000). Community mental health in Malaysia: Marriage of psychiatry and public health. *Special Bulletin on Health*, 155–167.

Jorm, A. F., A. E. Korten, et al. (1997). Beliefs about the helpfulness of interventions for mental disorders: a comparison of general practitioners, psychiatrists and clinical psychologists. *Aust N Z J Psychiatry* 31(6): 844-51.

Jorm, A.F. (2000). Mental health literacy. Public knowledge and beliefs about mental disorders. *British Journal of Psychiatry*. 177, 396-401.

Jorm, A.F.; Korten A.E.; Jacomb, P.A.; Christensen H.; Rodgers, B. & Pollitt, P. (1997). "Mental health literacy": a survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia*; 166: 182-186.

Jorm, A.F.; Nakane, Y.; Christensen, H.; Yoshioka, K.; Griffiths, H. & Wata, Y. (2005). Public beliefs about treatment and outcome of mental disorders: a comparison of Australia and Japan. *BMC Medicine*, 3:12. Available on <http://www.biomedcentral.com/1741-7015/3/12>

Jorm, AF., Blewitt, KA., et al. (2005) Mental health first aid responses of the public: results from an Australian national survey. *BMC Psychiatry*, 5:9

Jorm, AF., Kelly, CM. et al. (2006). Belief in dealing with depression alone: Results from community surveys of adolescents and adults. *Journal of Affective Disorder*, 96:59-65

- Karam E.G., Mneimneh, Z.N., Dimassi, H., Fayyad, J.A., & Karam, A.N., et al. (2008). Lifetime Prevalence of Mental Disorders in Lebanon: First Onset, Treatment and Exposure to War. *PLoS Med*, 5(4):e61. doi:10.1371/Journal.pmed.0050061.
- Katerndahl, DA.,(2002). Factors Influencing Care Seeking for a Self-Defined Worst Panic Attack. *Psychiatric Services*, Vol 53:4.
- Kawakami, N., Takeshima, T. & Ono, Y. et al. (2005) Twelve-month prevalence, severity and treatment of common mental disorders in communities in Japan: Preliminary finding from the World Mental Health Japan Survey 2002-2003. *Psychiatry and Clinical Neurosciences*, 59:441-452.
- Kessler, R., & Mroczke, D. (1994). *Final versions of our Non-specific Psychological Distress Scale* (Written communication). Ann Arbor (MI) Survey Research Center of the Institute for Social Research, University of Michigan, 1994.
- Kessler RC, McGonagle KA, Zhao S, Nelson CB, Hughes M, Eshleman S, Wittchen HU, Kendler KS (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. *Arch Gen Psychiatry* 51: 8–19.
- Kessler, R.C. (2000). Psychiatric epidemiology: selected recent advances and future directions. *Bulletin of the World Health Organization*, 78(4).
- Kessler, R.C. (2004). Prevalence, severity, and unmet need for treatment of mental disorders in the world health organization world mental health survey. *Jama*, 291-21, 2581-2590.

- Kessler, R.C. (2007). The global burden of anxiety and mood disorders: putting the European Study of the Epidemiology of Mental Disorders (ESEMeD) finding into perspective. *J Clin Psychiatry*, 68 Suppl 2:10-9.
- Kessler, R.C., Gruber, M.J., & Petukhova, M., et al (2007). Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry*, 6:168-176.
- Kessler, R.C., Olfson, M., & Berglund, P.A. (1998). Patterns and predictors of treatment contact after first onset of psychiatric disorders. *Am J Psychiatry*, 155, 62-69.
- Khan, T.M., Sulaiman, S.A., Hassali, M.A., Anwar, M., Wasif, G., & Khan, A.H. (2010). Community knowledge, attitudes, and beliefs towards depression in the state of Penang, Malaysia. *Community Mental Health*, 46(1):87-92.
- Kinziae, J.D.; Teoh, J.T. & Tan, E.S. (1974). Community psychiatry in Malaysia. *Am. J. Psychiatry* 131:573.
- Kohn, R, Saxena, S., Levav, I., Saraceno, B. (2004).The treatment gap in mental health care. *Bulletin of the World Health Organization*, 82:858-866.
- Kohn, R., Saxena, S., Levav, I., & Saraceno, B. (2004). The treatment gap in mental health care. *Bulletin of the World Health Organization*, 82(11).
- Koopmans, G.T., & Lamers, L.M. (2007). Gender and health care utilization: the role of mental distress and help-seeking propensity. *Social Science and Medicine*, 64, 1216-1230.
- Krishnaswamy, S. Professor and Senior Consultant Dept. of Psychiatry Faculty of Medicine, National University of Malaysia

- Krueger, R.F. (1999). The structure and stability of common mental disorders. *Arch Gen Psychiatry*, 56, 921-926.
- Kua, E.H., Chew, P.H., & Ko, S.M. (1993). Spirit possession and healing among Chinese psychiatric patients. *Acta Psychiatrica Scandinavica*. 88: 447-450.
- Kua, J.H.K.; Parker, G.; Lee, C. & Jorm, A.F. (2000). Beliefs about outcomes for mental disorders: a comparative study of primary health practitioners and psychiatrists in Singapore. *Singapore Med J*, 41(11): 542-547
- Kuper, H., Marmot, M., & Hemingway, H. (2002). Systematic review of prospective cohort studies of psychosocial factors in the etiology and prognosis of coronary heart disease. *Semin Vasc Med.*, 2(3):267-314
- Kurumatani T., Ukawa K., Kawaguchi Y., Miyata S., Suzuki M., Ide H., Seki W., Chikamori E., & Uemoto M. (2004). Teachers' knowledge, beliefs and attitudes concerning schizophrenia. *Soc Psychiatry Psychiatr Epidemiol*. 39:402-409.
- Larson, S.L. et al. (2001). Depressive disorder, dysthymia, and risk of stroke: thirteen-year follow-up from the Baltimore epidemiologic catchment area study. *Stroke*, 32, 1979-1983.
- Lauber C., Nordt C., Falcato L., & Rossler W. (2003). Do people recognize mental illness? Factors influencing mental health literacy. *Eur Arc Psychiatry Clin Neurosci*. 253:248-251.
- Lauber C, Rössler W.(2007) Stigma towards people with mental illness in developing countries in Asia. *Int Rev Psychiatry*. Apr;19(2):157-78.
- Lee, S. (2002). The stigma of schizophrenia: a transcultural problem. *Current Opinion in Psychiatry*. Vol. 15(1), Jan., 37-41.

- Lee, S., Tsang, A., & Kwok, K. (2007). Twelve-month prevalence, correlates, and treatment preference of adults with dsm-IV major depressive episode in Hong Kong. *Journal of Affective Disorders*, 98, 129-136.
- Leon, A.S. (2001). Is Depression a risk factor for ischemic stroke?. *American Heart Association*, 32(4), 907-908.
- Leung SS, Stewart SM, Wong JP, Ho DS, Fong DY, Lam TH. (2009) The association between adolescents' depressive symptoms, maternal negative affect, and family relationships in Hong Kong: cross-sectional and longitudinal findings. *J Fam Psychol*. Oct;23(5):636-45.
- Lev-Ran, S., & Fennig, S. (2007). Points to ponder regarding contemporary psychiatric training in Israel. *Isr J Psychiatry Relat Sci*, 44(3), 187-193.
- Lin, E., Parikh, SV., (1999). Sociodemographic, clinical, and attitudinal characteristics of the untreated depressed in Ontario. *Journal of Affective Disorders*, 53:153–162
- Ling, H.K. (2007). *Indigenising Social Work: Research and Practice in Sarawak*. Selangor: Strategic Information and Research Development Centre.
- Lloyd KR, Jacob KS, Patel V, St. Louis L, Bhugra D & Mann AH (1998). The development of the Short Explanatory Model Interview (SEMI) and its use among primary-care attenders with common mental disorders. *Psychological Medicine*, 28, 1231-1237.
- Lolak, S., Rashid, N. & Wise, T.N. (2005). Interface of women's mental and reproductive health. *Current psychiatry reports*, Vol.7 (3), 220-7.
- M.Z. Azhar in Amber Haque, *Mental Health in Malaysia, Issues and Concerns* (University of Malaya Press, 2001).

- Marks, I.M. (1979). Brief standard self-rating for phobic patients. *Behavior Research and Therapy*, 17:263-167
- Mathers, C.D., & Loncar, D. (2006). Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Med*, 3(11), e442.doi:10.1371/journal.pmed.0030442.
- Mathers, C.D., & Loncar, D. (2006). Updated projections of global mortality and burden of disease, 2002-2030: data sources, methods and results. *Evidence and Information for Policy Working Paper*.
- McQuaid, J.R., Stein, M.B., Laffaye, C., & McCahill, M.E. (1999). Depression in a primary care clinic: the prevalence and impact of an unrecognized disorder. *Journal of Affective Disorders*, 55, 1-10.
- McWilliams, L.A., Goodwin, R.D., & Cox, B.J. (2004). Depression and anxiety associated with three pain condition: results from a nationally representative sample. *International Association for the Study of Pain*, 111, 77-83.
- Meltzer, H., Bebbington, P., Brugha, T., Farrell, M., Jenkins, R. & Lewis, G. (2000). The reluctance to seek treatment for neurotic disorders. *Journal of Mental Health*, 9, 319-327.
- Meyer, T.J., Miller, M.L., Metzger, R.L., & Borkovec, T.D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy*. 28, 487-495.
- Miller, K. (2005). *Communication Theories: Perspectives, Processes and Contexts*. McGraw-Hill.
- Milstein, G., et al. (2005). The clergy's role in reducing stigma: a bi-lingual study of elder ptients' views. *World Psychiatry*, 4, 51.

- Ministry of Health (2002). *Health Management Information System*.
- Ministry of Health (MOH), Government of Malaysia (1996). *National Health and Morbidity Survey 1996*.
- Ministry of Health, Government of Malaysia (2003). *Clinical Practice Guidelines Anxiety Disorder*
- Ministry of Health, Malaysia. (2004). *Malaysian Burden of Disease and Injury Study. Health Prioritization: Burden of Disease Approach*. Division of Burden of Disease, Institute for Public Health.
- Mogga, S., Prince, M., Alem, A., et al. (2006). Outcome of major depression in Ethiopia: population-based study. *British Journal of Psychiatry*, 189, 241-246. Doi:10.1192/bjp.bp.105.013417.
- Mohd Sidik S., Rampal L. & Kaneson N. (2003). Prevalence of emotional disorders among medical students in a Malaysian university. *Asia Pacific Family Medicine*. 2 (4), 213-217.
- Monteiro, VBM., Santos, JQ, Martin, D., (2006) Patients' relatives delayed help seeking
- Morgan, C., et al. (2005). Pathways to care and ethnicity: source of referral and help-seeking. *British Journal of Psychiatry*, 186, 290-296.
- Mullen, P.D., Hersey, J., Iverson, P.C. (1987). Health behaviour models compared. *Social Science & Medicine*, 24:973-981.
- Mykletun, A., Overland, S., Dahl, A.A. (2006). A population-based cohort study of the effect of common mental disorders on disability pension awards. *Am J Psychiatry*, 163, 1412-1418.
- NICE Clinical Guideline 22 (amended) (2007). *Management of anxiety (panic disorder, with or without agoraphobia, and generalised anxiety disorder) in*

adults in primary, secondary and community care. *National Institute for Health and Clinical Excellence*. (online: www.nice.org.uk/CG022NICEguideline)

NICE Clinical Guideline 23 (amended) (2007). Depression: management of depression in primary and secondary care. *National Institute for Health and Clinical Excellence* (online: www.nice.org.uk/CG090NICEguideline)

National Statistics Online; www.statistics.gov.uk.

Nawka, P., Reiss, C.M., Goeller, N., & Werling M.R. (2005). Increasing integration, decreasing stigma: mental health reform in the Slovak Republic. *World Psychiatry*, 4, 51.

Nease, D.E., & Aikens, J.E. (2003). DSM depression and anxiety criteria and severity of symptoms in primary care: cross sectional study. *BMJ*, 327, 1030-1. <http://bmj.com/cgi/content/full/327/7422/1030> .

Ng TP, Fones CSL, & Kua EH (2003). Preference, need and utilization of mental health services, Singapore National Mental Health Survey. *Australian and New Zealand Journal of Psychiatry*, 37 (5), 613-619.

Noorbala, A.A., Bagheri Yazdi, S.A., Yasamy, M.T., & Mohammad, K. (2004). Mental health survey of the adult population in Iran. *British Journal of Psychiatry*, 184, 70-73.

Okello, E.S., & Neema, S. (2007). Explanatory models and help-seeking behavior: pathway to psychiatric care among patients admitted for depression in Mulago Hospital, Kampala, Uganda. *Qualitative Health Research*, 17;14.

- Oliver, M.I., Pearson N., Coe, N. & Gunnell, D. (2005). Help-seeking behaviour in men and women with common mental health problems: cross-sectional study. *British Journal of Psychiatry*, 186, 297-301.
- Oliver, M.I., Pearson N., Coe, N., & Gunnell, D. (2005). Help-seeking behaviour in men and women with common mental health problems: cross-sectional study. *British Journal of Psychiatry*, 186, 297-301.
- Olsson, I., Mykletun, A., & Dahl, A.A. (2006). Recognition and treatment recommendations for generalized anxiety disorder and major depressive episode: a cross-sectional study among general practitioners in Norway. *Prime Care Companion J Clin Psychiatry*, 8(6).
- Owen, D.J., & Fang, M.E. (2003). Information seeking behavior in complementary and alternative medicine (CAM): an online survey of faculty at a health sciences campus. *J Med Libr Assoc*, 91(3).
- Parameshwara Deva, M (2004). Malaysia mental health country profile. *International Review of Psychiatry*. 16(1-2), 167-176.
- Parker, G., Gladstone, G., Kuan, T.C. (2001). Depression in the Planet's Largest Ethnic Group: The Chinese. *Am J Psychiatry*, 158:857-864
- Parslow, R.A., & Jorm, A.F. (2004). Use of prescription medications and complementary and alternative medicines to treat depressive and anxiety symptoms: result from a community sample. *Journal of Affective disorders*, 82, 77-84.
- Patel, V. et al. (2005). Why do women complain of vaginal discharge? A population survey of infectious and psychosocial risk factors in a South Asian community. *International Journal of Epidemiology*, 34(4), 853-62.

- Patel, V., & Kleinman, A. (2003). Poverty and common mental disorders in developing countries. *British of The World Health Organization*, 81, 609-615.
- Patel, V., Chisholm, D., Kirkwood, B.R., & Mabey, D. (2007). Prioritizing health problems in women in developing countries: comparing the financial burden of reproductive tract infections, anaemia and depressive disorders in community survey in India. *Tropical Medicine and International Health*, 12(1), 130-139.
- Patel, V., Chisholm, D., Rabe-Hesketh, S., Dias-Saxena, F., Andrew, G., Mann, A. (2003). Efficacy and cost-effectiveness of drug and psychological treatments for common mental disorders in general health care in Goa, India: a randomised, controlled trial. *Lancet*, 361: 33-39
- Patel, V., DeSouza, N., & Rodrigues, M. (2003). Postnatal depression and infant growth and development in low income countries: a cohort study from Goa, India. *Arch Dis Child*, 88, 34-37. <http://adc.bmj.com> .
- Patel, V., Kirkwood, B.R., Pednekar, S., et al. (2006). Risk factors for common mental disorders in women. *British Journal of Psychiatry*, 189, 547-555.
- Patel, V., Rahman, A., Jacob, K.S., & Hughes, M. (2004). Effect of maternal mental health on infant growth in low income countries: new evidence from South Asia. *BMJ*, 328, 820-823.
- Patel, V., Saraceno, B., & Kleinman, A. (2006). Beyond evidence: the moral case for international mental health. *Am J Psychiatry*, 163:8.
- Patel, V. & Kleinman, A. (2003) Poverty & Common Mental Disorders in Developing Countries. *Bulletin of the WHO*, 81, 609-15.

- Paul, N., Sharma, B., & Pande, S.K. (2006). Categorical and dimensional classification in psychiatry. *Indian Journal of Social Psychiatry*, 22(1-2), 13-24.
- Pescosolido, B.A. & Boyer, C.A. (1999). How do people come to use mental health services? Current knowledge and changing perspectives In A.V. Horowitz & T Shield (Edu.). *A handbook for the study of mental health: Social Contexts, Theories and Systems*. Cambridge University, New York, 392-411.
- Pereira, B. et al. (2007). The explanatory models of depression in low income countries: listening to women in India. *Journal of Affective Disorders*, 102, 209-218.
- Phelan, J.C., Yang, L.H., Cruz-Rojas, R. (2006) Effects of Attributing Serious Mental Illnesses to Genetic Causes on Orientations to Treatment. *Psychiatric Services*, 57:382–387
- Pinfold V., Toulmin H., Thornicroft G., Huxley P., Farmer P. & Graham T. (2003). Reducing psychiatric stigma and discrimination: evaluation of educational interventions in UK. *British Journal of Psychiatry*, 182, 342-346.
- Quek K.F., Wah Y.L., Razack A.H. & Chit S.L. (2001). Reliability and validity of the General Health Questionnaire (GHQ-12) among urological patients: A Malaysian study. *Psychiatry and Clinical Neurosciences*. 55(5), 509-513.
- Rabinowitz J, Gross R, & Feldman D (1999). Correlates of a perceived need for mental health assistance and differences between those who do and do not seek help. *Social Psychiatry and Psychiatric Epidemiology*, 34, 141-146.

- Radloff, L.S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-401.
- Raguram R., Weiss M.G., Channabasavanna S.M., & Devins G.M. (1996). Stigma, depression and somatization in South India. *Am J Psychiatry*, 153, 1043-1049.
- Rahman A, Malik A, Sikander S, Roberts C, Creed F. (2008) Cognitive behaviour therapy-based intervention by community workers for mothers with depression and their infants in rural Pakistan: a cluster randomized control trail. *Lancet* Sep 13;372(9642):902-9.
- Razali, S.M. & Najib, M.A.M. (2000). Help-seeking pathways among Malay psychiatric patients. *International Journal of Social Psychiatry*. Vol. 46, Issue 4, 281-290.
- Razali, S.M. & Najib, M.A.M. (2000). Help-seeking pathways among Malay psychiatric patients. *International Journal of Social Psychiatry*. Vol. 46, Issue 4, 281-290.
- Razali, S.M., Khan, U.A., & Hasanah, C.I. (1996). Belief in supernatural causes of mental illness among Malay patients: impact on treatment. *Acta Psychiatrica Scandinavica*. 94(4), 229-233.
- Regional Health Forum, World Health Organization, South-East Asia Region. (2001)
- Rhi, B.Y., Ha, K.S., Kim, Y.S., Sasaki, Y., Young, D., Woon, T.H., Laraya, L.T.R., & Yang, Y. (1995). The health care seeking behavior of schizophrenic patients in East Asian areas. *International Journal of Social Psychiatry*. Vol. 41, No. 3, 190-209.

- Rickwood, D., Deane, F.P., Wilson, C.J., & Ciarrochi, J. (2005). Young people's help-seeking for mental health problems. *Australian e-Journal for the Advancement of Mental Health*, 4(3) Supplement. www.auseinet.com/journal/vol4iss3suppl/rickwood.pdf.
- Riedel-Heller, S. G., H. Matschinger, et al. (2005). Mental disorders--who and what might help? Help-seeking and treatment preferences of the lay public. *Soc Psychiatry Psychiatr Epidemiol* 40(2): 167-74.
- Rodrigues, M., Patel, V., Jaswal, S., & de Souza, N. (2003). Listening to mothers: qualitative studies on motherhood and depression from Goa, India. *Social Science & Medicine*, 57, 1797-1806.
- Rojas G, Fritsch R, Solis J, Jadresic E, Castillo C, González M, Guajardo V, Lewis G, Peters TJ, Araya R. (2007) *Treatment of postnatal depression in low-income mothers in primary-care clinics in Santiago, Chile: a randomised controlled trial.* *Lancet Nov 10;370(9599):1629-37*
- Roy-Byrne, P.P., Stang, P., Wittchen, H.U., et al. Lifetime panic-depression comorbidity in the national comorbidity survey: association with symptoms, impairment, course and help-seeking. *British Journal of Psychology*, 176, 229-235.
- Ruzanna ZamZam, Maniam Thambu, Marhani Midin, Khairani Omar & Pervesh Kaur (2009). Psychiatric morbidity among adult patients in a semi-urban primary care setting in Malaysia. *International Journal of Mental Health Systems*. 3:13
- Salacyk, K.J. et al. (2007). Depressive symptoms and risk of stroke: the Framingham study. *Stroke*, 38, 16-21, doi:10.1161/01.str.0000251695.39877.ca.

- Salleh, M.R. (1989). The consultation of traditional healers by Malay patients. *Med J Malaysia* 44(1): 3-13.
- Salvidia, S. et al. (2004). Use of mental health service in Chile. *Psychiatric Service*, 55, 71-76.
- Sanchez AR & Atkinson DR (1983). Mexican-American cultural commitment, preference for counselor ethnicity and willingness to use counseling. *Journal of Counseling Psychology*, 30, 215
- Sareen, J., Cox, B.J., Afifi, T.O., et al. (2005). Perceived need for mental health treatment in a nationality representative Canadian sample. *Can J Psychiatry*, 50, 634-651.
- Sartorius, N. (2002). *Fighting for Mental Health: A Personal View*. United Kingdom: Cambridge University Press.
- Sartorius, N. (2005). Stigma and discrimination because of schizophrenia: a summary of the wpa global program against stigma and discrimination because of schizophrenia. *World Psychiatry*, 4, 51.
- SCIENCE www.scencemag.org, (2006). The Unseen: Mental Illness's Global Toll, Vo311
- Shaikh, T., and Hatcher J (2005). Complementary and alternative medicine in Pakistan: prospects and limitations. *Advance Access Publication*, 2(2) 139-142
- Shaw , CM., Creed F., Tomenson B., Riste L., Cruickshank JK (1999). Prevalence of anxiety and help seeking behaviour in African Caribbeans and white Europeans: two phase general population survey. *BMJ* 318:302-6
- Sheehan DV, Lecrubier Y, Harnett-Sheehan K, Amorim P, Janavs J, Weiller E, Hergueta T, Baker R, & Dunbar G (1998). The Mini International

- Neuropsychiatric Interview (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview. *J. Clin Psychiatry*, 59(suppl 20), 22-33.
- Simon, G.E., Cherkin, D.C., Sherman, K.J., et al. (2004). Mental health visits to complementary and alternative medicine providers. *Gen Hosp Psychiatry*, PMID:15121344.
- Singleton N, Bumpstead R, O'Brien M, Lee A, Meltzer H (2001). Psychiatric morbidity among adults living in households, 2000. *Her Majesty's Stationery Office (HMSO)*: London.
- Smith, N.F., Lesperance, F. (2005). Reflections on depression as a cardiac risk factor. *Psychosomatic Medicine*, 67(1), s19-s25.
- Spencer, John W & Jacobs, Joseph J. (1999). Complementary/Alternative medicine: an evidence based approach. St .Louis: Mosby
- Spitzer, R., Kroenke, K., Williams,J. (1999). Validation and utility of a self-report version of PRIME-MD: the PHQ Primary Care Study. *Journal of the American Medical Association*. 282:1737-1744
- Srinivasan, T.N., & Thara, R. (2001). Beliefs about causation of schizophrenia: do Indian families believe in supernatural causes? *Social Psychiatry Psychiatric Epidemiology*. 36: 134-140.
- Srnka, K.J., & Koeszegi, S.T. Integrated qualitative-quantitative research. *How To Achieve Both – Theoretical Insights and Quantitative Results: Guidelines for Integrated Qualitative-Quantitative Research and Exemplary Study*.
- Starkes, JM.,Poulin, CC., Kisely, SR., (2005). Unmet need for the treatment of depression in Atlantic Canada. *Can J Psychiatry*, 50:580-590

Stiglitz, J.E. (2002). *Globalization and Its Discontents*. Great Britain: Penguin Press.

Stovall, J. (2003). Assertive Outreach in Mental Health: a manual for practitioners. *Psychiatric Services*, 54:1549.

Sugiura, T., Sakamoto, S., Kijima, N., Kitamura, F., & Kitamura, T. (2000). Stigmatizing perception of mental illness by Japanese students: comparison of different psychiatric disorders. *The Journal of Nervous and Mental Disease*. Vol. 188(4), 239-242.

Sumathipala, A., Hewege, S., Hanwella, R., Mann, A.H. (2000). Randomized control trial of cognitive behaviour therapy for repeated consultations for medically unexplained complaints: a feasibility study in Sri Lanka. *Psychological Medicine*, 30, 747-757.

http://tcm.moh.gov.my/v2/modules/mastop_publish/?tac=Units. Accessed: December 2010

Tait, R. J., D. J. French, et al. (2003). Validity and psychometric properties of the General Health Questionnaire-12 in young Australian adolescents. *Aust N Z J Psychiatry* 37(3): 374-81.

Tetsuya, O., et al. (2001). Prospective study of depressive symptoms and risk of stroke among Japanese. *American Heart Association*, 32(4), 903-907.

Thompson, A., C. Hunt, et al. (2004). Why wait? Reasons for delay and prompts to seek help for mental health problems in an Australian clinical sample. *Soc Psychiatry Psychiatr Epidemiol* 39(10): 810-7.

Tijhuis MAR, Peters L, & Foets M. (1990). An orientation toward help-seeking for emotional problems. *Soc. Sci. Med.* 31, 989-995.

- Tilburt JC and Miller FG (2007). Responding to medical pluralism in practice: a principled ethical approach. *JABFM* doi: 10.3122/jabfm.2007.05.060205
- Tseng, W. S., K. Ebata, et al. (2001). "Mental health in Asia: social improvements and challenges. *Int J Soc Psychiatry* 47(1): 8-23.
- University of Kent at Canterbury, the London School of Economics, and the University of Manchester, Centre for the Economics of Mental Health Institute of Psychiatry (1998). Mental Health Research Review
- Ustun, T.B., et al. (2004). Global burden of depressive disorders in the year 2000. *British Journal of Psychiatry*, 184, 386-392.
- U.S. Preventive Services Task Force (USPSTF) (2009). Screening for depression in adults: USPSTF recommendation statement. *Annals of Internal Medicine*. 151, 11
- Vasiliadis, H.M., et al. (2005). Service use for mental health reasons: cross-provincial differences in rates, determinants, and equity of access. *Can J Psychiatry*, 50(10).
- Vera M, Alegria M, Freeman DHJ, Robles R, Pescosolido B & Pena M (1998) Help seeking for mental health care among poor Puerto Ricans: problem recognition, service use and type of provider. *Medical Care*, 36(7), 1047-1056.
- Verhaak, P.F.M., Hoeymans, N., Garssen, A.A., & Westert, G.P. (2005). *British Journal of General Practice*, 55, 770-775.
- Vollebergh, W.A.M., Ledema, J., Bijl, R.V., et al. (2001). The structure and stability of common mental disorders: the nemesis study. *Arch Gen Psychiatry*, 58, 597-603.

- Wada K, Satoh T, Tanaka K, Tsunoda M, Aizawa Y.(2007) Associations of depressive symptoms with regular leisure activity and family social support among Japanese workers. *Ind Health*. Jan;45(1):181-5.
- Wade C, Chao M, Kronenberg F, Cushman L, Kalmuss D. (2008) Medical Pluralism among American Women: Results of a National Survey. *Journal of Women's Health*. June 2008, 17(5): 829-840.
- Wade TD, Kendler KS. (2000) Absence of interactions between social support and stressful life events in the prediction of major depression and depressive symptomatology in women. *Psychol Med*. Jul;30(4):965-74
- Wainwright, N.W.J., & Surtees, P.G. (2004). Area and individual circumstances and mood disorders prevalence. *British Journal of Psychiatry*, 185, 227-232.
- Wallis, L.M., Moore, M., Maguire, J., & Hollingbery, T. (2002). *Shared Care in Mental Health*. New York: Oxford University Press.
- Wang, J.L., Patten, S.B., et al. (2005). Help-seeking Behaviours of individuals with mood disorders. *Can J Psychiatry*, 50:5-659
- Wang, P.S., Angermeyer, M., & Borges, G., et al. (2007) Delay and failure in treatment seeking after first onset, of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry*, 6:177-185.
- Watson, D., Clark, L.A., Weber, K., et al. (1995). Testing a tripartite model: exploring the symptom structure of anxiety and depression in student, adult and patient samples', *Journal of Abnormal Psychology* 104: 15-25

- Weich, S. Lewis, G. Epidemiol, J. (1998). Material standard of living, social class, and the prevalence of the common mental disorders in Great Britain. *BMJ*, 52;8-14
- Weich, S., Lewis, G., (1998). Poverty, unemployment, and common mental. *BMJ*, 317;115-119
- Wells JE, Robin LN, Bushnell JA, Jarosz D & Oakley-Browne MA (1994). Perceived barriers to care in St. Louis (USA) and Christchurch (NZ): reasons for not seeking professional help for psychological distress. *Social Psychiatry and Psychiatric Epidemiology*, 29, 155-164.
- Whiting, M. (2006). Managing type 2 diabetes and depression in primary care. *Primary Care Mental Health*, 4, 175-84.
- WHO Educational Package: Mental Disorders in Primary Care (1998)
- Wilks, T. (2004). The use of vignettes in qualitative research into social work values. *Qualitative Social Work*. 3(1), 78-86.
- Willcox, C.E., Washburn, R., & Patel, V. (2006). Seeking help for attention deficit hyperactivity disorder in developing countries: A study of parental explanatory models in Goa, India. *Social Science & Medicine*, doi:10.1016/j.socscimed.2006.11.32.
- WHO, World Mental Health Survey Consortium, (2004). Prevalence, Severity, and Unmet Need for Treatment of Mental Disorders in the World Health Organization World Mental Health Survey. *JAMA*, 291(21):2581-2590 (doi:10.1001/jama.291.21.2581)
- WHO, World Mental Health Survey Consortium, (2004). Prevalence, Severity, and Unmet Need for Treatment of Mental Disorders in the World Health Organization

- World Health Organization (2007). *Mental health: Strengthening mental health promotion*. Geneva: WHO.
- World Health Organization (2005). *Mental health atlas*. Geneva: WHO.
- World Health Organization. (1992). *Manual of the International Classification of Diseases, Tenth Revision (ICD—10)*. Geneva: WHO.
- World Health Report 2001. *Mental Health: New Understanding, New Hope*. WHO: Geneva
- World Health Organization Report. (2000). *Why do health systems matter?*.
- World Health Organization (2005). *Mental health policy, plans and programme – Rev. ed. 2*. Geneva, World Health Organization (Mental Health Policy and Service Guidance Package)
- World Health Organization (2008). *Integrating mental health into primary care: global perspectives*. Geneva, World Health Organization.
- Yaakup, A., Abu Bakar, A., Yahaya, N.A., & Taib, O.K. (2003). Taburan dan ciri-ciri kawasan perumahan kos rendah dan setinggan di wilayah Lembah Klang. *Biro Inovasi dan Perundingan, UTM, Skudai, Johor*.
- Yazaji, M.E., Moussaoui, D., & Kadri, N. (2005). Perceived stigma in patients with schizophrenia and their relatives in morocco: a focus group study. *World Psychiatry*, 4, 51.
- Yeap, R., & Low, W.Y. (2009). Mental health knowledge, attitude and help-seeking tendency: a Malaysian context. *Singapore Med J*, 50(12):1169-76
- Zung, WW (1965). A self-rating depression scale. *Arch Gen Psychiatry* 12, 63-70

Appendix 1: Socio-demographic questionnaire - Translated

<p>1 Sex:</p> <p>Male <input type="checkbox"/></p> <p>Female <input type="checkbox"/></p>	<p>2 Age: _____</p>
<p>3 Marital status:</p> <p>Single <input type="checkbox"/></p> <p>Married <input type="checkbox"/></p> <p>Widowed <input type="checkbox"/></p> <p>Divorces <input type="checkbox"/></p>	<p>4 Living condition:</p> <p>Alone <input type="checkbox"/></p> <p>Nuclear family <input type="checkbox"/></p> <p>With parents <input type="checkbox"/></p> <p>Extended family <input type="checkbox"/></p> <p>Other _____ <input type="checkbox"/></p>
<p>5 Ethnicity:</p> <p>Chinese <input type="checkbox"/></p> <p>Indian <input type="checkbox"/></p> <p>Malay <input type="checkbox"/></p> <p>Other-I _____ <input type="checkbox"/></p>	<p>6 Religion:</p> <p>Islam <input type="checkbox"/></p> <p>Buddha <input type="checkbox"/></p> <p>Taoist <input type="checkbox"/></p> <p>Hindu <input type="checkbox"/></p> <p>Christian <input type="checkbox"/></p> <p>Sikh <input type="checkbox"/></p> <p>None <input type="checkbox"/></p> <p>Other _____ <input type="checkbox"/></p>
<p>7 Education:</p> <p>None <input type="checkbox"/></p> <p>Primary <input type="checkbox"/></p> <p>Secondary <input type="checkbox"/></p> <p>Tertiary <input type="checkbox"/></p> <p>Other _____ <input type="checkbox"/></p>	<p>8 Employment status:</p> <p>Work</p> <p>a. Full time <input type="checkbox"/></p> <p>b. Part-time <input type="checkbox"/></p> <p>Unemployed <input type="checkbox"/></p> <p>Retired <input type="checkbox"/></p> <p>Student <input type="checkbox"/></p> <p>Housewife <input type="checkbox"/></p> <p>Other _____ <input type="checkbox"/></p>
<p>9 Job: _____ <input type="checkbox"/></p>	<p>10 Monthly household income:</p> <p>Less than RM1000 <input type="checkbox"/></p> <p>RM1000-RM2000 <input type="checkbox"/></p> <p>More than RM2000 <input type="checkbox"/></p>

Appendix 2: Help-seeking questionnaire-Translated

Who have you consulted in the past 4 weeks?

LET RESPONDENT ANSWER THE OPEN-ENDED QUESTION, IDENTIFY RESPONSE(S) AND CONTINUE PROBES USING THE TABLE BELOW.

FINALLY CONFIRM USE OF REMAINING CARE PROVIDERS

	Yes/ No	Number of time(s)	Amount paid each time	Reason for visit (health)	Reason for choice	Decision- maker	Satisfaction
GP							
Hospital doctor							
<i>Bomoh</i>							
<i>Sinseh</i>							
Acupuncturist							
Herballist							
Ayurvedic practitioner							
Masseuse							
Homeopathy practitioner							
Religious leader							
Faith healer							
Others							

Appendix 3 – SEMI questions for vignette

a.	What if anything is A's problem? / What is his/her problem?
b.	Is A suffering from an illness? If yes, what is it?
c.	What are the causes of A's problems?
d.	What should A do about it?
e.	What should the doctor do? (If mentioned)

Appendix 4: Vignette

John is 30 years old. He has been feeling unusually sad and miserable for the last few weeks. Even though he is tired all the time, he has trouble sleeping nearly every night. John doesn't feel like eating and has lost weight. He can't keep his mind on his work and puts off making decisions. Even day-to-day tasks seem too much for him. This has come to the attention of John's boss who is concerned about his lowered productivity.

Appendix 5: Stigma Questionnaire

Do you agree, disagree or unsure with the following statements about the person depicted in the vignette?

	Agree	Disagree	Unsure
This person is difficult to talk to			
This person is likely to be violent			
This person can recover from her/his problem			
This person is weak and only have her/himself to blame			
This person is unpredictable			

Appendix 6: GHQ-12

Have you recently?

Been able to concentrate on what you're doing?	Better than usual	Same as usual	Less than usual	Much less than usual
Lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
Felt you were playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
Felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less capable
Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
Felt you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
Been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
Been able to face up to your problems?	More so than usual	Same as usual	Less so than usual	Much less able
Been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
Been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
Been feeling reasonably happy, all things considered	More so than usual	About same as usual	Less so than usual	Much less than usual;

Appendix 7: MINI – components A, B, E, F, G and O

	<p>A. MAJOR DEPRESSIVE EPISODE (➡ MEANS: GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)</p>		
A1	Have you been consistently depressed or down, most of the day, nearly every day, for the past two weeks?	NO	YES
A2	In the past two weeks, have you been less interested in most things or less able to enjoy the things you used to enjoy most of the time?	NO	YES*
	IS A1 OR A2 CODED YES?	NO ➡	YES
A3	<p>Over the past two weeks, when you felt depressed or uninterested: a Was your appetite decreased or increased nearly every day? Did your weight decrease or increase without trying intentionally (i.e., by $\pm 5\%$ of body weight or ± 8 lbs. or ± 3.5 kgs., for a 160 lb./70 kg. person in a month)?</p> <p>IF YES TO EITHER, CODE YES.</p>	NO	YES *
	b Did you have trouble sleeping nearly every night (difficulty falling asleep, waking up in the middle of the night, early morning waking or sleeping excessively)?	NO	YES
	c Did you talk or move more slowly than normal or were you fidgety, restless or having trouble sitting still almost every day?	NO	YES*
	d Did you feel tired or without energy almost every day?	NO	YES
	e Did you feel worthless or guilty almost every day?	NO	YES
	f Did you have difficulty concentrating or making decisions almost every day?	NO	YES
	g Did you repeatedly consider hurting yourself, feel suicidal, or wish that you were dead?	NO	YES
	ARE 5 OR MORE ANSWERS (A1-A3) CODED YES?	NO	YES*
	<p>MAJOR DEPRESSIVE EPISODE, CURRENT IF PATIENT HAS CURRENT MAJOR DEPRESSIVE EPISODE CONTINUE TO A 4, OTHERWISE MOVE TO MODULE B</p>		
A4	a During your lifetime, did you have other periods of two weeks or more when you felt depressed or uninterested in most things, and had most of the problems we just talked about?	NO ➡	YES
	b Did you ever have an interval of at least 2 months without any depression and any loss of interest between 2 episodes of depression?	NO	YES
	<p>MAJOR DEPRESSIVE EPISODE, RECURRENT</p>		

	* If patient has Major Depressive Episode, Current, code YES in corresponding questions		
	MAJOR DEPRESSIVE EPISODE WITH MELANCHOLIC FEATURES (optional) (➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE) IF THE PATIENT CODES POSITIVE FOR A CURRENT MAJOR DEPRESSIVE EPISODE (A3 = YES), EXPLORE THE FOLLOWING:		
A5	a IS A2 CODED YES	NO	YES
	b During the most severe period of the current depressive episode, did you lose your ability to respond to things that previously gave you pleasure, or cheered you up? IF NO: When something good happens does it fail to make you feel better, even temporarily?	NO	YES
	IS EITHER A5a OR A5b CODED YES	NO ➡	YES
A6	Over the past two week period, when you felt depressed and uninterested: a Did you feel depressed in a way that is different from the kind of feeling you experience when someone close to you dies?	NO	YES
	b Did you feel regularly worse in the morning, almost every day?	NO	YES
	c you wake up at least 2 hours before the usual time of awakening and have difficulty getting back to sleep, almost every day?	NO	YES
	d IS A3c CODED YES (PSYCHOMOTOR RETARDATION OR AGITATION)?	NO	YES
	e IS A3a CODED YES FOR ANOREXIA OR WEIGHT LOSS?	NO	YES
	f Did you feel excessive guilt or guilt out of proportion to the reality of the situation?	NO	YES
	3 OR MORE A6 ANSWERS CODED YES <i>Major Depressive Episode with Melancholic Features Current</i>	NO	YES
	B. DYSTHYMIA (➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE) IF PATIENT'S SYMPTOMS CURRENTLY MEET CRITERIA FOR MAJOR DEPRESSIVE EPISODE, DO NOT EXPLORE THIS MODULE		
B1	Have you felt sad, low or depressed most of the time for the last two years?	NO➡	YES
B2	Was this period interrupted by your feeling OK for two months or more?	NO	YES➡
B3	During this period of feeling depressed most of the time:		

	a Did your appetite change significantly?	NO	YES
	b Did you have trouble sleeping or sleep excessively?	NO	YES
	c Did you feel tired or without energy?	NO	YES
	d Did you lose your self-confidence?	NO	YES
	e Did you have trouble concentrating or making decisions?	NO	YES
	f Did you feel hopeless?	NO	YES
	ARE 2 OR MORE B3 ANSWERS CODED YES?	NO➡	YES
B4	Did the symptoms of depression cause you significant distress or impair your ability to function at work, socially, or in some other important way?	NO➡	YES
	IS B4 CODED YES?	NO	YES
DYSTHYMIA CURRENT			
E. PANIC DISORDER (➡ MEANS: CIRCLE NO IN E5 AND SKIP TO F1)			
E1	a Have you, on more than one occasion, had spells or attacks when you suddenly felt anxious, frightened, uncomfortable or uneasy, even in situations where most people would not feel that way?	NO➡	YES
	b Did the spells peak within 10 minutes?	NO➡	YES
E2	At any time in the past, did any of those spells or attacks come on unexpectedly or occur in an unpredictable or unprovoked manner?	NO➡	YES
E3	Have you ever had one such attack followed by a month or more of persistent fear of having another attack, or worries about the consequences of the attack?	NO	YES
E4	During the worst spell that you can remember:		
	a Did you have skipping, racing or pounding of your heart?	NO	YES
	b Did you have sweating or clammy hands?	NO	YES
	c Were you trembling or shaking?	NO	YES
	d Did you have shortness of breath or difficulty breathing?	NO	YES
	e Did you have a choking sensation or a lump in your throat?	NO	YES
	f Did you have chest pain, pressure or discomfort?	NO	YES

	g Did you have nausea, stomach problems or sudden diarrhea?	NO	YES
	h Did you feel dizzy, unsteady, lightheaded or faint?	NO	YES
	i Did things around you feel strange, unreal, detached or unfamiliar, or did you feel outside of or detached from part or all of your body?	NO	YES
	j Did you fear that you were losing control or going crazy?	NO	YES
	k Did you fear that you were dying?	NO	YES
	l Did you have tingling or numbness in parts of your body?	NO	YES
	m Did you have hot flushes or chills?	NO	YES
E5	ARE BOTH E3, AND 4 OR MORE E4 ANSWERS, CODED YES?	NO	➔ E7 YES PANIC DISORDER LIFETIME
E6	IF E5 =NO, ARE ANY E4 ANSWERS CODED YES? THEN SKIP TO F1.	NO	YES LIMITED SYMPTOM ATTACKS LIFETIME
E7	In the past month, did you have such attacks repeatedly (2 or more) followed by persistent fear of having another attack?	NO	YES 18 PANIC DISORDER CURRENT
F. AGORAPHOBIA			
F1	Do you feel anxious or uneasy in places or situations where you might have a panic attack or the panic-like symptoms we just spoke about, or where help might not be available or escape might be difficult: like being in a crowd, standing in a line (queue), when you are alone away from home or alone at home, or when crossing a bridge, traveling in a bus, train or car? IF F1 = NO, CIRCLE NO IN F2.	NO	YES
F2	Do you fear these situations so much that you avoid them, or suffer through them, or need a companion to face them?	NO	YES AGORAPHOBIA CURRENT
	IS F2 (CURRENT AGORAPHOBIA) CODED NO and IS E7 (CURRENT PANIC DISORDER) CODED YES? PANIC DISORDER without Agoraphobia CURRENT	NO	YES
	IS F2 (CURRENT AGORAPHOBIA) CODED YES and IS E7 (CURRENT PANIC DISORDER) CODED YES? PANIC DISORDER with Agoraphobia CURRENT	NO	YES

	IS F2 (CURRENT AGORAPHOBIA) CODED YES and IS E5 (PANIC DISORDER LIFETIME) CODED NO? AGORAPHOBIA, CURRENT without history of Panic Disorder	NO	YES
	G. SOCIAL PHOBIA (Social Anxiety Disorder) (➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE)		
G1	In the past month, were you fearful or embarrassed being watched, being the focus of attention, or fearful of being humiliated? This includes things like speaking in public, eating in public or with others, writing while someone watches, or being in social situations.	NO➡	YES
G2	Is this fear excessive or unreasonable?	NO➡	YES
G3	Do you fear these situations so much that you avoid them or suffer through them?	NO➡	YES
G4	Does this fear disrupt your normal work or social functioning or cause you significant distress? SOCIAL PHOBIA (<i>Social Anxiety Disorder</i>) CURRENT	NO	YES
	O. GENERALIZED ANXIETY DISORDER (➡ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)		
O1	a Have you worried excessively or been anxious about several things over the past 6 months?	NO ➡	YES
	b Are these worries present most days?	NO ➡	YES
	IS THE PATIENT'S ANXIETY RESTRICTED EXCLUSIVELY TO, OR BETTER EXPLAINED BY, ANY DISORDER PRIOR TO THIS POINT?	NO	YES ➡
O2	Do you find it difficult to control the worries or do they interfere with your ability to focus on what you are doing?	NO ➡	YES
O3	FOR THE FOLLOWING, CODE NO IF THE SYMPTOMS ARE CONFINED TO FEATURES OF ANY DISORDER EXPLORED PRIOR TO THIS POINT. When you were anxious over the past 6 months, did you, most of the time:	NO	YES
	a Feel restless, keyed up or on edge?	NO	YES
	b Feel tense?	NO	YES

	c Feel tired, weak or exhausted easily?	NO	YES
	d Have difficulty concentrating or find your mind going blank?	NO	YES
	e Feel irritable?	NO	YES
	f Have difficulty sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)?	NO	YES
	ARE 3 OR MORE O3 ANSWERS CODED?	NO	YES
	GENERALIZED ANXIETY DISORDER CURRENT		

Appendix 8: SEMI for own CMD

Section 6: Participant's explanatory model of own illness	
a.	What do you think your problem is?
b.	Do you have a specific name for this problem?
c.	When did your problem start?
d.	Why do you think you are experiencing the problems/ What do you think is the cause of your problems?
e.	How serious is your problem?
f.	What do you fear most about your problem?
g.	What can make your problem worse?
h.	What can make it better?

Appendix 9: Pathways to care questionnaire

(a) Have you sought help for your problem?

a. YES b. NO

Order of care provider	Source of help (whom)	Why? (reason for choice)	Type(s) of help given	What happened?	Satisfaction
1 st					
2 nd					
3 rd					
4 th					
5 th					
6 th					

**INFORMATION SHEET
HELP-SEEKING BEHAVIOUR FOR GENERAL HEALTH AND MENTAL
HEALTHPROBLEMS**

Researcher: Siti Irma Fadhilah Binti Ismail, Clinical Psychologists
UPM, Aras 8, Grand Seasons Avenue, 72 Jln Pahang
Tel: 03 26987780

We are working on a study about the way people in this community seek help for health problems. Whatever you do, whether you are experiencing any health problems or not, we would be very interested to talk to you.

What we are asking for is your agreement to take part in this study by allowing us to interview you. The information that you give will help us to understand about how you feel and think about seeking help for health problems, particularly problems related to stress. This will help us understand how people deal with their health problems and will also help us improve how we offer our health care services. Our interview may also help you with identifying health problems and we will give you advice if this should be the case.

If you decide to take part in this study, you may at any point change your mind and your information will not be used. You may also decide upon completion of the interview to not be part of the study, in which case the information we collect from you will not be used.

If you do decide to take part, we would like to conduct an interview that will last about 30 minutes.

All information collected in this study will be kept in a secure facility, are confidential to the project team and the names of participants will remain anonymous.

We will only share the findings of our study with the scientific world and policy makers in a way that does not reveal the identity of research participants.

If you agree to take part, please sign the attached consent form to show you understand the purpose of this study and give permission for the information to be used in our study.

CONSENT FORM
HELP-SEEKING BEHAVIOUR FOR MENTAL AND GENERAL HEALTH
PROBLEMS

I understand that the information acquired from the interview will be used for research purposes. I give permission for the information to be used in this way and I understand that my identity will remain confidential.

Signature

.....

Name.....

....

Date.....

.....