Current Trends in Biotechnology and Pharmacy
Vol. 18 (Supplementry Issue 3s) 161 - 176, July-Sept 2024, ISSN 0973-8916 (Print), 2230-7303 (Online)
10.5530/ctbp.2024.3s.12

Investigating the Menstrual Health Practices and Needs of Rohingya Women Refugees Living in Malaysia

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Abstract

The Rohingya people are the most marginalized minorities in the world. Being female refugees in Malaysia, they are vulnerable to many challenges which may impact their menstrual hygiene. Currently, not much is known about their menstrual health practices and needs in Malaysia in which this knowledge gap needs to be addressed. This study aimed to identify the menstrual health practices and needs among Rohingya women refugees and determine the relationship between their socio-demographic profile and menstrual experiences. A cross-sectional study involving 18 to 55 years old Rohingya women attending QFFD Clinic managed by IMARET in Selayang, Selangor between April to November 2022 was conducted. The MPQ and MPNS-36 were included in the self-administered questionnaire. 70 respondents completed the questionnaire. Majority of respondents had used disposable sanitary pad and able to wash hands every time after changing (n = 65, 92.9%), as well as preferred to use bathroom (n = 50, 71.4%) and household bin (n = 68, 97.1%) as location to change and dispose their menstrual materials when at home. The study had also found that only 47.1% (n = 33) of respondents had positive menstrual experiences with the husband's education level to be statistically significantly associated with respondents' menstrual experiences. This study provides a preliminary data on menstrual health practices and needs of Rohingya women in Malaysia. Nevertheless, they performed poorly in addressing their menstrual experiences. Thus, there is a need to include menstrual health programmes in humanitarian crisis.

Keywords: menstrual health; menstrual management; menstrual needs; refugees; women's health.

Introduction

The Rohingya people are considered among the most persecuted and marginalized minorities in the world as they face forced eviction from their home due to human rights violations done on them (Mohajan, 2018). As a result, Rohingya people were forcibly displaced across neighbouring countries such as Bangladesh, India, Indonesia, Thailand and Malaysia (UNHCR, 2021). After the year of 2010, the number of Rohingya refugees who had come to Malaysia were increasing (Todd *et al*., 2019). According to the United Nations High Commissioner for Refugees (UNHCR) 2022, as many as 184,980 refugees and asylum-seekers had been registered under the organization in Malaysia by the end of July 2022. Despite the large influx of Rohingya refugees entering Malaysia, it does not change the fact that Malaysia remained to be a non-signatory to the 1951 United Nations Convention relating to the Status of Refugees and its 1967 Protocol (Kaur, 2008). This had

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caused the Malaysian government to perceive them as undocumented migrants (Teng & Zalilah, 2011).

Being an undocumented migrant, they faced various challenges such as limited access to working opportunity, formal education, and affordable medical care (Buscher & Heller, 2010; Teng & Zalilah, 2011; Mohd Safwan *et al*., 2020). When it comes to the Malaysian health care system, it is widely known to provide medical care at a low cost through subsidization by the government (Yu *et al*., 2008). Unfortunately, these low-cost medical services are only applicable to Malaysian citizens while foreigners such as refugees who want access to these services are required to pay a high fee (Chuah *et al*., 2018). Their low health literacy and language barriers had also further restricted their access to health care (Chuah *et al*., 2018; Zhooriyati *et al*., 2021). To address this issue, non-governmental organizations (NGOs) such as IMAM Response & Relief Team (IMARET) had started to provide cost-effective medical care, health screening and health education through multiple outreach mobile clinics to the Rohingya refugees residing in Malaysia since June 2015 (IMAM, 2022). Though, a permanent mobile clinic was formed in Selayang, Selangor in March 2021 which is known as the Qatar Fund for Development (QFFD) Clinic (IMAM, 2022). This is to further expand the primary care services such as outpatient treatment, vaccination, counselling and others to the Rohingya refugees on a daily basis (IMAM 2022).

Despite the outreaches from IMARET, it has been reported that Rohingya women have inadequate accessed to services and understanding of sexual and reproductive health (SRH) such as family planning services and contraception (Ahmad Rashidi *et al*., 2022). It has also been noted that they have limited knowledge of and poor practice in managing their menses as well as lack of access to water, sanitation and hygiene (WASH) facilities (Pandit *et al*., 2022). These challenges can be seen in an assessment done by a group of NGOs on Rohingya refugees living in refugee camps in Bangladesh (REACH, 2019). This then could lead to health problems due to SRH needs are not being met as menstrual health is an integral part of a woman's SRH (Glasier *et al*., 2006; Phillips-Howard *et al*., 2018).

Little is known about the menstrual practices and needs of Rohingya refugee women in Malaysia, so researchers conducted a study to address this gap in knowledge. The study aimed to identify the relationship between socio-demographic information and menstrual experiences among these women.

Materials and Methods

This was a cross-sectional study conducted among Rohingya women refugees aged between 18 to 55 years old who had attended QFFD Clinic run by IMARET in Selayang, Selangor from April until November 2022. Respondents were recruited through convenience sampling method. The exclusion criteria for this study were menopause women, individuals who had trouble understanding the questionnaire and spoke in other languages apart from the trained translators. A one-off interview was done by using a self-administered questionnaire with the help of trained translators upon consent. The trained translators were health care workers (HCWs) working at the study site who had basic education and can speak in Malay language. They were trained to understand and familiarize themselves with the questionnaire.

Study tools

The questionnaire contained four main sections which were: (1) socio-demographics, (2) menstrual history, (3) the Menstrual Practices Questionnaire (MPQ) and (4) the Menstrual Practice Needs Scale (MPNS-36). Both the MPQ and MPNS-36 were translated to Malay language. The translated questionnaire had been reviewed

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by a validated academician from University Sains Malaysia (USM). The translated questionnaire was then back-translated to English language and send to the developer of MPQ and MPNS-36. The developer had compared the back-translated questionnaires with the original version and reconciliation was done by incorporating feedback from the developer into the final version of the Malay translated version to provide the most accurate version of the translated questionnaire.

The socio-demographics section included information such as age, marital status, educational level & employment status, household incomes and number of females in a household while the menstrual history section provided information such as age of menarche, duration of period & menstrual cycle, consistency of menstrual cycle, menstrual symptoms and the frequency of disturbance of everyday work & school absenteeism due to menses (Nur Aizati Athirah *et al*., 2019). The MPQ section identified the menstrual hygiene practices of respondents such as the menstrual material (MM) use, its washing and drying, the location of changing, disposal, storage of MM, as well as sanitation practices during their last menstruation (Hennegan *et al*., 2020). For the last section which was the MPNS-36, it measured whether the perceived needs of respondents during their last menstrual period are met or not and evaluate their menstrual experiences by providing information on respondents' perceptions of comfort, satisfaction, adequacy, reliability as well as worries and concerns (Hennegan *et al*., 2020). Version 1 of both MPQ and MPNS-36 were used in the questionnaire.

A reliable translated questionnaire was ensured through a pilot study consisting of 17 respondents and the use of Cronbach's alpha reliability test. The removal of item 7 from the MPNS-36 section was found to contribute to the questionnaire's reliability. In order to assess face validity, the questionnaire was rated by trained translators who reported a moderate level of difficulty in understanding it.

The MPNS-36 was divided into 6 sub-scales. The score from all 6 sub-scales were then summed-up to get the total score which is the menstrual experiences. A higher score would indicate positive experiences. In cases where questions were not applicable to respondents (e.g., respondents did not wash and reuse any MMs, the total score only reflects the mean of relevant questions. Median splits were then used to rank the level of overall menstrual experiences into 2 categories as shown in (Table 1).

Data analysis

The data collected was analysed using Statistical Package for Social Sciences (SPSS) software version 23.0. The socio-demographic, menstrual history, MPQ and MPNS-36 were reported using descriptive statistics where numerical data were presented as mean (SD) or median (IQR) based on their normality distribution while categorical data were presented as frequency and percentage. The relationship between respondents' socio-demographic data and their menstrual experiences were determined using Pearson Chi-Square test and Fisher's Test if the expected count of <5 was more than 20%. For Pearson Chi-Square test, the statistical value, degree of freedom and *p*-value of the test were reported while for Fisher's Test, only the statistical value (if reported by SPSS) and *p*-value were reported. For both tests, the significant level was set at $p<0.05$.

Ethical considerations

Ethical approval and research approval were obtained from Human Research Ethics Committee (HREC) USM [USM/JEPeM/21100678] and IMARET [IMARET/Research/2021/01] respectively.

Table 1: Scoring of menstrual experiences for MPNS-36

Menstrual experiences	Score range
Negative experiences	0.00 to 2.00
Positive experiences	2.01 to 3.00

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Subjects' enrolment throughout the study was voluntary and refusal to participate in the study did not affect participants' medical condition management and care. The respondents were also well-informed regarding the study and assured that their data were kept private and confidential prior to data collection. During the transferring of data into SPSS software, it was entered using index numbers as to remain anonymous. The data presented in the study were presented as grouped data and no individual participants were identified. The data collected were then stored securely by the researchers.

Results and Discussion

Socio-demographic data

Table 2 showed the socio-demographic data of the respondents. A total of 70 respondents completed the questionnaire. The majority of the respondents were aged between 18 to 39 years old (n = 57, 81.4%) with a mean age of 31 ± 8.3 years old. Most of the respondents were married (n = 62, 88.6%), had non-formal education (n = 34, 48.6%) and unemployed (n = 53, 75.7%). Many of the respondents' husbands also had non-formal education (n = 27, 38.6%) but the majority of them were employed (n = 56, 80%). On the other hand, about 75.7% (n = 53) and 81.4% (n = 57) of the respondents' mothers and fathers respectively had no education and majority of them were also unemployed (n = 69, 98.6% for mother; n = 66, 94.3% for father). In terms of household income, a lot of the respondents had a monthly household income within the range of RM 1,001 to RM 1,999 (n = 44, 62.9%). Finally, many of the respondents had 1 to 3 menstruating females in their household (n = 62, 88.6%) with a mean of 2 ± 1.2 females.

The age distribution in this study was comparable with another study done at the same study site where 55.8% of Rohingya women were in the age ranged between 18 to 39 years old (Ahmad Rashidi *et al*., 2022). In Malaysia, unmarried refugees tend to experience poor income generation, social support and network compared to married ones who tend to have a better quality of life (Shaw *et al*., 2018; El Arab & Sagbakken). This is reflected in the result of this study as the majority of the respondents were married.

The high proportion of respondents and their family members who are uneducated can be attributable to the denial of access to school in their hometowns in Myanmar (Amnesty International, 2020). The Malaysian public schools also do not accept refugees' children (Letchamanana, 2013; Palik, 2020). Therefore, the only way of receiving education is through non-formal settings which are mainly organized by UNHCR and NGOs (Letchamanana, 2013; Palik, 2020). Though, this non-formal education faces various challenges such as inadequate facilities and untrained teachers (Letchamanana, 2013; Palik, 2020).

Being refugees, they are also suffering economically due to the absence of formal opportunities to earn a living (Nungsari *et al*., 2020). Thus, many had to engage in informal employment such as working in the construction, manufacturing and agricultural sectors and others (Todd *et al*., 2019). If hired, majority of them would be male refugees in which they could only provide a monthly household income of RM 1,127 (UNHCR, 2016). This explains why the majority of the respondents' husbands are working and were able to achieve a household income within the range of RM 1,001 to RM 1,999. The number of menstruating females in a household in this study could also be reflected in another study which stated majority of the households in refugee settlements had at least one woman of menstruating age (Calderón-Villarreal *et al*., 2022).

Menstrual history data

Table 3 showed the menstrual history data of the respondents. More than half of the respondents had their first period within the age range of 11 to 15 years old

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Table 2: Socio-demographic data of the respondents

Socio-demographic	Mean (SD)	n (%)
Age (n = 70)	31 years old (8.3)	
18 to 29 years old		36 (51.4)
30 to 39 years old		21 (30.0)
40 to 55 years old		13 (18.6)
Marital status (n = 70)		
Not married		5 (7.1)
Married		62 (88.6)
Divorced		3 (4.3)
Education level (n = 70)		
Formal education		14 (20.0)
Non-formal education		34 (48.6)
No education		22 (31.4)
Employment status (n = 70)		
Full-time		15 (21.4)
Part-time		2 (2.9)
Unemployed		53 (75.7)
Husband's education level (n = 62)		
Formal education		17 (24.3)
Non-formal education		27 (38.6)
No education		18 (25.7)
Husband's employment status (n = 62)		
Full-time		52 (74.3)
Part-time		4 (5.7)
Unemployed		6 (8.6)
Mother's education level (n = 70)		
Formal education		5 (7.1)
Non-formal education		12 (17.1)
No education		53 (75.7)
Mother's employment status (n = 70)		
Full-time		1 (1.40
Unemployed		69 (98.6)
Father's education level (n = 70)		
		(*Contd.*)

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Table 2: Socio-demographic data of the respondents (*Contd.*)

Socio-demographic	Mean (SD)	n (%)
Formal education		3 (4.3)
Non-formal education		10 (14.3)
No education		57 (81.4)
Father's employment status (n = 70)		
Full-time		3 (4.3)
Part-time		1 (1.4)
Unemployed		66 (94.3)
Household income (n = 70)		
≤ RM 1,000		11 (15.7)
RM 1,001 to RM 1,999		44 (62.9)
RM 2,000 to RM 2,999		15 (21.4)
Number of menstruating females in a household (n = 70)	2 (1.2)	
1 to 3 menstruating females		62 (88.6)
4 to 6 menstruating females		8 (11.4)

Table 3: Menstrual history data of the respondents

Menstrual history items	Mean (SD)	Median (IQR)	n (%)
Menstruation age (n = 70)	14 years old (2.0)		
≤ 10 years old			3 (4.3)
11 to 15 years old			46 (65.7)
≥ 16 years old			15 (21.4)
Duration of period (n = 70)	5 days (2.0)		
1 to 5 days			42 (60.0)
≥ 6 days			28 (40.0)
Duration of menstrual cycle (n = 70)		30 days (2.0)	
≤ 30 days			66 (94.3)
≥ 31 days			4 (5.7)
Menstrual cycle consistency (n = 70)			
Consistent			61 (87.1)
Sometimes consistent			5 (7.1)
Never consistent			4 (5.7)
Menstrual symptoms (n = 125)[a]			
Anger			10 (8.0)
			(*Contd.*)

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Table 3: Menstrual history data of the respondents (*Contd.*)			
Menstrual history items	Mean (SD)	Median (IQR)	n (%)
Anxious			2 (1.6)
Sensitive			1 (0.8)
Insomnia			9 (7.2)
Menstrual pain			59 (47.2)
Chest pain			18 (14.4)
Headache			26 (20.8)
Disturbance of everyday work due to period (n = 70)			
Frequently			10 (14.3)
Occasionally			16 (22.9)
Rarely			10 (14.3)
Never			34 (48.6)
School absenteeism due to period (n = 70)			
Yes due to menstrual pain			16 (22.9)
No			54 (77.1)
[a]n = 125 as respondents can choose more than 1 menstrual symptoms			

(n = 46, 65.7%) in which the period lasted less than 5 days (n = 42, 60.0%). Almost every of the respondents felt that their menstrual cycles lasted less than 30 days (n = 66, 94.3%) and were consistent (n = 61, 87.1%). Out of all the menstrual symptoms listed in the questionnaire, majority of the respondents experienced menstrual pain (n = 59, 47.2%) during their menstrual cycles, followed by headache (n = 26, 20.8%) and chest pain (n = 18, 14.4%). Despite that, only a small percentage of respondents stated that their menstrual symptoms frequently disturbed their everyday work (n = 10, 14.3%). This was also seen in school absenteeism as only 22.9% respondents (n = 16) were absent from school due to menstrual pain when they were a student.

The mean menstruation age and duration of period of respondents in this study were equivalent with one study which stated that puberty age for girls is within 10 to 16 years old with the menstrual flow could range from 3 to 5 days (Thiyagarajan *et al*., 2021). The median of duration of menstrual cycle of respondents in this study was also comparable with another study which mentioned that the average menstrual cycle of most women is 28 days which could also usually last as short as 21 days and as long as 35 days (Rostami Dovom *et al*., 2016).

When compared with another study, menstrual pain also remained the major menstrual symptoms felt during menses (Sadaria *et al*., 2022). The similarity of results further strengthens that menstrual pain is widespread among the general population (Schoep *et al*., 2019). Nevertheless, any menstrual symptoms experienced can affect females' quality of life and reduce their productivity due to poor concentration and motivation felt during the menstrual cycle (Nuranna *et al*., 2018; Geta *et al*., 2020). Though, most females experienced none to mild menstrual symptoms, but some may experience moderate and severe menstrual symptoms which can lead to work and school absenteeism (Eshetu *et al*., 2021; Hennegan *et*

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al., 2021). This suggested that majority of the respondents in this study had experienced mild menstrual symptoms as almost half of the respondents felt that their period had never disturbed their everyday work and as many as 77.1% (n =54) of the respondents had not skipped schools due to menstrual pain.

Menstrual health practices

Figure 1 showed that the majority of them preferred to use disposable sanitary pad as MM (n = 65, 92.9%). Figure 2 showed that most of the respondents were able to change their MMs 3 times or more (n = 45, 64.3%) in which they preferred to change them inside the bathroom (n = 50, 71.4%) when at home as shown in Figure 3. This study has also captured that as many as 92.9% (n = 65) of the respondents had washed their hands every time after changing their MMs as depicted in Figure 4. Figure 5 also illustrated that household bin was the commonest disposal site (n = 68, 97.1%) for disposing their used MMs when at home.

Majority of the respondents in this study has used disposable sanitary pad during their last menstrual cycle despite it being more expensive compared to other MMs (UNICEF, 2019). The reason why they could have afforded it is because their husbands are able to earn more than the monthly wage in

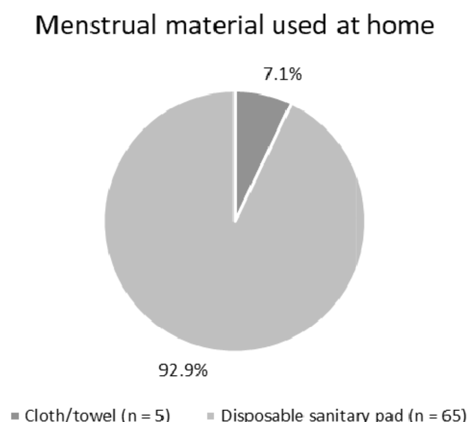

Figure 1: Menstrual material used

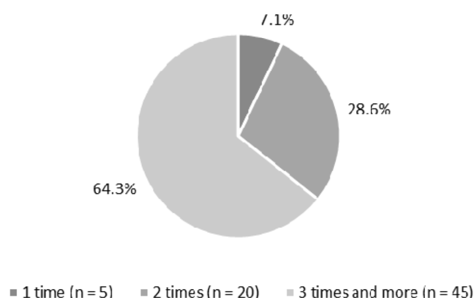

Figure 2: Menstrual materials during the heaviest days of period

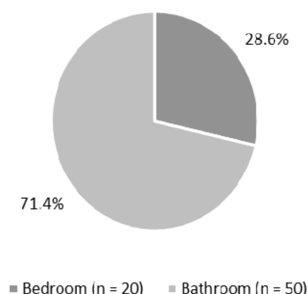

Figure 3: Location to change menstrual materials

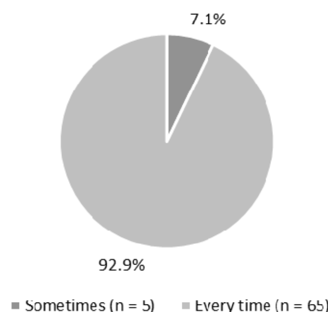

Figure 4: Washing hands after changing menstrual materials

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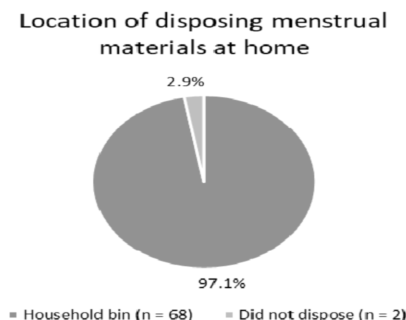

Figure 5: Places of disposing menstrual materials

Malaysia (Nungsari *et al*., 2020).

In Bangladesh, clothes were the major choice of MMs due to the population there had a monthly income lower than Bangladesh's average per capita income in 2019 (Huda *et al*., 2022). When it comes to changing MMs, it is recommended to change them every 6 to 8 hours as failing to do so could lead to infection (Rai *et al*., 2019; Mali & Sudi, 2021).

In Malaysia, Rohingya refugees live in urban settings and not in camps which allow them to have access to nearby shops and buy their MMs when needed (Nungsari *et al*., 2020). Though, in refugee settings, they had to rely on the distribution of sanitary pads by the relevant organization which is infrequent where some had to wait for 2 to 5 months instead of monthly (IOM, 2021; Pandit *et al*., 2022). This explained why only 27.0% of Rohingya girls in Bangladesh were able to change their MMs 3 times and more compared to 64.3% (n = 45) of respondents in this study (Pandit *et al*., 2022).

In this study, bathroom was the major choice of location for changing MMs because Rohingya women in Malaysia have accessed to their own bathrooms and toilets inside their houses. Despite this, a different picture is seen in refugee camps where Rohingya girls had reported challenges in finding spaces for changing their MMs safely and privately (Pandit *et al*., 2022). The challenges included lack of gender segregation facilities, presence of gaps on the walls, poor lighting at night and absence of door locks (IOM, 2021; Pandit *et al*., 2022). This could have affected their MHM as latrines which are safe, clean, lockable, has privacy and good lighting are important factors in managing good menstrual health (Schmitt *et al*., 2021).

It has been described that it is essential to wash hands frequently as a prevention for contracting reproductive tract infections (Ademas *et al*., 2020). Other than that, clean hands are also linked to feeling confidence when managing menses (Hennegan *et al*., 2020). Unfortunately, only 25.7% of Rohingya girls in Bangladesh's refugee camps had washed their hands before and after changing due to the lack of safe and clean water and soap (Pandit *et al*., 2022). This showed that living in urban areas has a higher likelihood of accessing water and can practice hygienic practices as compared to living in refugee camps (Chisty *et al*., 2020). Lastly, it has also been documented that in refugee camps, many women and girls faced difficulty in accessing disposal facility and locating disposal bin (IOM, 2021). Due to the taboo of keeping a bin inside their shelters, many were met with negative remarks such as "shameful" and "dishonourable" for disposing their used MMs in the open by the cleaners (IOM, 2021). This explained why only 6.93% of Rohingya adolescent girls in Bangladesh had used dustbin as the disposal site for their used MMs (Pandit *et al*., 2022). This also shows that living in Malaysia, one is less likely to have trouble finding bins to dispose their used MMs and faced discriminatory remarks.

Menstrual practice needs, concerns and experiences

Table 4 showed the numerical data of sub-scales and total scores of MPNS-36 in which the respondents had a mean total score of 1.99 ± 0.36 with only 47.1% (n = 33) of the respondents had positive menstrual experiences as shown in Figure 6.

This study has shown that the respondents had done poorly in meeting their needs, had higher concerns and lower menstrual experiences when compared to other studies in the same age group (Vural & Varişoğlu, 2021; Hennegan *et al*., 2022). This could be due to lack of access to resources

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Table 4: Numerical data of sub-scales and total scores of MPNS-36		
Sub-scales and total scores of MPNS-36 (n = 70)	Mean	SD
Material and home environment needs	2.23	0.44
Transport and school environment needs	1.37	0.70
Material reliability concerns	2.06	0.94
Disposal insecurity	2.33	0.70
Reuse needs	2.13	0.42
Reuse insecurity	2.00	0.58
Total score (menstrual experiences)	1.99	0.36

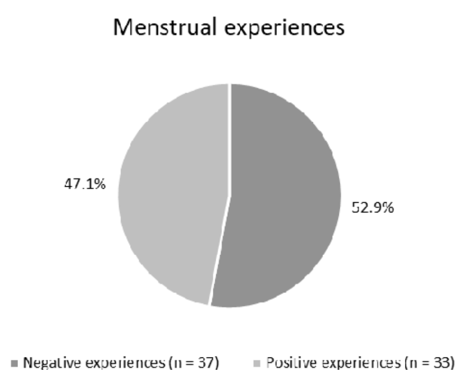

Figure 6: Menstrual experiences

(Hennegan *et al*., 2022). Being a refugee in Malaysia, the respondents in the present study are perceived to be undocumented migrant (Kaur, 2008). Thus, they are unable to get access to formal education and jobs with their movements also being restricted (Teng & Zalilah, 2011; Mohd Safwan *et al*., 2020; Suzarika *et al*., 2020).

In three separate studies which were conducted in India, Ethiopia and Bangladesh, they had shown that females with higher education have better menstrual hygiene management (MHM) and experiences (Bhore & Kumbhar, 2014; Belayneh & Mekuriaw, 2019; Rakhshanda *et al*., 2021). Sufficient knowledge of managing period was also found to be associated with positive menstrual attitudes in females throughout the globes from low- to high-income countries (Munro *et al*., 2021). Most of the Rohingya women in this study, who are uneducated, have poorer menstrual experiences which were found in this study.

Rohingya refugees could only work in the Malaysian informal economy (Todd *et al*., 2019). In the informal economy, there is a lack of enforcing occupational safety regulations and standards where employers are not obligate to provide females employees with the necessary workplace environment which is suitable for their sanitation-related needs (Sommer *et al*., 2016). Some employers may even perceive their sanitation-related needs as unimportant (Sommer *et al*., 2016). Even if there were adequate WASH facilities, they might be prevented from freely using them, such as having to pay before using the sanitation facilities which then increased their incurred costs (Hennegan *et al*., 2020). All of these might also contribute to the reason why most of the respondents in this study are unemployed.

The act of going outside could also pose a risk to the refugees in Malaysia as they are liable to be detained, arrested, and raided (Tasneem *et al*., 2022). According to a report published by the International Federation for Human Rights (FIDH) in 2008, 17,700 refugees had been arrested in 2006 during raids. Most of the raids took place near their living quarters as well as workplaces and despite having proper work permits, most of the refugees were detained (FIDH, 2008). Thus, this prevented them from being able to safely buy their menstrual materials and products without having to face consequences.

Relationship between socio-demographic data and menstrual experiences

Table 5 showed the relationship between various socio-demographic data of

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Table 5: Relationship between socio-demographic data and menstrual experiences

Socio-demographic items	Menstrual experiences, n (%)		Statistic value (df)	*p*-value
	Negative	Positive		
Age (n = 70)				
18 to 29 years old	21 (56.8)	15 (12.1)	5.750 (2)[a]	6.560
30 to 39 years old	13 (35.1)	8 (24.2)		
40 to 55 years old	3 (8.1)	10 (30.3)		
Marital status (n = 70)				
Not married	1 (2.7)	4 (12.1)	4.296[b]	0.107
Married	33 (89.2)	29 (87.9)		
Divorced	3 (8.1)	0 (0.0)		
Education level (n = 70)				
Formal education	9 (24.3)	5 (15.2)	5.724 (2)[a]	0.057
Non-formal education	13 (35.2)	21 (63.6)		
No education	15 (40.5)	7 (21.2)		
Employment status (n = 70)				
Full-time	9 (24.3)	6 (18.2)	0.642[b]	0.784
Part-time	1 (2.7)	1 (3.0)		
Unemployed	27 (73.0)	26 (78.8)		
Husband's education level (n = 62)				
Formal education	14 (42.4)	3 (10.4)	18.827 (2)[a]	0.001*
Non-formal education	6 (18.2)	21 (72.4)		
No education	13 (39.4)	5 (17.2)		
Husband's employment status (n = 62)				
Full-time	25 (75.8)	27 (93.1)	4.197[b]	0.126
Part-time	4 (12.1)	0 (0.0)		
Unemployed	4 (12.1)	2 (6.9)		
Mother's education level (n = 70)				
Formal education	1 (2.7)	4 (12.1)	3.292[b]	0.152
Non-formal education	5 (13.5)	7 (21.2)		
No education	31 (83.8)	22 (66.7)		

(*Contd.*)

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Table 5: Relationship between socio-demographic data and menstrual experiences (*Contd.*)

Socio-demographic items	Menstrual experiences, n (%)		Statistic value (df)	*p*-value
	Negative	Positive		
Mother's employment status (n = 70)				
Full-time	0 (0.0)	1 (3.0)	No statistical value[b]	0.471
Part-time	0 (0.0)	0 (0.0)		
Unemployed	33 (100)	32 (97.0)		
Father's education level (n = 70)				
Formal education	1 (2.7)	2 (6.1)	1.456[b]	0.542
Non-formal education	4 (10.8)	4 (18.2)		
No education	32 (86.5)	25 (75.8)		
Father's employment status (n = 70)				
Full-time	1 (2.7)	2 (6.1)	1.367[b]	0.790
Part-time	1 (2.7)	0 (0.0)		
Unemployed	35 (94.6)	31 (93.9)		
Household income (n = 70)				
≤ RM 1,000	6 (16.2)	5 (15.2)	0.294[b]	0.863
RM 1,001 to RM 1,999	24 (64.9)	20 (60.6)		
RM 2,000 to RM 2,999	7 (18.9)	8 (24.2)		
Number of menstruating females in a household (n = 70)				
1 to 3 menstruating females	35 (94.6)	27 (81.8)	No statistical value[b]	0.136
4 to 6 menstruating females	2 (5.4)	6 (18.2)		

[a]Pearson chi-square
[b]Fisher's exact test
**p*-value <0.05 is significant

respondents and their menstrual experiences. This study has found that there was a statistically significant relationship between husband's education level & respondents' menstrual experiences ($p < 0.05$). On the other hand, other socio-demographic data have showed no statistically significant relationships with respondents' menstrual experiences ($p > 0.05$).

When it comes to male responsibility at household level, they are involved in the decision-making on the allocation of household resources (Mahon *et al*., 2015). Thus, their knowledge on menstruation is important as husbands are seen as the main breadwinner of the family (UNFPA, 2022). Though, it was revealed that most of the time, the husbands did not discuss about menstrual issues with their wives and daughters (Mahon *et al*., 2015). There were also instances where the males in the households were ignorant about menstrual products which then caused problems for the females when it came to requesting money to

buy them (Mahon *et al*., 2015). Thus, it is important to break the stigma by involving men in the discussion of menstruation as males with poor knowledge of menstruation were more likely to endorse cultural myths about menstruation and restrictions on menstruating females which can negatively impact their menstrual experiences (Cheng *et al*., 2007; Mahon *et al*., 2015). When husbands are educated, the study found a higher prevalence of positive menstrual experiences among the respondents (n = 24, 82.8%). In contrast, those who are uneducated had a significantly lower prevalence (n = 5, 17.2%).

Conclusion

In conclusion, it was found out that there were various menstrual health practices of Rohingya women refugees in Malaysia during their last menstrual cycle which differ from those who are living in refugee camps. Nonetheless, Rohingya women refugees performed poorly in addressing their menstruation-related needs, concerns and experiences compared to other studies in the same age group. Thus, there is a need for the agency involved in humanitarian work and NGOs to improve the livelihood of refugees in Malaysia through promoting access to education, work and menstrual health products. For example, they can focus their efforts more on the uneducated and unemployed menstruating women. It is also essential for every stakeholder to work together in implementing menstrual health programmes especially during humanitarian crisis as a way of going forward to combat period poverty. An example of menstrual health programme is by developing and distributing a menstrual health kit which is equipped with basic information on menstrual hygiene practices, disposable sanitary pads, painkillers and others. They could also involve the men in the Rohingya community in the menstrual health programme or workshop as the present study was able to find a relationship between the male education and menstrual experiences experienced by their counterparts.

Acknowledgement

The authors gratefully acknowledge IMARET and their staff, as well as the respondents who had participated in this study.

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