

RESEARCH ARTICLE

Resettled Syrian refugees in Jordan: Survival or health promotion

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Email: faalzoubi@just.edu.jo**Abstract****Aim:** To assess the health promotion practices of Syrian refugees in the north of Jordan and to determine their correlation with some socio-demographic variables.**Design:** Cross-sectional descriptive correlational.**Methods:** Health-Promotion Lifestyle Profile II (HPLP-II) was used to measure health promotion practices of Syrian refugees. Data were collected from a convenient sample of 250 Syrian refugees who lived in the North of Jordan. Descriptive and inferential statistics were used to analyse data.**Results:** The results showed that Syrian refugees in Jordan had low scores of total health promotion scale (mean = 2.28) with a cut score of 2.5, which indicated that they minimally adopted health promotion practices in general. The higher score was found on the interpersonal relation domain (mean = 2.89, SD 0.52). While the stress management domain (mean = 2.48, SD 0.43), spiritual growth domain (mean = 2.38, SD 0.39) and nutrition domain (mean = 2.34, SD 0.37) were lower than 2.5, the scores on responsibility and physical activity domains (mean = 2.20, SD 0.62), (mean = 1.35, SD 0.18) respectively, were the lowest. Women, married and unemployed, have more healthy behaviours than their counterparts.**KEYWORDS**

health, health promotion practices, nursing, nutrition, physical activity, stress, Syrian refugees, war

1 | INTRODUCTION

War, displacement and violence are issues of concern to the whole world. Civil war conflicts, governmental abuse, discrimination and violence have forced many people around the world to leave their home countries to secured neighbourhood countries through unsafe risky conditions where people may lose their lives (Alshoubaki & Harris, 2018; Torp, Berggren, Erlandsson, & Westergren, 2015).

It is reported that number of Syrian refugees in Jordan in 2019 was 655,000, 124,720 of them lived in-camps and 532,567 lived

out of the camps (UNHCR, 2019). Refugees are exposed to many risk factors and suffered from poor living conditions and scarce resources, which made them susceptible to many physical and psychological problems such as anaemia and malnutrition (Alnuaimi, Kassab, Ali, Mohammad, & Shattnawi, 2017; Andresen et al., 2014), abnormal lipid level and vitamins deficiencies (Pour, Kumble, Hanieh, & Biggs, 2014), cardiovascular diseases (Collins et al., 2017), psychological problems due to lack of social support and exposure to trauma (El Arnaout et al., 2019), persistent hopelessness and stress due to cultural diversity, social isolation and language barriers

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(Alzoubi, Al-Smadi, & Gougazeh, 2019; Kiselev et al., 2020; Yako & Biswas, 2014).

Health promotion behaviours were defined as individuals' behaviours which may lead to improvement of their health status, personal well-being and self-achievement (Morrison, Flynn, Weaver, & Wieland, 2013; Pender, 1996). Recently, many people are dying from non-communicable diseases like ischaemic heart diseases, diabetes, hypertension and cancer. Adopting unhealthy lifestyle is the main leading cause that increase the prevalence of non-communicable diseases (Collins et al., 2017; Raj, Senjam, & Singh, 2013). Most of non-communicable diseases have risk factors which are modifiable and preventable through health educational interventions (Ko et al., 2014). A cross-sectional survey among non-camp Syrian refugees in northern Jordan revealed that among 8,041 adults, 21.8%, suffered from at least one NCD; hypertension (14.0%) and diabetes (9.2%) were the most prevalent NCDs. Of those people who needed health care, 23.0% did not seek it; 61.5% cited provider cost as the main barrier, 63.4% reported the unaffordability of medication (Rehr et al., 2018).

In the context of migration, it is worthy to examine health promotion practices in relation to diet, exercise and stress management among refugees because health promotion can prevent diseases (Ko et al., 2014; Pender, 1996). In addition, refugees and immigrants have the fundamental right to enjoy the highest attainable standard of health.

2 | BACKGROUND

Health promotion and disease prevention have a significant relationship where Health promotion practices are essential in all populations including refugees. Higher intake of fruits and vegetables could reduce the risk of hypertension, coronary heart disease and stroke (Boeing et al., 2012). A retrospective study compared Syrian refugee women with Jordanian counterpart revealed that refugee mothers had a significant increase in the rate of anaemia, lower neonates' weight scores when compared to their Jordanian counterpart (Alnuaimi et al., 2017). A cross-sectional study conducted among Somali refugees in Sweden to identify the dietary habits revealed that that most participants were not eaten complete healthy meals (73.6%), their meals lack of fruits, vegetables and starch (Thoits, 2011). Also increased intake of butter, red meat and fatty diet were significantly associated with higher risk of non-communicable disease (Von Ruesten, Feller, Bergmann, & Boeing, 2013). Refugees with poor income may lack the ability to afford sufficient healthy food for their families.

Exercise showed significant improvement in non-communicable diseases, body mass index, blood pressure, cholesterol level, sugar level and low-density lipoprotein (Drozek et al., 2014). A qualitative study was conducted in the United States to assess and evaluate physical activity facilitators and barriers among Somali refugees. The participants acknowledged the importance of physical activity in disease prevention, but they showed poor practicing of physical

activity, they did not give priority to exercise. Finding a job and seeking financial support to their dependents were the top of their priorities, even when they got a stable job it was difficult to re-adjust to join exercise, they also identified the lack of time as another barrier to practice exercise (McNaughton, Korman, Kabagambe, & Wright, 2015). Yet we have little information whether Syrian refugees perform regular exercises to promote their health or not.

Interpersonal relations and social network had a positive impact in both physical health and emotional status of individuals and also in controlling stress (Thoits, 2011). A descriptive correlational study conducted with 550 Syrian refugees in Jordan indicated that 88% of refugees seeking social support as a method of coping strategy, regardless of the source of support (the family, the community, or formal or informal bodies) (Alzoubi et al., 2019). It is not known whether Syrian refugees use interpersonal relations as a health promotion practice in the context of migration.

Refugees in the context of migration showed responsibilities for their own health and for their families. However, the challenges of migration and resettlement hindered them from taking appropriate correct choices in relation to their health (Kiselev et al., 2020). A scoping review on health seeking behaviours of Syrian refugees conducted on 19 studies revealed that socio-cultural, language, social disconnection, lack of public transportation and the lack of culturally and gender specific health services were common barriers for accessing healthcare services (Al-Hamad, Forchuk, Oudshoorn, & McKinley, 2020). This study aiming to identify the responsibility of Syrian refugees in promoting their health.

Stress management and spirituality are identified as effective health promotion practices. It was found that stress reduction was effective in treating depression, hostility, unhappiness and emotional distress (Henderson et al., 2012). Spirituality and religious practices are important issues that influence individuals' health and coping (Braxton, Lang, Sales, Wingood, & DiClemente, 2007; Lozi, 2013). There is evidence that religion and spiritual practices help refugee women manage stress, including, trusting God to solve problems and relying on prayer and other religious practices to cope (Shaw, Peacock, Ali, Pillai, & Husain, 2019). A qualitative interview conducted with 68 Syrian refugees in the North of Jordan revealed that emotional distress is a central concern and is frequently highlighted as the trigger for a non-communicable disease or its exacerbation (McNatt et al., 2019). Stress among refugees could come from perceived discrimination, lack of support from host country, lack of materials, missing home country, concerns about family in home country, economic and social strain and family conflicts (Malm, Tinghög, Narusyte, & Saboonchi, 2020). There is a need to identify whether Syrian refugees use stress management to protect their health.

In Jordan, health services provided for Syrian refugees in Alza'atari camp are limited only to urgent care. Few health promotion programmes were conducted (Doocy et al., 2015). With the crisis stretching over years, non-communicable diseases may be overlooked, and medications are either not available in the camp or only intermittently available (Akik et al., 2019). Outside of Za'atari

camp, refugees face different challenges. They must pay out of pocket for medical services or supplies (El-Khatib, Scales, Vearey, & Forsberg, 2013). Establishing appropriate and sensitive healthcare programmes for refugees should be based on comprehensive assessment of their health status and health promotion practices.

Overall, few quantitative studies were found among Syrian refugees in Jordan and more specifically that addressed health promotion practices. Most of the studies found were qualitative studies that explored one dimension of health promotion practices such as nutrition and stress management (McNatt et al., 2019; McNaughton et al., 2015). In searching for literature, there was no comprehensive study found, that included all health promotion domains, so this study is addressing six domains of health promotion to cover this gap in knowledge. The information yielded from this study could help community organizations to organize and prioritize their resources, services and financial support to promote the positive health practices and change or modify the negative health practices.

2.1 | Research questions

1. What are the health promotion practices practiced by Syrian refugees reside outside camps in Jordan?
2. What is the difference of health promotion practices based on refugees' socio-demographic variables (age, sex, educational level, income, marital status, religion, number of family members, number of household members, presence of diseases and employment status).

3 | THE STUDY

3.1 | Design

Descriptive cross-sectional correlational design was used.

3.2 | Methods

A convenient purposive sample was used in the current study. The sample size was based on the type of statistics of *t* test and analysis of variance (Polit & Beck, 2006). Based on power analysis for alpha of 0.05 and power of 0.80 and medium effect size, the required sample for ANOVA would be between 40–50 participants (Cohen, 1992). The sample obtained was increased to 250 refugees to allow for any drop out during the study and incomplete data. Inclusion criteria were implied to the Syrian refugees who are 18 years old and older and who lived more than 6 months in Jordan to be able to reflect on their health promotion practices postmigration.

Data were collected from Syrian refugees who reside outside camps in six governmental hospitals and twenty primary healthcare centres in the northern cities of Jordan, these sites were chosen because they are the nearest to the Syrian-Jordanian borders and serve

large proportion of the Syrian refugees in relation to their health issues. Some refugees were approached in their houses and worksites.

The instrument used included two sections. The first section included questions about demographic information (age, sex, educational level, income, marital status, religion, number of family members, number household members, presence of diseases and employment status). The second section was the Arabic version of Health-Promotion Lifestyle Profile II (HPLP-II) which is a widely used scale and validated by several studies (Al Ma'aitah, Haddad, & Umlauf, 1999). The scale is used to measure six health behavioural dimensions (subscales); responsibility, nutrition, interpersonal relation, physical activity, stress management and spiritual growth. It has fifty two items anchored on a 4-point scale 1 (never), 2 (sometime), 3 (often) and 4 (routinely). Scoring of HPLP-II was established by computing the mean of participants' responses to the total scale. Mean score of 2.5 or more on any of the subscales reflected high practice of health promotion. Alpha coefficient of internal consistency for total HPLP-II was high (0.94) (Walker & Hill-Polerecky, 1996). The scale was translated to Arabic by bilingual experts, internal consistency was high for the total scale (0.89) (Al Ma'aitah et al., 1999). In the current study reliability for total HPLP-II was high (0.90).

Participants were approached by the researcher in clinics and in the waiting rooms in the primary health centres and worksites. First, the researcher explained the nature, the purpose and the benefits of the study, for participants who agreed to participate and met the inclusion criteria, the consent form was obtained. The researcher was physically present with refugees when they filled out the questionnaire and answered all questions the participants had. For illiterate participants, the researcher read the questions and filled in the answers based on the participant's verbal responses.

3.3 | Analysis

Descriptive statistics (mean, *SD*, frequency and percentage) were used to assess the demographic variables and the level of HPLP-II and its domains among Syrian refugees. One-way ANOVA test was used to determine the differences in total health promotion and its domains based on educational level. Independent *t* test was used to examine the differences in the mean scores of total health promotion and its dimensions based on sex, employment status, marital status, monthly income and presence of diseases. Pearson's *r* test was used to describe the correlations between the total health promotion and its domains and socio-demographic variables of age, number of family members and number of family household members among Syrian refugees.

3.4 | Ethics

Ethical approval from Institutional Review Board in a governmental university was obtained. MOH approval was also obtained to access refugees in hospitals, clinics and primary healthcare centres.

Confidentiality was maintained by asking the participants not to write their names or any identification data on the questionnaire. Information on the risks and benefits of participating in this study were discussed with participants. The participation of the study was voluntary. The hard copy of the questionnaires were kept in a safe and locked wardrobe. No one had access on identification data except the researchers. No data were attached with the main document. Data were available upon request.

4 | RESULTS

All the participants who joined the study were Muslim Syrians and living outside refugee camps. The participants were aged from 18–80 years old (mean = 42.24, *SD* 15.29); maximum number of their family members was 8 people (mean = 4.90, *SD* 1.69), while the maximum number of their household members was 14 (mean = 6.81, *SD* 2.14). More than one third of the participants had one or more of non-communicable diseases ($N = 99$, 39.6%), while the rest were healthy and free of non-communicable diseases. Results of participants' gender, education level, marital status, employment status, family monthly income and number of non-communicable diseases were described in Table 1.

Item		Frequency	Percentage %
Gender	Male	132	52.8
	Female	118	47.2
Educational level	Illiterate	32	12.8%
	Primary	80	32.0%
	Secondary	101	40.4%
	Diploma	35	14.0%
	BC and higher	2	0.8%
Marital status	Single	35	14.0%
	Married	175	70%
	Divorced	5	2.0%
	Widowed	35	14.0%
Employment status	No	165	66%
	Yes	85	34%
Participants' income	<100	19	7.6%
	100–200	86	34.4%
	201–300	117	46.8%
	301–400	24	9.6%
	401–500	3	1.2%
	>500	1	0.8%
Number of non-communicable diseases	None	151	60.4%
	One disease	59	23.6%
	Two diseases	35	14.0%
	Three diseases	3	1.2%
	Four diseases	2	0.8%

4.1 | Descriptive statistics of HPLP-II and subscales

The mean score for the total HPLP-II scale was 2.28 (*SD* 0.30). The highest mean score was for interpersonal relation domain (mean = 2.89, *SD* 0.52). The minimum two scores were for responsibility and physical activity domains (mean = 2.20, *SD* 0.62), (mean = 1.35, *SD* 0.18) respectively. Stress management score was mean = 2.48, *SD* 0.43, spiritual growth and nutrition scores were mean = 2.38, *SD* = 0.39 (mean = 2.34, 0.37), respectively.

4.2 | Health promotion practices and socio-demographic variables

Independent sample *t* test was conducted to compare HPLP-II and its subscales scores for males and females, the results shown in Table 2. The results showed that women have more healthy behaviours than men. There were also significant differences (female had higher scores) for three domains of responsibility, interpersonal relation and physical activity.

There were significant differences on the scores of HPLP-II for not-working participants (mean = 2.33, *SD* 0.32) and working participants (mean = 2.19, *SD* 0.25), $t(248) = 3.68$, $p = .001$. Results

TABLE 1 Participants' gender, education level, marital status, employment status, family monthly income and number of non-communicable diseases ($N = 250$)

TABLE 2 Differences on HPLP-II and its domains based on gender ($N = 250$)

	Gender	N	Mean	SD	df	T	p
HPLP-II	Male	132	2.21	0.31	248	-4.47	.001
	Female	118	2.37	0.28			
Responsibility	Male	132	2.04	0.63	248	-4.29	.001
	Female	118	2.37	0.58			
Nutrition	Male	132	2.31	0.39	248	-1.38	.17
	Female	118	2.37	0.33			
Interpersonal relation	Male	132	2.58	0.40	248	-12.90	.001
	Female	118	3.24	0.40			
Physical activity	Male	132	1.39	0.20	248	4.18	.001
	Female	118	1.30	0.13			
Stress management	Male	132	2.43	0.42	248	-1.77	.08
	Female	118	2.52	0.43			
Spiritual growth	Male	132	2.42	0.40	248	1.80	.07
	Female	118	2.33	0.37			

Note: p significant at $< .05$

TABLE 3 Differences on HPLP-II and its domains based on monthly income ($N = 250$)

	Monthly income	N	Mean	SD	df	T	p
HPLP-II	≤ 200 JD	105	2.19	0.28	248	-4.41	.001
	> 200 JD	145	2.35	0.30			
Responsibility	≤ 200 JD	105	2.06	0.59	248	-3.10	.001
	> 200 JD	145	2.30	0.63			
Nutrition	≤ 200 JD	105	2.26	0.36	248	-2.71	.001
	> 200 JD	145	2.40	0.36			
Interpersonal relation	≤ 200 JD	105	2.76	0.48	248	-3.40	.001
	> 200 JD	145	2.98	0.52			
Physical activity	≤ 200 JD	105	1.32	0.16	248	-2.32	.02
	> 200 JD	145	1.37	0.19			
Stress management	≤ 200 JD	105	2.40	0.43	248	-2.37	.19
	> 200 JD	145	2.53	0.42			
Spiritual growth	≤ 200 JD	105	2.26	0.36	248	-4.38	.001
	> 200 JD	145	2.47	0.38			

Note: p significant at $< .05$.

indicated that not-working participants practiced more healthy behaviours. Not-working participants had higher scores on responsibility, nutrition, interpersonal relation and stress management domains, while working participants had higher scores on physical activity and spiritual growth domains.

There were significant differences on the score of total HPLP-II between not married (mean = 2.21, SD 0.29) and married (mean = 2.32, SD 0.30), t (248) = -2.60, $p = .01$. There were significant differences in two domains, these domains were responsibility (mean = 2.05, SD 0.62 for not married, mean = 2.26, SD 0.62 for married, t (248) = -2.37, $p = .02$) and spiritual growth (mean = 2.25, SD 0.36 for not married, mean = 2.43, SD 0.38 for married, t (248) = -3.43, $p = .00$), these results indicated that married people practice more healthy behaviours than unmarried. On the other hand, the analysis showed that marital

status variables did not differ significantly on nutrition (mean = 2.31, SD 0.34 for not married, mean = 2.26, SD 0.38 for married, t (248) = -0.82, $p = .41$), interpersonal relation (mean = 2.84, SD 0.52 for not married, mean = 2.91, SD 0.51 for married, t (248) = -1.01, $p = .07$), physical activity (mean = 1.32, SD 0.19 for not married, mean = 1.36, SD 0.18 for married, t (248) = -1.59, $p = .11$) and stress management (mean = 2.40, SD 0.42 for not married, mean = 2.50, SD 0.43 for married, t (248) = -1.79, $p = .07$).

Independent sample t test was conducted to compare HPLP-II and its subscales for participants with income equal or less than 200 JD (severely low income) and those with income more than 201-500 JD (moderate low income), results were shown in Table 3.

Independent sample t test was conducted to compare HPLP-II and its domains scores for participants with no non-communicable

more non-communicable diseases. Similar results were found in a national survey about Syrian refugees conducted in Jordan. The survey indicated that the presence of hypertension, cardiovascular disease, diabetes, non-communicable respiratory disease or arthritis in one or more household members was reported by 43.4% of households (UNHCR, 2016). The cost of treatment is the primary barrier to accessing healthcare (Akik et al., 2019). The number of households' members who were living with family was ranged from 2–14 members which is considered high, which means that Syrian refugees were living in an extended families form; this could be due to the lack of financial resources as many families were unable to afford the rental fees and they were looking for similar nationalities to ensure security, companionship, social support and peace (Alzoubi et al., 2019). As seen in Lebanon, there where Syrian refugees' families shared accommodations due to lack of financial resources (Harvey, Garwood, & El-Masri, 2013). Mainly most of refugees had either secondary or primary education, while diploma and higher degrees were having lower numbers in this study and illiterate refugees were 12.8% which considered high percentage; similar results were found in a study conducted by United Nations (UN) in Jordan about Syrian refugees (2013). Syrian refugees left schools and higher education to find jobs to feed their families.

The results showed that Syrian refugees in Jordan had low scores of total health promotion scale (mean = 2.28) which indicated that they minimally adopted health promotion practices in general. This could be due to lack of financial resources, cultural perceptions and changing priorities to cope with the forced transition. Results showed high interpersonal relation score which means that Syrian refugees were able to practice social interactions effectively in Jordan. Syrian refugees were living with their families and relatives so they have social network, also both Jordan and Syria are Arab countries with same language and similar cultures, which may facilitate interaction with host community (Alshoubaki & Harris, 2018). The availability of internet access and smart phones enabled refugees to communicate with their families all over the world. Similar results were found among Kurd and Ethiopian refugees (Araya, Chotai, Komproe, & de Jong, 2007; Cummings, Sull, Davis, & Worley, 2011).

Result of stress management domain indicated that Syrian refugees were not appropriately performing stress management practices, their stress score was less than 2.5. Being residentially and socially unstable, having worries about their future and fear of losing family members because of war may justify the results (Malm et al., 2020; UNHCR, 2016). In addition, being unemployed with limited income as shown in the results of this study may hinder performing any stress management techniques as they cannot afford using entertainment and tourism services. Similar hardships were reported in a study conducted in the United States with Iraqi refugees that indicated that cultural diversity and social isolation were the evident stressors among them (Yako & Biswas, 2014).

The study revealed that Syrian refugees were minimally practicing spirituality. It seems that they were not optimistic about their future, were not targeting long-term goals and were unsatisfied

about their lives in Jordan. Spirituality, meanings of life and humans relationships with God are very personal experiences (Braxton et al., 2007; Cook, 2004). Therefore, it is reasonable to have individual variations.

Healthy nutrition practices were presenting low score among refugees. Syrian refugees in our study were not eating healthy food due to lack of financial resources to access different choices of food items (Alnuaimi et al., 2017; Pour et al., 2014). The result was consistent with many studies conducted on refugees' population, where refugees consumed less vegetables and fruits and had high lipid level due to unhealthy nutritional habits (Collins et al., 2017; Pour et al., 2014; Torp et al., 2015).

Results indicated that the responsibility domain is low. Syrian refugees showed inadequate responsibility and accountability regarding their healthcare decisions evidenced by refraining from routine medical examinations, seeking care and consultation, medical follow-up and attending health educational programmes. Some refugees did not have medical insurance and cannot afford high cost of private healthcare services and lack of health resources in Jordan (El-Khatib et al., 2013; Rehr et al., 2018). It could be that refugees were busy looking for jobs and seeking for financial help to support their extended families; therefore, they ignored their health issues. The low educational level of study sample might affect participants' knowledge about health information and treatment options (Haley, Walsh, Maung, Savage, & Cashman, 2014; Morrison et al., 2013; Saadi, Bond, & Percac-Lima, 2012).

Results of physical activity domain showed that this domain had the lowest score. Syrian refugees minimally performed physical activity to maintain their health. Refugees in this study were not interested in regular exercises because they were looking to meet their basic needs. They did not give priority for physical activity as they were concerned about finding jobs to afford living expenses. Similar results were found in Mohamed, Hassan, Weis, Sia, and Wieland (2014) and Persson, Mahmud, Hansson, and Strandberg (2014). Practicing exercise is a social value that may not persist in some refugee's lives before moving to Jordan.

In this study, female refugees had healthier lifestyles than male refugees. Also, females reported higher scores in responsibility and interpersonal relations domains than male refugees, while male refugees reported higher scores in physical activity domain. Syrian refugee's women were more responsible regarding their health than men. Syrian women are coming from culture where women more concerned about the health of their families and children as they are the "caregivers". Women also were more socially interactive than men. Being not working and spending long time at homes enables women to socialize with their neighbours, friends and other Syrian families. Women by their nature love to share information and exchange experiences with others. This can be supported by the high percentage of unemployment rate among women in this sample (97.46%). Nutrition, stress management and spiritual growth domains were not different significantly based on gender. The reasons of this might be that males and females were both exposed to the same stressors and lack of financial resources.

Results of health promotion domains showed that not-working refugees had higher scores on responsibility, nutrition, interpersonal relation and stress management domains. On the other hand, working refugees had higher scores on physical activity and spiritual growth domains. In this study, not-working refugees showed more responsibility about their health than employed refugees. Not-working refugees may have more free time during the day to access healthcare centres and seek medical follow-up, medical consultation and investigation as they can visit the healthcare centre at any time at morning. In addition, they have time and freedom to socialize and meet friends and community members, so they had higher scores in interpersonal domain. Similar results found in Cummings et al. (2011). On the other hand, working refugees might be exposed to more stressors due to illegal entry to Jordan and lack of work permits since working was not allowed for Syrian refugees in Jordan (Lozi, 2013; UNHCR, 2019). Therefore, not-working refugees were having higher scores in stress management domain. In relation to physical activity domain, Syrian working refugees were more physically active than not-working refugees; this might be due to the type of jobs refugees do as most of working participants do manual jobs which may be considered as a method of exercise. Working refugees had higher score in spiritual growth. This might be due to their positive feelings towards achieving work tasks and being able to produce and meet the basic needs of their families.

The results showed that married refugees had higher scores of total health promotion behaviours than non-married refugees. It could be that married refugees protecting their health to be able to keep their families functioning and moving on. Also being married provides a chance for the partners to care for and support each other's. Results indicated that married refugees had higher scores on responsibility and spiritual domains than non-married refugees. Same result was found in a study conducted by United Nations about Syrian refugees (UN, 2013). Married refugees were motivated about the future; they tend to look forward for long-term goals for their children and families and have commitment to provide and support their families.

The result of current study showed that Syrian refugees with moderate low income (>200 JD) had higher scores in total health promotion behaviours than those with sever low income (\leq 200 JD). Also, the scores for subscales of responsibility, nutrition, interpersonal relation, physical activity and spiritual growth had same results. Similar results were found in Mohamed et al. (2014) and Wieland et al. (2015). The availability of more financial resources provides Syrian refugees with more opportunities to seek medical care when they were sick, afford eating well balanced diet, interact with others and show responsibilities towards their health and their families' health as well (Rehr et al., 2018). Higher physical activity associated with higher income might be mediated by employment in jobs that require performing physical activities such as market labourers, construction labourer, cashier and moving and cleaning services. On the other hand, refugees with low income contributed to less responsibility, less physical activity and unhealthy eating habits and less

health seeking behaviours (Akik et al., 2019; Morrison et al., 2013; Rondinelli et al., 2011; Wieland et al., 2015).

As indicated on the results of the current study, Syrian refugees with non-communicable diseases had higher scores of total health promotion behaviours than those without diseases. Refugees with non-communicable diseases pay more attention to their health and do medical follow-up to avoid complications and to ensure positive health progress. This result is clearly indicated in the National Assessment of Access to Health Care by Syrian Refugees survey conducted in Jordan (Doocy et al., 2015). Refugees who did not have non-communicable diseases were more physically active which might be related to absence of diseases and disabilities and also it might be due to age. In this study, younger Syrian refugees were more physically active and spiritual than older refugees. It could be that younger refugees usually did walking because they do not have cars and did regular activities while looking for jobs. Also, younger refugees were exposed to many challenges to get jobs and looking for long-term goals which made them more responsible. Similar results were reported in the literature among refugees in Matlin, Depoux, Schütte, Flahault, and Saso (2018) and Torp et al. (2015).

The results of current study showed that illiterate Syrian refugees had higher scores on total health promotion behaviours than primary or secondary educated refugees, which is surprising and contradicted with previous studies (Morrison et al., 2013; Peterman, Silka, Bermudez, Wilde, & Rogers, 2011). We think that educational level contributed to results through age variable. Elderly refugees were adopting healthier lifestyles than younger refugees and most of illiterate refugees were older refugees and had non-communicable diseases. Also, it could be that having non-communicable diseases encouraged elder refugees to practice more health promotion activities to avoid complications of diseases.

As indicated on the results of this study, age was positively correlated with total health promotion behaviours and health promotion domains of responsibility, nutrition, interpersonal relation and stress management. While negative correlations were noted between age with domains of physical activity and spiritual growth. Younger refugees might be ignorant about their medical conditions, neglect and delay reporting abnormal symptoms and seeking medical help, risk taking evidenced by smoking, they prefer eating fast food and deserts and avoid taking breakfast. Older adults showed more capabilities to control their stress and avoid stressful situation based on their experiences in life. Similar results were seen with elder female refugees who had higher responsibility and doing screening more than younger females (Morrison et al., 2013; Rehr et al., 2018).

The results of current study presented that the number of family members was negatively correlated with nutritional domain and positively with spiritual domain. Syrian refugees who were living with family of many members were practicing less healthy nutritional behaviours probably because high number of individuals will affect food distribution per person, increase demand for more food quantities and decrease the choices of healthy food items such as fruits and vegetables (Jordan Times, 2016). On the other hand, increased number of family members may motivate them to plan for future

and share meaning and worries of life and religious practices which improve their spirituality.

5.1 | Limitations

The limitations of this study include the self-reporting bias since self-reporting questionnaire was used; however, the researcher was available most of the time during data collection to answer refugees' questions to limit the effect of bias. The sample was selected conveniently, which may affect the representation of the population of interest ultimately may limit the generalizability of the study findings. High numbers of participants were with non-communicable diseases because some of the participants were recruited from hospitals and primary health centres, which may not correctly reflect the prevalence of non-communicable diseases among Syrian refugees.

5.2 | Implications

The study has implication for nursing practice. Nurses could provide education for refugees to promote their healthy practices and adjust or modify the negative practices. Nurses could implement health promotion programmes to encourage Syrian refugees to promote their healthy lifestyle behaviours by enhancing their responsibility, spirituality, social interaction, physical activity, healthy nutrition and coping strategies to control stress. The programmes should be tailored to low income, not married, educated and male refugees. Results of this study showed that income dramatically affects healthy lifestyle behaviours among refugees. Nurses could act as advocate for refugees' rights of getting work permits that could enhance their income, then consequently promoting their healthy behaviours. Nursing educators could use the findings of this study to educate and train nursing students about the basic needs of refugees, their health promotion behaviours, health promotion determinants and effective health promotion programmes. The current study highlighted the low scores of health promotion lifestyle behaviours among Syrian refugees in Jordan. Future research is needed to explore the determinants of health promotion behaviours and to investigate health promoting practices among refugee children. In addition, using mixed methods to address different sides of health promotion might enhance research outcomes.

6 | CONCLUSION

The main findings of this study indicated low scores of health promotion practices among Syrian refugees in Jordan. This study provides nurses with a set of data about health promotion practices used by Syrian refugees. Identifying the low scores of health promotion domains will guide nurses to emphasize on the main basic health needs and adjust their health plans according to refugees' needs. Community health nurses could work in partnership with

policy makers and services providers to plan for the future of Syrian refugees' health. This includes improving their medical insurance, providing healthy diet for low income families and enhancing their financial resources.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

DATA AVAILABILITY STATEMENT

No data attached with the main document. Data available upon request.

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