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Ethics and Methods for Collecting Sensitive Data: Examining Sexual and Reproductive Health Needs of and Services for Rohingya Refugees at Cox's Bazar, Bangladesh

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Abstract

During humanitarian emergencies, such as the forced displacement of the Rohingya diaspora, women and adolescent girls become highly vulnerable to sexual and reproductive health (SRH) issues and abuse. Although sensitive in nature, community-driven information is essential for designing and delivering effective community-centric SRH services. This article provides an overview of the theoretical framework and methodologies used to investigate SRH needs, barriers, and challenges in service-delivery and utilization in the Rohingya refugee camps in Cox's Bazar, Bangladesh. It also offers insights on important methodological and ethical factors to consider while conducting research in a similar context.

A concurrent mixed-method study was undertaken in ten randomly selected Rohingya refugee camps between July and November 2018. The design consisted of a cross-sectional household survey of 403 Rohingya adolescent girls and women, along with an assessment of 29 healthcare facilities. The team also completed in-depth interviews with nine adolescent girls, 10 women, nine formal and nine informal healthcare providers, key informant interviews with seven key stakeholders and seven influential community members. Lastly, three focus group discussions were undertaken with a group of 18 Rohingya men. Our theoretical framework drew from the socio-ecological models developed by Karl Blanchet and colleagues (2017) insofar as they considered a multiplicity of related contextual and cross-cutting factors.

Building good rapport with community gatekeepers was key in accessing and sustaining the relationship with the various respondents. The data collected through such context-specific research approaches is critical in designing community-centric service-delivery mechanisms, and culturally and gender-sensitive SRH interventions in humanitarian crises.

Keywords: humanitarian crisis; information; refugee; Rohingya; sexual and reproductive health

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Introduction

Complex humanitarian emergencies, like forced displacement, are one of the main reasons for political unrest, security and safety issues, and various public health challenges in recent times. Man-made disasters are responsible for greater global mortality and morbidity rates when compared to natural disasters (Brennan & Nandy, 2001). Globally, armed conflicts and violence forcibly displaced about 68 million people from their homes in 2017 (UNHCR, 2018). Among these people, 21 million were forced to seek refuge in foreign lands (World Bank, 2017). Such movement creates a complex environment that results in an emergency need for shelter, protection, food, clean water, sanitation, and basic public health services (Onyango & Heidari, 2017). About 89% of such forced displacement typically happens in low-and middle-income countries, creating a complex ecosystem of humanitarian crises by imposing a huge burden on the socio-political, economical, and health systems of host countries, and thus impact the overall societal development (Gardemann, 2002; World Bank, 2017). Humanitarian response settings, therefore, can practically be considered as a composite network system due to the instability of the environment and the unregulated operating landscapes resulting from the plethora of actors, and their complex interactions (Altay & Labonte, 2014). Hence, coordination between different humanitarian actors including the displaced population, the governments of countries where they seek refuge, donor agencies, human rights groups, The United Nation (UN) agencies, national and international non-government organizations (NGOs), political missions and military contingents is essential to manage such complex humanitarian emergency situations (Chynoweth, 2015; Landegger et al., 2011; Seybolt, 2009). Humanitarian responses also require collaboration between humanitarian actors, researchers, and government for thoughtful, planned yet flexible, innovative and evidence-based program designs, implementation and practices to ensure better health and life outcomes (Onyango & Heidari, 2017; Turner et al., 2011). Effective collaboration between humanitarian actors and health researchers can ensure that the resources allocated are significant, as well as distributed and utilized, as per need, and not wasted (Turner et al., 2011). Such collaboration can also help in upholding a suitable combination of operational expertise with the collection, analysis, critical interpretation, and dissemination of data (Banatvala & Zwi, 2000).

The need for reliable and authentic information to handle complex humanitarian crisis conditions is enormous. As forced displacement increases the health risk of the affected population, relevant context-specific public health information is crucial to support the local health system for effectively responding to the crisis situation (Brennan & Nandy, 2001; Checchi et al., 2017). Robust, reliable, and relevant information is critical for identifying the health needs and priorities of the refugees in crises. Appropriate health service packages and interventions that address diverse groups' needs can thus be designed and resources mobilized accordingly (Checchi et al., 2017). Accurate and reliable health information helps humanitarian aid organizations make decisions based on evidence and enable them to invest resources effectively and efficiently. Therefore, most of the donors and humanitarian aid agencies emphasize context-specific information collection before designing and implementing any proposed interventions (Darcy et al., 2013). This being said, the use of research-generated information becomes challenging if evidence fails to capture the wider socio-political and cultural dimensions of the problem, along with the actual needs of the community at-risk (Bradt, 2009; Darcy et al., 2013; Mock & Garfield, 2007). Conducting a well-designed analysis with appropriate tools that have been validated in the specific humanitarian context can help aid agencies, donors, and public health researchers to understand the local, cultural, and community practices. In turn, these are

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key in designing effective and people-centric interventions, successful implementation, and proper uptake by the displaced population in need.

Research on Sexual and Reproductive Health Care in a Humanitarian Context

Sexual and reproductive health (SRH) care is recognized as one of the priority needs in emergency humanitarian crisis situations (Onyango & Heidari, 2017). Forced displacement and life in refugee camps aggregate vulnerability to SRH problems and increase the risk of mortality and morbidity. New SRH problems, such as sexually transmitted infections and sexual violence, emerge where forcibly displaced populations take shelter. The different socio-cultural context in the host country often conflict with the refugee's own traditional values and beliefs, and the lack of social support system increases their trauma of losing family members, livelihood, and social identity during displacement (Doedens & Burns, 2001). The health systems in host countries also face challenges in providing adequate healthcare (especially SRH care) support to the refugee population due to a lack of understanding (at times) of their traditional healthcare seeking behavior as well the gender and socio-cultural barriers which inform their practices. Therefore, generating evidence on sensitive access issues regarding SRH in conservative displaced communities is vital to understanding the strategies required to provide effective lifesaving services in these complex settings (Onyango & Heidari, 2017). Evidence shows that SRH-specific programs in humanitarian settings lack systematic information collection, thus, failing in many cases to critically link interventions to research evidence (Casey, 2015), with in-depth information often missing. A systematic approach to conducting research on SRH issues during humanitarian crises (which incorporates numerous actors, their complex interactions, and networks) is important for better coordination and for effective decision-making that would enable a quality outcome of response for the displaced population in need (Altay & Labonte, 2014).

WHO Initiative to Improve the SRH of Refugees in Three Countries

The World Health Organization (WHO) has established a strategic partnership with the Ministry of Foreign Affairs of the Netherlands to deliver integrated SRH services to the most vulnerable groups, focusing on adolescent girls and women in humanitarian crises in three countries; Bangladesh (Cox's Bazar), the Democratic Republic of the Congo (DRC) (Kasai), and Yemen (Ahmed et al., 2019). All three countries are struggling with managing SRH needs of the huge number of refugees they are hosting due to the poor SRH service availability in those fragile humanitarian settings. As the first step toward implementing comprehensive SRH interventions, WHO contracted local research organizations in those countries to conduct a need and feasibility assessment to better understand the SHR needs of the refugee populations, as well as related socio-cultural behavior and practices, to design evidence-informed interventions (Ahmed et al., 2019).

The Bangladesh Case Study

Bangladesh is currently hosting about 912,114 Rohingya refugees (UNHCR, 2019), who fled from the Rakhain state of Myanmar as a result of political violence. The 1982 Myanmar Citizenship Law did not count Rohingyas as one of the 135 legally-recognized ethnic groups in the country thus removing a variety of their citizenship-related rights (Haque, 2017). This encouraged decades of violence against this ethnic minority population, forcing them to leave their country. Due to

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geographical proximity, the flow of people between the Bangladesh-Myanmar borders has been common since the 1970s. However, the outbreak of violence that occurred on August 25, 2017[1] caused an influx of Rohingyas in Bangladesh. This displaced population took shelter in the refugee camps established in two sub-districts (namely Ukhiya and Teknaf) of the Cox's Bazar district. The living conditions in these overcrowded and informal settlements, especially for adolescent girls and women, created health-related threats and challenges. As of July 2019, about 52% of the Rohingya refugees were female and 30% of them belonged to the 12–59 years age group (UNHCR, 2019). These women and girls are identified as being at a higher risk of morbidity and mortality related to pregnancy, exploitation, violence, and diseases during such complex humanitarian emergencies, and need special attention in terms of SRH care (Strategic Executive Group, 2019). Being in their reproductive age, Rohingya adolescent girls and women are in dire need of SRH services such as pregnancy care, childbirth support, postnatal care, family planning services, menstrual health, safe abortion, and prevention and management of sexually transmitted infections including HIV/AIDS (Islam & Nuzhat, 2018). In order to deliver these services, an in-depth investigation of this group's priority needs, including their traditional practices, and cultural models and understandings is required. In doing so, one could also get comprehensive insights into barriers and existing vulnerabilities of the Rohingya refugee population at large (Doedens & Burns, 2001), particularly for adolescents and women of reproductive age. The emergency humanitarian response for the Rohingya refugee crises in Bangladesh followed the cluster approach (by UNHCR) whereby the governments of the host country, UN agencies and NGOs, work together to improve capacity, coordination, leadership, and accountability jointly within different sectors such as Health, Water Sanitation and Hygiene (WASH), Education, and Protection (Landegger et al., 2011). The Sexual and Reproductive Health working group is one of the sub-sectors led by The United Nations Population Fund (UNFPA) under Health Sector (headed by WHO) that collaborates and coordinates with the government of Bangladesh, UN agencies, and all NGOs providing SRH services in the Rohingya refugee camps. Since inception, this study brought together key stakeholders, and ensured their engagement. These include the Ministry of Health and Family Welfare, The Government of Bangladesh (GoB); Health sector implementors and the Sexual and Reproductive Health and Rights (SRHR) sub-sector which operate in the camps. The discussions among the sub-sectors are overseen by UNFPA and play a key role in influencing local SRH service provision policies. This study was designed in consultation with WHO and UNFPA to ensure adequate contextualization of questions and instruments, and to capture different aspects of a complex humanitarian eco-system as part of the study setting.

A situation analysis was conducted in 10 randomly selected refugee camps in Cox's Bazar, Bangladesh between July and November 2018 by the authors to assess the SRH needs of Rohingya adolescent girls and women (especially their healthcare seeking behavior) and to explore the demand and supply barriers in SRH service uptake (Ahmed et al., 2019). It also explored facilities' readiness to deliver comprehensive SRH services, and areas of improvement of the existent SRHR service delivery systems (along with the availability of resources within the refugee camps) (Ahmed et al., 2019; Aktar et al., 2019). This research is among the first to investigate Rohingya adolescent girls and women's (aged 12-59 years) SRH needs, availability and utilization of SRHR services, barriers to service uptake, and challenges faced in the camps. As such, it illustrates a case study approach for examining SRH conditions and services in a humanitarian setting for Rohingya refugees. It also serves as a reference for future research in terms of theoretical framing, methodological adaptations, insights and directions on how to conduct research on SRH during forced migration.

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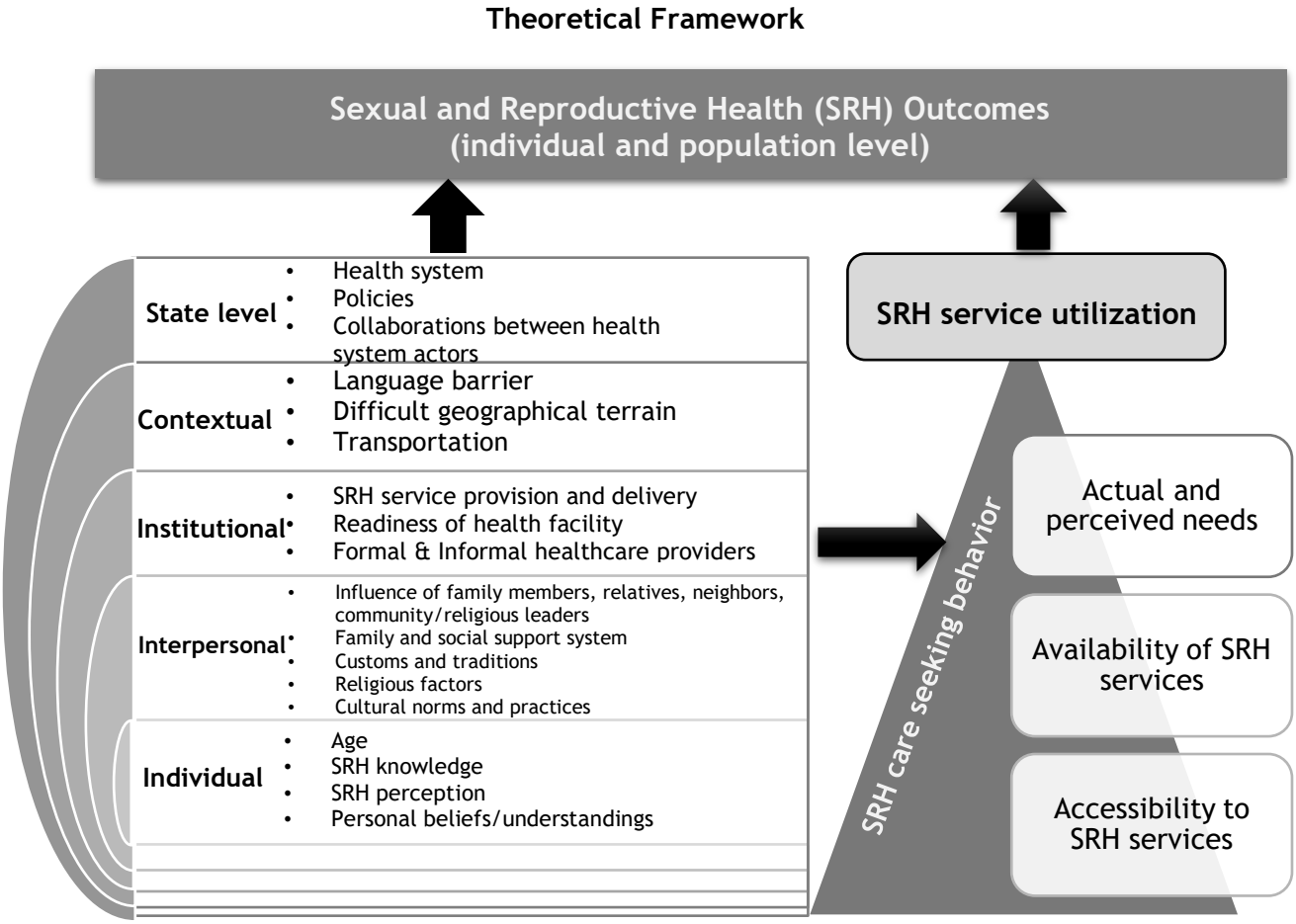

Figure 1. Conceptual framework for the study (adopted from the ecological models of McLeroy et al., 1988 and Blanchet et al., 2017).

This research was guided by the ecological model of health behavior (McLeroy et al., 1988) and the conceptual framework developed by Blanchet and colleagues (2017) which explained the influence of key factors on health service delivery in humanitarian crises situation (Blanchet et al., 2017). Together these two frameworks serve the purpose of capturing all-inclusive factors, at both individual and population levels, pertinent for SRH-related information, in a context of religious and cultural conservatism as illustrated by the (forcibly) displaced Rohingyas in the context of this study. In our case, the health interventions, influencing factors, and other cross-cutting related issues were selected based on the objectives and themes identified in consultation with experts (SRHR sub-sector and Health sector stakeholders and some community discussions[2]). Our situation analysis was focused on the core SRH-related issues and interventions, service delivery mechanisms and challenges that pertain to the Rohingya adolescent girls and women. Thus, the conceptual framework (see Figure 1) shows that SRH outcomes and outputs, at both individual and population levels, are influenced by SRH service-seeking behavior and service utilization, as well as the complex but interlinked socio-cultural and contextual factors

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within the ecosystem of humanitarian crises—Rohingya refugee camps in our case. This conceptual framework also captures the demand-side and supply-side aspects of SRH service provision and utilization, which are mostly influenced by the social and structural determinants of health. We argue that the interdisciplinary aspects of the ecological model explains the multi-sectoral, multi-modal, and multi-level factors influencing refugees' healthcare seeking behavior (Chung et al., 2018; Taylor & Lamaro Haintz, 2017). This framework integrates the syndemics[3] (de Jong et al., 2015) of the overall health systems including the total complex ecosystem along with the individual, interpersonal, institutional, contextual, and state-level influences in utilizing and/or accessing SRH services during humanitarian crises. The socio-ecological model allows one to consider the relationship of individuals (such as Rohingya adolescent girls and women) within the context of their community practices, familial structures, cultural beliefs and norms, and context-specific needs for SRH. This framework also acknowledges the gap in community-specific knowledge required to identify the need-based strategic public health approaches to solve SRH related problems and service delivery gaps from the perspective of the beneficiaries (de Jong et al., 2015). The overall health systems' functions and responses to humanitarian emergency situations along with the broader public and health policy approaches are key to the SRH outcomes and outputs for the Rohingya refugees due to their direct impact on uptake of interventions and service delivery systems. Collecting and combining information through this situation analysis at the initial stage of the humanitarian crisis condition serves as a basis for understanding community needs, availability and access to care, utilization of services, and barriers in service utilization, along with facility readiness to provide the needful SRH services, supply-side barriers, and key contextual factors including their socio-cultural and religious beliefs.

Methods

This study employed a concurrent mixed-methods design using both qualitative and quantitative techniques. Ten refugee camps (out of a total of 34) were randomly selected from Ukhiya and Teknaf, two Upazilas (sub-districts) where Rohingya refugees settled after the August 25, 2017 influx, taking shelter in makeshift camps in those two sub-districts. A cross-sectional survey was administered along with in-depth interviews (IDIs) with adolescent girls and women, as well as focus group discussions (FGDs) with adult Rohingya males and key informant interviews (KIIs) with influential community members as a means of understanding SRH-related needs on the demand side. An assessment of health facilities was carried out to evaluate facility readiness for providing integrated SRH services to Rohingya adolescent girls and women. In addition, 10 IDIs with healthcare providers and seven KIIs with a range of key stakeholders were conducted to identify supply-side barriers. The strength of the study rests on the involvement of Rohingya refugee community members and representatives from different stakeholder organizations, who play a critical role in dealing with the humanitarian crises condition in the Rohingya camps. A detailed description of the sampling technique, data collection method, and data analysis can be found in the protocol paper based on this study (Ahmed et al., 2019).

As per the theoretical framework discussed above, accessibility and availability of SRH services in the refugee camps were explored using the household survey, IDIs, KIIs, and FGDs. The household survey and IDIs with Rohingya adolescent girls and women touched upon the individual, contextual, and interpersonal aspects of SRH service utilization and most importantly their SRH needs. The IDIs with formal healthcare providers and KIIs with key stakeholders (see Table 1) addressed the institutional composites. FGDs with Rohingya men, IDIs with informal healthcare providers, and KIIs with influential community members as a whole helped to gain a better

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understanding on the socio-cultural and contextual factors for SRH service accessibility. The facility assessment approach contributed to the better understanding of readiness for SRH service provision and delivery at institutional levels, which were explored by using the institutional records as well as by interacting with the facility managers and care providers within those facilities.

Table 1. Detailed sampling strategies, sample size and characteristics of each qualitative respondent groups

Methods	Sampling Strategy	Respondent Groups	Numbers
KIIs	Opportunistic/ emergent sampling & Snowball sampling	**Key stakeholders**	7
		SRHR sub-sector focal points - Male	1
		Government high officials - Male	1
		Local and international NGO program leads & project managers – (Male: 3, Female: 1)	4
		Hospital Director - Male	1
		Influential community members	7
		Majhii (community leader) - Male	3
		Imam (Influential religious leader) - Male	3
		Burmese teachers - Male	1
IDIs	Purposive sampling	**Rohingya women aged 18-59 years - Female**	10
		Rohingya adolescent girls (12-17 years old) - Female	9
	Opportunistic/ emergent sampling	**Formal providers**	10
		Midwife - Female	3
		Clinic managers - Male	2
		Medical Officers - Male	3
		Nurses - Female	1
		Paramedics - Male	1
	Opportunistic/ emergent sampling	**Informal providers**	9
		Traditional birth attendants (TBAs) - Female	3
		Kabiraj (traditional healers) - Male	2
		Female Traditional healers	1
		Burmese doctors - Male	3
FGDs	Convenient sampling (3 FGDs with 6 participants in each)	**Rohingya adult males****	18

**Adult Rohingya males (other than community influential) who were included for Focus Group Discussions aged between 25-65 years. They included husbands and/or fathers of Rohingya adolescent girls and women, and are in many cases the household heads and decision makers for health service utilization.

Household Survey

A household survey was administered to 403 Rohingya adolescent girls and women in the selected refugee camps (278 of whom were women and 125 were adolescent girls). A multistage sampling strategy was applied to select respondents from the household level following pre-set

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recruitment criteria (married/unmarried females aged 12-59 years that were forcefully displaced to Bangladesh during or after the August 25, 2017 influx and that were residing in the selected refugee camps). One woman per household was selected as a respondent for the survey. If more than one woman was found in a household, then only one was randomly selected on the basis of availability and interest. In addition, and if available, an adolescent (aged 12–17 years) was interviewed from the same household. If more than one adolescent girl was present in the same household, then a similar random selection process was conducted.

The household survey contributed to understanding SRH service utilization among the study population, and to determining the barriers in service utilization. The survey consisted of a structured questionnaire that was adapted from the "Reproductive Health Assessment Toolkit for Conflict-Affected Women" (United States Agency for International Development, 2007), and expanded based on reviewing different literatures, experiences from prior field visits, and in consultation with WHO Head Quarter and the Cox's Bazar team. The questionnaire included inquiries on SRH service utilization among Rohingya adolescent girls and women, especially on menstrual health and hygiene; pregnancy, delivery, and postnatal care; family planning methods; menstrual regulation (MR) and safe abortion care; sexually transmitted diseases; and reasons for using or not using SRH services.

The demographic profile of the study respondents was also captured through this survey. We worked with local translators/data collectors to translate the questionnaire into Bengali so that local data collectors could properly understand the meaning of the questions and make them fit into the local dialect. Key terms such as pregnancy, pregnant women, and menstruation in Rohingya dialect were also included in the questionnaire as reference terms for use by the data collectors. The questionnaire was pre-tested in a refugee camp other than the selected camps and modified accordingly. Data was collected using Samsung tablets (model no. SM-T231) to ensure automatic data storage in the database through SurveyCTO software, an Open Data Kit (ODK)[4] tool. Local data collectors were trained on basic concepts and on the SRH terminology used locally. They also familiarized themselves with the questionnaire and research methodology and were trained on administering the questionnaire and collecting data using ODK through tablets.

Qualitative Interviews and Group Discussions with Stakeholders

Nineteen IDIs were conducted with adolescent girls and women in order to complement the survey findings and to have a better understanding of their SRH needs, religious and cultural beliefs and practices, availability of the services in the camps, and the challenges they face to access the services. In addition, three FGDs with adult Rohingya males were also conducted to understand their attitudes on whether (and why) women were discouraged or not from receiving SRH services from formal providers and health facilities. Key Rohingya community leaders referred to as Majhii[5], Imams (religious leaders), and teachers and community informal providers (such as traditional birth attendants, Burmese doctors, and traditional healers) were also interviewed to find out their views as well as their influence on decision-making processes of the communities when seeking SRH services. Three camps were selected from the 10 selected camps (for household surveys) depending on geographic location, challenging terrains, remoteness, difficulty in accessibility, and availability of infrastructure. Rohingya adolescent girls and women were recruited for interviews using purposive sampling, and male respondents were recruited using a convenient sampling method. Influential community members and informal providers were identified using opportunistic/emergent sampling and snowball sampling methods. Table 1

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presents a detailed sampling method, sample size, and characteristics of respondent groups. Using semi-structured guidelines prepared in English and then translated into Bangla, interviews and discussions were conducted until data saturation was achieved. Trained researchers conducted IDIs and facilitated FGDs with assistance from the local data collectors who also acted as interpreters.

Data collected from the household survey and IDIs were triangulated to gather information on the SRH demand side (needs, service availability and utilization, and barriers to access by the study population). The study revealed several demand-side barriers when it comes to utilizing formal healthcare services from health facilities including the community's perception and religious beliefs, the perceived importance and quality of services, the trust in informal providers, and the influence of spouses, family members, and other informal providers (Aktar et al., 2019). The perceived quality of services included, but were not limited to, availability of 24/7 health services, medications and other supplies, female doctors, and comprehensive SRH services in each health center (want to receive antenatal, delivery and postnatal services from a single health center) (Aktar et al., 2019).

Facility Assessment

Facility assessments were conducted at those health facilities established by the government, NGOs, and international NGOs (INGOs). The purpose was to explore facility readiness regarding comprehensive SRH services. Six categories of health facilities were chosen based on the Health Facility Register (shared internally by WHO) that included primary health centers (PHCs), health posts (fixed), labor rooms or SRH-only facilities, comprehensive women's health centers, secondary health facilities, and community clinics. A description of the sampling technique and sampling strategies for facility assessment has been documented in Ahmed et al. (2019). Table 2 summarizes the type and number of health facilities assessed as part of this study.

Table 2. Distribution of selected facilities for facility Assessment

Facility type	**Ukhiya**	**Teknaf**
Community clinic (run by the Ministry of Health and Family Welfare)	1	1
Health Post (fixed)	7	3
Labor room or specialized SRH facility	3	-
Primary Health Center (PHC)	6	2
Secondary Health Facility (run by NGOs/INGOs)	4	-
Upazila Health Complex (run by the Ministry of Health and Family Welfare)	1	1
Total	**22**	**7**

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A structured English checklist was prepared for the facility assessment following WHO's Service Availability and Readiness Assessment (SARA) tool (WHO, 2013). The checklist was then shared with two key stakeholders at Cox's Bazar, the WHO's Health Sector lead, and UNFPA's SRHR Sub-sector, to seek their input as to whether the instrument aligned with the actual situation based on their knowledge on the ground. The checklist was also tested several times on similar types of health facilities before finalization. The data were collected using Samsung tablets and the Kobo Toolbox software, an Open Data Kit (ODK) tool. During the assessment, field notes were taken through observations and informal discussions with the facility management. These helped to gather explanations about any service gaps identified as per the checklist. A separate analysis of six different facility categories was also conducted to identify gaps at multiple levels such as service provision and availability, service utilization, human resources including their training, infrastructure, and supply of equipment and drugs for providing SRH services by the health facilities. This assessment helped the team to have a broader overview of supply-side barriers as related to infrastructure, medical supplies, and human resources along with their training needs.

Qualitative Interviews with Healthcare Providers and Key Stakeholders

Ten IDIs with the formal healthcare providers working in the health facilities selected were also conducted to have a detailed and elaborate picture of the challenges and barriers they face on a daily basis. Moreover, nine IDIs with informal healthcare providers working in the selected refugee camps were conducted, and these helped to understand their perceptions and practices regarding SRH service provision along with their influence in the community (and family) decision making. Formal healthcare providers for IDIs were recruited from the same facilities where the facility assessment was conducted. The informal healthcare providers for IDIs were recruited from the same three camps selected for the qualitative assessment using the opportunist/emergent sampling technique. Interviews were conducted until data saturation was reached. Seven KIIs with different stakeholders within government, INGOs, and NGOs were conducted through emergent/opportunist sampling and snowball sampling strategies (see Table 1). Their insights were key to understanding the existing SRH services utilization and management challenges at the systemic level. The evidence gathered enabled us to get a better understanding of supply-side challenges, of the perspectives of key actors regarding SRH needs of Rohingya adolescent girls and women, and the readiness of the supply-side actors in providing comprehensive SRH services.

Ethical Considerations

Conducting research with vulnerable refugee populations in a humanitarian crisis situation requires special ethical attention. Precautions need to be taken while applying research ethics principles such as confidentiality, privacy, and respect of the respondents (Mfutso-bengo et al., 2008). The communities living through these complex humanitarian crisis situations often go through severe traumatic experiences during forcible displacement and migration from one country to another, and even sometimes become victims of exploitations in the refugee camps (Banatvala & Zwi, 2000; Mfutso-bengo et al., 2008). Therefore, researchers need to be very cautious when phrasing and asking sensitive questions, and also need to be cognizant and respectful of the cultural and religious norms of the respondents. Lastly, it is critical that the respondents' concerns and priorities be identified and addressed.

This study received ethical approval from the Institutional Review Board (IRB) of the authors' organization (2018-017-IR). Both verbal and written consent was sought from all respondents.

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For adolescent respondents, verbal and written assents were requested along with written parental consent. In the case of respondents with low literacy levels, only verbal assent and consent were collected. Because SRH is considered a culturally sensitive issue among the Rohingya community, and because mobility restrictions are sometimes imposed on adolescent girls and women, the research team trained female data collectors to interview the female respondents following comprehensive research ethics and sensitivity training (i.e., avoiding questions on family members murdered, or to those who witnessed such events).

The cultural and religious beliefs of the Rohingya community regarding SRH issues was among the biggest challenges researchers faced. Adolescent girls and women were particularly reluctant and shy to talk about their experiences due to the sensitive nature of this topic. Moreover, as mentioned, interviewing the adolescent Rohingya girls regarding SRH issues required permission from their parents and/or guardians. Adolescent girls and adult women from the same household were interviewed at different times to avoid interference, and to ensure privacy and confidentiality thus allowing young women to be able to participate and communicate their views. To ensure a free-flowing discussion, additional team members were recruited to engage family members about various health issues with the ulterior motive being to essentially distract them so that the main interview with selected respondents could proceed without too many interruptions. As can be seen, there are many substantial aspects that need to be addressed if one is to do justice to a complex research context with marginalized communities (and vulnerable members within those communities, as was the case with women and adolescent girls in this study).

Contextual Considerations

Before conducting any research in a humanitarian setting, it is critical that the researchers become familiar with both the context and the community. Therefore, the team spent several months building rapport with the Rohingya refugee community, focusing initially on repeated visits, creating familiarity, and gaining trust with influential local community leaders (such as Majhiis or Imams). This greatly aided the researchers in accessing and recruiting adolescent girls and women, which enabled us to conduct the research successfully. The very fact of accessing community members in refugee camps required permission from several gatekeepers, often different authorities (e.g., Refugee Relief and Repatriation Commission [RRRC] and Camp in Charge [CiC], camp site management organization of the respective camp). The team sought approval from the relevant authorities before starting data collection in any of the selected camps. This ensured support and lack of interference on the part of the various stakeholders. In addition, informal discussions and formal interviews with influential community persons (who were key informants) were helpful in building a relationship and allowed for an active community participation. Being researchers (who mostly do research and are not directly involved in service delivery) rather than implementors (who implement and manage service delivery on daily basis) also allowed for greater ease of conversations about community needs, and frank responses regarding barriers and challenges to SRH services.

It must be noted that the research team consisted of experienced and trained researchers from diverse backgrounds, with strong methodological backgrounds, and first-hand expertise in conducting qualitative, quantitative, and mixed-method research. The multidisciplinary core research team consisted of 10 senior, mid-level and junior researchers (female: five, male: five). The Principal Investigator of the study (female) is an academic and trained medical anthropologist with over 20 years of qualitative research expertise focusing on SRHR, adolescent

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health, formal-informal health care providers, and health service delivery. The senior researcher team also consisted of two quantitative and statistics experts (male) and two Master of Public Health trained researchers with more than five years of research experience (female). Junior researchers in the team were from anthropology, gender studies, health economics, and statistics backgrounds (female: two, male: three) with at least two years of research experience. The majority of members in the research team (including data collectors) were female as the target group was women. Four male researchers in the team helped build rapport with the male community, including individuals who were influential and/or leaders, before initiating data collection. They also conducted facility assessments. The combination of experienced Bengali-speaking researchers having expertise in SRHR research, related programs, and local enumerators familiar with the local context and Rohingya dialect collectively made the research team strong. Overall, this was key in conducting this type of research in a challenging humanitarian setting.

Another challenge was the language barrier as the Rohingya dialect is different from standard Bengali language. Therefore, the research team had to rely on 12 data collectors (female: eight, male: four) who were familiar with the community dialect and were hired and trained to act as interpreters for the main research team. In the process, a mini dictionary was developed with key terms (e.g., pregnancy, pregnant women, menstruation, etc.) in Rohingya, Bengali, and English so that the research team could follow the conversation between the data collectors and the Rohingya respondents.

The data collection tools (survey questionnaire, qualitative guidelines) required several rounds of pre-testing and revisions before they were deemed acceptable in the cultural and social context of the communities studied. Alongside demographic diversity in the Rohingya humanitarian context, the difficult geographical terrain posed further challenges for the project's management, administration, and implementation. Flexibility was paramount as the planned timeline for data collection had to be revised several times, especially at the initial stage of data collection. Ultimately, the team was able to revise their plans based on a more realistic approach to completing data collection. Lastly, the political unrest and security issues due to strikes inside the camps affected and delayed the completion of the research. The lessons learnt are that it is critical to be pragmatic and adaptable when designing any research in crisis situations. Working closely with the community also means adapting timelines and budgets to manage uncertainties and developments on the ground. It is our hope that other researchers learn and benefit from our research approach and practices.

Conclusion

This research shed light on the under-explored area of SRH service availability and delivery in refugee camps, along with an assessment of the unique barriers to services (along with supply-side challenges) in forced displacement contexts. We shared in this article the context-specific nature of the study, and the alterations made to our design, methods, and tools to help us shed light on SRH services for Rohingya adolescent girls and women. We focused on their needs and perspectives on SRH services and barriers, as well as providers' perspectives on existing service gaps and delivery challenges. The data generated through this research will help humanitarian aid agencies to design more community-centric and gender-sensitive SRH service packages and service delivery mechanisms to deliver integrated comprehensive SRH services to meet the needs of the target population.

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Endnotes

[1] The 1982 Myanmar Citizenship Law did not count the Rohingyas, Muslims from Rakhine state of Western Myanmar, as one of the 135 legally recognized ethnic groups in the country, hence, their citizenship rights got compromised which triggered decades of violence, abuse, and murders (UNHCR, 2018; Haque, 2017). As a result of such violence, many Rohingyas were forced to seek refuge in geographically proximate countries. Hence, movement between the Bangladesh-Myanmar border has been common since the 1970s; however, there was a particularly large influx from 1991 to 1992 (Khatun, 2017). The next influx into Bangladesh occurred after August 25, 2017 as a result of an outbreak of violence upon the Rohingya communities in the Rakhine State (Strategic Executive Group, 2019).

[2] In the lifetime of this research, starting from proposal development to data analysis, the research team had a series of discussions and consultations with key stakeholders, such as WHO and UNFPA, involved with humanitarian response work in Cox's Bazar. The researchers also periodically attended SHRH sub-sector meetings held in Cox's Bazar and discussed with all SRHR sub-sector partners. Those consultations helped understand supply-side related programmatic factors better and fine-tune the theoretical model further.

Discussions with community helped identify the actual situation based on their experience on the ground. It helped us add and/or align themes that were initially not part of the theoretical model or did not arise from the expert consultations. These additions occurred at various levels (individual, interpersonal, institutional, and contextual levels) such as personal beliefs, transportation issues, and influence of informal providers. Thus, the theoretical model evolved gradually over the research period with necessary modifications at different stages of the research and finally came to the current shape.

[3] Here the term 'syndemics' (de Jong et al., 2015) refers to a set of linked problems involving two or more afflictions, interacting synergistically, and contributing to excess burden of SRH related issues among the Rohingya adolescent girls and women. The authors point to the individual, interpersonal, institutional, contextual, and state-level issues intertwined with each other to influence the SRH service access and utilization of the target population residing in Rohingya refugee camps.

[4] Open Data Kit (ODK) are free and open-source software for collecting data through mobile electronic devices, such as smart phones or tablet computers in resource constraint settings. There are available templates for developing questionnaires using those tools. Data can be collected offline, and after connecting online, it automatically synchronizes and stores data in highly secured designated clouds. Stored data can be imported directly as Excel and Stata for analysis. Thus, using ODK helps minimize costs related to data collection and entry. In addition, researchers can also do quality check remotely.

[5] Majhiis are local leaders selected by the Bangladesh Army and the Camp In-charge (CIC) offices from the Rohingya refugees, who are responsible for managing administrative matters (reaching refugees, relief distribution, etc.) for a certain number of households in a designated area (Aktar et al., 2019).

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