# The Quality of Life of Syrian Refugees who Are Residing Outside Camps in the North of Jordan: A Cross-Sectional Study

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**Abstract**

Introduction: since the beginning of Syrian conflict at 2011, about 700.000 of Syrian refugees were registered in Jordan. In which many aspects of their lives were highly affected, which in turn affecting their quality of life as a whole. However, few studies were conducted to assess Syrian refugees' QOL, and examine the associated factors that could improve or worsen it. This study aimed to examine QOL and its associated factors, and the access to healthcare services among Syrian refugees who are residing outside the camps in north of Jordan. Materials and Methods: A cross-sectional correlational study was conducted with a convenient sample of 60 Syrian refugees who are residing outside camps in Jerash governorate. Data regarding access and barriers were collected using the general access and barriers scales, and WHOQOL-BREF scale was used to collect data on QOL. SPSS version 25 was used in data analysis. Results: refugees had higher score on overall QOL (M=81.78), in which higher scores sequentially were for physical domain (M=70.18), then psychological (M=56.39), social (M=52.50) and environmental (M=34.69) domains. However, they indicate low level of access to health services (M=18.85), and moderate to high level of barriers (M=63). Multiple hierarchical regression analysis showed that being younger and having employment were more likely to have higher scores of QOL. Conclusion: The results could be used to formulate health policies to facilitate and reinforce the Syrian refugees' access to health services, and to develop innovative programs, and adopting some procedures to improve the QOL of Syrian refugees.

Keywords: quality of life, Syrian refugees, access to healthcare.

## 1. Introduction

Globally, Quality of Life (QOL) of Syrian refugees considered a hot public health research issue, and it can be defined as the overall comfort and wellness of individuals and communities, representing the positive and negative characteristics of life. It indicates the life satisfaction, encompassing all aspects of the physical health, family, learning opportunities, employment status, resource availability, religious beliefs, economic status, and the environmental context (Rodney, 2014). QOL is an indicator about the refugees' living conditions, preferences, general well-being and all health dimensions (physical, psychological, social, emotional, and spiritual). However, QOL shown to be highly influenced by individual, family, structural, organizational, or societal factors, therefore, it should attract the attention of all official and unofficial individuals, organizations and stakeholders, particularly in the case of vulnerability (Al-Masri et al., 2021; Dangmann et al., 2021; Gottvall et al., 2020; Grochtdreis et al., 2021).

Mostly, refugees often are experiencing several traumatic and stressful events, starting from the compulsory leaving of their homes, missing their materials and possessions, and forced displacement, migration and crossing the borders to the neighboring countries (Anagnostopoulos, Giannakopoulos & Christodoulou, 2016). Moreover, in the host countries additional negative experiences were found as; high financial burden that is associated with poor economic status, lack of educational opportunities, lack of health insurance, social exclusion, feeling of not belonging, discriminatory practices against them, lack of social networks, and inadequate access to competent healthcare services (Weinstein, Khabbaz & Legate, 2016). As a result of these events and traumatic experiences, the gap of health disparities increases between people, and health equity cannot be reached, and consequently the quality of life of the refugees seems to be greatly affected (Charlton et al., 2018; Redko et al., 2015). All these problems

doi.org/10.31838/hiv23.03.120 Received: 27.11.22, Revised: 25.12.22, Accepted: 13.01.23

together, serve as an alarm to pay an attention to the Syrian refugees' quality of life, to provide more focus on the factors that affecting it, and then to work firmly to enhance it.

Due to the internal conflict started in 2011; Syrian refugees were compulsory enforced to leave their home, and migrated to other countries, during which, they experienced several painful and traumatic events, which consequently have many negative physical, psychological, and socio-economic consequences on their life, and affecting their QOL negatively (Doocy et al., 2016; Sevinç et al., 2016; Weinstein, Khabbaz & Legate, 2016).

It is well known that, poor Quality of Life (QOL), considered as one of the most significant variables associated with the physical and mental illnesses, and stressful disorders among refugees. According to the WHO, the value of quality of life as a subjective expression, is referred to the process by which persons sense, understand, and realize their status in life in the socio-cultural context, and the value systems, where they live and interact, based on their goals, health needs, expectations, preferences, standards and regards (Aziz et al., 2014). So, providing refugees with a sufficient access to the healthcare services, play a vital role in softening their suffer, and improving their quality of life.

On the other hands, the access to healthcare services considered an important issue worldwide, that has great impact on the quality of life, particularly for people who suffering from conflicts, and experiencing displacement and migration as Syrian refugees. Because, such people often have special needs, and experience additional health problems due to the process of refuge, and they have high likelihood to face several barriers to access the healthcare in the host countries (Cookson et al., 2017). Therefore, the refugees' access to healthcare services is a policy concern of high importance, given the influence of the conflict on the provision of healthcare services and the increased vulnerability of the refugees (Ooms, Keygnaert & Hammonds, 2019).

Approximately to 400 million people around the world is actually are prohibited from any access to essential health care services (WHO, 2019). That is, having an access to healthcare service is not merely indicating a gateway and utilization of the health service, rather it indicates the health system properties as affordability, availability, accessibility, and components of services goodness that defines the ability to utilize and benefit from healthcare services (Levesque et al., 2013).

The access to healthcare services defined as the ability to obtain the suitable care from a competent healthcare professional, at the proper time and setting, based on the people needs and context (Saurman, 2016). It has five dimensions including; availability, which refers to the whole number of healthcare services obtained by the client. Accessibility; represents the time and distance, required to reach the services. The affordability; refers to purchasing healthcare services (Jacobs, 2021). Accommodation; refers to organizing and delivery of health service based on the clients' needs and expectations. Acceptability; refers to the clients' and health care workers' personality traits and the effect of these traits on their attitudes and behaviors (Julián et al., 2019; Terry et al., 2017; Wang, 2012).

On the other hands, Syrian refugees may experience many barriers, which hindering them from accessing the healthcare services in the host countries. Such barriers are classified in to economic barriers; representing the cost and prices of healthcare services, and the health insurance coverage. The structural barriers; which including the organizational and institutional barriers as availability, waiting time, safety measures, facility location, continuity of care and shortage of resources. The cognitive barriers; including the barriers of knowledge, language, communication skills, awareness, health literacy, and the ethno-racial congruent care (Carrillo, et al., 2011).

It is seem that, having some barriers for accessing healthcare services by refugees in the host countries, lead to experience some delays in the access to health services, or to be ignored at all by them. These conditions cause an elevation in the cost of health care services, in which refugees are unable to pay for health services, and found themselves with worse health conditions, that influence their quality of life negatively. In addition, lack of health services, being distant from services, and improper allocation of health care resources and workers, have restricted the access to health services for vulnerable people, who experiencing bad socio-economic living conditions and those residing in the rural or remote areas (Walker, 2015).

Since the internal conflict in Syria had been started, more than five million Syrians are registered as refugees around the world, in which about 1.3 million of them are registered in Jordan. Almost 19% of the registered refugees in Jordan are living within camps, while the rest Syrian refugees (81%) are residing outside the camps (UNHCR, 2018). Based on UNHCR databases; Jordan has registered more than 673,000 Syrian refugees until the end of 2019 (UNHCR, 2018). Five camps are available for Syrian refugees in Jordan, and the main three camps are Al-Zaatari camp with 78,545, Al-Azraq camp with 40,738, and the Emirati Jordanian camp with 6,848 refugees. The remaining refugees are residing outside camps and penetrating the Jordanian communities, in which they utilize the public health sector of the ministry of health, but after changing the policy in 2014, they start to utilize health services of UNHCR, in addition to private sectors, which considered beyond their financial capacities (Krafft et al., 2018; Amnesty International, 2016). (UNHCR, 2017b).

Many studies were conducted worldwide to evaluate Syrian refugees' quality of life, and it is relationship with healthcare access. Most studies indicate that, Syrian refugees demonstrate higher degree of health services utilization, than population from the host

countries, because of the newly developed physical, psychological, emotional, and socio-economic health problems, they experienced during and post the processes of displacement and influx to the neighboring countries, which result in negative consequences on their health, and force them to access health care services to soften, treat, or palliate their signs and symptoms (The Lancet Public H., 2018; Graetz et al., 2017).

Furthermore, a variety of socio-demographic variables as age, gender or marital status, were greatly affecting the access to healthcare services by the refugees' Baumann & Adera, 2021). To some extent, similar findings were implied from a cross sectional study conducted in USA by Semere et al., 2018. On the other hands the mostly reported barriers to healthcare access worldwide were; difficulties in social integration, poor housing level, low educational level, long waiting times, difficulty in getting medical appointments, fragmented healthcare system, language and communication barriers, transportation problems in the rural areas, lack of some culturally competent health services, and an inability to afford healthcare due to low financial status (Cavalcanti et al., 2022; Chuah et al., 2018; Guruge et al., 2018; Sousa et al., 2020; Zeidan et al., 2019).

Otherwise, some studies were conducted to examine the QOL of Syrian refugees worldwide. AlMasri and colleagues conducted a study in Germany 2021, to examine the QOL of 114 Syrian refugees residing there, and they implied that QOL scores were low in all dimensions, and the significant predictors that seen to explain the higher scores of QOL were; the place of residence, period of resettlement as refugee in Germany, and the marital status (Al Masri et al., 2021). A study conducted in Jordan with a sample of 661 Syrian refugees, indicated that the overall scores of QOL for them was less than 50 out of 100, and the major factors that were significantly affecting the physical, psychological and social domains of the QOL among Syrian refugees were; employment status, total family income, marital status, and having chronic diseases (Abdo et al., 2019). However, many studies were indicating a significant relationship between the access to healthcare and the quality of life among Syrian refugees (Alduraidi et al., 2021; Aziz et al., 2014; Dangmann et al., 2020; Doocy et al., 2016; Grochtdreis et al., 2021).

In addition, a study implied significant negative associations were present between QOL scores and the extent of being married, number of family households, and the total income. However, accessing antenatal health services was positively correlated with the whole QOL scales (physical, role, emotional, pain, and general health). Physical functioning and general health status were significantly associated with low extent period of being married, being early married, low experience of violence and increased total income (Nabolsi et al., 2020).

Obviously, there is a gap in the knowledge about the quality of life, accessing healthcare services, and the barriers of the health access among Syrian refugees in Jordan, and also few studies were conducted regarding that in Jordan. The current study aiming to investigate the real state of Syrian refugees' QOL, the level to what extent they access healthcare, and to highlight the factors that serve as barriers for accessing healthcare services in Jordan.

The knowledge about the QOL and associated factors, access to healthcare services, barriers of access to healthcare services, and relationship between QOL, healthcare access, and barriers to get access among Syrian refugees in Jordan, is necessary to inform policy developers, decision makers, researchers and other stakeholders with the needs, health-related perceptions, and barriers to access to healthcare, and then to put them in the heart of the state of health equity. However, this could assist researchers, and organizations who concern with refugees' health, in developing and evaluating programs, to enhance health equity and accessibility, and to minimize the health disparities to create equitable and accessible health systems to them, which in turn enhancing their health outcomes and quality of life as well.

### Purpose

To assess the quality of life, and it is associated factors and relationship with the access to healthcare services among the Syrian refugees, who are residing outside the camps in Jordan.

## 2. Materials and Methods

### Design

A self- reported descriptive, correlational research design was used in this study. Data collected from Syrian refugees who are residing outside the camps in the city of Jerash, which is one of the cities that receive large number of Syrian refugees in the north of Jordan, since the beginning of Syrian conflict. It is located about 50 km north to Amman, and about 50 km south to the Jordanian-Syrian borders. Jerash contains about 2% of the whole Syrian refugees in Jordan (UNHCR, 2021).

### Population and Eligibility

The target population of the study was adult Syrian refugees in north Jordan, with chronic diseases. Chronic diseases are conditions that last one year or more and require ongoing medical attention. In addition, refugees have access to any official public or private healthcare service points in Jordan. The accessible population was patients with chronic diseases which are defined broadly as diseases that last one year or longer and require constant medical attention and are viewed as preventable, but hard to be cured naturally, and living in the northern Jordan. The inclusion criteria included, a Syrian refugee who arrived in Jordan due to the Syrian conflict in 2011 with chronic diseases (diabetes, hypertension, or both), aged 18 years and over,

able to write and read the Arabic language, in addition, accessing healthcare facilities and agreed to participate voluntarily. Exclusion criteria included refugees who were disabled, handicapped and those who received psychological counselling.

### Sample and Sampling

Non-probability, convenience sampling technique was utilized in this study due to the logistic restrictions that made it very difficult to utilize a probability sampling technique. The sample size was determined based on an estimation calculation on the software G*Power using normal approximation using the Z statistic instead of the t statistic calculation equation, where alpha was determined at 0.05, beta at 0.20, and an intermediate estimated effect size r of 0.30. The calculation yielded a minimum required sample size of 65 participants.

### Measurement Instruments

A structured questionnaire with a clear cover letter will be used in this study. The questionnaire composed of three sections: 1) socio-demographic data, 2) Access to Healthcare services Scale, which is adopted from the Canadian Community Health Survey CCHS by AlRimawi and colleagues (AlRimawi et al., 2020), and 3) the Quality of life (WHOQOL-BRIEF), in which all were Likert scale questionnaires. The access questionnaire composed of two sections. The General Access Scale, which is including two sections: the first is concerning with the access and utilization of outpatients clinics (four items). The second section composed of (8) items representing the overall access to health care. The other section of healthcare access scale is the "Difficulties Scale" (20 items), measuring the barriers encountering refugees in accessing health services. World Health Organization Quality of Life Instrument (WHOQOL-BREF) is an international uniform standardized self-reported instrument, developed by WHO in 1996. It is composed of 4 domains (physical (7 items), psychological (6 items), social (3 items), and environmental (8 items) (WHO, 1996). The Arabic version of WHOQOL-BREF was used, as it is available on the WHO website, and after getting the permission. Further, the psychometric properties were tested for scales, and the results indicate a Cronbach's Alpha of 0.77, 0.85, and 0.88 for the three scales respectively. However the validity testing indicate the Content Validity Index (CVI) of 98.3%, 95%, and 96.9% for the three scales respectively.

### Ethical consideration

Ethical approval will be obtained from IRB committee at the University Jordan, and the school of nursing. Then the approval obtained from refugees personally. The cover letter of the questionnaire placed as the first page, and include the name, and contact information of the researcher (researcher's Email), the purpose and nature of the study, and ensuring that the study will not include any physical, psychological or economical harms for them. In addition, the anonymity and confidentiality was maintained (each questionnaire has the coded number of the participant without a name). Also participants have the right to withdraw from the study at any time.

### Data Collection Procedure

The researcher attended the UNHCR office, to obtain their permission to use the resigestration data regarding Syrian refugees, these registration data contain lists of the contact numbers and residency places of the syrian refugees, also similar lists were obtained from the chariatable associations that dealing with Syrian refugees in Jerash. In addition each approached refugee was asked for a referral to the nearest Syrian household. Refugees were approached in all settings they exist; homes, healthcare centers, work settings, markets, and public spaces.

## 3. Results

Data were analyzed using the Statistical Package for Social Science (SPSS) version 25. Descriptive statistics (the mean, percentage, and standard deviation) were used to analyze the scores of quality of life, access and barriers. ANOVA and independent t tests were used to examine the differences in the mean scores of the quality of life according to the refugees' demographic variables. A hieratical multiple regression was used to infer the correlations between the demographic variables of the Syrian refugees and their quality of life (Pallant, 2011).

### Demographics

A total number of 65 questionnaire were distributed among Syrian refugees in Jordan, and a 60 were completed with good response rate of 92.3. Results (table 1) revealed that 50% (n= 30) of participant were males, and 50% (n= 30) of participant were females, with mean age of 35 (SD = 15.75) years. About two third of them 70% (n = 42) were married, and more than half 53.3% (n = 32) were holding secondary educational level degree. Regarding occupation, half of them 50% (n= 30) were not working, and 16.7 (n = 10) were working in agriculture sector. In addition, it appears that 76.7% (n = 46) of participant were living in urban residencies, while 23.3% (n =14) were living in rural residencies. About chronic diseases, it appeared that this study sample tend to have low prevalence rate of them. For instance, the most prevalent disease was hypertension 18.3% ( n = 11), then DM by 16.7% (n = 10), then cardiac diseases and skeletal diseases by the same percent 10% (n = 8), and lastly it comes hyperlipidemia disease by 8.3% (n = 5). Also, results indicated that most of the sample 86.7% ( n = 52) were not having any insurance.

| Table 1: Demographic characteristics | | | |
|---|---|---|---|
| Categorical Variables | | | |
| | | n | % |
| Gender | Male | 30 | 50 |
| | Female | 30 | 50 |
| Social Status | Single | 14 | 23.3 |
| | Married | 42 | 70 |
| | Divorced | 3 | 5 |
| | Widowed | 1 | 1.7 |
| Educational level | Illiterate | 1 | 1.7 |
| | Primary | 21 | 35 |
| | Secondary | 32 | 53.3 |
| | Diploma | 2 | 3.3 |
| | Bachelor | 4 | 6.7 |
| | Postgraduate | 0 | 0 |
| Employment | None | 30 | 50 |
| | Agriculture | 10 | 16.7 |
| | Industry | 2 | 3.3 |
| | Construction | 3 | 5 |
| | Trade | 3 | 5 |
| | Others | 12 | 20 |
| Residency | Urban | 14 | 23.3 |
| | Rural | 46 | 76.7 |
| Chronic diseases | HTN | 11 | 18.3 |
| | Cardiac | 6 | 10 |
| | DM | 10 | 16.7 |
| | Hyperlipidemia | 5 | 8.3 |
| | Skeletal | 6 | 10 |
| Household number | One | 6 | 10.0 |
| | Two | 7 | 11.7 |
| | Three | 17 | 28.3 |
| | more than three | 30 | 50.0 |
| Health Insurance | None | 52 | 86.7 |
| | governmental | 0 | 0 |
| | NGOs | 5 | 8.3 |
| | Private | 3 | 5.0 |
| Continues variables | | | |
| | | M | SD |
| Age | | 35 | 15.57 |
| Monthly income | | 237.67 | 97.17 |

## Quality of life

Analysis (table 2) showed that the total quality of life scores ranged between 55 and 113, with mean score of 81.78 (SD = 14.11). Using quartile equation, giving that the higher score indicates better quality of life, revealed that 75% of the participants had a score of 71.50 or higher, and 25% of the participants had a score of 92 or higher. This indicates that, given the expected range of scores up to 125, participants had high level of quality of life.

Moreover, physical domain of quality-of-life scores ranged between 21.43 and 26.43, with mean score of 70.18 (SD = 20.60). Using quartile equation, giving that the higher score indicates better physical quality of life, revealed that 75% of the participants had a score of 58.93 or higher, and 50% of the participants had a score of 75 or higher. This indicates that, given the expected range of scores up to 100, participants had moderate to high level of physical quality of life.

Likewise, psychological domain of quality-of-life scores ranged between 29.17 and 91.67, with mean score of 56.39 (SD = 15.82). Using quartile equation, giving that the higher score indicates better psychological quality of life, revealed that 50% of the participants had a score of 58.33 or higher, and 75% of the participants had a score of 70.83 or higher. This indicates that, given the expected range of scores up to 100, participants had moderate level of psychological quality of life.

Furthermore, social domain of quality-of-life scores ranged between 16.67 and 100, with mean score of 52.50 (SD = 18.56). Using quartile equation, giving that the higher score indicates better social quality of life, revealed that 25% of the participants had a score of 41.67 or lower, and 50% of the participants had a score of 50 or lower. This indicates that, given the expected range of scores up to 100, participants had low to moderate level of social quality of life.

Similarly, environmental domain of quality-of-life scores ranged between 18.75 and 71.88, with mean score of 34.69 (SD = 12.16). Using quartile equation, giving that the higher score indicates better environmental quality of life, revealed that 75% of the participants had a score of 40.63 or lower. This indicates that, given the expected range of scores up to 100, participants had low level of environmental quality of life.

| Table 2: Independent and dependent variables | | | | | | | |
|---|---|---|---|---|---|---|---|
| Variables | M | SD | Min | Max | Percentiles | | |
| | | | | | 25th | 50th | 75th |
| Access to health care | 18.85 | 3.62 | 12 | 29 | 16.50 | 18 | 21 |
| Barrier to health care | 63 | 7.79 | 37 | 77 | 60.50 | 64 | 68 |
| Physical QOL | 70.18 | 20.60 | 21.43 | 96.43 | 58.93 | 75 | 85.71 |
| Physiological QOL | 56.39 | 15.82 | 29.17 | 91.67 | 45.83 | 58.33 | 70.83 |
| Social QOL | 52.50 | 18.56 | 16.67 | 100 | 41.67 | 50 | 66.67 |
| Environmental QOL | 34.69 | 12.16 | 18.75 | 71.88 | 25 | 32.81 | 40.63 |
| Total QOL | 81.78 | 14.11 | 55 | 113 | 71.50 | 82.50 | 92 |

## Access to health care

Eight items were used the access to health care among Syrian refugees, total score was calculated to indicate the level, higher scores indicate better access. Results (table 2) revealed that scores ranged between 12 and 29, with mean score of 18.85 (SD = 36.62). Using quartile equation revealed that 75% of the participants had a score of 16.50 or higher, and 25% of the participants had a score of 21 or higher. This indicates that, given the expected range of scores up to 40, participants had low level of access to health care. Moreover, the care that the sample have higher access to it was "Your medical diagnosis and history are known for you and for health care givers" with mean of 2.85 (SD = 0.68), while the care that the sample have lowest access to it was "Always you can pay for the health services costs" with mean of 1.91 (SD = 0.74).

## Barriers to health care

Twenty items were used as the barriers to health care among Syrian refugees, total score was calculated to indicate the level, and higher scores indicate more barriers. Results (table 2) revealed that scores ranged between 37 and 77, with mean score of 63 (SD = 7.79). Using quartile equation revealed that 50% of the participants had a score of 64 or higher, and 25% of the participants had a score of 68 or higher. This indicates that, given the expected range of scores up to 100, participants had moderate to high level of barriers to health care. Furthermore, the most prevalent barrier to health care was "Long waiting time to take medications "with mean 4.53 (SD = 0.74), while the least prevalent barrier to health care was "Inability to leave house due to health problems "with mean 1.55 (SD = 0.83)

## Relationship of dependent variable with independent variables

Using independent sample t-test, analysis revealed that there was no significant (t = 0.482, p = 0.632) difference between males and females related quality of life. Also, there was no significant (t = 1.284, p = 0.204) difference between those living in urban and rural residencies related quality of life. Though, there was significant difference (t = -2.872, p = .006) between those who have health insurance and those who don't, in which those who don't have health insurance are more likely to have lower quality of life than those who have one.

Using one way ANOVA test, results indicated that there was no significant (F= 0.834, p = 0.481) difference between participant with different marital status related quality of life. Likewise, there was no significant (F= 2.160, p = 0.072) difference between participant with different occupational section related quality of life. On the other hand, there was significant (F= 5.370, p = 0.001) difference between participant with different educational level related quality of life.

Furthermore, Pearson r correlation test was used, analysis showed that there was significant positive relationship (r = 0.402, p = 0.001) between level of access to health care and quality of life. Likewise, there was significant positive relationship (r = 0.404, p = 0.001) between monthly income and quality of life. Also, there was significant negative relationship (r = -0.506, p < 0.001) between level of barriers to health care and quality of life. Similarly, there was significant negative relationship (r = -0.647, p < 0.001) between age and quality of life.

| Table 3: Relationship of dependent variable with independent variables | | |
|---|---|---|
| Independent variables | Dependent variable: quality of life | |
| T test | | |
| | T | P |
| Gender | 0.482 | 0.632 |
| Residency | 1.284 | 0.204 |
| Insurance | -2.872 | 0.006 |
| ANOVA test | | |
| | F | P |
| Social status | 0.834 | 0.481 |
| Education level | 5.370 | 0.001 |
| Employment | 2.160 | 0.072 |
| Pearson correlation | | |
| | r | P |
| Access to health care | 0.402 | 0.001 |
| Barrier to health care | -0.506 | < 0.001 |
| Age | -0.647 | < 0.001 |
| Monthly income | 0.404 | 0.001 |

### Predictors of quality of life

Two- steps multiple hierarchical regression analysis was performed to examine prediction power of access and barriers to health care controlling for selected demographic characteristics (age, gender, social status, educational level, employment, monthly income, residency, and health insurance). The analysis (table 4) showed that the model 1 that includes the selected demographics was significant ($F = 13.213$, $p < 0.001$) with $R\ 2 = 0.675$ (67.5%). Then in model 2 by adding access and barriers to health care, the model retrieved to be significant ($F = 11.424$, $p < 0.001$) with $R\ 2 = 0.700$ (70%). The R 2 change form model 1 to 2 was 0.025 (2.5%). The results indicate 70% of the variation in quality of life are explained by the model 2 that contains access and barriers to health care controlling for the selected demographic characteristics. Also, 67.5% of the variation in quality of life are explained by the model 1 that contains the selected demographics.

In model 2, age was negative predictor ($\beta = -0.559$, $p < 0.001$). This indicates that the older participants are more likely to have lower level of quality of life. Also, employment was found to be positive predictor ($\beta = 0.282$, $p = 0.005$). This indicates that the employed participants are more likely to have higher level of quality of life.

**Table 4: Predictors of quality of life**

| Variables | Model 1 | | | Model 2 | | |
|---|---|---|---|---|---|---|
| | B | β | p | B | β | p |
| Age | -.533 | -.588 | < .001 | -.506 | -.559 | < .001 |
| Gender | 2.179 | .078 | .410 | .468 | .017 | .865 |
| Social status | 1.870 | .076 | .401 | 1.083 | .044 | .632 |
| Educational level | 1.994 | .117 | .251 | 2.087 | .122 | .227 |
| Employment | 2.139 | .307 | .003 | 1.962 | .282 | .005 |
| Monthly income | .034 | .232 | .022 | .019 | .128 | .263 |
| Residency | 2.522 | .076 | .402 | 2.502 | .076 | .400 |
| Health insurance | 7.117 | .173 | .078 | 3.413 | .083 | .439 |
| Access to health care | | | | .620 | .159 | .166 |
| Barrier to health care | | | | -.181 | -.100 | .454 |
| $R^2$ | 0.675 | | | 0.700 | | |
| Model fit | $F = 13.213$, $p < 0.001$ | | | $F = 11.424$, $p < 0.001$ | | |
| $R^2$ change | | | | 0.005 | | |

## 4. Discussion

The results indicated that the overall score of quality of life for Syrian refugees was high to some extent. However, this is inconsistent with the results of most studies addressed quality of life of Syrian refugees, and this could be due to the use of small size, and single-site study sample, (AlMasri et al., 2021; Aziz et al., 2014; Sengoelge et al., 2022). Other exploration could be due to many reasons as; most participants in the study were young and free of diseases, 50% of them have jobs, which support their financial status, and 70% of them were married, which means the presence of a life partner as an important psycho-social support. In addition, most of them (98.3%) were literate people, which means they have some cognitive and thinking abilities assisting them to strive in their lives. These findings are similar to those of a study conducted in Germany among Syrian refugees (Gottval et al., 2020; Grochtdreis et al., 2020).

Specifically, the main justification for the moderate to high scores on physical domain of the quality of life, could be due the young age of most participants, and also most of them were free of chronic illnesses. These findings were congruent with those of a study conducted to examine QOL of Syrian refugees in Jordan (Abdo et al., 2019), and other study conducted on 523 Syrian women refugees in Jordan (Nabolsi et al., 2020).

However, results of the psychological domain of quality of life indicated a moderate level, which could be due to many reasons including; the refuge status, the lived painful experiences during the Syrian conflict and post migration, and poor living conditions. These findings were congruent with the findings of a study conducted on Syrian refugees in Germany (Grochtdreis et al., 2021), and other study conducted on Syrian refugees who are residing in Kurdistan (Aziz et al., 2014).

Moreover, the results indicated low to moderate scores on social domains of the QOL, and this could be justified as; most Syrian refugees perceive low social support from others, and suffering from discriminations, being isolated and excluded from the host communities. Tough, these results were congruent with a study conducted on Syrian refugees in Jordan (AlZoubi et al., 2016), however, they were contradicted with the results of a study conducted by Aziz and colleagues in on Syrian refugees in Irbil (Aziz et al., 2014).

On the other hands, the results indicated low scores on the environmental domain of the QOL, and this could be due to; most Syrian refugees are dissatisfied with their living conditions, housing, and residence places, because they did not have the potentials to reside in the places or houses they need, because of the poor financial status. These findings were similar to those of a systematic review conducted to assess QOL of refugees, in the studies that use WHOQOL-BREF in measuring QOL (Gagliardi et al., 2021), and the results of a study conducted on 510 refugees in Sweden (Leiler et al.,

2019).

Regarding the refugees' access to the healthcare services, the results implied low level of access, which could be due to many reasons including; most participants are young and have low prevalence of most chronic illnesses, low financial status, and lack of health insurance, however, the changed health policy in Jordan after 2014 imposed some fees on the Syrian refugees for health services. These findings are similar to those of a large survey conducted in Jordan (Doocy et al., 2016). Furthermore, the results stated moderate to high level of barriers for accessing health services among Syrian refugees, and this could be due poor socio-economic status, lack of health insurance, poor residence place, and lack of proper transportation vehicles. These findings were similar to those of many studies conducted regarding the Syrian refugees' access to healthcare services in the host countries (Assi, Özger-İlhan & İlhan, 2019; Cavalcanti et al., 2022; Sousa et al., 2020; Zeidan et al., 2019).

The results regarding the relationship between QOL and the demographics indicate that there was a statistical difference between participants in the QOL based on their educational status, this could be interpreted as; the educated refugees have more cognitive, thinking and problem solving abilities, which all are required to deal with the life events, responsibilities and stressors successfully. Additionally, having health insurance was significantly and positively affecting QOL, because most of refugees have poor financial status, and cannot pay for health services, therefore, having health insurance coverage, could help them to get health service, and consequently improve their QOL. These findings were consistent with many studies conducted on Syrian refugees in Lebanon, Egypt, and Germany (Fares and Jaume, 2017; Haj-Younes et al., 2021; Grochtdreis et al., 2021).

Otherwise, no significant difference in QOL was seen based on gender, marital status, and residence place, although most studies indicate significant difference in QOL based on age and marital status, because commonly being male and married, are more able to get responsibilities, and successful coping strategies (AlZoubi et al., 2016; Baumann & Adera, 2021), also this could be due to small sample size in this study. Even so, the insignificant difference in QOL based on residence place, was due to; all study participants were recruited from one site (Souf town), and small sample size. These results were inconsistent with a study conducted in USA (Aljadeeah et al., 2021; Baumann & Adera, 2021; Semere et al., 2018).

Likewise, the results of correlations indicate positive correlations between QOL and both the level of access to health services and total income, and this could be justified as; having sufficient access to health services along with having good financial status, have great impact on the physical, mental and social health states of the refugees, which will be reflected on improved QOL. This was congruent with the results of two studies conducted on Syrian refugees in Germany and Sweden (Grochtdreis et al., 2021; Sengoelge et al., 2022).

Regression results indicated that; the refugees' age and employment status, were the significant predictors of their QOL, that is, the older refugees are more likely to have lower level of quality of life, and this could be interpreted as that; as the refugees' age progressing, their likelihood will increase to develop new physical health problems, miss some of their abilities, and decrease their tolerance energy, which in turn will produce some negative health outcomes, and worsen their QOL. Another predictor is the employment status, in which the employed refugees were more likely to have higher level of quality of life, and this could be justified that; employment status considered an important concern for Syrian refugees and considered the major financial resource for fulfilling the basic health needs. In addition it is support their living circumstances, self-adequacy, social relationships, feeling of respect and accessing to the healthcare service. These findings were similar to those of many studies conducted on Syrian refugees (Dangmann et al., 2020; Doocy et al., 2016; Mencütek & Nashwan, 2021).

The results of this study may be useful for nurse leaders to make political pressure on the policy developers, decision makers and other stakeholders to enhance Syrian refugees' access to health services in Jordan. Nurses could design creative educational programs that are tailored toward low income, illiterate, and unemployed Syrian refugees to improve their QOL. Nurses could provide counseling services, stress management sessions, and referral services, and connect Syrian refugees with social bodies, that provide them with financial, social and psychological aids. Also, nurses can play an important advocacy role, to connect refugees' voice to the formal administrators, to stand on their necessary needs regarding health, employment, resettlement, and finance. Further quantitative studies with large and multi-setting samples should be conducted, in addition to conduct qualitative studies to explore the real lived experiences of Syrian refugees regarding the access to health services and barriers that hinder such access.

The study has limited limitations, including; it was conducted in the town of Souf in Jerash city, use small sample size, and a convenient sample, which in turn may limit the generalizability of the study results. In addition the study was cross-sectional, therefore, the causality relationship between QOL and other independent variables cannot be ascertained.

## 5. Conclusion

This study comes with the results that, the QOL of Syrian refugees is mainly and highly affected by their psychological, social and environmental circumstances. Therefore, warning signs are alarmed, to get the attention from the organizations, leaders, decision makers, policy developers, and

other stakeholders, to pay their focus on all issues that contribute in the refugees' QOL as; improving their access to healthcare services, eliminating barriers for such access, supporting refugees with sufficient opportunities of education, and employment to assist them integrating in the host community successfully. Further, encouraging educators to develop innovative health plans and educational programs, to rise refugees' awareness level regarding healthy lifestyles to help them enhancing their QOL.

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