Reproductive Health Issues and Assessment of Knowledge, Attitude and Practice (KAP) on Family Planning (FP) among Rohingya Female Refugees

Ahmad Rashidi Mohamed Tahir1,2, Shahida Adila Saiful Adli1, Rosnani Hashim1, Farida Hanim Islahudin3

1Faculty of Pharmacy, University of Cyberjaya, Persiaran Bestari, Cyberjaya, Selangor, Malaysia
2IMAM Response and Relief Team (IMARET), Batu Caves, Selangor, Malaysia
3Faculty of Pharmacy, National University of Malaysia, Kuala Lumpur, Malaysia

Email: rashidi@cyberjaya.edu.my

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Abstract

Introduction: Reproductive health issues are responsible for one-third of health problems among women. Having lack of access to contraception is one of the major risk factors. Woman refugees often face discrimination and they have limited access to basic needs including healthcare. These have caused an increase to the woman’s reproductive health issues. Objectives: Along with identifying the reproductive health issues, this study aims to evaluate family planning (FP) through assessment of three components of knowledge, attitude and practice. Methodology: This study is a cross-sectional study involving Rohingya female refugees attending the Islamic Medical Association of Malaysia (IMAM) Response and Relief Team (IMARET) Mobile Clinic in Selayang, Selangor, Malaysia. Data collection was done through questionnaires with the help of trained translators. Results and Discussions: Reproductive health issue has a minor and negative correlation with all three domains of Knowledge, Attitude and Practice of family planning, (r = −0.11, r = −0.22, and r = −0.18, p > 0.05) respectively. Out of 86 respondents only (n = 7, 8.1%) had at least one reproductive health issue, whereas none reported having sexually transmitted diseases. The most common reproductive health issues reported were pre-eclampsia and gestational diabetes (n = 5, 71.4% respectively). Knowledge on contraception methods was poor in the Rohingya female refugees while the practice of contraceptive in this study was only 33.7%. Among the contraception methods used, almost half (n = 15, 51.7%) have used contraceptive pills followed by injection (n = 8, 27.6%), whereas the least practiced method...
was condoms (n = 2, 6.9%). This study finds that 57% of the respondents had positive attitudes towards family planning. Majority (n = 53, 61.6%) agreed on the use of contraception to control birth interval and more than half of the respondents (n = 54, 62.8%) said that the benefit of contraception outweighs the negative effects. Conclusion: Limited knowledge and practice of contraception methods were found among the Rohingya female refugees, however, majority showed positive attitude on family planning. In conclusion, there is urgent need to improve the family planning education among the Rohingya female refugees to increase practice of contraceptives. This study is of guiding significance for improving the reproductive health of refugee women, but there are still some problems in the article, which need to be revised.

Keywords
Refugees, Reproductive Health Issues, Family Planning, Women’s Health

1. Introduction
Reproductive health issues were responsible for one-third of health problems among women between the ages of 15 and 44 years old (Ezeh et al., 2016). Having lack of access to contraception is the major risk factor (Bustreo, 2015). According to Austin et al., (2008) reproductive health issues include high rates of poor pregnancy outcomes, unsafe abortions, complications from gynaecological surgery, complications of genital circumcision and complications during pregnancy and childbirth. Optimal reproductive health is fundamental to the social and economic development of communities and nations (Smith, 2016). When sexual and reproductive health needs were not met, health problems will arise and become the leading cause of premature death for women (Glasier et al., 2016). Thus, identifying the reproductive issues and evaluating family planning through assessment of KAP especially in female refugees in Malaysia are crucial to help the policy makers to improve health practices of the refugees globally, and increase their quality of life. IMAM Response & Relief Team better, known as IMARET is a chapter by the Islamic Medical Association of Malaysia (IMAM). IMARET’s main aim is to provide high quality healthcare services and promotional activities to those in need of these essential services. Among the activities done by IMARET is providing emergency health care relief to those involved in natural or man-made disaster such as the recent Malaysian East Coast flood relief and Sulawesi Tsunami relief. IMARET not only reaches out to those in need in Malaysia but is also active internationally by involvement in major volunteering activities such as in Cox Bazaar which is in Bangladesh itself, primarily to assist the Rohingya refugee community there through health check-ups. IMARET is also involved in running many mobile clinics for other marginalised communities in Malaysia such as the Orang Asli and Bajau Laut communities. This is in addition to the mobile clinics that are dedicated to the Rohingya refu-
This study was conducted to identify the reproductive health issues among Rohingya female refugees attending IMARET mobile clinics and evaluate family planning (FP) through assessment of three components of knowledge, attitude and practice.

2. Materials and Methods

2.1. Study Design and Sampling

A cross-sectional study was done from August 2019 to November 2019 in IMARET Mobile Clinic in Selayang, Selangor, Malaysia. The population included for this study was Rohingya female refugees of reproductive age group (15 - 52 years old) (Bustreo, 2015). Study subjects with any of the following exclusion criteria were not eligible to participate in this study. The exclusion criteria were as follows: individuals facing difficulty of understanding the questionnaire, individuals speaking other languages apart from the trained translators, elderly (60 years old and above), not consented or willing to participate in the study and individuals that failed to complete the whole questionnaire.

2.2. Ethical Approval

The study was approved by the appropriate institutional and/or national research ethics committee and was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. Ethical approval for conducting this study was obtained from the Medical Research Ethics Committee, University of Cyberjaya (CUCMS/CRERC/FR/032).

Subjects’ involvement in this study was voluntary and agreed to participate with both verbal and written consent form (Appendix: consent form). Participants were well-informed of all important information regarding the study including assured confidentiality with no adverse consequences arise if they declined participation. No identifying markers of any of the participants were revealed in the study and only relevant details related to the research were conveyed.

2.3. Data Collection

Quantitative information was collected using a validated questionnaire developed by Santoso & Surya, (2017). It contains five domains such as socio-demographic background, reproductive health issues, knowledge, attitude and practice on family planning. Questions regarding sources of information and services of contraception were included under the knowledge domain. Each of the questions were verbally asked to each of the participants with the help of a trained translator in the preferred languages. One session took about 10 - 15 minutes to complete the questionnaire.

Total score for each domain was used to rank the level of knowledge, attitude and practice into specific categories as summarised in Table 1. For knowledge
Table 1. Categories of knowledge, attitude and practice of family planning.

| Domains       | Categories          | Scores |
|---------------|---------------------|--------|
| Knowledge Level | Adequate            | 13 - 18|
|               | Medium              | 7 - 12 |
|               | Poor                | 0 - 6  |
| Attitude Level | Positive            | 7 - 11 |
|               | Negative            | 0 - 6  |
| Practice Level | Good practice       | 8 - 14 |
|               | Poor practice       | 1 - 7  |
|               | Not using contraception | 0    |

domain, the total score was determined by summation of number of contraceptive methods known and knowledge on number of contraceptive methods that did not interfere with process of breastfeeding. The total score of attitude refers to summation of the use of contraception to control birth interval, the benefit of using contraception, the desire to use contraception postpartum, and family support to use of contraception. While the total practice score was the summation of history of using contraception and the desire to use contraception in the future (Salisbury et al., 2016). Other questions in the questionnaire apart from the stated were not included for scoring of KAP.

2.4. Data Analysis

Data collected were analysed using the Statistical Package for Social Sciences (SPSS) Ver. 25 for Windows. Descriptive statistics were used to analyse the characteristics of study population. The categorical variables were tabulated as frequency and percentage while continuous variables were measured as mean ± standard deviation. Inferential statistics such as Mann-Whitney U test and Kruskal Wallis tests \( p < 0.05 \) were used to evaluate significance among study variables. \( p \)-value < 0.05 is considered statistically significant (Hameed et al., 2019). Meanwhile, correlations were interpreted using Pearson product-moment correlation.

3. Results

3.1. Demographics

Demographic characteristics of the 86 respondents included in the study were as shown in Table 2, in which age varied from 15 to 52 years old.

The most frequently encountered group was 15 to 19 years old \( (n = 16, 18.6\%) \). More than half of the respondents did not have educational background \( (n = 44, 51.2\%) \) and all the respondents \( (n = 86, 100\%) \) were Muslims. About \( (n = 54, 62.8\%) \) were housewives and most of them \( (n = 67, 77.9\%) \) were married. A big percentage of them \( (n = 32, 42.7\%) \) had early marriage age below 18 years old \[17\] and majority \( (n = 45, 59.2\%) \) had 1 - 3 children.
Table 2. Sociodemographic characteristics of respondents.

| Description                          | Frequency (n = 86) | Percentage % |
|--------------------------------------|-------------------|--------------|
| **Age (years old)**                  |                   |              |
| 15 - 19                              | 16                | 18.6         |
| 20 - 24                              | 13                | 15.1         |
| 25 - 29                              | 15                | 17.4         |
| 30 - 34                              | 9                 | 10.5         |
| 35 - 39                              | 11                | 12.8         |
| 40 - 44                              | 10                | 11.6         |
| 45 - 49                              | 7                 | 8.2          |
| 50 - 54                              | 5                 | 5.8          |
| 55 - 59                              | 0                 | 0            |
| **Last educational level**           |                   |              |
| Primary school                       | 28                | 32.6         |
| High school                          | 12                | 14.0         |
| University                           | 2                 | 2.3          |
| None                                 | 44                | 51.2         |
| **Occupation**                       |                   |              |
| Housewife                            | 54                | 62.8         |
| Student                              | 2                 | 2.3          |
| Works at wet market                  | 13                | 15.1         |
| Factory worker                       | 8                 | 9.3          |
| Others                               | 9                 | 10.5         |
| **Marital status**                   |                   |              |
| Single                               | 12                | 14.0         |
| Married                              | 67                | 77.9         |
| Divorced                             | 4                 | 4.7          |
| Widowed                              | 3                 | 3.5          |
| **Age at marriage (years old) [12]** |                   |              |
| ≤18                                  | 32                | 42.7         |
| Above 18                             | 43                | 57.3         |
| **Number of children**               |                   |              |
| 0                                    | 16                | 21.1         |
| 1 - 3                                | 45                | 59.2         |
| 4 - 6                                | 11                | 14.4         |
| 7 - 9                                | 4                 | 5.3          |
3.2. Reproductive Health Issues

Table 3 showed only seven (8.1%), had experienced one or more reproductive health issues. Out of the seven people, five, (71.4%) had gestational diabetes and another five (71.4%) had pre-eclampsia. Meanwhile, only one person had either miscarriage or pre-mature birth. Other reproductive health issues such as STDs that has high correlation with unmet use of contraception as mentioned by McCoy et al., (2014) was not found in the Rohingya female refugee community.

3.3. Knowledge, Attitude and Practice (KAP)

3.3.1. Knowledge and Awareness of Family Planning

The mean for total knowledge score was 4.14 ± 3.447 which is categorized under poor knowledge. Based on Table 4 majority of the respondents (n = 71, 82.6%) have heard about FP and most of them (n = 65, 75.6%) knew at least one method of contraception. Only four types of methods were known by the respondents. The best-known method was contraceptive pills (n = 62, 72.1%) followed by injection (n = 45, 52.3%). A similar study conducted among Rohingya refugee by UNHCR/WRC (2011) also found that among all women, the two most widely known methods were oral contraceptive pills (OCPs) and injectables (Santoso & Surya, 2017).

Table 3. Frequency of reproductive health issues.

| Issues                  | Frequency | Percentage |
|-------------------------|-----------|------------|
| None                    | 79        | 91.9%      |
| Yes                     | 7         | 8.1%       |

*Multiple choices were allowed, so total was not 100%.

Table 4. Knowledge and awareness regarding family planning.

| Knowledge                                      | Yes, n (%) | No, n (%) |
|------------------------------------------------|------------|-----------|
| Heard about family planning                    | 71 (82.6%) | 15 (17.4%)|
| Knows any method of contraception*             | 65 (75.6%) | 21 (24.4%)|
| Breast feeding/Lactation amenorrhea method (LAM)| 7 (10.8%)  | Not applicable|
| Contraceptive pills                            | 62 (72.1%) | Not applicable|
| Menstruation calendar                          | 4 (6.2%)   | Not applicable|
| Condoms                                        | 14 (21.5%) | Not applicable|
| Injection                                      | 45 (52.3%) | Not applicable|

*Multiple choices were allowed, so total was not 100%.
3.3.2. Source of Information and Services on Family Planning

Figure 1 showed more than half respondents, \( n = 55, 64.0\% \), get information from their family followed by health professionals \( n = 43, 50.0\% \) while the least source of information was radio \( n = 4, 4.7\% \). Mutumba et al., (2018) stated that low literacy rates and high language barrier limits on the use of communication platform such as the media to access information on FP.

Based on Figure 2, majority of the respondents were able to get the service from pharmacy, \( n = 49, 57.0\% \) and doctors, \( n = 48, 55.8\% \). The rest went to hospital and primary health centres such as clinics to get the contraceptive services.
3.3.3. Attitude towards Family Planning

More than half of the respondents (57%) showed positive attitude towards FP. The study by Raheel et al., (2012) also found positive attitude towards FP among the Afghan refugee women. This was seen despite their conservative background and marginal economic status. Table 5 showed, majority, (n = 53, 61.6%) agreed on usage of contraception to control birth interval. More than half of the respondents (n = 54, 62.8%), said that benefits of contraception outweigh the negative effects. More than half (n = 53, 61.6%) also agrees to encourage practice of contraception to their family members. In line with study by Vong et al., (2018), female refugees had good understanding of the relationship between FP with their own health, child’s health and their overall quality of life.

3.3.4. Practice of Contraception

The mean for total practice score was 2.56 ± 3.903 indicating poor practice of contraception by the respondents. Although most respondents portrayed good attitude towards FP, contraceptive usage in this study was only 33.7%. In reference to Table 6, despite poor practice, almost half (n = 41, 47.7%) were willing to use contraception in future. However, a few respondents were unsure (n = 25, 29.1%) rather than not using contraception (n = 20, 23.3%).

Based on Table 7, the reason for not wanting (n = 20, 23.3%) and unsure (n = 25, 29.1%) on the usage of contraception in future were mostly, because of the lack of information (n = 26, 57.8%). Apart from that, this study discovered that almost half of the respondents received opposition from partners (n = 19, 23.3%).

**Table 5.** Attitude towards family planning.

| Attitude                                      | Yes, n (%) | No, n (%) | Don’t know, n (%) |
|-----------------------------------------------|------------|-----------|-------------------|
| Use of contraception to control birth interval | 53 (61.6%) | 7 (8.1%)  | 26 (30.2%)        |
| Feels difficult to get information about family planning | 40 (46.5%) | 23 (26.7%) | 23 (26.7%)        |
| Feels difficult to access contraception services | 41 (47.7%) | 26 (30.2%) | 19 (22.1%)        |
| Willing to use contraception after postpartum | 41 (47.7%) | 20 (23.3%) | 25 (29.1%)        |
| Use of contraception is beneficial             | 54 (62.8%) | 8 (9.3%)  | 24 (27.9%)        |
| Would encourage practice of contraception to family | 53 (61.6%) | 11 (12.8%) | 22 (25.6%)        |

*Multiple choices were allowed, so total was not 100%.

**Table 6.** Practice of contraception.

| Practice                                      | Yes, n (%) | No, n (%) | Unsure, n (%) |
|-----------------------------------------------|------------|-----------|---------------|
| History of using contraception                | 29 (33.7%) | 57 (66.3%)| -             |
| Willing to use contraception in the future    | 41 (47.7%) | 20 (23.3%)| 25 (29.1%)    |
42.2%). Parallel findings were seen in study by Frank, (2011) where husband is the ultimate decision maker in most Myanmar Muslim community while the Chin community prefers making FP decisions together.

3.4. Correlation between Reproductive Health Issues with KAP

Table 8 showed small and negative correlation of reproductive health issue with all three domains of KAP. This indicates that the higher the KAP scores the lower the incidence of reproductive health issues among the respondents. However, it has no statistical significance with \( r = -0.11, p = 0.322 \), \( r = -0.22, p = 0.142 \) and \( r = -0.18, p = 0.102 \) respectively. This was due to small number of reported cases of reproductive health issues found in this study. Out of the 86 respondents, none reported having sexually transmitted disease.

### Table 7. History of using contraception.

| Questions | n | % |
|-----------|---|---|
| **Contraception methods used in the past**, n = 29 | | |
| Natural | 4 | 13.8% |
| Contraceptive pills | 15 | 51.7% |
| Injection | 8 | 27.6% |
| Condoms | 2 | 6.9% |
| **Reasons for not wanting to use contraception**, n = 45 | | |
| Desire to have child | 19 | 42.2% |
| Lack of information | 26 | 57.8% |
| Afraid of side effects | 5 | 11.1% |
| Against religion/beliefs | 17 | 37.8% |
| Opposition from parents | 2 | 4.4% |
| Opposition from partner | 19 | 42.2% |
| Husband used contraception | 3 | 6.7% |
| Husband works far away | 7 | 15.6% |
| Used natural conception | 2 | 4.4% |

Multiple choices were allowed, so total was not 100%.

### Table 8. Correlation between reproductive health issues KAP.

| Variables | Correlation coefficient | \( p \)-value |
|-----------|-------------------------|--------------|
| Health Issue-Knowledge | -0.108 | 0.322 |
| Health Issue-Attitude | -0.220 | 0.142 |
| Health Issue-Practice | -0.178 | 0.102 |
4. Discussions

4.1. Demographics

A study by Frank (2011) reported that the education among Rohingya children was being discouraged by the government, which explained low literacy rates. Thus, the language barrier may become one of the major factors limiting access of knowledge on family planning. About (n = 54, 62.8%) were housewives and most of them (n = 67, 77.9%) were married. A big percentage of them (n = 32, 42.7%) were married before they were 18 years old (UNICEF, 2017) and majority (n = 45, 59.2%) had 1 - 3 children. According to Hamid et al., (2011), women who are independently working, autonomous and free to make decision, had better provision in their married life and were more able to talk about their reproductive matters to their husbands.

4.2. Reproductive Health Issues

Strong religious belief was found to be the factor for lack of STDs reported among the Rohingya refugees’ community who are mostly practicing Muslims. Similarly, Frank, (2011) found that the presence of the community leader significantly affects the difference of lifestyle practiced by the Rohingya refugees living in Malaysia.

4.3. Knowledge, Attitude and Practice (KAP)

4.3.1. Knowledge and Awareness of Family Planning

This study identified that, other methods such as interrupted coitus, diaphragm, implant, IUD, female and male sterilization were unheard. Study by Salisbury et al., (2016) claimed that most women refugees had never seen a diaphragm or it was completely unknown. UNHCR/WRC (2011) identified knowledge of traditional methods among Rohingya refugee was low (rhythm/calendar method at 0.6%, and withdrawal at 0.6%) due to poor family planning practice among the Rohingya communities.

4.3.2. Source of Information and Services on Family Planning

Health professionals were also popular as it is believed to be the positive impact brought by non-government organization (NGO) clinics, including IMARET which offers good health services free of charge.

This finding is parallel with study by Frank, (2011) which revealed both clinics and hospital were the least choice to access services out of fear of being detained since most of them were unregistered and refugees were not eligible to get discounted services at the government healthcare.

4.3.3. Correlation between KAP

This study found positive correlation within all three domains of KAP of FP. Knowledge has medium correlation with attitude. Despite having inadequate knowledge on multiple methods of contraception, the general acceptance to-
wards family planning was positive due to high socioeconomic burdens. Medium correlation was also seen between attitude and practice. Although major respondents had positive attitude on FP, the existed barriers such as inadequacy of source of information remain the biggest limitation on wide practice of contraception.

However, only small correlation is observed between knowledge and practice. Some had marked gap between knowledge and practice of FP methods especially in respondents with higher education background. This study found that increase in education level is not accompanied by practice of FP methods. This is due to existing FP barriers such as religion, partner’s approval, and desire to have more children. Study by Quereishi et al., (2017) also had similar finding were there was a marked gap existing between knowledge and practice of FP methods. In their study, half of the respondents had never practiced any contraception method despite high mean score of knowledge regarding FP. Parallel with this study, Quereishi et al., (2017) found reasons for discontinuing the FP methods were due to the husband’s decision to go against contraception.

5. Conclusion

This study concluded that the most common reproductive health issues found in the Rohingya female refugees were pregnancy related illness such as gestational diabetes and pre-eclampsia. However, the finding was not substantial as the frequency was very low among the respondents. There were no cases of STDs reported in this study thus very small correlation between reproductive health issues and KAP of FP was found. The overall knowledge and practice were poor among women towards FP. However, regardless of the current poor practice, positive attitude was recorded.

Although religious prohibition was one of the main factors of not using contraception in other studies, this study found larger barrier for limitation of contraceptive usage among the female refugees that were lack of sources and partner’s opposition. This study found that husband being the dominant member in the family plays the pivotal role in approving the family size and contraceptive practices.

Meanwhile, women’s education and counseling of couples can play an important role in adopting family planning methods. There is an urgent need to improve the educational status of the females to improve their understanding and practice modern contraceptives especially on birth spacing.

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Conflicts of Interest

The authors declare that there is no conflict of interest.
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Appendix: Consent Form

CRERC Ref no: (CUCMS/CRERC/FR/032).
CUCMS RESEARCH ETHICS REVIEW COMMITTEE (CRERC)
CUCMS, NO. 3410, JALAN TEKNOKRAT 3, CYBER 4, 63000
CYBERJAYA, SELANGOR, MALAYSIA

FORM C2: CRERC CONSENT (ENGLISH)
Research Title: REPRODUCTIVE & MENTAL HEALTH ISSUES AMONG
ROHINGYA FEMALE REFUGEES IN MALAYSIA

RESPONDENT’S/GUARDIAN’S CONSENT
I……………………………………………………………………
Identity Card No…………………………………………………………
Address……………………………………………………………………
hereby voluntarily agree to take part in the research stated above *(clinical/drug
trial/video recording/audio recording/focus group/interview-based/questionnaire-
based).
I have been informed about the nature of the research in terms of methodolo-
gy, possible adverse effects and complications (as written in the Respondent’s
Information Sheet). I understand that I have the right to withdraw from this re-
search at any time without giving any reason whatsoever. I also understand that
this study is confidential and all information provided with regard to my identity
will remain private and confidential.
I* wish/do not wish to know the results related to my participation in the re-
search
I agree/do not agree that the images/photos/video recordings/voice recordings
related to me be used in any form of publication or presentation (if applicable)
*delete where necessary
Signature……………………………………
(Respondent/Guardian)…………………………
(Witness)……………………………………
Date…………………………………………
Name……………………………………
I/C No.: ………………………………………
I confirm that I have explained to the respondent the nature and purpose of
the above-mentioned research.
Date ……………………………
Signature ……………………………
(Researcher)