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Prevalence and Determinants of Modern Contraceptive Use among Rohingya Women of Reproductive Age Residing in Refugee Camps in Bangladesh: A Cross-Sectional Survey

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ABSTRACT

Background: Comprehensive studies on the determinants of modern contraceptive use in humanitarian settings are relatively uncommon in Bangladesh. The aim of this study was to examine the prevalence and determinants of modern contraceptive use among Rohingya women living in the refugee camp of Cox's Bazar, Bangladesh.

Methods: A cross-sectional survey was conducted among 160 Rohingya refugee women aged 15-49 living in unregistered camps (Camps 7 and 14) in Ukhiya Upazila, Cox's Bazar. In the study, participants were selected using a convenience sampling method, and the sample size was calculated using the single population proportion formula. However, only 160 participants were recruited due to travel restrictions and safety measures implemented throughout Bangladesh during the COVID-19 pandemic. The data were gathered via a structured questionnaire. Results were summarized using both descriptive and inferential statistics and SPSS v.23 software was used for data analysis at 5% level of significance.

Results: The prevalence of contraceptive use was found to be 41.9%. The most commonly used contraceptives were Injection Depot-Provera (65.7%) and Oral Contraceptive Pill (OCP) (28.4%) followed by implant (4.5%) and intrauterine device (IUD) (1.5%). Multivariate logistic regression revealed lower odds of modern contraceptive use among women who had more than a 1.5 year interval between the last two pregnancies (OR = 0.19; 95% CI = 0.07– 0.51) and higher odds were found who expressed a lack of desire for future pregnancies (OR = 13.69; 95% CI = 3.43–54.68). Community Health Workers (CHWs) (80.4%) were the main sources of information on modern contraceptives, whereas hospitals (83.6%) were the most accessible places to obtain contraceptives.

Conclusion: Community health workers play a vital role in disseminating information, emphasizing the need for their training and involvement in relevant programs. These findings are crucial for shaping future research, policies, and reproductive health services in humanitarian settings.

Keywords: Refugee Camp, Reproductive health, Contraceptive devices, female

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Introduction

Family planning services are crucial in safeguarding women's health and well-being, especially those in refugee settings (Abdulahi et al., 2020). Refugee women in conflict situations usually encounter life-threatening reproductive health challenges, such as unwanted pregnancies, unsafe abortions, risk of sexual violence, as well as the spread of Sexually Transmitted Infections (STI), including HIV (Austin et al., 2008; Curry et al., 2015). These challenges lead them to long-term physical and psychological problems as well as elevated rates of infant and maternal mortality (McGinn et al., 2011; Senanayake & Potts, 2008). A key element of primary sexual and reproductive health initiatives during humanitarian crises is to strongly advocate contraception use to prevent these adverse consequences (McGinn, 2000; UNFPA, 2004).

Worldwide, a concerning rise in the refugee population has been noticed, with 4 million individuals being added within a single year, bringing the total to 36.4 million as of mid-2023. This total encompasses around 1 million Rohingya refugees who have been living in the Cox's Bazar District of Bangladesh since 1970 (Simoniya, 2022). In 2017, the most recent surge resulted in an influx exceeding 700,000 Rohingya individuals seeking refuge in Cox's Bazar (UNHCR, 2022). This Muslim minority ethnic group in Myanmar has long been deprived of citizenship and fundamental human rights including education and healthcare services (Azad et al., 2022; Khan et al., 2021). These deprivations have significantly affected their awareness and utilization of contraception and family planning (Palma, 2017), consequently leading to elevated fertility rates and adverse health consequences associated with pregnancy, including high rates of maternal and child mortality (Ainul et al., 2018; Islam et al., 2021; Varagur, 2017). The circumstances have essentially persisted without significant alterations after their forced migration to Bangladesh (Ainul et al., 2018; Women's Refugee Commission [WRC], 2019).

A significant portion of Rohingya refugee population comprises women and girls, representing over half of the total population, and women of reproductive age constitute 24.3% of this demographic (Prothom Alo, 2022). To effectively tackle the reproductive and maternal health challenges encountered by these women, a collaborative initiative has been launched, engaging 150 stakeholders including government entities and humanitarian organizations (UNFPA, 2021). Numerous strategies have been implemented to increase the uptake of modern contraception within this community. Such initiatives include the deployment of Community Health Workers, the recruitment and training of midwives from the refugee population, the establishment of an adolescent-friendly sexual and reproductive health task force, and the introduction of family planning counseling services (UNFPA, 2021, 2022). Despite these efforts, an estimated low prevalence of modern contraceptive use has been reported among Rohingya women (Khan et al., 2021; WRC, 2019). Nevertheless, organizations and their workers noted facing considerable challenges stemming from religious and cultural values, along with entrenched misperceptions regarding contraceptive utilization prevalent among the Rohingya community (UNFPA, 2020; WRC, 2019). The existing patriarchal social framework within this community has disempowered women, limiting their participation in decisions related to their reproductive lives (Ripoll, 2017; WRC, 2019). In addition to these difficulties, research has highlighted that Rohingya women and girls still face inadequate and unequal access to crucial services (Azad et al., 2022).

However, few studies have been conducted into fertility behavior and contraceptive use in the humanitarian settings of Cox's Bazar (Rahman et al., 2024; Guglielmi et al., 2024; Hossain et al., 2023). There is a lack of data regarding contraceptive use among married Rohingya

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women of reproductive age living in the refugee camp of Cox's Bazar, Bangladesh. This study aimed to fill this gap by exploring the prevalence and determinants of modern contraceptive use among Rohingya women of reproductive age in the refugee camp. This explored knowledge and information will help the policymakers to provide a comprehensive guideline for tailoring and improving the management and delivery of substantial family planning services. Additionally, this study will contribute to improving the overall level of sexual and reproductive health, and empower girls and women to actively participate in decisions about their reproductive lives.

Methods

Study design and setting

A cross-sectional survey was implemented using a standardized structured questionnaire among married Rohingya women of reproductive age (15-49) living in two unregistered refugee camps located at Kutupalong (camp 7) and Hakim Para (camp 14) of Ukhiya Upazila, Cox's Bazar. These camps serve as temporary settlements for non-registered Rohingyas who sought refuge in Bangladesh during the 2017 influx (UNHCR, 2022).

Study participants and sampling

To be eligible for the survey, women had to meet the following criteria: (1) married, (2) being within the reproductive age range of 15-49, (3) living with husbands, and (4) residing in unregistered refugee camps. The sample size was calculated utilizing the single population proportion formula, assuming p = 50% (hypothesizing a 50% frequency of the outcome in the population), a significance level of 5% ($\alpha = 0.05$), $Z1-\alpha/2 = 1.96$, and a margin of error of 5% (d = 0.05). The determined sample size was 384. However, the authors managed to recruit only 160 participants, which is 41% of the required sample size, due to the enactment of travel restrictions and safety measures taken across all parts of Bangladesh during the COVID-19 pandemic. Convenient sampling was employed, given the humanitarian context and limited financial resources. Additionally, the absence of a comprehensive roster of Rohingya individuals residing in a specific block or camp posed challenges in constructing a sampling frame (Azad et al., 2022).

Data collection and data quality control:

During the period of data collection of 10th to 20th January 2022, five female data collectors with prior field data collection experience were recruited and trained by the primary investigator. These data collectors were selected due to their teaching abilities and fluency in Rohingya language, a dialect quite similar to the local Chittagong language. Additionally, their profession created a comfortable environment for collecting data because they were well-known in the community. Due to this familiarity , respondents felt more relaxed and more open about sensitive topics such as contraception use, marriage, pregnancy and sexual life.

The data collection process involved face-to-face interviews using a structured questionnaire. The questionnaire was developed based on the literature review pertaining to the utilization of modern contraceptives among women of reproductive age in humanitarian settings. The initial version of the questionnaire was sent to subject experts to assess its content validity. After incorporating their recommended changes, the revised questionnaire was distributed to a small group of ten women to evaluate face validity. The participants' suggestions were then reviewed and adjusted based on relevant published literature. Prior to the actual data collection, the questionnaire was pre-tested and adjusted for better consistency. The duration of the survey ranged from 20 to 50 minutes, with an average duration of 30 minutes. The survey was carried out in the Rohingya language and later translated into English for analysis purposes.

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Measurements

More than 30 questions were set in three sections. The initial segment of the survey gathered data on the socio-demographic attributes of participants, encompassing age, educational level, occupation, number of children, number of household members, and average monthly income. The second part concentrated on participants' awareness, understanding, and utilization of modern contraceptives, along with their accessibility. The third section sought information on the potential factors influencing the use of modern contraceptives. In this context, modern contraceptives encompassed male and female condoms, oral pills, implants, injectables, and intrauterine devices. Awareness was determined by whether the respondent had ever heard of modern contraceptives, while knowledge was assessed based on the participant's ability to mention at least one modern contraceptive method. The present utilization of modern contraceptives was defined as the current use of any of the contemporary contraceptive methods.

Data analysis

The characteristics of the participants were described using descriptive statistics. An examination of the association between the use of modern contraceptives among refugee women and the categorical variables was conducted using the Pearson chi-square test. In the analysis of multiple variables, logistic regression was conducted by including only the factors that showed significant associations in the bivariate analysis in order to assess the overall impact of the independent variables on the outcome variables. The results included unadjusted and adjusted Odd Ratios (OR), and a P-value of <0.05 was considered significant with a 95% Confidence Interval (CI) to determine the level of significance. The statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS) Version 23.

Results

Socio-demographic characteristics of the respondents

The socio-demographic characteristics of the respondents are presented in Table 1. A total of 160 married Rohingya women were recruited for the study, with a response rate of 100%. Their ages ranged from 19 to 39, with an average age of 26 ± 4.13 (mean ± SD). All respondents were Muslim, married and the heads of the household were male (these details are not shown in the table). Only 18.8% (n=30) of the respondents were literate including primary education. On average, the participants had 3 ± 1.32 children, and the typical household size was 6 ± 1.4. Only 11.3% of the participants were engaged in paid work both inside and outside the camps, earning an average wage of 5,777 (range 4000 to 8000) in Bangladeshi Taka (Table 1).

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Table 1. Socio-demographic characteristics of married Rohingya women in refugee camps of Cox's Bazar (n=160)

Characteristics	Number	Percentage
Age		
19-25	74	46.3
26-32	73	45.6
>32	13	8.1
Education		
Illiterate	130	81.3
Literate	30	18.8
Number of children		
1- 3	77	48.1
>3	83	51.9
Household members		
3-6	108	67.5
7-10	52	32.5
Engage in paid work		
Yes	18	11.3
No	142	88.8
Monthly income (in BDT)		
5000 and below	8	44.4
Above 5000	10	55.6

Note: BDT= Bangladesh taka (currency). 1 BDT= 0.0083 USD according to Central Bank of Bangladesh.

Knowledge, availability and use of contraceptives

Table 2 provides information on respondents' knowledge, availability and current use of modern contraceptives. Approximately 90% of the respondents knew at least one modern contraceptive method. Among these methods, Injection Depot-Provera (83.2%) and Oral Contraceptive Pill (OCP) (78.3%) were the most known. Overall, 41.9% of the women were using modern contraception at the time of the study. The most prevalent choices were injection depo (65.7%) and OCP (28.4%), with implant (4.5%) and IUD (1.5%) being less common.

The primary sources of information on modern contraceptives for the respondents were CHWs (80.4%), and health clinics (67.8%). Hospitals (83.6%) were identified as the most accessible facilities for obtaining contraceptives (Table 2).

Determinants of modern contraceptive use

The bivariate analysis revealed that among the sociodemographic factors, only engaging in paid work (p=0.006) and the birth interval between the last two pregnancies (p=0.006) exhibited statistically significant associations with the utilization of modern contraceptives among refugee women (as shown in Table 3). Women who were employed outside their homes for wages and those with shorter intervals between their last two pregnancies were more likely to use contraceptives within the camps. However, among other selected variables, actively seeking pregnancy (p=<0.001), frequent clinic visits (p=0.014); received ANC visits (p=0.023), and the place of childbirth (p=0.006) were correlated with the use of modern contraceptives (Table 3).

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Table 2. Knowledge, availability and use of modern contraceptives among the respondents

Characteristics	Number	Percentage
Ever heard about contraceptives (n=160)		
Yes	143	89.4
No	17	10.6
*Identified modern contraceptive method (n=143)**		
OCP	112	78.3
Injection Deport-Provera	119	83.2
IUD	2	1.4
Implant	5	3.5
Condom	4	2.8
*Sources of information about contraceptives (n=143)**		
Community Health Workers (CHWs)	115	80.4
Health clinics	97	67.8
Female relatives and neighbours	31	21.7
Family	17	11.9
Traditional Birth Attendant (TBA)	12	8.4
Others (dispensary)	1	.7
Currently using any contraceptive (n=160)		
Yes	67	41.9
No	93	58.1
Name of currently used method (n= 67)		
Injection Depot-Provera	44	65.7
OCP	19	28.4
IUD	1	1.5
Implant	3	4.5
Sources of getting contraceptives (n=67)		
Hospital	56	83.6
CHWs	9	13.4
Others	2	3

*= Multiple responses allowed

Table 3. Current use of contraceptives by background characteristics and selected variables

Factors	Use of contraceptives Yes n (%)	No n (%)	Chi-square P-value
Age (in year)			
19 – 25	28 (37.8)	46 (62.2)	
26 – 32	32 (43.8)	41 (56.2)	.503
>32	7 (53.8)	6 (46.2)	
Educational status			
Illiterate	57 (43.8)	73 (56.2)	.293
Literate	10 (33.3)	20 (66.7)	
Number of children			
1-3	30 (39.0)	47 (61.0)	.472
>3	37 (44.6)	46 (55.4)	
Birth interval between the last two pregnancies			
1-1.5 years	51 (50.0)	51 (50.0)	.006*
>1.5 years	13 (26.5)	36 (73.5)	
Engage in paid work			
Yes	13 (72.2)	5 (27.8)	.006*
No	54 (38.0)	88 (62.0)	

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Table 3. Current use of contraceptives by background characteristics and selected variables

Factors	Use of contraceptives Yes n (%)	No n (%)	Chi-square P-value
Monthly income			
5000 and below	7 (87.5)	1 (12.5)	.314
Above 5000	6 (60.0)	4 (40.0)	
Actively seeking pregnancy			
Yes	11(26.8)	30 (73.2)	
No	28 (75.7)	9 (24.3)	<0.001*
Unsure	28 (34.1)	54 (65.9)	
Frequent clinic visits			
Yes	15 (65.2)	8 (34.8)	.014*
No	52 (38.0)	85 (62.0)	
ANC visit			
Yes	21 (58.3)	15 (41.7)	.023*
No	46 (37.1)	78 (62.9)	
PNC visit			
Yes	10 (58.8)	7 (41.2)	.134
No	57 (39.9)	86 (60.1)	
Place of childbirth			
Health facilities	27 (58.7)	19 (41.3)	.006*
Home (within camp)	40 (35.1)	74 (64.9)	

*Significant at $p < 0.05$.

Univariate logistics regression analysis indicated that the odds of modern contraceptive use were low among women who were not engaged in paid work (OR = 0.23; 95% CI = 0.08–0.69) compared to those who worked in paid jobs. Additionally, refugee women with a birth interval exceeding 1.5 years between their last two children were 64% less likely to use modern contraceptives than those with a shorter interval (OR = 0.36; 95% CI = 0.17–0.76). Furthermore, women who did not plan to conceive in the future had substantially higher odds of using contraception (OR = 8.48; 95% CI = 3.05–23.54) compared to those actively seeking pregnancy. However, women who did not visit health clinics frequently had decreased odds of contraceptive use (OR = 0.32; 95% CI = 0.12–0.82). Similarly, those who did not receive antenatal care from health facilities and opted for home births were less likely to use modern contraceptives (OR= 0.42 and 0.38; 95% CI= 0.12–0.82 and 0.18–0.76, respectively) (Table 4).

In the multivariate logistic regression analysis, factors independently predicting the use of modern contraceptives among refugee women were identified after controlling for potential covariates. Having a birth interval exceeding 1.5 years between the last two pregnancies was a significant predictor, reducing the odds of modern contraceptive use (AOR = 0.19; 95% CI = 0.07–0.51). Conversely, not desiring future pregnancies substantially increased the likelihood of using modern contraceptives (AOR = 13.69; 95% CI = 3.43–54.68) (Table 4).

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Table 4. Univariate and multivariate logistic regression analysis regarding factors associated with modern contraceptive use (n = 160)

Factors	Crude OR (95% CI)	p value	Adjusted OR (95% CI)	P-value
Engage in paid work				
Yes	Ref		Ref	
No	0.23 (0.08 – 0.69)	0.009*	0.49 (0.12 – 1.9)	0.319
Gap between last two pregnancies				
1-1.5 years	Ref		Ref	
>1.5 years	0.36 (0.17 – 0.76)	0.007 *	0.19 (0.07 – 0.51)	0.001 *
Actively seeking pregnancy				
Yes	Ref			
No	8.48 (3.05 – 23.54)	<0.001*	13.69 (3.43 – 54.68)	<0.001 *
Unsure	1.41 (0.61 – 3.23)	0.412	2.23 (0.80 – 6.21)	0.124
Frequent clinic visits				
Yes	Ref		Ref	
No	0.32 (0.12 – 0.82)	0.018*	0.41 (0.12 – 1.3)	0.147
ANC visit				
Yes	Ref		Ref	
No	0.42 (0.19 – 0.89)	0.025*	0.89 (0.29 – 2.7)	.838
Place of childbirth				
Health facilities	Ref			
Home (camp)	0.38 (0.18 – 0.76)	0.007*	0.61 (0.23 – 1.5)	0.305

OR = Odd Ratio.
CI = Confidence Interval.
Ref = reference category.
* P < 0.05.
** Adjusted for work for wages, gap between last two pregnancies, want more children, ever had UP, visited clinic in last 6 months, ANC and place of childbirth.

Discussion

While the research indicates a substantial level of knowledge regarding family planning methods, the application of these methods was limited among the participants. A significant majority (90%) of women in the study mentioned knowing at least one modern contraceptive method, a finding consistent with studies conducted in African and European refugee camps (Bakesiima et al., 2020; Casey et al., 2020; Özşahin et al., 2021). This study revealed a contraceptive usage rate of 41.9% among the participants, which is higher than the reported prevalence rate of 33.7% in 2011 (Ullah, 2011) and 33.99% in 2018 (Ainul et al., 2018) but lower than 50.91% in 2021 (Khan et al., 2021). The injectable and OCP are the most commonly used modern contraceptive methods among reproductive-age Rohingya refugee women (Icddr,b, 2018; Khan et al., 2021). Unlike many refugee camps where the use of male condoms is prevalent, this practice is absent in the Cox's Bazar camps (Abdulahi et al., 2020; Halle-Ekane et al., 2016). Studies have provided explanations for this absence, indicating that the prevalent belief in male-dominated communities, asserting that family planning is exclusively the responsibility of women, has contributed to the low usage of male condoms in these camps (Asiedu et al., 2020; Eliason et al., 2014; MacQuarrie et al., 2015).

The increased usage of contraceptives can be attributed to several factors, including the widespread availability of contraceptive services within the camps, the provision of free contraceptives by various healthcare organizations, and a range of programs such as counseling, the involvement of Community Health Workers (CHWs), the engagement of midwives within the healthcare system, and door-to-door interventions (Ainul et al., 2018; Khan et al., 2021; WRC, 2019). Sources of information on

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contraceptives included CHWs/Volunteers, health clinics, and other female peers. Contraceptive services were accessible at healthcare facilities, with specific organizations such as Action Aid, IOM, HOPE, RTMI, MSF, and Red Crescent being named by respondents (UNFPA, 2022). Additionally, respondents mentioned obtaining contraceptives from CHWs and Women Friendly Spaces (WRC, 2019).

The study findings revealed that Rohingya women tend to avoid contraceptive use due to their desire for children, a trend consistent with similar studies conducted in the same context (Azad et al., 2022). Several factors contribute to this preference. Within the Rohingya community, children are viewed as a source of strength (Ripoll, 2017). There is a strong preference for male offspring, as they are expected to provide financial support and care in the parents' old age (Azad et al., 2022; Ainul et al., 2018). Moreover, having children is perceived as a way to preserve their lineage and enhance their chances of survival in the challenging conditions of refugee camps (Islam & Nuzhath, 2018; Uddin, 2019). Furthermore, the number of children is directly linked to the allocation of food cards for families in the camps. The prospect of obtaining additional food cards, which come with benefits such as food, medicine, and clothing, serves as an incentive for them to have more children (Azad et al., 2022).

Sociocultural and religious norms play a significant role in the desire for larger families among the Rohingya. In line with the convictions shared by other Muslim refugees, children are considered blessings from God, symbolizing prosperity in this community (Ainul et al., 2018; Degni et al., 2006). Giving birth is regarded as a virtuous act because they see it as a contribution to the growth of the Islamic population (Islam & Habib, 2023). Consequently, limiting the number of children through contraception is discouraged, as it is viewed as conflicting with Islamic principles (Piran, 2004; Ripoll, 2017). Women in traditional gender roles are also expected to become mothers shortly after marriage and consider motherhood as her primary responsibility in life, which further contributes to their desire for children (Melnikas et al., 2020; Toma et al., 2018). The results indicate a necessity for initiatives promoting contraceptive usage to highlight the advantages of having smaller families. These programs should focus on dispelling misconceptions and negative perceptions regarding the use of modern contraceptives.

The current World Health Organization (WHO) guidelines on pregnancy recommend an optimal spacing of 24 months between pregnancies, with no fewer than 18 months, to minimize health risks for both the mother and the baby (BBC, 2018). Nevertheless, the present study revealed that 68% of the participants had birth intervals shorter than the recommended guidelines. Women who experienced little or no interval between their last two pregnancies expressed a desire for a longer interval between their children, preferring this over limiting their births through contraceptive methods (Alemayehu et al., 2012; Seyife et al., 2019). In a systematic literature review, it was found that contraceptives can reduce the likelihood of short birth intervals, which can be detrimental to both mothers and infants (Yeakey et al., 2009). As a result, preterm birth, low birth weight, and small size for gestational age are more likely to occur, potentially resulting in early neonatal mortality and complications for the fetus (Conde-Agudelo et al., 2006). Additionally, women who have short delivery intervals (less than six months) are more likely to experience maternal complications such as proteinuria, bleeding, edema, and premature rupture of membranes, as well as preeclampsia and hypertension (Razzaque et al., 2005). Research indicates that Rohingya women often choose abortion when they are not prepared for childbirth. Unplanned pregnancies and unsafe abortions can be reduced through the use of contraceptives (Inter-Agency Working Group on Reproductive Health in Refugee Situations,

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2011), and the findings suggest that this awareness should be disseminated within the vulnerable community. The results emphasize the importance of implementing extensive mass and peer campaigns to involve a broader community in diverse family planning programs. These campaigns should center on highlighting the adverse consequences of short birth intervals on the well-being of mothers and children and the benefit of using contraceptives to have a minimum birth interval.

The study has several limitations. The primary limitation is the small sample size, which restricts the generalizability of the study's findings. Factors such as the COVID-19 pandemic, manpower shortage, financial constraints, difficulties in accessing refugee camps, and reaching remote areas contributed to the inability to collect a larger sample size as required. Additionally, it is conceivable that particular nuances may have been neglected amid the translation process from Rohingya to Bangla and subsequently to English. To minimize errors, precautionary measures were taken including the engagement of skilled data collectors and two teams of transcribers with a deep understanding of Chittagonian dialect of Bengali.

Conclusion

In conclusion, this study sheds light on a critical but understudied aspect of reproductive health within humanitarian settings in Bangladesh. Conducted amidst the challenges posed by the COVID-19 pandemic, the research focused on exploring the prevalence and determinants of modern contraceptive use among Rohingya women residing in the refugee camps of Cox's Bazar. The findings reveal a lower rate of contraceptive use among refugee women. An insightful aspect brought to light by this study is the role of intervals between pregnancies in contraceptive choices. Women with more than 1.5 years interval between their last two pregnancies demonstrated lower odds of modern contraceptive use, indicating potential areas for targeted interventions. Conversely, women who did not desire more children exhibited significantly higher odds of adopting modern contraceptives, highlighting the importance of understanding individual reproductive preferences in family planning initiatives.

The study's findings serve as a foundational platform for future research endeavors, policy formulation, and targeted interventions aimed at enhancing reproductive health services for vulnerable populations in humanitarian settings. Based on the findings, there is an urgent need to develop interventions targeting women who want more children and have less birth interval between children. Furthermore, community health workers emerged as a pivotal source of information in this study, indicating the effectiveness of grassroots-level healthcare providers in disseminating knowledge. Therefore, providing them with practical training and involving them in relevant interventions is crucial.

Acknowledgment

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Conflict of Interest

The authors declared no conflict of interests.

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Ethical considerations

The study protocol received primary approval from the Department of Sociology at the University of Dhaka for field execution. Subsequently, ethical clearance was obtained from the Refugee Relief and Repatriation Commissioner (Approval No. RRRC/Research Work/1-3/020/103).

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Code of ethics

Approval No. RRRC/Research Work/1-3/020/103).

Author's Contributions

Conceptualization was done by Sh.E.H.; methodology was devised by M.I. and R.I.R.; Sh.E.H. and M.I conducted the investigation.; Formal analysis conducted by M.I. and R.I.R; Sh.E.H. reviewed and edited the manuscript; M.I. made the original draft; Sh.E.H. supervised the study.

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