BMJ Open

Policies, programmes and research on adolescent and youth sexual and reproductive health in South Sudan: a systematic scoping review

Jessica Crawford,[1] Chirrilo Madut,[2] Chol Bak,[2] Zack Wol,[2] Neha S Singh [1]

To cite: Crawford J, Madut C, Bak C, *et al*. Policies, programmes and research on adolescent and youth sexual and reproductive health in South Sudan: a systematic scoping review. *BMJ Open* 2025;**15**:e084809. doi:10.1136/bmjopen-2024-084809

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (https://doi.org/10.1136/bmjopen-2024-084809).

Received 29 January 2024
Accepted 31 December 2024

[1]London School of Hygiene & Tropical Medicine, London, UK
[2]Bridge Network Organization, Juba, South Sudan

Correspondence to
Dr Neha S Singh;
neha.singh@lshtm.ac.uk

ABSTRACT

Objectives To provide an overview of research, policies and programmes related to the sexual and reproductive health (SRH) needs of adolescents and youth (AY) in South Sudan in order to identify the gaps and potential areas of focus for researchers, policymakers and local and global SRH actors.

Design Systematic scoping review following the Joanna Briggs Institute criteria for evidence synthesis.

Data sources Medline, Embase and Global Health were searched for articles dated between 9 July 2011 and 13 July 2023. A grey literature search was conducted using Google search engine and on the websites of key stakeholders.

Eligibility criteria for selecting studies We included all types of studies, policies, reports and programmes that pertained to any aspect of the SRH AY (ages 10–35) in South Sudan.

Data extraction and synthesis All articles were screened by the first author using the predetermined eligibility criteria. A secondary review was conducted on all selected articles to ensure alignment with criteria. Data were extracted from all eligible articles using an established data extraction tool. The authors identified overarching themes from the extracted data and results were synthesised based on those themes.

Results We screened 728 articles, resulting in 52 articles included in the review (19 peer-reviewed, 33 grey literature). Results were mapped across South Sudan and synthesised by key AYSRH thematic areas. The results were largely focused on the experiences of adolescent girls and young women and the sociocultural norms and economic challenges that contribute to their lack of access to SRH services and increased risk of experiencing various forms of gender-based violence. Vulnerable populations were excluded from research, policies and programmes, including very young adolescents, LGBTQ youth and youth with disabilities.

Conclusions Quality research has been done on AYSRH in South Sudan; however, there are many key areas that have not been addressed such as maternal mortality and morbidities, safe abortion and tailored interventions for specific subgroups. While some policies and programmes were identified that address AYSRH, robust programme evaluation processes or evidence of follow-through or implementation of government strategies are lacking.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This is the first systematic review to comprehensively map adolescent and youth sexual and reproductive health (SRH) policies, programmes and research in South Sudan.
⇒ The review focuses on a wide range of inter-related SRH themes, enabling readers to identify potential disconnects, intersections and opportunities for research, policies or programming.
⇒ The review is limited by only reporting on resources that are available online, potentially excluding the work of smaller organisations.
⇒ There were time and resource restraints on the extent to which stakeholder websites could be reviewed, and we were only able to review documents published in English.
⇒ It was beyond the scope of this article to perform a full policy analysis to better understand barriers and enablers to SRH policy implementation in South Sudan.

INTRODUCTION

It is estimated that nearly 12% of those in need of humanitarian assistance globally are adolescents and youth (AY) who face unique and increased risks in humanitarian crisis settings.[1] This period in a person's life is a crucial time for their health and development and will play a role in how they see themselves in the world and how they will participate and contribute to their communities, now and in the future.[1 2] The upheaval of crisis settings prevents AY from accessing essential mental, emotional and physical health resources, including reproductive health services.[3] While guidelines such as the Minimum Initial Services Package (MISP) for sexual and reproductive health (SRH)[4] encourage an inclusive, coordinated and comprehensive response to crises that include the voices of AY impacted in humanitarian situations to help reduce SRH-related morbidity and mortality, there are still challenges faced in

Table 1 Eligibility criteria

Eligibility criteria	Inclusion	Exclusion
Reports	All types of studies as well as policy or programme reports. Reports must either be focused solely on adolescents and youth (AY) or include AY in the study or target population and included disaggregated data and results relevant to those populations.	Any studies, policies, reports or programmes that do not include AY in the target population or do not include relevant or significant disaggregated results for AY; programmes that do not have information on implementation or evaluation measures; clinical case studies
Concept	Reports related to any aspect of sexual and reproductive health (SRH) including pregnancy, sexually transmitted infection/HIV, abortion, menstrual health, child marriage, gender-based violence, transactional sex.	Reports focused solely on health systems outcomes or other outcomes that are not SRH
Participants	Youth and/or adolescents.	Children under the age of 10 or adults over the age of 35
Context	South Sudan.	Any country or area that is not South Sudan, including the area that is now South Sudan but before independence in 2011
Timeframe	2011 to June 2023.	Any studies that were conducted or published before 2011

meeting the specific needs of adolescents, who are at a nexus of various developmental challenges.[1 2 5]

Consistent and accurate data are often difficult to collect in humanitarian settings due to the unstable and unpredictable situations in both acute and protracted crisis situations,[6] but studies have shown that in conflict and crisis settings there is an increase in unintended pregnancy, maternal mortality and morbidity, and exposure to gender-based and sexual violence, and limited or no access to contraception and safe abortion.[7] With devasated health systems and infrastructure and unpredictable security situations, case studies have documented severe disruptions to national healthcare systems, directly impacting the SRH services available.[8] The disruption to local systems is further exacerbated by limitations in funding from humanitarian agencies. Funding and resources dedicated to SRH are often the first to be cut from intervention efforts.[9] In fact, the United Nations (UN) appeals for funding SRH work dropped by 50% between 2021 and 2022, weakening healthcare systems that would normally provide SRH services.[9] These gaps in healthcare structures, including workforce, delivery and financing, have been identified as significant barriers to implementing SRH services in crisis situations.[8]

South Sudan gained independence from Sudan in 2011. However, conflict erupting in 2013, along with repeated climate disasters, has exacerbated poverty, displacement and insecurity and, despite a peacebuilding agreement being signed in 2018, South Sudan remains in a humanitarian crisis situation.[10] Mirroring global patterns, AY face increased vulnerabilities related to SRH, with adolescent girls and young women (AGYW) especially vulnerable to impacts from the disruption of SRH serivces. Due to the lack of SRH services such as antenatal care and family planning (FP), the inability to access essential medicines and other complications before, during and after birth, South Sudan has the highest maternal mortality ratio in the world, at 1223 deaths per 100 000 live births.[11 12] The birth rate of 15–19-year-olds is 158 per 1000 girls of that age.[13] Early pregnancy is a leading cause of death for girls in that age range in low- and middle-income countries, and in South Sudan, maternal mortality is higher for girls aged 15–19 than other age groups.[14 15] Girls displaced by conflict are at a greater risk of being married before the age of 18; and over half of the girls 18 and under are married in South Sudan.[14 16] Among other East African nations, South Sudan ranks second in gender-based violence (GBV), with over 40% of married women aged 15–49 reporting having experienced intimate-partner violence (IPV).[17]

As the government and other stakeholders strive to address the unique challenges, strengths and needs of AYSRH in South Sudan, it is vital to understand the full scope of research, programmes and policies that exist which address these areas, both to address the immediate SRH risks faced by AY populations and to invest in the future and recovery of the country.[6]

This review aims to

1. Provide an overview of research, policies and programmes addressing the SRH needs of AY since South Sudan gained independence in 2011.
2. Identify the gaps and potential areas of focus that will help drive forward change in AYSRH in South Sudan.

METHODS

A systematic scoping review was conducted based on the established study protocol (online supplemental file 1), following the Joanna Briggs Institute criteria for evidence synthesis[18] and reported based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses.[19] Academic literature databases and

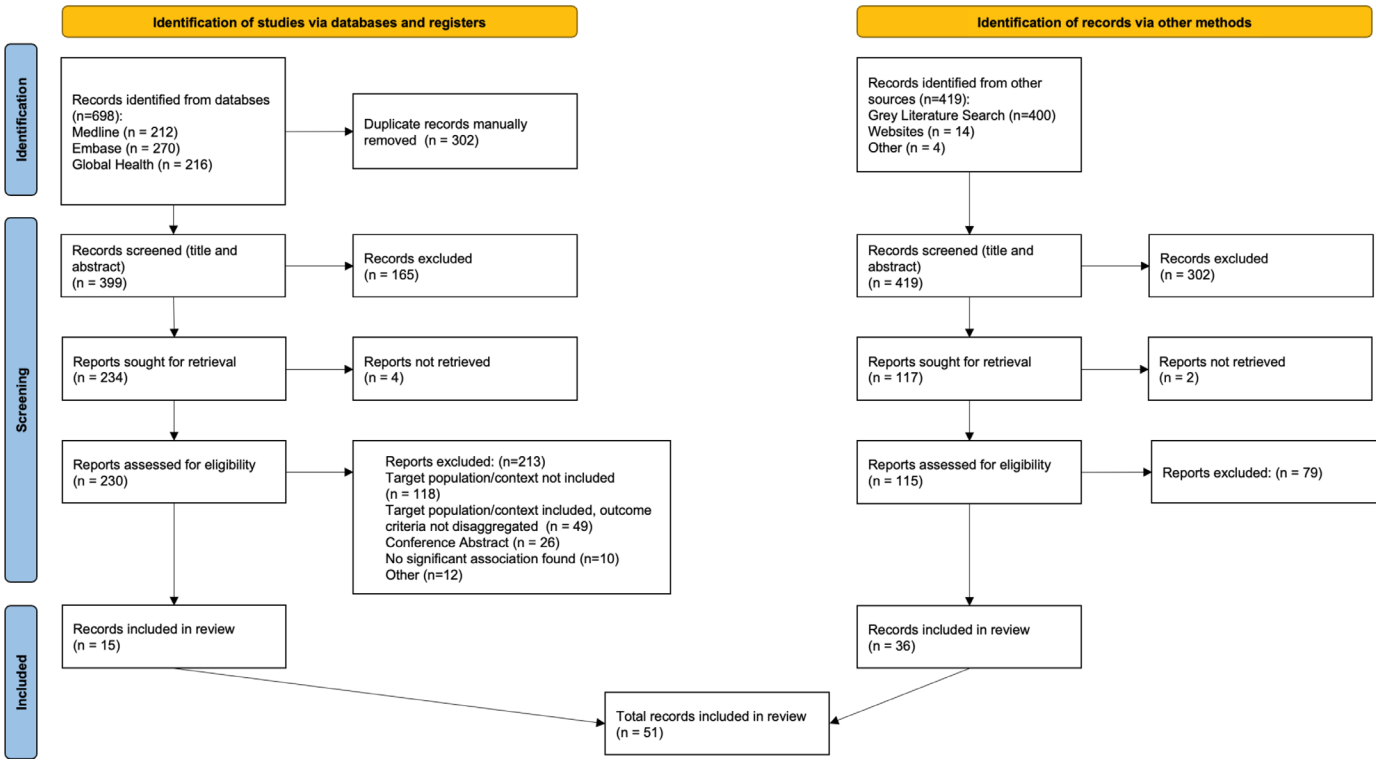

Figure 1 Adapted Preferred Reporting Items for Systematic Reviews and Meta-Analyses[20] flow diagram.

grey literature sources were searched to understand the current AYSRH research, programme and policy landscape in South Sudan. See online supplemental file 2 for key terms, definitions, and acronyms.

Selection/eligibility criteria

Eligibility criteria (table 1) were developed through conversations with the Bridge Network Organization, a research organisation with expertise in SRH based in South Sudan and based on criteria used for a similar review being conducted in Sudan by members of the Afya Consortium, a collaborative research programme conducting research on public health threats in populations affected by crises.[20]

Search strategy

Medline, Embase and Global Health were searched between 9 July 2011, that is, South Sudan's independence date, and 20 June 2023. Results were exported to Mendeley Reference Manager. Manually deduplicated citations were exported to Rayyan,[21] an online tool to assist in systematic literature reviews. Between 29 June and 13 July 2023, a grey literature search was conducted using the Google search engine and the first 100 results of each search were screened. Key stakeholders were identified from search results (online supplemental file 3). A separate search was performed on each entities' website.

See online supplemental file 4 for detailed search strategies.

Study selection, data extraction and analysis

Screening was conducted independently by two reviewers (JC and NSS). Each of these two authors screened citations by title and abstract for relevance. Full texts of articles included at this stage were then screened to assess for eligibility against the inclusion criteria. This double-screening approach offered the following two advantages: (1) it ensures that the study inclusion and exclusion criteria (table 1) were applied consistently, thus avoiding systematic errors; and (2) random errors such as careless mistakes could be identified and corrected.

Data from included articles were extracted in Microsoft Excel by JC according to the following categories: title, year published, authors, author institution, funding source, umbrella study, publication type; study design; methodology, data collection dates; target population, sample size, setting, thematic focus; aim, summary of results.

All data were analysed using narrative synthesis due to heterogeneity in article types and outcomes.

Critical appraisal

All peer-reviewed articles and publications reporting on a study were appraised for quality by the lead author (JC) using the Mixed Method Appraisal Tool (MMAT),[22] which was developed to appraise the quality of empirical studies. It includes five categories for each type of study that is being assessed and five additional criteria for mixed-methods studies. There is no ranking system associated with the MMAT but based on systems used in other studies,[7 23] appraisal results were ranked as high

≥67%; medium ≥34%; low <34%. A secondary appraisal was completed by NSS.

Patient and public involvement

There was no involvement of patients or the public in the design or conduct of this review.

RESULTS

The lead author (JC) screened titles and abstracts of 399 records from peer-reviewed databases and 419 articles from other sources. After full-text screening, 51 articles (19 peer-reviewed studies[24–42] and 32 grey literature articles[14 43–73]) were included in the review (figure 1). A secondary review of all titles was completed by author NSS.

Characteristics of results

Of the 32 grey literature articles identified, 8 were Republic of South Sudan policy or strategy documents related to AYSRH.[52–59] Of these, five are strategies,[52 53 55 57 59] two are policies[54 58] and one is a set of guidelines.[56] Three of the strategies[55 57 59] are considered up to date (defined as spanning 2023), and the remaining two documents have strategy end dates listed in 2016[53] and 2020.[52]

There were also 10 papers or reports produced by private or government organisations[14 43–51] and 14 records describing AYSRH programmes in South Sudan.[60–72]

The peer-reviewed results included seven qualitative studies,[26 28 31 36 38 39 42] five cross-sectional quantitative studies,[27 30 32 34 35] six mixed-method studies,[24 25 33 37 40 41] and one retrospective study.[29]

Online supplemental file 5 includes a table summarising all included peer-reviewed and grey literature, and online supplemental file 6 includes a table of all additional extracted data.

Critical appraisal

The majority (n=22) of studies scored as high quality.[14 24–29 31–34 36–38 40 42–44 46 48 50 51] The remaining studies (n=7) scored medium[30 35 39 41 45 47 49] (online supplemental file 7). Two studies that were originally included only met one criterion in their respective category and were ultimately excluded from the results.[74 75] Note that all articles or reports were appraised separately from any larger study they may have been associated with.

Results mapped by location

The map in figure 2 notes where research or programmes was reported to have taken place. Central Equatoria State (excluding Juba Protection of Civilians (POC) and

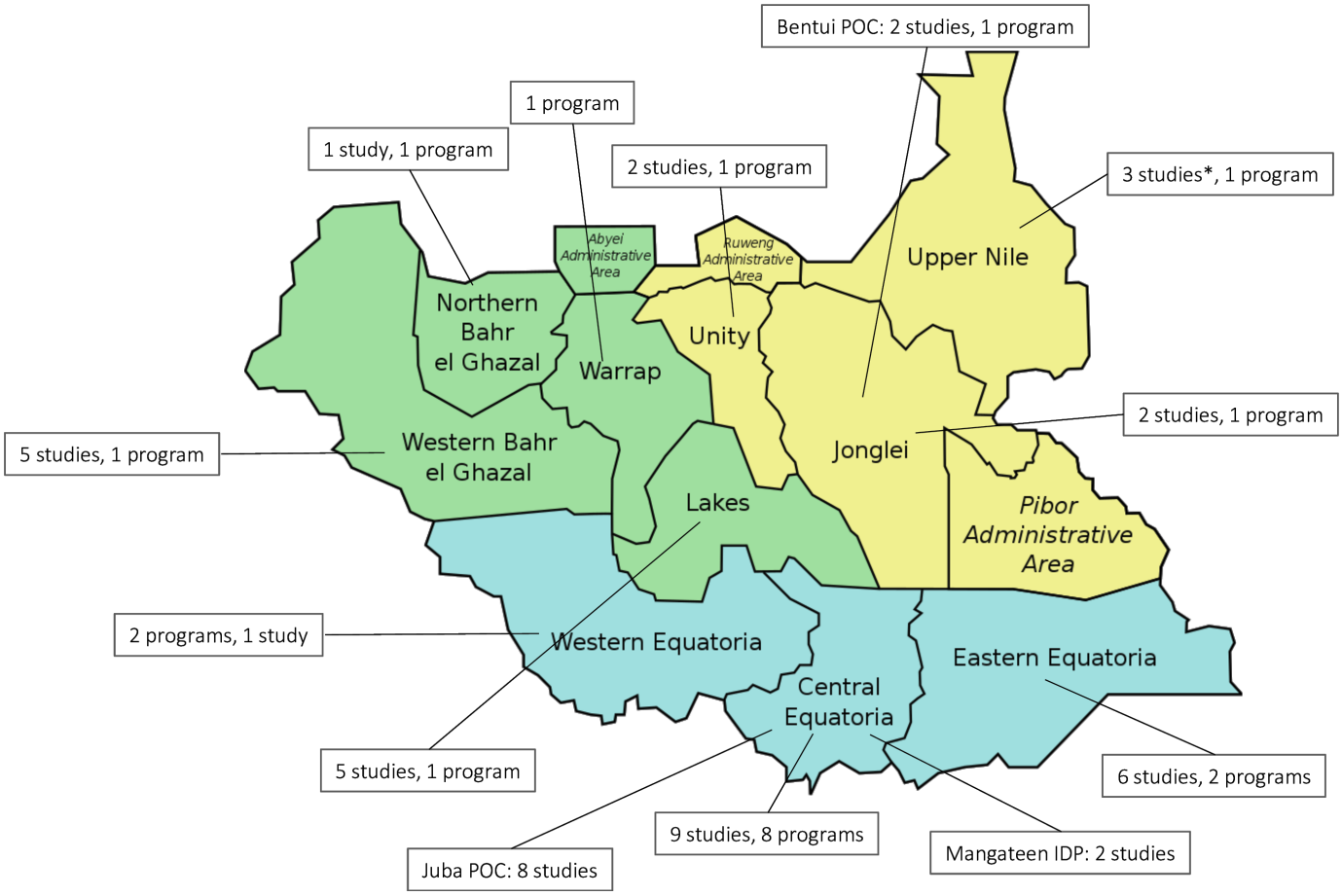

Figure 2 Map of adolescent and youth sexual and reproductive health research studies and programmes in South Sudan.

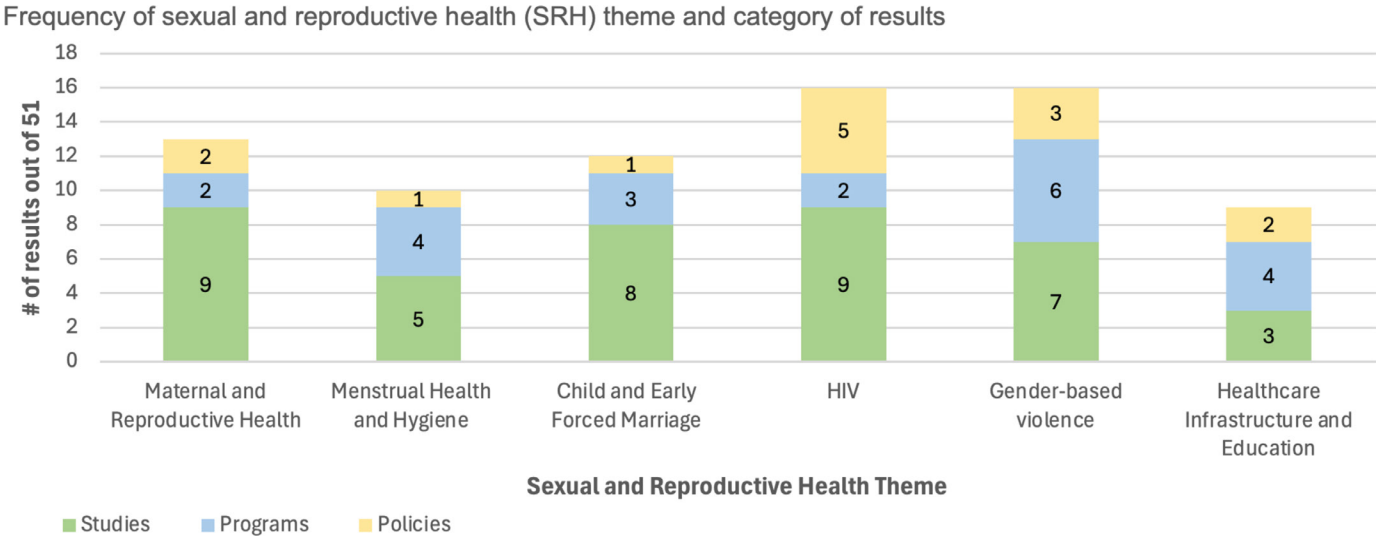

Figure 3 Results by adolescent and youth sexual and reproductive health theme and type of resource.

Mangateen IDP), which is home to the capital city of Juba, had the highest number of both studies[27 29 31 33–35 39 43 46] (n=9) and programmes[62–64 66 68 69 71] (n=8) focused on the state. Juba POC also had eight studies focusing on their community, although the only programming explicitly reported in a displaced persons camp was in Bentui POC in Unity State.[61]

Results by SRH theme

Several concepts related to AYSRH were consistent throughout the literature and programmes identified through the search. Additionally, authors reviewed prominent guiding documents in humanitarian AYSRH-focused agencies such as the Inter-Agency Working Group on Reproductive Health in Crisis Field Manual and the MISP to determine concepts and data points that guide work in the field.[76] Based on these concepts, results were grouped into six themes (figure 3). The themes are intended to align with best-practice AYSRH work in humanitarian settings and also call out concepts that emerged as priorities specific to South Sudan. The absence itself of integral aspects of SRH concepts such as abortion access, inclusion of further marginalised populations within AY and experiences of or leading to sex work and sexual exploitation calls attention to gaps in AYSRH research, policies, and programmes in South Sudan.[77]

1. Maternal and reproductive health
2. Menstrual health and hygiene (MHH)
3. Child and early forced marriage (CEFM)
4. HIV
5. GBV
6. Healthcare infrastructure and education

The authors acknowledge many AYSRH challenges in South Sudan coexist or overlap. They are considered separately in this article to better understand specific experiences related to each.

Maternal and reproductive health

As part of a 3-year-long study completed in partnership with local government to better understand SRH in three districts in South Sudan, participants communicated the high value and expectation placed on childbearing in South Sudan.[26 36 42] Researchers identified complexities in the way girls felt about childbearing. Having a child allowed girls to 'make a home' and, because of the high value placed on having children, when a girl was pregnant there was a sense of worth that was associated with that pregnancy.[26 42 77] Conversely, in a study with teenage mothers and pregnant adolescents in Maiwut town, participants identified early marriage and pregnancy as a sign of their lack of agency.[38] The participants in this study discussed the challenges they face as young mothers, particularly the lack of support networks in their life.[38] While the Child Act states that no female child can be expelled from school for becoming pregnant,[58] without support networks, girls find it difficult to continue their education, despite how determined they might be to do so.[38]

There are low levels of knowledge about FP options and contraception is highly stigmatised, especially for adolescents. Focus group discussions (FGDs) conducted with men and women in the Juba POC site found that unmarried women between 18 and 24 misconstrued contraception as an abortion medication.[25] In FGDs carried out by the Inter-Agency Working Group on Reproductive Health in Crises (IAWG) as part of an evaluation of RH services in Maban County, unmarried 18–24-year-old women identified abstinence as the only means of preventing pregnancy.[44] In a separate study in Western Bahr el Ghazal, adolescent FGD participants knew about contraceptive methods, but there was confusion on how or if they worked and participants discussed the stigma and judgement around accessing or taking contraception.[36] In a social norms assessment in 2021, young people discussed coordinating visits to a providers home to avoid the

shame and stigma of being seen accessing SRH services from a clinic, yet providers expressed their hesitancy in discussing or providing FP services to adolescents without their partner or parents' permission. They feared violent retaliation from family or community members who disagreed with the decision.[48] The Women's Integrated Sexual Health programme, a multistakeholder project supported by the International Planned Parenthood Federation, aimed to strengthen healthcare systems, increase access to and uptake of contraception, and build the capacity of community health workers in addressing FP needs; however, no evidence was found that this programme is still in operation.[61]

Early or unintended pregnancy can have severe implications for young girls. There is a high value placed on virginity in South Sudan, which can result in AGYW who become pregnant being forced into a marriage.[37] Marriages as a result of pregnancy are often characterised by violence.[45] In the case of a pregnancy that does not result in marriage, the male is able to pay a 'pregnancy price' of a small number of cattle to the pregnant girls' family in order to take custody of the child once they have reached the age of seven or eight, leaving the mother no options or recourse for keeping her child.[47]

In their focus groups in the Juba POC, Casey *et al* found that attitudes and practices around abortion have shifted since the outbreak of conflict in 2013.[25] Participants reported that there are cases where the family will support an abortion if a young girl becomes pregnant because the pregnancy would mean they would need to forfeit the income they serve to make from a potential marriage.[25] Study participants perceived that unintended pregnancy and abortion rates have increased since 2013, attributing the rise to displacement and family separation.[25]

Menstrual health and hygiene

Puberty education is reported to be provided in schools in South Sudan, but in a Social Norms Assessment conducted in 2022, respondents reported that they found it insufficient.[48] Through peer-led interviews with adolescents in public schools in Juba, Atari *et al* reported that adolescents acknowledge puberty and menstruation as a natural, biological process. However, they still received conflicting and insufficient information on the physiological process and how to manage menstruation or potential resulting pain. This resulted in many adolescents feeling shame or fear at menarche or during menstruation.[31] In a report from Plan International based on research across five sites in South Sudan (Juba, Nimule, Torit, Yei, Lainya), research participants also expressed an overall lack of understanding of MHH. Participants in all studies pertaining to MHH report staying home from school due to challenges in accessing menstrual materials—often due to economic constraints, pain medication and lacking adequate facilities to clean or remove menstrual products and also report experiencing bullying and shaming if peers or family know they are menstruating.[31 41 43 48] In research conducted in 2014, Tamiru *et al* found reports of girls engaging in sexual activities in exchange for menstrual products or money to purchase them.[41]

In multiple studies, girls reported hiding that they are mensturating.[31 48] Atari *et al* report that there is a belief that having sex causes menstruation, so girls can be perceived as immoral when they start bleeding and have reported experiencing physical violence from males in their family when they reach menarche, as punishment.[31]

Programmes like the Menstruation Station in South Sudan aim to provide education on MHH to help remove the stigma, but also train participants on how to sew their own reusable pads to eliminate the need to purchase products regularly.[62] UNFPA and UNICEF have facilitated projects to increase access to menstrual products[60 70] and ensure facilities are clean and include access to clean water.[60]

Child marriage

Despite a child's right to be protected from CEFM through South Sudan's Child Act,[58] rates of CEFM in South Sudan are among the highest in the world.[14] Results from an assessment of social norms in 2022 found that many find it culturally appropriate for someone to marry once they have reached menarche.[48] Reports on CEFM identified gender inequality, deep-rooted social norms, conflict-driven poverty, food insecurity and displacement as major drivers of CEFM in South Sudan.[14 37 38 43 47 48 50]

A report based on Oxfam interviews in Nyal, South Sudan, in 2018 discussed the impact the conflict has had on CEFM.[14] The report notes the historic gender roles and prioritisation of marriage and motherhood for women in South Sudan as a driving force behind CEFM, but FGD participants noted how economic hardship exacerbated by the ongoing conflict has contributed to increased CEFM, noting that the bridewealth—a price a man pays to the girls family in order to marry her—incentivises the practice. Lokot *et al* present findings from a gender assessment conducted by Save the Children in 2019.[37] In their paper, they discuss drivers of CEFM in South Sudan in line with the Oxfam report, noting gender norms valuing virginity and childbearing can perpetuate CEFM. In the study, CEFM was overwhelmingly identified as a source of income for families. Their analysis drew attention to the pressue on young boys to be able to afford or obtain the cattle often needed to pay a bride-price, resulting in conflict between young men, cattle raiding and retaliatory violence and sexual violence.[37]

A briefing paper resulting from the Leave No One Behind research project conducted in 2019 to study early marriage in conflict settings discusses these gendered expectations as well.[47] Study participants, young people who have experienced early marriage, also discussed the three types of marriage that they have seen or experienced, all forced with little-to-no say from the young girl herself: a planned marriage initiated and negotiated by male family members; a marriage resulting from an unintended pregnancy, but in a relationship the young girl had chosen; and forced marriage resulting from sexual

violence, rape or kidnapping by the future husband or their family. In a study conducted in 2015–2016 with women aged 15–64 in Juba, Rumbek and Juba POCs, Ellsberg *et al* discuss that, because of the high value placed on 'purity' for girls in South Sudan, there is a perceived 'incentive for young men to rape girls' as then the girl would be seen as 'spoilt' and the rapist would not have to pay the bride-price to marry her.[33]

Buchanan *et al* found that girls who married young were vulnerable to sexual violence in their marriage as well.[14] The report also highlighted the consequences of CEFM related to maternal health of the young girl if she experiences an early pregnancy in her marriage and ongoing mental health challenges. In multiple studies, AGYW communicated their lack of agency and feelings of hopelessness and loss in the face of child marriage.[14 47 51]

HIV

South Sudan's HIV/AIDS Strategic Plan addresses challenges and opportunities in meeting the needs of adolescents related to HIV, including implementing Differentiated Service Delivery models that will more effectively reach adolescents, such as integrating HIV and SRH services tailored to adolescents into mainstream health services.[59] Clinical guidelines established in 2017 that address treatment and prevention strategies include specific adolescent ART regimes, disclosure parameters and instructions for ensuring youth-friendly services are available to all adolescents.[56] The HIV Strategic Plan encourages implementing in-school programming to address SRH and HIV stigma, prevention and treatment, including social protection factors such as cash transfers and livelihood development programming.[59]

Despite these strategies in place, studies in Nimule and Juba between 2016 and 2018 found that there is a negative perception and low knowledge threshold among young people related to HIV and prevention strategies.[30 35 39 44] Dit *et al* surveyed 65 adolescents in Nimule in 2016 and found that, while they had a fair knowledge of HIV and some knowledge of transmission pathways, there were large misconceptions about the ways HIV can be transmitted, such as through mosquito bites or living in the same house as a person living with HIV.[30] Ismail *et al* conducted a cross-sectional study at the Gynaecological Unit of Juba Teaching Hospital assessing the acceptability of HIV testing among women receiving post-abortion care and found that young women under 25 were less likely to agree to HIV testing than women over the age of 25 in the Unit.[39] Thidor *et al* conducted a hospital-based cross-sectional study in 2015 with mothers at a maternal-child health clinic at Juba Teaching Hospital to assess the knowledge, attitudes and practices of women towards strategies preventing mother-to-child transmission of HIV (PMTCT). They found over half of the participants under the age of 20 had a negative attitude towards PMTCT.[35]

The Eagle Survey, conducted in 2015–2016 with female sex workers and sexually exploited adolescents (FSW/SEA) in Juba and Nimule, and a separate survey conducted in Wau and Yambio in 2019 show that FSW/SEA in South Sudan are disproportionally affected by HIV.[27 28 32] As a recipient of PEPFAR funding, South Sudan has programming designed to reach vulnerable populations, such as those engaging in transactional sex.[57] The Country Operational Plan submitted in 2022[57] lays out the goals and strategies for the DREAMS (Determined, Resilient, Empowered, AIDS-free, Mentored and Safe) programme. DREAMS programming focuses on Juba and aims to target 4023 girls with their outreach, an increase from the 2300 targeted in the previous grant cycle.[57] ACHIEVE, a global consortium of international organisations[72 78–81] and a DREAMS implementing partner, aims to address structural drivers of HIV and provide comprehensive prevention and treatment services by implementing case management services for AGYW and support healthcare systems to adequately reach and provide services to AY seeking care.[72]

Gender-based violence

Like CEFM, AGYW are guaranteed protection against GBV, sexual violence and exploitation through the Child Act.[58] However, in their 2019 study across five sites in the southern part of South Sudan, Lee-Koo *et al* found robust evidence that GBV is still experienced broadly and seen as a threat by AGYW, feared more than other types of violence they are exposed to.[43] A cross-sectional study was carried out in Juba, Rumbek and Juba POCs in 2015–2016 as part of the *What Works Initiative to Prevent Violence against Women and Girls in Conflict Settings*.[82] Based on these data, Murphy *et al* found that over 26% of 15–22-year-olds in Juba POCs had experienced non-partner sexual violence (NPSV), the largest portion of those instances being rape or attempted rape.[40] The study found that 39% of girls in Juba POC, 42% of girls in Rumbek and 43% of all partnered respondents had experienced IPV in the year prior.[40 50]

The study found that age is a significant risk factor for both NPSV and IPV and that conflict is a driver of male-perpetrated violence.[33 40] If their community had been attacked or experienced conflict, girls' odds of experiencing NPSV were 3–7 times higher and odds of experiencing IPV were doubled.[40 50] Participants who agreed with more gender-inequitable norms had an almost fourfold increase in odds of experiencing IPV, with those reporting controlling husbands experiencing an increased likelihood as well.[40] AGYW in Juba and Bentui POCs reported experiencing NPSV when they were travelling outside of their community.[51] There is fear and insecurity around armed officials,[43] and the most common perpetrators were reported to be police or members of another community or tribe.[40] In a mixed-method study with men and women in Juba POCs and Maban refugee camps, Nuer study participants in the Juba POC shared that rape from an opposing ethnic group is considered worse than from someone in their own community.[25] Many would not share the identity of the perpetrator for fear that it would incite violence either towards herself

or against the perpetrator in retaliation for the crime committed.[25] In the *What Works* study, AGYW also reported instances where a girl would be forced to marry the rapist, as they would be considered 'spoilt' for having had sex.[40] Some participants shared that it would be better to terminate a pregnancy experienced as a result of rape than to experience the shame and judgement they would bear in having had sex.[25]

The *What Works* study also found AY are not accessing professional medical or support services or disclosing their experiences of GBV to others.[50] Women over 30 years old had double the odds of disclosing NPSV over 15–19-year-olds.[34] The authors hypothesised that the consequences of disclosure would be greater for younger people considering the value that is placed on virginity,[34 37] the impact that might have on their marriage potential and the expectation that they are able to bring a high bride-price.[25 37 43] In Rumbek over 50% of girls who had experienced violence did not seek professional services; in Juba POC this number was over 70%.[50]

There are limited initiatives in South Sudan working to change norms around GBV and make seeking services more accessible for survivors. International government and NGO-supported *One Stop Centres* were established in Aweil and Akobo to provide more comprehensive and confidential medical, psychosocial and legal services to survivors of GBV and CEFM. The outreach programme coordinated through this multistakeholder initiative has seen some success, with 85% of 743 participants reporting a less acceptable view on GBV after they participated in the project.[65] The National HIV and AIDS Strategic Plan encourages including education on GBV within other health systems, such as HIV treatment and prevention services.[59] The National Reproductive Health Strategic Plan (RHSS) also encourages access to, and AY participation in, education on gender equality and GBV. This includes social and behavioural change communication strategies that engage parents and communities on AYSRH needs.[53] However, the success or implementation of these government strategies is unclear .

At a conference hosted by UNAIDS in 2019, AY created a 'Youth Compact' to help better position themselves to hold stakeholders accountable for their commitments to ending GBV and other SRH issues.[71] In 2016, the South Sudanese Red Cross implemented school clubs to improve dialogue among students on GBV. A report on the programme noted achievements such as enhancing survivor well-being and strengthening access to SGBV information in local communities. They also noted the importance of engaging the community and ensuring access to appropriate resources to respond to SGBV needs in the specific community where programming is implemented.[68] Voices for Change, a local South Sudanese NGO, implemented trainings in schools in Yei that were intended to increase GBV awareness for AGYW.[64] A UNICEF article discusses using their Adolescent Kit—a toolbox of guidance and activities to support AY aged 10–18 in humanitarian crisis—to support South Sudanese AY at risk of GBV to promote positive change in their life through art and innovation.[66]

Healthcare infrastructure and education

This review identified additional policies and programmes that address two interconnected aspects of AYSRH: strengthening the healthcare system to support adolescents and increasing information provided to and participation of AY.

The National Family Planning Policy (NFPP) adopted in 2013[54] and the RHSS,[53] also dated 2013, both include guidelines to strengthen the capacity of clinics, healthcare providers, communities and families in supporting youth and providing adolescent-friendly services across the spectrum of SRH. The NFPP provides directives that CSE, as well as affordable and accessible FP services, should be made available to adolescents.[54] The RHSS echoes this guideline while also emphasising the need to include youth in the work being done.[53]

The Family Planning Technical Strategy[55] is slated for implementation between 2019 and 2023, and a product of the Health Pooled Fund (HPF), a donor-funded multistakeholder programme, partnered with the Ministry of Health (MOH) to implement quality basic health services.[83] This is reportedly the third phase of the HPF, but no data were found on phases I or II. Phase III was intended to support primary care delivery throughout South Sudan. Facets of the plan specifically targeted to adolescents included sensitising healthcare staff on the specific needs of young people and ensuring facilities have appropriate screening rooms or physical spaces to support the needs of AY. There were results frameworks and key indicators laid out within the strategy, but this review found no progress reports or evaluations of implementation.[55]

UNFPA has supported interventions to help ensure age-appropriate and non-discriminatory services are available for AY, integrating SRH and HIV into training for providers, and engaging other stakeholders and community members in conversations related to the SRH needs of AY.[67] Through efforts to support the delivery of CSE, UNFPA has implemented projects that promote youth-led initiatives.[70] Experiences like the National Youth Conference on HIV, SRH and Gender Equality play a key role in engaging youth on these topics and positioning them to remain involved in ongoing efforts.[71] Multiple stakeholders, including government agencies and not-for-profit organisations, came together in 2016 to integrate CSE into life-skills training that already existed within the school system.[67] The project included training for teachers and revised curriculum resources to include aspects of CSE. The project was put on hold in 2016, and no information was identified in this review to determine if it was restarted.[67]

In 2019 the International Rescue Committee carried out a study in Unity State examining models of SRH interventions in humanitarian settings.[49] In South Sudan they analysed results from a 'Core ASRH Intervention Package'

that addressed facility and community-level barriers to AYSRH quality and services in comparison to the 'Core' programming plus Participatory Action Research (PAR) with adolescents and other stakeholders. While the study found that the SRH interventions did improve facility readiness and client experiences compared with the baseline SRH services offered in South Sudan, neither model increased use of ASRH services, suggesting that while the improvements were important, they were not enough to move the needle on AYSRH access to SRH services.[49]

Limited evidence was found of local organisations that are working to empower and educate youth around SRH. The Reproductive Health Association of South Sudan organises a volunteer group of young people who have facilitated peer-to-peer education opportunities and engage youth throughout Juba on issues related to SRH.[69]

DISCUSSION

This is the first known review of the AYSRH research, policy and programme landscape in South Sudan. The results span a variety of thematic areas of SRH and provide important insight into the challenges facing adolescents throughout the country. The themes identified in this review are largely consistent with previous reviews conducted on SRH in humanitarian settings.[7 84 85] The results show that important research has been done that engages youth directly and gives voice to their desire to have better access to SRH services and protective and supportive policies for themselves and their peers. The reports on policies and programmes demonstrate the challenging landscape government and NGOs are working in to implement effective and sustainable programming amidst conflict and natural disasters in the country.

This study has several strengths. It is the first systematic review to comprehensively map AYSRH policies, programmes and research in South Sudan. It also focused on including a wide range of inter-related SRH themes. By painting a picture of research, programming and policies, this review provides the opportunity to examine varied aspects of the SRH landscape and identify potential disconnects or successes in where these may—or may not—intersect. A systematic approach was used throughout the review with clear eligibility requirements and methods of screening, appraisal and synthesis. The review is limited by only reporting on resources that are available online. Programming by smaller organisations is often less likely to be documented,[7] so this could result in missing information on critical work being done. There were time and resource restrictions on the extent to which stakeholder websites could be reviewed. It was beyond the scope of this chapter to perform a full policy analysis to better understand barriers and enablers to all strategy or policy implementation.

The policies and guidelines that are included in this review often provide thoughtful and thorough frameworks for progress and implementation, but there is a lack of follow-through on their application.[14] This sentiment aligns with findings from a scoping review identifying systems gaps that prevent effective implementation of RH programmes in South Sudan.[86] Belaid *et al* identified political and economic factors as major impediments to strategy implementation, but also noted an insufficient investment in the capacity of healthcare facilities and staff. They also found the availability of services and quality of care to be severely lacking. These findings are reflected in this review and identified as challenges in other literature on SRH in humanitarian settings.[87]

As noted earlier in the chapter, major gaps exist in literature and interventions specifically targeting adolescents in integral areas of SRH care. For example, no studies or programming were found that aimed to increase access to or knowledge of medically safe abortions or address the high rates of maternal mortalities and morbidities among adolescents. More work is needed in this area given that nearly half (46%) of all unintended pregnancies in South Sudan end in an abortion,[88] and unsafe abortion is a leading cause of maternal mortality.[89] While evidence-based guidelines exist on incorporating MHH in humanitarian settings,[90] MHH was rarely mentioned in publications identified in a background literature search on SRH in humanitarian settings, apart from access to MHH products[7 91] or in discussing needs of very young adolsescents (VYA).[92] Menstruation plays an integral role in the health and safety of adolescents and has increasingly been recognised internationally as essential in comprehensive SRH.[93] More research is needed on how to effectively incorporate MHH in SRH dialogue in South Sudan.

Consistent with previous reviews conducted in humanitarian settings,[7 94] further marginalised adolescent populations such as AY with disabilities, queer youth or VYA were missing from the literature. Limited studies included these populations, and no effort was made to identify or disaggregate data specific to queer youth or those with disabilities in broader studies or programmes.[7 93]

While there were studies that discussed SRH needs and practices of men and boys through a gender-roles lense, research and programming did not explore other challenges within that population.[37] We know from the literature that this population is also at an increased risk of sexual violence in conflict settings[95] and that the area is severely under-researched globally.[96]

Deep-rooted social norms were identified as a major driver of various forms of GBV. In line with other humanitarian contexts, the limited interventions targeting or including men in South Sudan have been found to be particularly effective at changing behaviours related to GBV[23] and could be a lesson in guiding programming or research on adapting these interventions to South Sudan more broadly.

Recommendations

Programme designers or policymakers should consider the unique context and population with which a study was carried out when applying findings in order to highlight

pockets of concentrated risk or unique protective characteristics of an area or population.

A significant number of studies (n=44) were excluded from this review for failing to disaggregate results for AY. As noted in other reports and guidance,[2 43] it is important to prioritise the disaggregation of data by age and sex to fully understand the specific needs of all AY and to ensure those findings are actionable. Additionally, further—and more inclusive—research is needed on specific needs of particularly at-risk populations such as LGBTQ youth, SEA, and youth living with disabilities in South Sudan.

In line with internationally recognised guidelines,[2] government, NGOs, and researchers should continue to engage AY in the design and implementation process. While the research is limited, studies have shown that effectively engaging youth can have a positive effect on programme outcomes.[91 97] Lessons should be taken from experiences in these humanitarian contexts and emphasis should be placed on further research, such as the PAR framework used by IRC,[49] in understanding how best to engage AY in crises response in South Sudan.

CONCLUSION

This review highlights that while research and reporting have been done on AYSRH in South Sudan, there are significant gaps in addressing the full scope of SRH services essential in humanitarian settings and that key and vulnerable populations have been excluded from research, policies and programming. Additional resources and continued collaboration are needed to conduct relevant and inclusive research, administer evidence-based interventions for AY and ensure follow-through on strategies and policies addressing AYSRH. AY constitute a large portion of the population in South Sudan, and addressing their SRH needs is vital for their well-being now and in the future.

X Neha S Singh @neha_s_singh

Acknowledgements The authors would like to thank other members of the Afya Consortium for feedback and support throughout the research and writing process.

Contributors NSS, CM, CH and ZW conceptualised the review. JC and NSS led the development of the protocol and all authors provided input on inclusion criteria and search strategies. JC ran the database and grey literature search and completed the screening, full-text review and data extraction process. NSS completed a secondary review of selected articles. JC drafted the manuscript with support, feedback and critical review provided by NSS. CM, CH and ZW provided feedback on the manuscript. NSS is the guarantor of this article.

Funding This study was funded by by the Centers for Disease Control and Prevention of the US Department of Health and Human Services (HHS) as part of financial assistance award U01GH002319. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, CDC/HHS or the U.S. Government.

Map disclaimer The inclusion of any map (including the depiction of any boundaries therein), or of any geographic or locational reference, does not imply the expression of any opinion whatsoever on the part of *BMJ* concerning the legal status of any country, territory, jurisdiction or area or of its authorities. Any such expression remains solely that of the relevant source and is not endorsed by *BMJ*. Maps are provided without any warranty of any kind, either express or implied.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval This review was deemed exempt from needing ethical approval by the London School of Hygiene and Tropical Medicine's Institutional Review Board as only secondary data and openly accessible data were included in the review.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data sharing not applicable as no datasets generated and/or analysed for this study.

ORCID iD

Neha S Singh http://orcid.org/0000-0003-0057-121X

REFERENCES

1 UNFPA, Save the Children USA. Adolescent sexual and reproductive health toolkit for humanitarian settings: a companion to the inter-agency field manual on reproductive health in humanitarian settings. 2009.
2 UNICEF. NRC for the compact for young people in humanitarian action. iasc, with us & for us: working with and for young people in humanitarian and protracted crises. 2020.
3 Robles OJ, Katz R, Rastogi S. I'm here: adolescent girls in emergencies. 2014.
4 Inter-agency Working Group on Reproductive Health in Crises. Inter-Agency Field Manual on Reproductive Health in Humanitarian Settings, 2019. Available: https://iawgfieldmanual.com/manual [Accessed 8 Dec 2024].
5 Inter-agency Working Group on Reproductive Health in Crises. Adolescent Sexual and Reproductive Health Needs in Emergencies, Available: https://iawg.net/resources/adolescent-sexual-and-reproductive-health-needs-in-emergencies-2 [Accessed 8 Dec 2024].
6 Assessment in emergencies. United Nations Population Fund, Available: https://www.unfpa.org/resources/assessment-emergencies [Accessed 20 Aug 2023].
7 Jennings L, George AS, Jacobs T, *et al*. A forgotten group during humanitarian crises: a systematic review of sexual and reproductive health interventions for young people including adolescents in humanitarian settings. *Confl Health* 2019;13:57.
8 Singh NS, Ataullahjan A, Ndiaye K, *et al*. Delivering health interventions to women, children, and adolescents in conflict settings: what have we learned from ten country case studies? *The Lancet* 2021;397:533–42.
9 5 Things to know about Humanitarian Crises & Sexual and Reproductive Health - YouTube, Available: https://www.youtube.com/watch?v=RaGg8TVR6Cc [Accessed 20 Aug 2023].
10 World Bank. South Sudan Overview: Development news, research, data, Available: https://www.worldbank.org/en/country/southsudan/overview [Accessed 17 Aug 2023].
11 Maternal mortality ratio, Available: https://www.cia.gov/the-world-factbook/field/maternal-mortality-ratio/country-comparison/ [Accessed 21 Aug 2023].
12 WHO. Analytical fact sheet maternal mortality: the urgency of a systemic and multisectoral approach in mitigating maternal deaths in africa rationale. 2023.
13 World Population Dashboard -South Sudan. United Nations Population Fund, Available: https://www.unfpa.org/data/world-population/SS [Accessed 17 Aug 2023].

14 Buchanan E. Born to Be Married': Addressing Child, Early and Forced Marriage. Nyal, South Sudan, 2018.
15 Child, Early, and Forced Marriage Resource Guide, 2015. Available: https://www.usaid.gov/documents/1865/child-early-and-forced-marriage-resource-guide
16 World Population Dashboard, Available: https://www.unfpa.org/data/world-population-dashboard [Accessed 20 Aug 2023].
17 UNFPA South Sudan. South Sudan ranks second in GBV prevalence rate in East Africa – a new study indicates, Available: https://southsudan.unfpa.org/en/news/south-sudan-ranks-second-gbv-prevalence-rate-east-africa-%E2%80%93-new-study-indicates [Accessed 20 Aug 2023].
18 JBI Manual for Evidence Synthesis. Chapter 11: scoping reviews. 2020.
19 PRISMA, Available: http://www.prisma-statement.org/?AspxAutoDetectCookieSupport=1 [Accessed 13 Aug 2023].
20 Afya Consortium. LSHTM, Available: https://www.lshtm.ac.uk/research/centres-projects-groups/afya-consortium [Accessed 25 Aug 2023].
21 Rayyan - AI Powered Tool for Systematic Literature Reviews, Available: https://www.rayyan.ai/ [Accessed 13 Aug 2023].
22 Nha Hong Q, Pluye P, Fàbregues S, *et al*. Mixed Methods Appraisal Tool (MMAT) Version 2018 User Guide, Available: http://mixedmethodsappraisaltoolpublic.pbworks.com/
23 Warren E, Post N, Hossain M, *et al*. Systematic review of the evidence on the effectiveness of sexual and reproductive health interventions in humanitarian crises. *BMJ Open* 2015;5:e008226.
24 Bayo P, Belaid L, Tahir EO, *et al*. "Midwives do not appreciate pregnant women who come to the maternity with torn and dirty clothing": institutional delivery and postnatal care in Torit County, South Sudan: a mixed method study. *BMC Pregnancy Childbirth* 2020;20:250.
25 Casey SE, Isa GP, Isumbisho Mazambi E, *et al*. Community perceptions of the impact of war on unintended pregnancy and induced abortion in Protection of Civilian sites in Juba, South Sudan. *Glob Public Health* 2022;17:2176–89.
26 Kane S, Rial M, Matere A, *et al*. Gender relations and women's reproductive health in South Sudan. *Glob Health Action* 2016;9:33047.
27 Hakim AJ, Bolo A, Werner M, *et al*. High HIV and syphilis prevalence among female sex workers in Juba, South Sudan. *PLoS ONE* 2020;15:e0239543.
28 Okiria AG, Achut V, McKeever E, *et al*. High HIV and syphilis prevalence among female sex workers and sexually exploited adolescents in Nimule town at the border of South Sudan and Uganda. *PLoS ONE* 2023;18:e0266795.
29 Sube KLL, Seriano OF, Jaja S, *et al*. HIV and TB co-infection in south Sudan: a three year retrospective study. *South Sudan Medical Journal* 2014;7:86–90.
30 Dit MBJ, Bodilsen A. HIV/AIDS: knowledge, attitudes and practices among adolescents in Nimule, South Sudan. *South Sudan Medical Journal* 2018;11:13–6. Available: http://www.southsudanmedicaljournal.com/assets/files/Journals/vol_10_iss_2_may_17/SSMJ%2011%201%20Full%20Draft%20Final%201.pdf
31 Atari DO, Tariquzzaman SK, Nancy A. Knowledge and Perceptions on Menstrual Hygiene Management Among School-Going Adolescent Girls in South Sudan. *J Adolesc Res* 2024;39:361–86.
32 Bolo A, Ochira P, Hakim AJ, *et al*. Limited awareness of HIV Status hinders uptake of treatment among female sex workers and sexually exploited adolescents in Wau and Yambio, South Sudan. *BMC Public Health* 2023;23:692.
33 Ellsberg M, Ovince J, Murphy M, *et al*. No safe place: Prevalence and correlates of violence against conflict-affected women and girls in South Sudan. *PLoS ONE* 2020;15:e0237965.
34 Murphy M, Ellsberg M, Contreras-Urbina M. Nowhere to go: disclosure and help-seeking behaviors for survivors of violence against women and girls in South Sudan. *Confl Health* 2020;14:6.
35 Thidor GTY, August F. Prevention of mother-to-child transmission of HIV: knowledge, attitudes and practice among pregnant women at Juba Teaching Hospital. *South Sudan Medical Journal* 2019;12:12–6. Available: http://www.southsudanmedicaljournal.com/assets/files/Journals/vol_12_iss_1_feb_19/SSMJ%2012%201%20Full%20Issue%20Final.pdf
36 Kane S, Kok M, Rial M, *et al*. Social norms and family planning decisions in South Sudan. *BMC Public Health* 2016;16:1183.
37 Lokot M, DiPangrazio L, Acen D, *et al*. The 'Demand Side' of Child Marriage. *Journal of Humanitarian Affairs* 2022;4:25–35.
38 Corwith A, Ali F. The 2020 Pandemic in South Sudan: An Exploration of Teenage Mothers' and Pregnant Adolescent Girls' Resilience and Educational Continuity. *Journal on Education in Emergencies* 2022;8:136.
39 Ismail LW, Qureshi ZP, Ojwang SB. The acceptability of HIV testing among women receiving post abortion care. *South Sudan Medical Journal* 2019;12:101–5.
40 Murphy M, Bingenheimer JB, Ovince J, *et al*. The effects of conflict and displacement on violence against adolescent girls in South Sudan: the case of adolescent girls in the Protection of Civilian sites in Juba. *Sex Reprod Health Matters* 2019;27:1601965.
41 Murat Sahin MS, Selamawit Tamiru ST, Kuribachew Mamo KM, *et al*. Towards a sustainable solution for school menstrual hygiene management: cases of Ethiopia, Uganda, South-Sudan, Tanzania, and Zimbabwe. *Waterlines* 2015;34:92–102.
42 Kane S, Miedema E, Dieleman M, *et al*. You have a child who will call you "mama" : understanding adolescent pregnancy in South Sudan. *Glob Health Action* 2019;12:1553282.
43 Lee-Koo K, Jay H. Adolescent girls in crisis: voices from south sudan. 2018.
44 Government of the republic of south sudan ministry of health. An Evaluation of Reproductive Health Service Provision in Maban County, Upper Nile State. South Sudan,
45 Sudan S, Moran M, Howe K, *et al*. Experiences of Early Pregnancy among Displaced Female Youth in Experiences of Early Pregnancy among Displaced Female Youth in South Sudan, Available: https://reporting.unhcr.org/document/1799
46 South Sudan Women Empowerment Network. Initial Assessment and Mapping: Reducing Inequality and Gender-Based Violence in South Sudan, 2021. Available: https://www.un.org/sexualviolenceinconflict/countries/south-sudan/
47 Howe K, Stites E, Moran M, *et al*. Perspectives on early marriage: the voices of female youth who married under the age of 18. 2022.
48 South Sudan Social Norms Assessment, 2022. Available: www.USAIDMomentum.org
49 Blackwell A, Loewen S, Baumgartner S, *et al*. Nathaly spilotros, they know best. 2020.
50 Murphy M, Bingenheimer J, Ovince J, *et al*. Violence against adolescent girls: trends and lessons for east africa. 2018.
51 Murphy M, Blackwell A, Ellsberg M, *et al*. No Safe Place Full Report; 2017.
52 South sudan social and behavioural strategy for hiv and aids prevention. 2019. Available: www.iom.int
53 Reproductive health strategic plan. Government of South Sudan; 2013.
54 National family planning policy. Government of South Sudan; 2013.
55 Health pooled fund. Family Planning Technical Strategy; 2019.
56 Government of South Sudan. Consolidated clinical guidelines on use of antiretroviral drugs for hiv treatment and prevention. 2017.
57 PEPFAR Country Operational Plan (COP) 2022. Strategic direction summary. 2022.
58 Rights of the child with respect to certain types of treatment. Government of South Sudan; 2008.
59 National hiv and aids strategic plan 2021-2023 towards an hiv and aids. Free South Sudan; 2020.
60 Managing the monthly visitor | UNICEF South Sudan, Available: https://www.unicef.org/southsudan/stories/managing-monthly-visitor [Accessed 16 Aug 2023].
61 IPPF. About WISH, Available: https://www.ippf.org/about-wish
62 The Menstruation Station in South Sudan — My Period is Awesome, Available: https://www.myperiodisawesome.com/blog/aayo-intro [Accessed 16 Aug 2023].
63 Girls Not Brides - South Sudan Women Empowerment Network, Available: https://sswen.org/girlsnotbrides/ [Accessed 16 Aug 2023].
64 Yei – Voice for Change, Available: https://vfcss.org/programs/yei/ [Accessed 16 Aug 2023].
65 One-stop care centre helps women amid South Sudan's epidemic of violence | Africa Renewal, Available: https://www.un.org/africarenewal/news/one-stop-care-centre-helps-women-amid-south-sudan%E2%80%99s-epidemic-violence [Accessed 16 Aug 2023].
66 Adolescents in Humanitarian Situations - Adolescent Kit, Available: https://www.adolescentkit.org/countries/south-sudan.html [Accessed 16 Aug 2023].
67 CSE scale-up in practice: case studies from eastern and southern africa. 2017.
68 Red Cross and Red Crescent. n.d. Sexual and Gender Based Violence: Good Practices from South Sudan.
69 Reproductive Health Association of South Sudan - Facebook, Available: https://www.facebook.com/RHASSSOUTHSUDAN/ [Accessed 10 Aug 2023].
70 UNFPA South Sudan. Comprehensive Sexuality Education, Available: https://southsudan.unfpa.org/en/topics/comprehensive-sexuality-education-2 [Accessed 10 Aug 2023].

71 Empowering young people in South Sudan, Available: https://rstesa.unaids.org/highlights/2019/item/214-empowering-young-people-in-south-sudan [Accessed 10 Aug 2023].
72 ACHIEVE in South Sudan | Pact, Available: https://www.pactworld.org/library/achieve-south-sudan [Accessed 28 Aug 2023].
73 UNFPA South Sudan. Adolescent Sexual Reproductive Health, Available: https://southsudan.unfpa.org/en/topics/adolescent-sexual-reproductive-health [Accessed 10 Jun 2023].
74 Vincent G, Alemu FM. Factors contributing to, and effects of, teenage pregnancy in Juba. *South Sudan Medical Journal* 2016;9:28–31.
75 Ujjiga TTA, Omolo JO, Oaketch M, *et al*. Risk factors associated with postpartum haemorrhage at Juba Teaching Hospital, South Sudan, 2011. *South Sudan Medical Journal* 2014;7:52–6.
76 IAWG. Inter-Agency Working Group on Reproduction Health in Crises, Available: https://iawgfieldmanual.com/manual [Accessed 15 Aug 2023].
77 South Sudan Health Action and Research Project (SHARP) - KIT Royal Tropical Institute, Available: https://www.kit.nl/project/south-sudan-health-action-and-research-project-sharp/ [Accessed 15 Aug 2023].
78 No Means No Worldwide, Available: https://www.nomeansnoworldwide.org/ [Accessed 28 Aug 2023].
79 Home - WI-HER, Available: https://wi-her.org/ [Accessed 28 Aug 2023].
80 Africa | Palladium: Our Global Impact, Available: https://ogi.thepalladiumgroup.com/africa/ [Accessed 28 Aug 2023].
81 South Sudan - Jhpiego, Available: https://www.jhpiego.org/countries-we-support/south-sudan/ [Accessed 28 Aug 2023].
82 What Works - Home, Available: https://www.whatworks.co.za/ [Accessed 11 Aug 2023].
83 HPF South Sudan Who We Are - HPF South Sudan, Available: https://hpfsouthsudan.org/who-we-are/ [Accessed 23 Aug 2023].
84 Munyuzangabo M, Khalifa DS, Gaffey MF, *et al*. Delivery of sexual and reproductive health interventions in conflict settings: a systematic review. *BMJ Glob Health* 2020;5:e002206.
85 Foster AM, Evans DP, Garcia M, *et al*. The 2018 Inter-agency field manual on reproductive health in humanitarian settings: revising the global standards. *Reprod Health Matters* 2017;25:18–24.
86 Belaid L, Bayo P, Kamau L, *et al*. Health policy mapping and system gaps impeding the implementation of reproductive, maternal, neonatal, child, and adolescent health programs in South Sudan: a scoping review. *Confl Health* 2020;14:20.
87 Singh NS, Ataullahjan A, Ndiaye K, *et al*. Delivering health interventions to women, children, and adolescents in conflict settings: what have we learned from ten country case studies? *Lancet* 2021;397:533–42.
88 Guttmacher Institute. South Sudan, Available: https://www.guttmacher.org/regions/africa/south-sudan [Accessed 23 Aug 2023].
89 Abortion. Available: https://www.who.int/news-room/fact-sheets/detail/abortion [Accessed 23 Aug 2023].
90 A toolkit for integrating menstrual hygiene management (mhm) into humanitarian response. 2017. Available: www.elrha.org/r2hc
91 Adolescent Girls in Disaster & Conflict: Interventions for Improving Access to Sexual and Reproductive Health Services, 2016. Available: www.unfpa.org
92 Schlecht J, Lee C, Kerner B, *et al*. Prioritizing programming to address the needs and risks of very young adolescents: a summary of findings across three humanitarian settings. *Confl Health* 2017;11.
93 The power of integration: integrating menstrual health and hygiene, and sexual and reproductive health and rights is a pathway for gender equality. 2023.
94 Tanabe M, Nagujjah Y, Rimal N, *et al*. Intersecting Sexual and Reproductive Health and Disability in Humanitarian Settings: Risks, Needs, and Capacities of Refugees with Disabilities in Kenya, Nepal, and Uganda. *Sex Disabil* 2015;33:411–27.
95 Olaluwoye T, Hoban E, Connors P, *et al*. Sexual Violence Against Men in Conflict and Post-Conflict Settings: A Qualitative Research Methodology. *Am J Mens Health* 2022;16:15579883221084496.
96 Broban A, Van den Bergh R, Russell W, *et al*. Assault and care characteristics of victims of sexual violence in eleven Médecins Sans Frontières programs in Africa. What about men and boys? *PLoS One* 2020;15:e0237060.
97 Fongkaew W, Fongkaew K, Suchaxaya P. Early adolescent peer leader development in HIV prevention using youth-adult partnership with schools approach. *J Assoc Nurses AIDS Care* 2007;18:60–71.