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# A Systematic Review of Sexual and Reproductive Health Needs, Experiences, Access to Services, and Interventions among the Rohingya and the Afghan Refugee Women of Reproductive Age in Asia

## Abstract

**Introduction:** Approximately 9.2 million refugees live in Asia, with most originating from Afghanistan and Myanmar, and half of them are women, girls, and children. Humanitarian crises disrupt the existing health-care system, limiting access to sexual and reproductive health (SRH) services. This review explores the SRH status of Afghan and Rohingya refugee women of reproductive age in Asia and their needs and experiences in accessing these services and commodities. **Materials and Methods:** We used the PRISMA checklist and searched for qualitative and quantitative peer-reviewed studies from five online bibliographic databases, SCOPUS, EMBASE (Ovid), MEDLINE (Ovid), CINAHL, and PROQUEST, from January 2000 to April 2021. Content analysis was undertaken following the minimum initial service package objectives. **Results:** Fifteen studies were included in this review from four countries: Bangladesh (5), Pakistan (5), Iran (4), and Malaysia (1). Approximately 50.91% of Rohingya and 54% of Afghan refugee women used contraceptives. About 56.6% of Afghan refugee mothers experienced pregnancy-related complications, one-third received antenatal care, and low birth weight was 2.6 times higher among infants born to Afghan refugee mothers than to Pakistani-born mothers. One out of five Rohingya women received delivery-related care. Approximately 72% of Rohingya and 79.8% of Afghan refugee women had experienced gender-based violence, and 56.5% of Rohingya women engaged in unwanted sexual intercourse with their husbands. **Conclusion:** Social norms, stigma, cultural values, distrust of providers, inadequate staff, and prohibition by family members limit their access to SRH services and influence their needs, knowledge, and perceptions regarding SRH.

**Keywords:** *Afghan, Asia, minimum initial service package, refugee, Rohingya, sexual and reproductive health*

## Background

Sexual and reproductive health (SRH) is fundamental to the health and well-being of an individual; it is a basic human right and a prerequisite for population health and development.<sup>[1,2]</sup> However, humanitarian crises disrupt the existing health-care system, limiting access to SRH services.<sup>[3,4]</sup> Approximately 9.2 million refugees live in Asia as of September 2020, with most originating from Afghanistan and Myanmar.<sup>[5]</sup> Bangladesh is home to approximately 1.2 million Rohingya, with 52% women, girls, and children.<sup>[6]</sup> There are 2.5 million Afghan refugees, 96% of whom live in Iran and Pakistan.<sup>[7]</sup> Women and girls are disproportionately affected by war, conflict, and fragile situations.<sup>[1,8]</sup> Forced

displacement increases the vulnerability of women and girls to adverse SRH outcomes.<sup>[2,9]</sup> One out of every three displaced women and girls faces gender-based violence (GBV) in their lifetime; one in five girls is married before 18 years of age and has inadequate access to SRH services.<sup>[8]</sup> Approximately 60% of preventable maternal deaths occur in war-affected countries, 3.2 million women are reported to undergo unsafe abortions, and 12 million adolescent girls give birth in humanitarian settings each year.<sup>[1,10-12]</sup>

Several systematic reviews have examined SRH in humanitarian settings including an investigation of the barriers to accessing SRH care,<sup>[13]</sup> the effectiveness of SRH interventions,<sup>[14]</sup> and the utilization, evaluation, and quality of SRH programs in crisis settings.<sup>[1,2,15-18]</sup> However, few

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systematic reviews have examined the health and well-being of Rohingya and Afghan refugees, and none have focused on SRH. The reviews in this area have focused on mental health and psychosocial well-being,<sup>[19,20]</sup> the integration of the human rights approach into public health,<sup>[21]</sup> and the health status and challenges of Rohingya and Afghan refugees.<sup>[22-24]</sup> The only systematic review available assessing the needs, status, and experiences of SRH is in the context of Africa conducted by Ivanova *et al.* This review reported that limited access to SRH information and knowledge among young women and girls affects the overall SRH outcomes.<sup>[4]</sup> However, this review mostly focused on adolescent girls and young women in African with a limited focus on intervention, rather than focusing on women of reproductive age. Previous reviews focusing on SRH are not consistent with Rohingya and Afghan refugees as their host countries and contexts are different.

To address this evidence gap, this review aims to consolidate the existing evidence on the SRH status of Afghan and Rohingya refugee women of reproductive age in Asia and their needs and experiences concerning access to these services and commodities. The findings of this review could contribute to health service planning to deliver evidence-based interventions and policies to improve SRH outcomes in humanitarian settings across Asia.

## Materials and Methods

### Search strategy

In this review, we used the PRISMA checklist and standards for quality assessment of systematic reviews.<sup>[25]</sup> The review was registered in the PROSPERO database with ID CRD42021253975. The search strategy sought

all relevant peer-reviewed literature from five online bibliographic databases—SCOPUS, EMBASE (Ovid), MEDLINE (Ovid), CINAHL, and PROQUEST— using search terms related to the research questions. A full search term was used in the online database [Table 1] following the standardized definition of SRH from the International Conference on Population and Development in 1994 and the WHO Reproductive Health Strategy.<sup>[26]</sup> The search terms were generated with the consultation of the librarian of the University of Technology Sydney, and a modification from Ivanova *et al.* was adopted.<sup>[4]</sup> The review included any intervention aimed at improving the SRH outcomes as defined in the minimum initial service package (MISP) such as family planning (FP), contraception education, advice, and distribution; prevention of pregnancy; maternal, newborn, and child health (MNCH); comprehensive abortion care (CAC); GBV; sexually transmitted

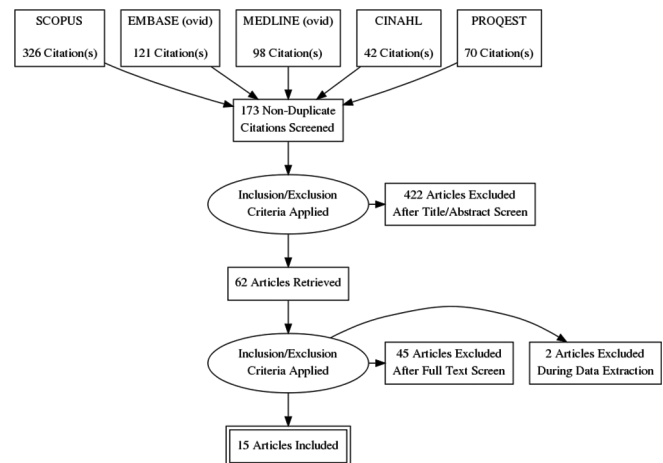


Figure 1: PRISMA flow diagram

Table 1. Search terms used in online database.

Category	Search Terms Combined with AND
Population	Rohingya AND Afghan
Age Group (reproductive age)	Woman OR women OR female OR youth OR adolescent OR teenager OR teen OR young female OR girl OR young woman OR young person OR adolescence OR reproductive age
Status	refugee OR displaced OR displaced person OR indigenous OR ethnic minority OR asylum OR internally displaced
SRH topics	sexual OR reproductive health OR sexual health OR child marriage OR early marriage OR female genital mutilation OR female circumcision OR cutting OR circumcised OR sexual behavior OR sexual experience OR sexual activity OR sexual initiation OR early sexual debut OR menstruation OR menstrual hygiene OR sexual intercourse OR contraception OR family planning OR pregnancy OR antenatal OR birth OR post-natal OR STI OR sexually transmitted infection OR HIV OR violence OR reproduction OR sexual wellbeing OR sexuality education OR condom OR human immunodeficiency virus OR AIDS OR sex OR sex education OR relationship OR sexual coercion OR rape OR sexual abuse OR physical relationship OR sexual violence OR abortion OR maternal health OR fistula OR OR gender motherhood OR forced sex OR gender based violence OR intimate partner violence OR transactional sex OR sex work OR knowledge OR need OR unmet need OR access OR availability OR experience OR awareness OR perception
Countries/regions	Asia OR Western Asia OR West Asia OR Georgia OR Armenia OR Azerbaijan OR Turkey OR Cyprus OR Syria OR Lebanon OR Israel OR Palestine OR Jordan OR Iraq OR Kuwait OR Bahrain OR Qatar OR Saudi Arabia OR Southeast Asia OR Brunei OR Cambodia OR Indonesia OR Laos OR Malaysia OR Myanmar OR Philippines OR Singapore OR Thailand OR Timor Lester OR Vietnam OR South Asia OR Sri Lanka OR Bangladesh OR India OR Afghanistan OR Pakistan OR Bhutan OR Nepal OR The Maldives

(Adopted with modification from Ivanova *et al.*, 2018). HIV: Human immunodeficiency virus, STIs: Sexually transmitted infection

**Table 2: Inclusion and exclusion criteria**

	Included	Excluded
Population	Rohingya and Afghan Refugee women of reproductive age	Other refugee groups
Setting	Humanitarian setting in Asia	Humanitarian setting outside of Aisa
Topics	Papers that describe SRH such as FP, MNCH, CAC, STIs, HIV/AIDS, GBV and ARH	Papers that reported on other reproductive health topics (e.g., female genital mutilation, forced or early marriage, reproductive cancers)
Types of paper/ Data	Qualitative, quantitative and mixed-method primary studies	Descriptive quantitative papers with no specific health intervention and no outcomes
Types of publication	Papers in peer-reviewed journals	Letters, editorials, commentaries; grey literature; review papers (although these were screened for references)
Language	English	Study titles and abstracts in languages other than English
Publication Date	2000 to the present (April 2021)	Papers published before 2000 or after April 2021

FP: Family planning, MNCH: Maternal, new-born, and child health, CAC: Comprehensive abortion care, STIs: Sexually transmitted infections, HIV: Human immunodeficiency virus, GBV: Gender-based violence, ARH: Adolescent reproductive health

infection (STI); and HIV/AIDS.<sup>[27]</sup> The review focused on 35 countries from three subregions of Asia—West Asia, Southeast Asia, and South Asia — as most of the Rohingya and Afghan refugees are taking shelter in these regions.<sup>[28-30]</sup> To ensure that the findings were contemporary, we sought studies published from January 2000 to April 2021. This date is closely aligned with the publication of the Inter-Agency Field Manual for Reproductive Health, which describes MISP in 1999.<sup>[1,15,27]</sup>

### Study selection

The search results are summarized in the PRISMA flowchart [Figure 1]. The literature search identified 657 records, 484 of which were unique records after removing duplicates. After screening the title and abstract of the 484 papers, 422 were excluded. Sixty-two full-text studies were assessed for eligibility. Forty-seven studies were excluded from the full-text screening, and 15 studies met the inclusion criteria [Table 2]. Information, such as the name of the author/s, study setting, research objectives, study population, study design, and research findings, were extracted in a Microsoft Excel form from the included articles. The extracted data were coded manually to identify patterns by grouping codes into categories and subsequently into themes.

### Critical appraisal

Herein, we used the mixed methods appraisal tool (MMAT) to assess the quality of individual studies.<sup>[31]</sup> However, no studies were excluded based on this assessment. The MMAT assisted in highlighting methodological issues and study types and clarified any impact that may have been exerted on the quality of the data.<sup>[31,32]</sup> Using the MMAT, nine papers were classified as high-quality, and six studies were classified as medium or low quality

### Data extraction and analysis

Content analysis was performed on the extracted qualitative and quantitative data. The data were presented descriptively

under different themes and classifications. The extracted data were first grouped for synthesis, using the objectives outlined in the MISP for SRH in crisis.<sup>[27]</sup> Subsequently, within each objective or set of activities in the MISP, the data were synthesized according to the needs, status, and experiences of women and girls across each refugee count in various countries, and a picture was built to understand the different perspectives and contexts. The tables and concepts map were used to explore the patterns and relationships between and within the extracted data across the different categories. Finally, the main themes were extracted by merging different groups and subgroups and assessed through discussion and critical reflection.<sup>[33]</sup>

## Results

### Study characteristics

A total of 15 studies were included in this review from four countries: Bangladesh (5), Pakistan (5), Iran (4), and Malaysia (1), focusing on the SRH of the Rohingya and Afghan refugees.<sup>[34-48]</sup> Most studies exclusively focused on women of reproductive age; only one study focused on both men and women. One study reported the maternal mortality among Afghan refugees in Pakistan before and after an intervention.<sup>[39]</sup> Seven papers discussed MNCH, two FP, one CAC, five GBV, and none discussed HIV/AIDS and STIs. Nine studies were quantitative, five studies were qualitative, and one was a mixed-method study design.

### Family planning

Two studies, one on the Afghan and the other on the Rohingya refugee community, examined FP services in refugee settings in Pakistan and Bangladesh.<sup>[40,42]</sup> Approximately 50.91% of Rohingya women used contraceptives including injectable (67.33%) and oral contraceptives (29.88%).<sup>[42]</sup> Among the Afghan refugee women, 89% of women with subsidized health-care (SHC) had heard of FP compared to 45% of the women with non-SHC (NSHC).<sup>[40]</sup> The reported use

**Table 3. Summary of studies included in the review**

References	Country	Population & Sample Size	Age group	Methodology	Research aims and objectives	Key Findings
Bartlett, L. A., et al. (2002)	Pakistan	A census of the 16,247 families living in the refugee settlements	15-49	Population-based retrospective cohort study	Information on the magnitude, causes, and preventable factors of maternal deaths among Afghan refugees	The census identified 134 406 Afghan refugees and 1197 deaths; a crude mortality rate of 5.5 (95% CI 5.2-5.8) per thousand population. Among the 66 deaths among women of reproductive age, deaths due to maternal causes ( $n=27$ ) exceeded any other cause (41% [95% CI 29-53]). 16 liveborn and nine stillborn infants were born to women who died of maternal causes; six of the liveborn infants died after birth. Therefore, 60% (15 of 24) of infants born to these women were either born dead or died after birth. Compared with women who died of non-maternal causes, women who died of maternal causes had a greater number of barriers to health care ( $P=0.001$ ), and their deaths were more likely to be preventable ( $P<0.05$ ).
Dadras, O., et al. (2020)	Iran	424 Afghan women aged 18-45 years old at three health centers of Tehran.	18-45	Cross-sectional study	The study aimed to explore the sociodemographic factors and potential barriers associated with adequate ANC among Afghan women in Iran	Almost a third of Afghan women in this study had adequate ANC ( $\geq 8$ visits). The women in older age group, those with higher education and family income, women with longer length of stay, those of legal status were more likely to have adequate ANC. In multivariate analysis, the poor knowledge and attitude toward ANC (AOR=0.06; 95% CI [0.03-0.15]), the poor quality of services (AOR=0.17 95% CI [0.07-0.41]); and to some extent, the difficulties in access (AOR=0.33; 95% CI [0.11-1.00]) were the main obstacles toward adequate ANC among the study population
Dadras, O., et al. (2021)	Iran	424 Afghan women aged 18-44 years old using the time-location sampling at three community health centers in Tehran.	18-44	Cross-sectional study	The study aimed to explore the prevalence and associated sociodemographic factors of adverse pregnancy outcomes and examine the impact of intimate partner violence, food insecurity, poor mental health, and housing issues on pregnancy outcome in Afghan women living in Iran.	More than half (56.6%) of Afghan women reported at least one pregnancy complication in their recent pregnancy. The results showed that undocumented, illiterate, and unemployed Afghan women with lower socioeconomic status are more likely to experience adverse pregnancy outcomes. Furthermore, lower prevalence of adverse pregnancy outcomes among documented immigrants with health insurance compared to those with no health insurance was observed. It was also found that the food insecurity [Adjusted OR=3.35, 95% CI (1.34-8.36)], poor antenatal care [Adjusted OR=10.50, 95% CI (5.40-20.39)], intimate partner violence [Adjusted OR=2.72, 95% CI (1.10-6.77)], and poor mental health [Adjusted OR=4.77, 95% CI (2.54-8.94)] could adversely impact the pregnancy outcome and higher incidence of adverse outcomes among those suffering from these situations was observed.

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Table 3. Contd...

References	Country	Population & Sample Size	Age group	Methodology	Research aims and objectives	Key Findings
Delkhosh, M., et al. (2019)	Iran	Afghan refugee women (n=188) with ages between 15 and 49 years were recruited for the survey.	15-49	Cross-sectional population-based household survey	The study reported: (a) the prevalence of IPV; the association between the occurrence of IPV and some sociodemographic characteristics of participants and, and also with some reproductive health outcomes	Overall, about 79.8% of the participants reported to have experienced a form of IPV in the past 12 months. IPV exposure was associated with a negative reproductive health outcome. The high prevalence of IPV found among refugee women in the present research and its strong links with poor reproductive health outcomes, underline the urgent need for the development and testing of appropriate interventions in refugee settlements.
Badshah, S., et al. (2011).	Pakistan	A total of 1039 mothers were recruited		A cross-sectional prospective survey	To determine the health risk factors associated with Afghan refugee mothers compared to Pakistani mothers.	The data revealed that low birthweight was 2.6 times higher in Afghan refugees compared to Pakistani mothers adjusting for all other important covariates. The univariate analysis highlighted a number of factors, however, the multivariate method established significant association of Afghan refugees with Tribal areas, older age and an un-registered pregnancy compared to Pakistani mothers.
Hyder, A. A., et al. (2007).	Pakistan	20 women of reproductive age and 20 health workers serving these women in an Afghan refugee camp in Pakistan.	Reproductive age	Qualitative study using indepth interview	The purpose of this paper to explore events and factors that lead to conflict in the home in the Afghan refugee setting, and the current status of the health sector's ability to respond to evidence of conflict.	This paper analyses women's explanations of how various marriage traditions may be linked to conflict in the home and how the interactions of different family members may be related to conflict. The relationships of women with their parents-in-law and husbands are highlighted in particular, and a model developed to explore the choreography of their relationships and the ways in which these dynamics may encourage or inhibit violence. The perspectives of health workers on the ways in which the health system responds to family conflict and violence are also presented.
	Bangladesh	A total of 508 women were interviewed	13-41	Cross-sectional survey	This study examined Rohingya refugee women's attitudes toward and experience of intimate partner abuse (IPA) and their impact on the abilities to reject husbands' advances to unwanted sex.	About 72% women perceived hitting/beatings by their husbands in certain situations as justifiable. Most women experienced such abuse and 56.5% had to engage in unwanted sexual intercourse with their husbands. Women with increasing leniency towards hitting/beatings and those who had experienced such abuse were less likely to be able to say "no" to husbands' advances to unwanted sexual intercourse. Rohingya women's attitudes toward and experience of IPA are associated with their abilities to say "no" to husbands' advances to unwanted sex.

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References	Country	Population & Sample Size	Age group	Methodology	Research aims and objectives	Key Findings
Khan, M. N., <i>et al.</i> (2021).	Bangladesh	The study conducted at refugee camps located at Cox's Bazar, Bangladesh. The facility is divided into 34 camps comprising a total of 208 blocks; on average, each block supports 892 households.	Reproductive age	Cross-sectional survey	To determine the prevalence of the use of contraceptives among female Rohingya refugees in Bangladesh and its associated factors.	The study found that 50.91% (251/493) of the survey participants used contraceptives, and that injection (169/251; 67.33%) and oral contraceptives (75/251; 29.88%) were the predominant modes. Of the women who did not use contraceptives, the main reasons were reported as disapproval by husbands (118/242; 48.76%), actively seeking a pregnancy (42/242; 17.36%) and religious beliefs (37/242; 15.29%). An increased likelihood of using contraceptives was found to be positively associated with women's employment outside their households (odds ratio, OR: 3.11; 95% confidence interval, CI: 1.69-6.11) and the presence of a healthcare centre in the camp (OR: 3.92; 95% CI: 2.01-7.67). Women who reported an unplanned pregnancy during the previous 2 years were less likely to use contraceptives (OR: 0.02; 95% CI: 0.01-0.05).
Mohammadi, S., <i>et al.</i> (2017).	Iran	A total of 11 Afghan women and 4 husbands were interviewed	Afghan mothers	Qualitative semi-structured interviews	This study explored experiences of maternal care among Afghan women surviving near-miss morbidity to increase insight into healthcare improvements for migrants.	Mistreatment in the form of discrimination and insufficient medical attention were key experiences. Participants commonly perceived poor women-professional communication and delays in recognising obstetric complications despite repeated care-seeking. Financial constraints, costly care, lack of health insurance, and low literacy were experienced barriers to accessing care to a lesser extent. Non-somatic consequences of near-miss morbidity affected mothers and families for extended periods.
Persson, M., <i>et al.</i> (2021).	Bangladesh	In-depth interviews (n=24) were conducted with health care providers (n=19) providing comprehensive abortion care to Rohingya refugee women and with key informants (n=5)		Qualitative in-depth interview with HCPs and key informants (KIs).	This study explored health care providers' perceptions and experiences of providing comprehensive abortion care in a humanitarian setting in Cox's Bazar, Bangladesh and identifies barriers and facilitators in service provision	The national menstrual regulation policy provided a favourable legal environment and facilitated the provision of comprehensive abortion care, while the Mexico City policy created organisational barriers since it made organisations unable or unwilling to provide the full comprehensive abortion care package. Supplies were available, but a lack of space created a barrier to service provision. Although training from organisations had made the health care providers confident and competent and had facilitated the provision of services, their knowledge of the national abortion law and menstrual regulation policy was limited and created a barrier to comprehensive abortion services. Even though the health care providers were willing to provide comprehensive abortion care and had acquired skills and applied strategies to communicate with and provide care to Rohingya women, their personal beliefs and their perceptions of Rohingya women influenced their provision of care.

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References	Country	Population & Sample Size	Age group	Methodology	Research aims and objectives	Key Findings
Purdin, S., <i>et al.</i> (2009).	Pakistan	Afghan refugees in Hangu district of Pakistan		Intervention study	The International Rescue Committee (IRC) strove to reduce maternal mortality among Afghan refugees in Hangu district of Pakistan by improving access to emergency obstetric care (EmOC), community knowledge of danger signs of pregnancy, and the use of health information.	The maternal mortality ratio among Afghan refugees in the area improved from 291 per 100000 live births in 2000 to 102 per 100000 live births in 2004. The proportion of refugee births attended by skilled staff increased from 5% in 1996 to 67% in 2007. Complete prenatal care coverage increased from 49% in 2000 to 90% in 2006, and postnatal coverage more than trebled from 27% in 2000 to 85% in 2006.
Raheel, H., <i>et al.</i> (2012).	Pakistan	A randomly selected group of 650 married Afghan women-325 women in each group-participated in a detailed survey	15-49	cross-sectional survey	The objective was to measure the effect of health subsidy on the uptake of contraception among Afghan refugee women and compare them to the group of Afghan women without such a subsidy.	90 percent of the women in the health subsidy group had heard of family planning, compared to the 45 percent in the non-subsidised group. The use of contraceptives was greater than two-fold in the former versus the latter. Results of logistic regression analysis revealed that the refugee women who had had access to subsidised healthcare were significantly more likely to use the contraceptive methods with advancing age as compared to the women in the non-health subsidy group. The difference remained significant after adjusting for other variables.
Sarker, M., <i>et al.</i> (2020).	Bangladesh	34 interviews (15 key informant interviews and 19 in-depth interviews among FDMNs)		Qualitative in-depth interview with HCPs and key informants (KIs).	This study explored the challenges and potential solutions for effective implementation of maternal, newborn, and child health (MNCH) programs for Forcibly Displaced Myanmar Nationals (FDMNs) residing in camps of Cox's Bazar, Bangladesh.	The study identified some key challenges hindering the effective implementation of MNCH service delivery for the FDMNs. High turnover and poor retention of staff, overlapping of service, weak referral mechanism, complex health information system, and lack of security of the front line health providers were some of the key challenges identified. Motivating the health workers, task shifting, capacity building on emergency obstetric care, training CHW & TBA on danger signs, and ensuring the security of the workers are the potential solutions suggested by the respondents. Selecting a few indicators and the introduction of E-tracker can harmonise the health information system.
Shair, D., <i>et al.</i> (2019).	Bangladesh	Twelve focus group discussions were conducted with women and girls	Women and girls	Qualitative study using FGD	The aim of this paper was to highlight the role of psychosocial support in coping with incidents of Gender Based Violence (GBV) among the Rohingya refugees by exploring two particular cases.	DanChurchAid (DCA) have found that useful approaches in this context have included the use of basic techniques for relaxation to help promote calmness in moments of anxiety and panic, plus reinforcement of positive coping strategies such as prayers, spending time with trusted people and engaging in productive activities (e.g., life skills training). This engagement has enabled Rohingya survivors of GBV to build relationships with other women, feel more relaxed and confident and able to respond effectively to issues affecting their lives.

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Table 3. Contd...

References	Country	Population & Sample Size	Age group	Methodology	Research aims and objectives	Key Findings
Welton-Mitchell C., <i>et al.</i> (2019).	Malaysia	Data were collected from seventy-five Rohingya community members residing in Malaysia, consisting of thirty structured interview participants and fortyfive focus group participants.	Men and women	Mixed method: structured interview and FGD	This study explored patterns of IPA, its correlates and help-seeking behaviours among Rohingya refugees in Malaysia	Results indicated high rates of IPA. Respondents also reported numerous chronic stressors and suggested links between stressors, mental health and IPA. Social norms emphasising the acceptability of IPA and discouraging helpseeking were also common. These data have broad implications, including for development of a 'healthy relationships' intervention integrating social norms and mental health approaches to address IPA in Rohingya communities, with potential for scale-up within Malaysia and elsewhere.

of contraceptives among SHCs was 54% which was more than double that of women with NSHC (25%). However, Rohingya refugee women reported not using contraceptives due to disapproval of their husbands (48.76%), actively seeking pregnancy (17.36%), and religious beliefs (15.29%).<sup>[42]</sup> The employment of women outside their households (odds ratio [OR]: 3.11; 95% confidence interval [CI]: 1.69–6.11) and the presence of a health-care center in the camp (OR: 3.92; 95% CI: 2.01–7.67) were associated with contraceptive use.<sup>[42]</sup> Women who had unplanned pregnancies were less likely to have used contraceptives (OR: 0.02; 95% CI: 0.01–0.05).<sup>[42]</sup> Refugee women who were provided with SHC were more inclined to use contraceptives.<sup>[40]</sup>

### Maternal, newborn, and child health

Seven of the 15 studies identified MNCH outcomes and services. In this review, we found that among the Afghan refugees in Pakistan, the crude mortality rate was 5.5/ thousand population, the maternal mortality rate was 102/100,000 live births, and the neonatal mortality ratio 20.7/1000 live births.<sup>[48]</sup> One study found that 67% of Afghan refugee births were attended by skilled assistants in Pakistan, and 90% of mothers had complete prenatal care coverage, and 85% had postnatal coverage.<sup>[39]</sup> Approximately 56.6% of Afghan refugee mothers reported that they experienced at least one pregnancy-related complication in their recent pregnancy,<sup>[35]</sup> and one-third received antenatal care (ANC) ( $\geq 8$  visits).<sup>[34]</sup> A low birth weight was 2.6 times higher among infants born to Afghan refugee mothers than Pakistani-born mothers.<sup>[37]</sup> Among Rohingya refugees, one in five women received delivery-related care.<sup>[44]</sup>

Maternal death in Afghan refugees was mostly preventable. They experienced barriers in accessing maternal care and delays in receiving care due to financial constraints, a lack of health insurance, and poor literacy.<sup>[38]</sup> A previous study reported that food insecurity (OR adj: 3.35; 95% CI: 1.34–8.36), inadequate ANC (OR adj: 10.50; 95% CI: 5.40–20.39), intimate partner violence (IPV) (OR adj: 2.72; 95% CI: 1.10–6.77), and poor mental health (OR adj: 4.77; 95% CI: 2.54–8.94) could significantly impact the pregnancy outcome.<sup>[35]</sup> Undocumented and illiterate Afghan refugee women in Iran with no health insurance experienced a higher incidence of adverse pregnancy outcomes.<sup>[35]</sup> Adequate ANC was associated with higher education, higher family income, and women with longer length of stay.<sup>[34]</sup> Poor knowledge and negative attitudes toward ANC (OR adj: 0.06; 95% CI: 0.03–0.15), difficulties in accessing services (OR adj: 0.33; 95% CI: 0.11–1.00),<sup>[34]</sup> and birth/pregnancy registration<sup>[37]</sup> were the main obstacles in accessing ANC among Afghan refugees in Pakistan. Several organizations have offered MNCH in Rohingya refugee camps since 2017; however, the overlapping services have created challenges for both the beneficiaries and the distribution of funds. The key

challenges reported in the Rohingya refugee camps include high staff turnover, weak referral, and the lack of security of frontline health workers.<sup>[44]</sup>

### Gender-based violence

Five studies investigated GBV and IPV. These studies explored the attitudes, experiences, coping strategies, and reproductive health outcomes of women. Approximately 72% of Rohingya<sup>[41]</sup> and 79.8% of Afghan refugee<sup>[36]</sup> women had experienced GBV, and 56.5% of Rohingya refugee women<sup>[41]</sup> had engaged in unwanted sexual intercourse with their husbands. Most women perceived being hit or beaten by their husbands as justifiable.<sup>[36,41]</sup> Refugee women who had experienced GBV/IPV were less likely to say “no” to their husbands’ advances for sexual intercourse. A lack of decision-making power, tolerant attitudes toward IPA, and unwanted sex were associated with GBV/IPV.<sup>[36,41]</sup> Exposure to such violence was associated with poor SRH outcomes such as sexual dissatisfaction, sexual dysfunction, and unplanned pregnancy.<sup>[36]</sup> Shair *et al.* suggested positive coping strategies for GBV such as spending time with trusted people, praying, engaging in productive activities, and life skills training. These engagements helped them build relationships with other women, feel more relaxed and confident, and respond effectively to issues affecting their lives.<sup>[45]</sup>

### Comprehensive abortion care

Only one study explored the health-care providers’ (HCPs) perceptions and experiences in providing CAC and identified the barriers and facilitators in the service provision among the Rohingya refugees in Bangladesh.<sup>[43]</sup> This study identified organizational barriers providing CAC in Bangladesh. In addition, HCPs’ personal beliefs and perceptions influenced the provision of care as they have varying knowledge of menstrual regulation (MR) policy and a limited understanding of abortion law.<sup>[43]</sup> The absence of clear abortion policies, along with a lack of privacy in service due to infrastructure and facility set-up, HCPs’ personal beliefs, a lack of cultural safety, and a lack of knowledge of abortion laws and policies, limit the accessibility and availability of CAC to Rohingya refugee women in Bangladesh.<sup>[43]</sup>

### Discussion

Our systematic review revealed the challenges that Rohingya and Afghan refugees face while accessing SRH services, especially those provided under the MISP. Research has determined that Afghan and Rohingya refugee women and girls consider SRH issues as a matter of shame, and social norms do not permit them to visit a doctor without being accompanied by a male partner or relative.<sup>[43,49,50]</sup> The risk of poor SRH outcomes is further complicated because these refugees are more likely to depend on traditional treatments and seek advice from spiritual healers, such as a Mollah, traditional birth attendee, and older women for SRH advice and services.<sup>[43,49,51]</sup> In addition, these refugee mothers experienced barriers in accessing SRH services due to the

distrust of providers, inadequate staff, low health literacy and their negative attitudes, negative staff attitudes, and health-related costs.<sup>[34,37]</sup> Therefore, social norms, stigma, cultural values, and barriers to health-care limit their access to SRH services and influence their needs, knowledge, and perceptions regarding SRH.<sup>[43]</sup>

### Implementation strategies to uptake family planning and maternal, new-born, and child health

Half of the Rohingya and Afghan refugee women did not use contraceptives.<sup>[40,42]</sup> The maternal mortality rate was high; one-third of these women received ANC, and only one in five pregnant women received delivery-related care from HCPs within the camps because of distrust of providers, sociocultural norms, and prohibition by a family member.<sup>[44]</sup> The key challenges hindering access to FP and MNCH also include sociocultural barriers, stigma, lack of decision-making power, low health literacy and negative staff attitudes, health-related costs, a lack of staff, and security for frontline health workers.<sup>[34,35,38,52]</sup> The uptake of FP and MNCH by women was found to be associated with the availability of SHC and supportive sociocultural norms. Building a positive environment to reduce stigma and the availability of low-cost, high-quality reproductive services could improve the uptake of contraception and MNCH.<sup>[40,42,53]</sup> Targeted programs focusing on women of reproductive age and their husbands, particularly for those who have no formal education and involvement of religious leaders in promoting the use of FP and MNCH services, may improve their knowledge of SRH and increase the uptake of services.<sup>[42]</sup> The provision of training for traditional birth attendants and mobile health workers and improving the link between health service providers and the community could increase the uptake of SRH services in humanitarian settings.<sup>[15,54,55]</sup>

### The implementation strategies to uptake comprehensive abortion care

Our review found limited CAC for refugees in Bangladesh, and women had difficulty in accessing this care when required.<sup>[43]</sup> While there is a policy concerning MR that provides the legal basis for early CAC, this policy does not clearly describe the provision of CAC, which may lead to unsafe abortions.<sup>[43]</sup> HCPs in refugee settings have limited knowledge of abortion laws and policies that can influence their competence and confidence in providing CAC.<sup>[43]</sup> A comprehensive approach to SRH and rights that includes abortion is needed to ensure the accessibility and availability of quality services. In addition, organizations working in humanitarian settings must ensure that HCPs have knowledge of abortion policies and the provision of services. It is also essential to have the ability to provide quality care that is woman-centered and nonjudgmental.<sup>[43]</sup>

## Implementation strategies to reduce gender-based violence

In this review, we found a high prevalence of GBV, including hitting/beatings, sexual violence, unwanted sex, and other forms of abuse among refugees.<sup>[36,41]</sup> Clear policies, practices, and awareness programs are essential to reduce GBV by increasing awareness regarding their rights, changing attitudes toward abuse, and building self-esteem in women.<sup>[41]</sup> Education and skill development programs should be implemented to empower women economically, create employment opportunities, and build social support networks within refugee camps.<sup>[56]</sup> In addition, a strong international commitment is needed to deal with GBV and its adverse consequences in humanitarian settings.<sup>[36]</sup>

## Evidence gap

There are gaps in the existing literature on the SRH of Rohingya and Afghan refugees in Asia. The publications captured in our review focused on FP, MNCH, and GBV. Consequently, the current review does not provide information on some of the MISP objectives such as STIs and HIV/AIDS, for Rohingya and Afghan refugees. Information regarding CAC in Afghan refugees is also missing from this review. In addition, we could not disaggregate the data according to the age groups. As a result, the current review did not report on adolescent SRH knowledge, needs, and experiences.

Although the Rohingya and Afghan refugee groups have similarities in terms of religion and country context, it is not easy to reflect on the realities, as the included studies' data have a different setting. Without a multisetting context, it is challenging to compare the MISP services and related outcomes across different refugee settings. Moreover, this review only included studies in English.

## Conclusion

The current review provides a comprehensive description of existing evidence and the identified gaps in evidence on the SRH needs, status, experiences, and services of Rohingya and Afghan refugee women of reproductive age in Asia. This review provides evidence to inform stakeholders and policymakers to improve SRH in humanitarian settings in Asia. There is a need for further research to better understand the SRH needs, experiences, and service use of Rohingya and Afghan refugees in Asia.

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## Conflicts of interest

There are no conflicts of interest.

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