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ORIGINAL RESEARCH

Knowledge, Attitudes And Practices Of Syrian Refugee Mothers Towards Sexually Transmitted Infections

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Purpose: Refugee women are vulnerable to sexually transmitted infections (STIs) due to risk factors associated with displacement. This study aimed to assess the knowledge, attitudes, and practices related to STIs among Syrian refugee mothers in Jordan.

Methods: A cross-sectional correlational study was conducted with a convenience sample of 523 Syrian refugee mothers in host communities in Jordan.

Results: A moderately positive relationship between the mothers' knowledge of and attitudes towards STIs ($p<0.001$) was found. Although Syrian refugee mothers' attitudes towards STIs were reasonably good, they had poor knowledge about non-HIV causes of STIs and clinical symptoms. Spousal acceptance of using a condom was significantly associated with mothers' STIs knowledge, attitude, length of being a refugee in Jordan and duration of marriage ($p<0.05$). Almost all Syrian refugee mothers (91.6%) and their spouses (95%) did not follow regular check-ups for STIs. Two-thirds of mothers'- spouses (66.6%) did not accept the usage of a condom during sexual intercourse.

Conclusion: Syrian refugee mothers have poor knowledge about non-HIV causes of STIs and clinical symptoms. They have poor practices concerning STI screening and prevention. It is imperative that nurses address these issues especially among refugees where in locales where resources are scarce.

Keywords: condom use, Jordan, reproductive health, screening, STIs KAP, Syrian refugee

Introduction

Women are more likely to suffer the consequences of sexually transmitted infections (STIs) than men are. STIs lead to serious reproductive health consequences beyond the direct effect of the infection itself, namely, mother-to-child transmission, cervical cancer, pelvic inflammatory disease (PID) or infertility.[1] Women may have fewer symptoms than men, especially in cases of chlamydia and gonorrhea infections; even when they have symptoms, they may not recognize these as symptoms of an STI. As a result, they are less likely to seek care and get treatment.[2]

Unfortunately, in low- and middle-income countries, the lack of public awareness and trained health care providers, widespread stigma around STIs, unavailability, inaccessibility, and expensive diagnostic tests for STIs compromise the treatment and follow-up efforts for STIs.[1] Refugees are at higher risk of contracting STIs because of factors associated with displacement, including poor socioeconomic status and insecurity, resulting in vulnerability to sexual violence, transactional sex, and a lack of access to prevention and educational efforts.[3]

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Jordan is the second highest country in the world in terms of the number of Syrian refugees in relation to its population, housing 89 refugees per 1000 inhabitants. In 2019, the number of Syrian refugees in Jordan was 671,579. Most of these refugees (83%) live in urban areas and below the poverty level, whereas only 17% of the refugees live in camps under the care of Jordanian and international migration organizations. Of all the Syrian refugees, about 50.3% are females, 25% of whom are in the reproductive age (15–49 years) and 6.5% are adolescent girls (12–17 years).[4] Fertility is higher among Syrian women than Jordanian women (4.7 versus 2.6 children per woman, respectively). The childbearing rate among Syrian adolescent girls is 28%, as compared to 5% among Jordanian adolescent-girls.[5]

In 2018, the rate of widowhood among women of 35 to 39 years of age was about 17% and nearly 31% among 50-years-old women. This high rate of widowhood is related to the male mortality rate, a result of the Syrian conflict.[6] It is suggested that widows without men to protect them, especially during wars, are vulnerable to sexual exploitation that may expose them to STIs.[7]

Syrian refugee girls have a high rate of early marriage, reaching 18% among 15 to 19-year-olds. This rate is more than double that of Jordanian girls (8%) in the same age group.[6] Syrian families in asylum countries have a disturbing sense of insecurity, vulnerability, and real and perceived risks of sexual harassment. Early marriage under the guise of protecting girls—"al Sutra" in Arabic—is considered one method of social protection and preservation of a girl's honor through protecting her virginity in fear of rape before a legal marriage.[8] Families marry off their daughters based on the assumption that they are protecting their daughters from poverty and insecure conditions.[9] Regardless of parents' good intentions, early marriage predisposes Syrian refugee girls to many serious consequences such as adolescent pregnancy and thus, higher risk of maternal mortality, obstetric complications, gender-based violence, and STIs including Human immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS).[10]

Syrian women's health and reproductive health are disproportionately compromised through gender-based violence. About 11.5% of Syrian refugee women in Jordan reported spousal sexual violence. Similarly, 10.5% of Syrian women reported sexual violence by a non-family member. Of those who reported sexual violence, 20.3% reported contracting an STI.[11] Syrian young girls and women are sexually exploited through a "temporary marriage" system where their families marry them off to men with significant wealth and age difference for the sake of dowry that would support their own family's financial constraints. Sexual violence victims are vulnerable to sexual and reproductive health consequences such as unwanted pregnancies, unsafe abortions, and a higher risk of sexually transmitted infections, including HIV.[12]

Culturally, the Middle East is a conservative society in which sexuality and sexual violence issues are social taboos and private matters.[13–15] Sexual violence is underreported among Syrian refugees due to causes such as shame or fear of stigmatization, inability to leave home unaccompanied by a relative, and unawareness of available or insufficient services for survivors of violence.[16,17] These factors make it onerous to obtain accurate figures about this problem.[14]

A study about methods of contraceptives used by Syrian women showed that only 33% of Syrian women and 38.2% of the Syrian men knew that using condoms and limiting sexual partners to one uninfected partner can reduce the chance of contracting HIV. About 14.7% of Syrian women and 28.2% of Syrian men know where to take an HIV test.[5]

The prevalence of chronic infectious hepatitis (B and C), HIV, and syphilis among Syrian refugees in Jordan appears to be low.[18,19] In Jordan, Syrian refugee males aged 25 and above, who live outside of refugee camps, reported low levels of satisfaction about the provision of treatment for STIs and referral services to specialists for STIs.[20] As per the researchers' knowledge, very limited data are available about STIs among Syrian refugee mothers in Jordan. This study aims to assess the knowledge, attitudes and practices (KAP) toward STIs among Syrian refugee mothers in Jordan.

Materials And Methods

Design

The study was a cross-sectional correlational survey.

Sample And Setting

The sample comprised Syrian refugee mothers (N = 523) within 6 months postpartum who live outside the refugee camps in four major governorates in Jordan—Amman (34.42%), Irbid (27.14%), Mafrak (16.43%) and Zarka (13.85%).[20] A proportional quota sampling technique was used, based on the number of Syrian refugee mothers in each governorate. The sample size consisted of a 0.05

two-tailed level of significance, an effect size = 0.20 (small), and power = 0.80; a mean difference test was used, requiring at least 393 mothers.[21] Considering an agreement rate of 75%, approximately 523 eligible mothers were included in this study. The inclusion criteria were that they had to be Syrian refugee mothers, between 14 and 49 years old, beneficiaries of reproductive health services in the community, and had given birth to a newborn within the last six months. This report is part of a larger study in which the period of six months postpartum was a required criterion.

The governorates, districts and sub-districts were chosen based on information available about the target population concentration gathered from the General Population and Housing Census in Jordan 2015.[22] Each sub-district was split into blocks and the research assistants began with the blocks with the biggest population capacity. The total sample was 523 mothers representing both urban and rural areas. Most mothers in Amman and Zarka were living in urban areas—93.3% and 98%, respectively. In contrast, the distribution of mothers was different in Irbid and Mafraq with more mothers living in rural areas, representing 56% and 86%, respectively.

Instruments

The study questionnaire was developed based on valid and reliable STIs knowledge, attitude and practice tools[23,24] and from other relevant studies on STIs,[25,26] including the reproductive health assessment toolkit for conflict-affected women, which was developed by the Centers for Disease Control and Prevention (CDC).[27] Using multiple tools was necessary to consider the cultural sensitivity of such a topic among refugee women. Face and content validity were assessed by a panel of 5 experts in the field of study. Modifications were made according to recommendations. The questionnaire was written in English language first, translated into Arabic language, and then translated back into English later by another bilingual translator. The entire questionnaire was pilot tested on a sample of 30 Syrian refugee mothers. The length of the interview and internal consistency was examined. A few adjustments were made by simplifying the phrasing of questions.

The valid questionnaire consisted of questions regarding the participants' sociodemographic background. The knowledge section assessed mothers' knowledge about STI types and their sources of knowledge. Additionally, 29 questions were used to examine participants' knowledge about clinical symptoms of STIs, transmission and prevention methods, possible complications, and treatment. Each correct answer was scored as (1) and a wrong or uncertain answer was scored as zero. The score for the overall knowledge scale and its subscales was calculated out of 100 to make comparison easier. Mothers with knowledge scores above the mean were considered as having good knowledge, while those with scores below the mean were categorized as having poor knowledge. Internal consistency was assessed using the Kuder-Richardson Formula 20 (KR-20) that measures internal consistency reliability of instruments with dichotomous choices. The knowledge part showed an acceptable KR-20 score of 0.84.

The attitudes section examined the mothers' attitudes towards STIs, using a 20-item questionnaire. The statements were answered using a 5-point Likert scale ranging from (1) to (5), with (5) denoting "strongly agree" and (1) representing "strongly disagree". The statements discussed mothers' attitude towards the severity and curability of STIs, the best ways to prevent STIs, and STIs screening and treatment. Total attitude scores ranged between 20 and 100. Mothers with attitude scores above the mean were ranked as having a positive attitude, while those with scores below the mean were ranked as having an unfavorable attitude. The Cronbach's alpha value for the attitude scale was found to be 0.73. Finally, the practices part dealt with mothers' practices in the instance of experiencing any symptom of STIs, in seeking treatment, and barriers to STI screening and treatment.

Data Collection

Door to door technique was used to reach participants in the community. Considering the sensitivity of the topic, female research assistants were particularly trained. After obtaining a mother's consent for participation in the study, data were collected through face-to-face interviews in the mother's home. Research assistants assisted illiterate mothers by reading each question out and completing the form together.

Ethical Considerations

The Research Ethics Committees at the School of Nursing and The University of Jordan approved the study (PF.17.2). The Department of Statistics, which is the body responsible for national surveys in Jordan, also approved the recruitment process of the participants in host communities. Participants were informed of the purpose, procedures, rights to voluntary participation, confidentiality, and the right to decline or withdraw from the

study without consequential penalty. They were invited to sign a consent form and were given a copy of this form. As for participants who were under 18 years of age, an assent of the participants and permission from an extended family guardian were obtained before the interview took place.

Results

Statistical analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 23.0 for Windows (SPSS Inc. Chicago, IL, USA).

Characteristics Of Participants

A total of 523 Syrian refugee mothers within 6 months postpartum participated in the study with a response rate of 98%. All mothers were Muslim with an age range of 16 to 44 years (M± SD = 26.11 ± 6.11). The majority of the mothers (83.0%) had lower than high school level of education and were unemployed (97.5%). Mothers' age of marriage ranged from 12 to 37 years (M ± SD = 18.50 ± 3.71) with a marriage duration of 1 to 25 years (M ± SD = 7.6 ± 5.3). The age of their spouses ranged from 19 to 60 years (M ± SD = 31.80 ± 6.82). The number of children in a family ranged from 1 to 11 (M ± SD = 3.21 ± 1.84). Family monthly income in Jordanian dinar (JOD) ranged from 30 to 940 JOD (M ± SD = 223.44 ± 105.45) where 1 JOD was equal to 1.41 US dollars at the time. The length of refuge in Jordan ranged from 1 to 7 years (M ± SD = 5.01 ± 1.23). About two-thirds of the mothers (68.5%) did not have medical insurance.

Regarding mothers' obstetric history, 79.3% of the mothers were multipara. Less than one-third of the mothers (28.3%) received home visits from a health care provider or had a follow-up visit during the first six months postpartum. Only 43.8% of the mothers used some type of family planning method. About 6.5% of the mothers experienced domestic violence. Among these mothers, 9.1% experienced sexual violence of any type, including forced intercourse, anal intercourse, intercourse during menstruation, or intercourse before lochia flow has ceased.

Knowledge About STIs

Human immunodeficiency Virus/Acquired Immunodeficiency Syndrome was the most commonly heard of infection among STIs (92.1%). Besides, bacterial vaginosis (70%). Gonorrhea (33.8%), hepatitis B (30%), hepatitis C (25.8%), Human Papillomavirus or HPV (20.8%), syphilis (19.6%), herpes (12.1%), and chlamydia (10%) were more or less poorly known as STIs by the mothers.

The total knowledge score ranged between 0 to 89.66 (M ± SD = 54.84 ± 20.04). As shown in Table 1, the majority of the mothers (89.1%) knew that sexual intercourse is a route of STIs' transmission. Only one-fourth (24.1%) of the mothers recognized that toilet seats is not a route of STIs transmission. Regarding prevention methods of STIs, almost two-thirds of the mothers knew that abstinence (66.5%), avoiding multiple partners (62.5%), use of condoms (61.2%), and use of vaccine (60.8%) could reduce the risk of infection. Almost one-third of the mothers (30.2%) knew that women are less likely than men to have symptoms of some common STIs. Pelvic inflammatory disease was mostly known as a complication of STIs by 70.2% of the mothers. Only 27% of the mothers knew that STIs can lead to health problems that can be more serious for women than for men. In terms of the treatment of STIs, the majority of the mothers (82.2%) knew that both partners in a sexual relationship need complete treatment for any STI and nearly two-thirds of them (64.2%) knew that a condom should be used during the treatment of STIs.

Less than half of the mothers (41.5%) identified physicians as the main source of information about STIs. This was followed by the Internet (36.5%) and radio/television (25.4%). One-fourth of the mothers (24.1%) considered their family and friends as a source of information about STIs. Only 12.8% of them obtained information about STIs from nurses. Very few mothers (6.9%) depended on publications, such as brochures, as their source of information about STIs.

Attitudes Towards STIs

In this study, the mothers' attitude scores ranged from 52 to 99 (M ± SD = 76.66 ± 9.67). More than half of the mothers (53.5%) scored above 76.66. Table 2 shows the mothers' attitudes related to STIs.

Practices Towards STIs

This study showed that 11.5% of Syrian refugee mothers had a history of STIs. Of these mothers, only 11.7% did not seek treatment for STIs for reasons such as not knowing where to go (42.9%), cost (42.9%), embarrassment (28.6%), perceiving STIs' treatment as "not effective" (14.3%), and fear of not retaining their privacy (14.3%). Almost half of the mothers (46.2%) who had had a history of STIs tried to treat themselves using homemade remedies and over-the-counter medications, or both. Some

Table 1 Syrian Refugee Mothers' Knowledge Of STIs (N = 523)

No.	Questions	Correct n (%)	Total Score (M±SD)
1.	**Modes of STIs transmission**		62.41±25.46
	Sexual intercourse	466 **(89.1)**	
	Blood transfusion	449 **(85.9)**	
	Mother to child	353 **(67.5)**	
	Oral sex	317 **(60.6)**	
	Anal sex	313 **(59.8)**	
	Breast milk	261 **(49.9)**	
	Toilet seat	126 **(24.1)**	
2.	**Prevention methods of STIs**		54.03±26.86
	Sexual abstinence	348 **(66.5)**	
	Multiple sexual partners	327 **(62.5)**	
	Condoms	320 **(61.2)**	
	Vaccines	318 **(60.8)**	
	Vaginal douching	100 **(19.1)**	
3.	**Clinical Symptoms of STIs**		39.96±27.17
	Vaginal itching	276 **(52.8)**	
	Foul-smelling vaginal discharge	258 **(49.3)**	
	Dyspareunia	251 **(48.0)**	
	Symptomless infection	244 **(46.7)**	
	Penal discharge	174 **(33.3)**	
	Women show less symptoms than men	158 **(30.2)**	
	Heavy menstrual/between periods bleeding	102 **(19.5)**	
4.	**Complication of STIs**		57.52±31.66
	Pelvic Inflammatory Disease	367 **(70.2)**	
	Fetal or newborn complication	352 **(67.3)**	
	Pregnancy and childbirth complications	327 **(62.5)**	
	Reproductive cancers	321 **(61.4)**	
	Infertility	297 **(56.8)**	
	Women have more serious complications than men	141 **(27.0)**	
5.	**Treatment of STIs**		64.58±31.24
	Both partners need complete treatment	430 **(82.2)**	
	A condom should be used during treatment	336 **(64.2)**	
	Antibiotics can cure most bacterial STIs	313 **(59.8)**	
	No specific treatment to cure viral STIs	272 **(52.0)**	
	The overall score		54.83±20.04

Note: Bold numbers within parenthesis in column 3 are percentages of mothers who had a correct answer.

Table 2 Attitudes Toward STIs Among Syrian Refugee Mothers (N = 523)

No.	Items	M±SD
1.	If a woman suffers from STIs she should inform her partner or spouse	4.55±0.86
2.	If I notice symptoms of STIs in my partner, I will advise him to seek treatment immediately	4.54±0.87
3.	If I notice symptoms of STIs, I think I should seek treatment immediately	4.48±0.87
4.	Getting early medical care is the main key to prevent the harmful effects of STIs	4.30±1.00
5.	Poverty may force women to prostitution*	4.29±1.29
6.	In case of STIs, I take medication concurrently with my partner	4.28±1.03
7.	I feel screening for STIs before marriage is important	4.26±1.08
8.	If I had STIs, I would avoid exposing others during treatment	4.22±1.09
9.	I will avoid sexual contact anytime I think there is even a slight chance of getting STIs	4.21±1.08
10.	I always follow up with treatment after cure	4.01±1.13
11.	I will have less fear of STIs by receiving information about them	3.93±1.13
12.	In my opinion, I feel STIs can cause death if left untreated	3.79±1.30
13.	It is easy to use the STI prevention methods	3.78±1.22
14.	Women's examination is a shame*	3.76±1.39
15.	I would dislike having to follow the medical steps for treating STIs*	3.48±1.33
16.	STIs cannot be treated and lasts for life*	3.04±1.33
17.	I do not think that STIs are serious because they are curable*	2.92±1.39
18.	I do not like to talk about STIs with my relatives/ friends*	2.94±1.44
19.	I will not go to the doctor unless I am certain I have STIs*	2.81±1.41
20.	If both partners are suffering of STIs, there is no need to use a condom*	2.62±1.45
	Overall attitude	3.83±0.48

Note: *Reverse coded items.

mothers reported examples of homemade remedies including sitz bath using chamomile, saltwater or sodium bicarbonate, or drinking chamomile or malt water.

The majority of the mothers (88%) who had a history of STIs received treatment and were satisfied about it (80.8%). Nearly half of them (46.2%) sought

treatment at a private clinic or hospital for different reasons that included being able to afford the expenses for the services by themselves (26.9%), a nearby place (26.9%), being covered by their health insurance (15.4%), and the confidentiality of such a service source (11.5%). However, almost all Syrian refugee mothers (91.6%) and their partners (95%) did not go for regular check-ups for STIs. Two-thirds of mothers' partners (66.6%) refused to use a condom during sexual intercourse.

KAP Analysis With Other Parameters

The Spearman's rank-order correlation was used to determine the relationship between knowledge of STIs and attitude towards STIs among Syrian refugee mothers. There was a significant positive correlation between knowledge and attitude ($r(523) = 0.54$, $p < 0.001$).

Spousal acceptance of using a condom was asked with three alternatives (yes, no, and do not know). The participants who answered "do not know" (n = 58) were excluded from analysis. Spousal acceptance of using a condom during sexual intercourse was found to be significantly associated with mothers' knowledge and attitude on STIs, years of marriage, and the length of being a refugee in Jordan. However, it was not significant with the of age of mothers and their spouses, maternal parity, family monthly income, and education of mothers and their spouses (see Table 3).

Mothers following regular STI screening differed significantly in their age (M ± SD= 28.03 ± 6.02) from those who did not follow regular STIs screening (M ± SD = 25.94 ± 6.11), $t(517) = 2.049$, $p = 0.04$, $r = 0.34$. Moreover, those following regular STIs screening differed significantly in the duration of marriage (M ± SD =9.21 ± 5.84) from those who did not follow regular STIs screening (M ± SD = 7.44 ± 5.198), $t(517) = 2.023$, $p = 0.04$, $r = 0.32$. In other words, mothers who were older and married for a longer time tended to follow regular STIs screening more than those who were younger and married for a shorter time

Discussion

The Syrian refugee mothers in this study demonstrated several areas of concern related to STIs and their management. One major concern was their lack of knowledge about the appropriate and available sexual and reproductive health services. Other problems were related to barriers of using services, such as cost of treatment, embarrassment, perception of STIs treatment as "not effective", and fear of privacy violations. This might be explained by the inherent risk factors associated with displacement, including low literacy, poor socioeconomic status, socio-cultural factors. Such an explanation is also validated by previous studies.[1,3,14–17,20] Our study found that Syrian refugee mothers had inadequate knowledge about STIs in general, particularly about STI types and clinical symptoms. This result was alarming since knowledge of the clinical symptoms is critical in seeking health services and delays in treatment leads to serious consequences. HIV was the most commonly known type of infection among all STIs. This result could be understood considering the extensive worldwide campaigns about HIV, as compared to other types of STIs which do not receive as much attention.[28,29]

This study revealed that the Syrian refugee mothers did not usually see nurses as providers of information for STIs. The most commonly identified sources were

Table 3 Independent Samples *t*-Test For Assessing Significant Differences Between Syrian Mothers' Characteristics Regarding Their Spousal Acceptance To Use A Condom (N = 465)

Mother Characteristics	User (n = 116) M±SD	Non-user (n = 349) M±SD	*t* statistics	Cohen's d
Knowledge about STIs	17.29±4.77	15.41±6.06	3.04**	0.34
Attitude toward STIs	79.56±8.57	75.57±9.85	4.18**	0.45
Monthly income	231.86±93.09	222.65±109.61	0.81	-
Length of marriage	8.53±5.38	7.40±5.12	2.03*	0.22
Maternal age	26.43±5.94	25.995±6.06	0.68	-
Spouse age	32.45±6.14	31.50±6.71	1.35	-
Number of children	3.45±1.90	3.21±1.80	1.22	-
The length of refuge in Jordan	5.37±1.05	4.91±1.25	3.58**	0.4

Notes: *$P<0.05$, **$P<0.001$.

physicians, the Internet, public media, and the family. This outcome was contradictory to reports in previous studies that emphasized the importance of well-prepared nurses in reducing the rates of STIs and in improving women's sexual and reproductive health.[30]

In this study, although Syrian mothers showed moderate levels of knowledge about STI prevention measures, including condoms, vaccines, sexual abstinence, and having a single sexual partner, their actual practices for preventing STIs were poorly implemented. The majority of Syrian mothers and their spouses ignored regular screening for STIs, especially mothers of younger age with a shorter duration of marriage. Similarly, two-thirds of the mothers reported that their spouses refused to use a condom during sexual intercourse and these included those mothers who had poor knowledge of and attitude toward STIs, were married for a shorter duration of time, and were a refugee for a shorter time. The majority of the mothers in this study did not appreciate the serious consequences of STIs on their health, including infertility. They agreed on the practice of obtaining treatment by relying on home remedies, as demonstrated by almost half of the women interviewed. This finding may be explained in the context of (1) religious and socio-cultural norms that prohibit open discussion of private sexual matters or practices, (2) social stigmatization of STIs, (3) the patriarchal system in which women have no control, where asking a spouse to be tested for STIs or to use a condom is unheard of, and (4) prioritization of needs in time of refuge, when mothers give priority to others, especially their children and thus, sexual and reproductive health issues are of lower priority compared to urgent needs including relocation, safety, and settlement.[14,15,31]

In this study, the Syrian refugee mothers' attitudes towards STIs were reasonably plausible, owing to religious beliefs of chastity. All Syrian refugee mothers in this study were Muslim and standard Islamic doctrine and instructions prohibit sexuality out of marriage. Moreover, in Islam, sexuality is prohibited during menstruation and 40 days after childbirth. Anal intercourse, prostitution, and homosexuality are prohibited in Islam. All these conditions diminish risk factors for the transmission of STIs.[13,15,31]

Limitations

Because of the sensitivity and social stigmatization of STIs as a topic among Syrian refugees, we may assume that some sexual behaviors were under-reported. Data were collected via face-to-face interviewing because of the low literacy of the participants. Embarrassment would be one cause for concealing some relevant and important information. Self-administered questionnaires provide a more private and less threatening means of reporting sensitive behaviors, thereby reducing response bias. All the study participants were Muslim; they were unlikely to discuss private sexual matters or practices outside their home because of their commitment to the privacy code in the Quran and the teachings of Islam. The use of non-random sampling limited the generalizability of the findings.

Conclusions

Based on our findings, although Syrian refugee mothers have poor knowledge pertaining to the non-HIV causes of STIs and clinical symptoms, besides having poor practices related to STI screening and treatment, they seem to have good attitudes as instructed by their religious and cultural beliefs. Results of this study provide essential data that is of great relevance to the Ministry of Health, health education institutions, humanitarian organizations, and the Nursing Councils, in order to develop policies that protect this vulnerable population from the adversities of conflict and migration.

Recommendations

The nursing profession, at the forefront of addressing STIs, in collaboration with social and political forces is responsible for mitigating the adversities of migration experienced by women and their children in the time of conflict. Nurses worldwide must address knowledge, prevention, and treatment of STIs by using strict measures of screening, follow-up, and health education in the community. They can improve refugees' awareness of available reproductive health services such as family planning and STI screening by coordinating awareness campaigns and training sessions at UNHCR reception centers, community centers, municipalities, and nongovernmental organizations. They can break the barrier of stigma and silence by utilizing both group and individual sessions that respect cultural norms. Efforts need to be made to build the capacity of nurses for clinical care of sexual assault survivors, gender-based violence case management as well as facilitating access to reproductive health counseling services for men, women, boys and girls.

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The authors declare that there is no conflict of interest in this work.

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