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**Publication Date**

2016

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Social Determinants of Health-related Quality of Life in Palestinian  
Refugees Living Inside and Outside Camps in Jordan

by

Hamza Alduraidi

DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Nursing

in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

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by  
Hamza Alduraidi

## DEDICATION

I dedicate this work to every refugee and displaced person in the world, including my dear mother.

## ACKNOWLEDGEMENTS

This dissertation was made possible because of the distinguished guidance of Dr. Catherine M. Waters, Dr. Carol Dawson-Rose, Dr. Lisa Thompson, and Dr. Erika Froelicher, and the generous support of Dr. Steven Paul, Mr. Ahmad Al-Shibi, Dr. Maysoon Abdelrahim, Mrs. Huda Amre, Dr. Eshtaiwi Abu-Zayed, Dr. Tayseer Abu-Zeeneh, Ms. Dareen Abu Lail, Mr. Ilufredo Tantoy, and Mrs. Kate Grünke-Horton.

## ABSTRACT

Social Determinants of Health-related Quality of Life in Palestinian Refugees

Living Inside and Outside Camps in Jordan

Hamza Alduraidi

**Background:** Palestinian refugees are the world's largest and one of its longest standing refugee caseloads. Since 1948, Jordan has received several waves of Palestinian refugees who, with their descendants, count for half Jordan's population. There is a clear concentration of poverty, household crowdedness, inferior housing standards, and limited healthcare and other services access inside camps, in which 18% of Jordan's Palestinian refugees reside. The Health-related Quality of Life (HRQOL) is the product of not only individuals' characteristics, but also the characteristics of the surrounding physical and sociopolitical environment.

**Objective:** Within the context of an integrated HRQOL ecological framework, the dissertation purpose was to (1) describe the state of and gaps in health and social outcomes of Palestinian refugees in Jordan; (2) describe HRQOL, depression and hopefulness to return to Palestine, taking into consideration the influence of age, gender, education and poverty; and (3) compare HRQOL between Palestinian refugees who live inside and outside camps in Jordan, taking into consideration sociodemographic characteristics.

**Method:** The sample of 177 adult Palestinian refugees living in Jordan was recruited from inside of UNRWA's Al-Baq'a Palestinian refugee camp (n = 86) and outside of the camp from surrounding communities in Abu Nsair (n = 91). Participants provided sociodemographic information and completed the World Health Organization QOL Brief Questionnaire.

**Results:** Palestinian refugees living in Jordan were depressed and nearly half experienced low

HRQOL, particularly if refugees were older and poorer. Participants were 'very hopeful' about returning to Palestine in the future. Hopefulness, however, was not significantly associated with HRQOL or depression. Furthermore, refugees living inside and outside of camps in Jordan were significantly different by education, type of health insurance and poverty. Physical health, environment and overall HRQOL were significantly higher for non-camp refugees than camp refugees. Regression analyses indicate poverty and residency, individually and/or in combination, were significant predictors of environment, physical health and social relationships HRQOL.

**Conclusion:** Palestinian refugees in Jordan, especially those who lived inside camps, reported poor HRQOL. Community/public health programs and social policies need to be bolstered or created and implemented to benefit Palestinian refugees in Jordan, particularly inside camps.

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## CHAPTER I

### INTRODUCTION

#### **Statement of the Problem**

Military conflict and political turmoil force refugees to leave their homes and seek refuge elsewhere, usually in camps located in other countries (United Nations High Commissioner for Refugees, 2016). The uniqueness of the Palestinian refugee population living in Jordan is the result of complex historical, sociocultural, religious, political and military forces (Young, 2011). Because of the unresolved 1948 and 1967 Arab-Israeli disputes over the establishment of an independent, livable and sustainable Palestinian state west of the Jordan River, Palestinians are the longest-standing refugee caseload in the world (Young 2011). According to UNRWA (2016a), more than five generations of Palestinian refugees and descendants (approximately five million) have been born and raised in Jordan and other host countries in the Middle East, including Lebanon, Syria, and Occupied Palestinian Territories of the West Bank and Gaza Strip.

More than two million registered Palestinian refugees lived in Jordan in the year 2014, 18% (370,000) of whom lived in 10 official UNRWA camps and 82% (1.6 million) of whom lived outside of camps (UNRWA, 2016b). Palestinian refugees in Jordan can choose to live inside or outside of camps unlike Palestinian refugees in Syria and Lebanon. The socioecological conditions in camps have been described as “generally poor, with high population density, cramped living conditions and inadequate basic infrastructure such as roads and sewers” (UNRWA 2016a, “Where do Palestine refugees live,” para. 4). Understanding the impact of living conditions or residency, whether living inside or outside camps, on the health, functioning and wellbeing, taking into consideration other social determinants, of refugees is essential to adhering to basic health and human rights (Gruskin, Mills, & Tarantola, 2007) and humanitarian

and public health nursing principles (Easley & Allen, 2007). Yet, little is known about the influences of social determinants on health outcomes in the Palestinian refugee population living in Jordan.

### **Purpose of the Study**

The purpose of the dissertation study was threefold: (a) conduct a literature review in order to describe the state of and gaps in health and social outcomes of Palestinian refugees living inside and outside camps in Jordan, (b) guided by the socioecological perspective, describe health-related quality of life (HRQOL), depression and hopefulness to return to Palestine, and (c) compare HRQOL between Palestinian refugees who live inside and outside camps in Jordan. The influence of age, gender, education, poverty and other sociodemographic characteristics on HRQOL were also examined.

### **Organization of the Dissertation Chapters**

Chapter II is a description of the literature related to the state of and gaps in health and social outcomes of Palestinian refugees living inside and outside camps in Jordan. In Chapter III, HRQOL, depression and hopefulness to return to Palestine are described in a sample of 177 adult Palestinian refugees (55% men and 45% women) recruited from two community locations in Amman, Jordan. Guided by the socioecological perspective, the influence of age, gender, education and poverty, along with depression, on the HRQOL of Palestinian refugees living in Jordan were also examined. Presented in Chapter IV are the findings of whether Palestinian refugees living in Jordan differed in HRQOL by residency (camp or non-camp). In Chapter V, a summary of the dissertation research findings, conclusions, limitations, implications for health and nursing, and recommendations for further research with the Palestinian refugee population living in Jordan are discussed. Following Chapter V are appendices that include the research

instruments, support letters, and approval by the UCSF Institutional Review Board to conduct the study.

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## CHAPTER II

### LITERATURE REVIEW

#### HEALTH AND SOCIAL OUTCOMES OF PALESTINIAN REFUGEES IN JORDAN

Military conflict and political turmoil force refugees to leave their homes and seek refuge elsewhere, usually in camps located in other countries (United Nations High Commissioner for Refugees, 2016). The uniqueness of the Palestinian refugee population living in Jordan is the result of complex historical, sociocultural, religious, political and military forces (Young, 2011). Because of the unresolved 1948 and 1967 Arab-Israeli disputes over the establishment of an independent, livable and sustainable Palestinian state west of the Jordan River, Palestinians are the longest-standing refugee caseload in the world (Young 2011). Palestinian refugees are “persons whose normal place of residence was Palestine during the period 1 June 1946 to 15 May 1948, and who lost both home and means of livelihood as a result of the 1948 conflict” (United Nations Relief and Works Agency for Palestine Refugees in the Near East [UNRWA], 2016a, “Who are Palestinian refugees,” para. 1).

Palestinian refugees register with and are clients under the mandate of UNRWA, the special United Nations agency that has been in operation since 1950 to provide relief and work solely to Palestinian refugees (UNRWA, 2016a). According to UNRWA (2016a), more than five generations of Palestinian refugees and descendants (approximately five million) have been born and raised in Jordan and other host countries in the Middle East, including Lebanon, Syria, and Occupied Palestinian Territories of the West Bank and Gaza Strip. Unlike Palestinian refugees in Syria and Lebanon, Palestinian refugees in Jordan are entitled to full Jordanian citizenship, including healthcare and participation in political and economic life (UNRWA, 2016b). Ninety-



five percent of Palestinian refugees in Jordan have Jordanian citizenship. Palestinian refugees and their descendants are a substantial and integral part of Jordan's population.

The Hashemite Kingdom of Jordan, with a population of more than 8 million, was the first and is the largest and longstanding host country in the world for Palestinian refugees; 40% of the Jordanian population originated from Palestine (UNRWA, 2016b). According to UNRWA (2016b), more than two million registered Palestinian refugees lived in Jordan in the year 2014, 18% (370,000) of whom lived in 10 official UNRWA camps and 82% (1.6 million) of whom lived outside of camps. See Figure 1. A camp is land allocated and administered by the host government to accommodate refugees (UNRWA, 2016a). Education, health and social services programs provided to Palestinian refugees living inside and outside of camps, however, are administered by UNRWA and coordinated with various agencies. According to the most current statistics as of July 1, 2014, there are 23 primary health centers, 12 women's health centers, eight community rehabilitation centers, 173 schools with 116,953 students, and two vocational and technical training centers located in Jordan (UNRWA 2016b).

Palestinian refugees in Jordan can choose to live inside or outside of camps unlike Palestinian refugees in Syria and Lebanon. The socioecological conditions in camps have been described as "generally poor, with high population density, cramped living conditions and inadequate basic infrastructure such as roads and sewers" (UNRWA 2016a, "Where do Palestine refugees live," para. 4). Understanding the impact of living conditions or residency, whether living inside or outside camps, on the health, functioning and wellbeing, taking into consideration other social determinants, of refugees is essential to adhering to basic health and human rights (Gruskin, Mills, & Tarantola, 2007) and humanitarian and public health nursing principles (Easley & Allen, 2007). Yet, little is known about the influences of social

determinants on health outcomes in the Palestinian refugee population living in Jordan. The purpose of this review was to describe the state of and gaps in health and social outcomes of Palestinian refugees living inside and outside camps in Jordan.

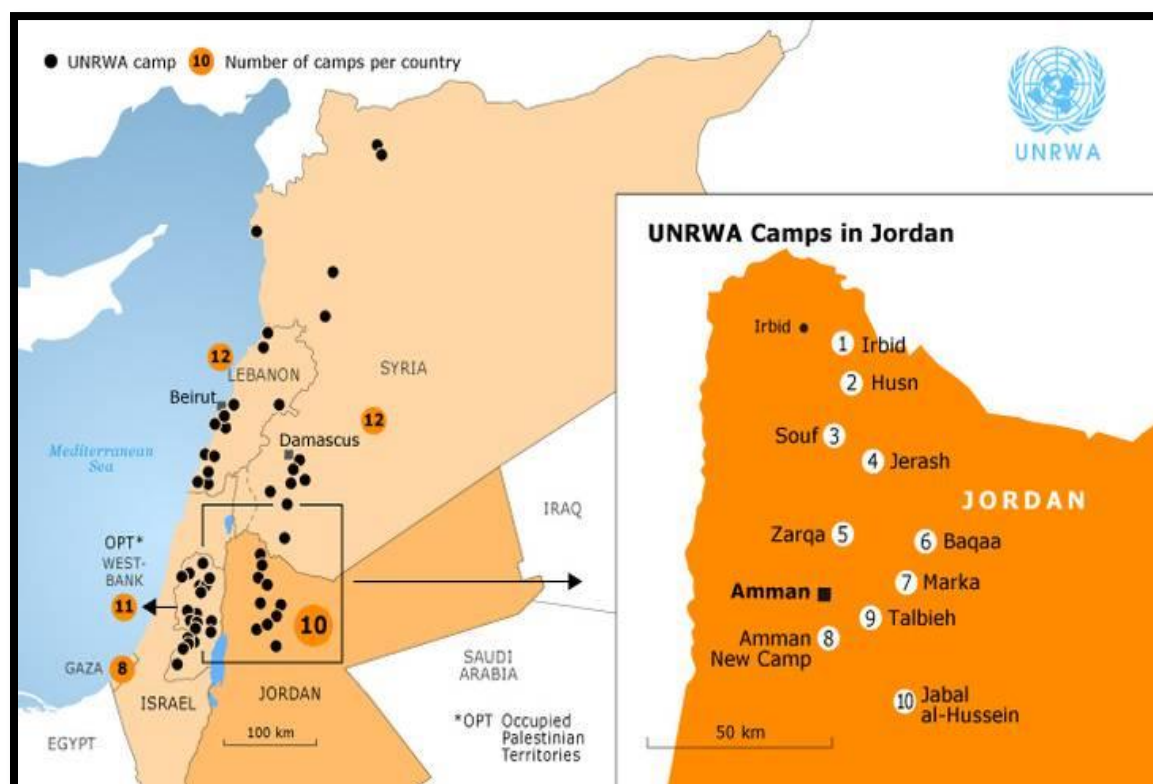


Figure 1. UNRWA’s official camps in the Middle East: Jordan, Lebanon, Syria and Occupied Palestinian Territories of the West Bank and Gaza Strip (Source: <http://fanack.com/countries/jordan/population/palestinian-and-iraqi-refugees>)

## Method

Iterative searches were conducted to identify literature about the health and social outcomes of Palestinian refugees living inside and outside camps in Jordan. Literature published within the past 10 years (2005 to 2015) was sourced from the following databases: PubMed,

PsychINFO, Cumulative Index to Nursing and Allied Health Literature, Sociological Abstracts, Google Scholar and Web of Science. Medical subject headings, used separately and in combination, to conduct the searches were refugees, refugee camps, health services, social services, health, social determinants of health, quality of life, physical health, psychological, social, environment, Palestinian, Jordan, Arabs and/or Middle East.

The date restriction was moved and the search was expanded from one country, Jordan, to several Middle Eastern countries that host Palestinian refugees in order to yield more records. Forty-eight records were identified through database searching; six duplicate records were removed. The abstracts of 42 records were screened for the following eligibility criteria: published in English, quantitative design, included in the sample Palestinian refugees who lived inside or outside camps in Jordan or other Middle Eastern countries, and focused on the aforementioned medical subject heading topics. Thirty records were excluded. Twelve full-text articles were assessed for eligibility and all 12 were included in the review.

## **Results**

The 12 studies were synthesized for common threads and major gaps related to the health (eight studies) and social (four studies) outcomes of Palestinian refugees. Organized by outcome, the articles, published from 2002 to 2013, are summarized in Table 1 by study (year), topic, sample, study design, host country (Jordan, Lebanon, and/or Occupied Palestinian Territories of the West Bank and Gaza Strip), residency (camp and/or non-camp), main results and major limitations. All twelve studies employed the descriptive, cross-sectional design, of which one study was a secondary analysis and one study was a retrospective chart review. Sample sizes ranged from 860 to 27,822 and included 5,248 adult men and women, 1,740 pregnant women, 14,315 adolescents, 3,382 children, 14,202 infants, and 34,372 households. Seven studies

included only camp refugees, one study included only non-camp refugees, four studies included both camp and non-camp refugees. The host countries were Jordan only (three studies), Lebanon only (two studies), Occupied Palestinian Territories of the West Bank and Gaza Strip only (four studies) or all of the aforementioned countries (three studies).

### **Health Outcomes**

The health and welfare of mothers, infants and children is an indication of the vitality of a nation (Reidpath & Allotey, 2003). Two studies were found in the literature that addressed infant and under 5-year child mortality in Palestinian refugees. In one study, the infant and child mortality rates of Palestinian refugees living inside camps in Jordan, Lebanon and Occupied Palestinian Territories of the West Bank and Gaza Strip were comparable or lower than non-refugees (Khawaja, 2004). In Jordan, the infant and child mortality rates for camp refugees were 24 per 1,000 live births and 26 per 1,000 live births, respectively. In contrast, among non-refugees in Jordan, the infant and child mortality rates were 31 per 1,000 live births and 46 per 1,000 live births, respectively. Palestinian refugees living outside of camps were not included in the secondary analysis of four sources of survey data collected between 1995 and 1999 from 27,822 randomly selected households of married women between 15 and 54 years. Survey response rates varied from 91.5% to 98.2%.

In the other study, infant mortality rates of Palestinian refugees living outside camps in Jordan, Lebanon and Occupied Palestinian Territories of the West Bank and Gaza Strip were determined from data reported by mothers registered by UNRWA in 2008 (Riccardo, Khader, & Sabatinelli, 2011). Among the 14,202 infants, 48.5% were males and 51.5% were females. The number of deaths reported was 318. In Jordan, 81 infant deaths were reported and the infant mortality rate for non-camp refugees was 22.6 per 1,000 live births (CI: 17.3-28.3), which was

comparable to Jordan's 2006 national infant mortality rate of 22 per 1,000 live births. The wide confidence interval may be the result of the relatively small numbers of infant deaths. Palestinian refugees living inside camps were not included in the analysis.

Khader and colleagues (2009) assessed the prevalence of anemia among 1,740 pregnant refugee women who attended UNRWA's antenatal clinics in Occupied Palestinian Territories of the West Bank and Gaza Strip in 2006. The mean age of the sample was 27.1 years and the mean parity was 2.7 children. Data collected by nurses revealed the prevalence of anemia, defined as 10.9 gram/dl or lower, was similar for non-camp refugee pregnant women (38.6%) and camp-refugee pregnant women (38.1%). Potential covariates of anemia, toxic, nutritional, genetic and social risks, were not reported.

El-Sharif and colleagues (2002) examined the prevalence of asthma in a stratified systematic sample of 3,382 Palestinian children, aged 6 to 12 years, who lived in the Ramallah district of the West Bank in Palestine. Parental response rate to the International Study for Asthma and Allergies in Childhood survey was 86%. The sample was comprised of camp refugees and non-refugees. Among the children, 52.7% were males and 47.3% were females. Refugee children living inside camps had a higher prevalence (15.6%) of asthma as compared to non-refugee children from rural (10%) or urban (7.3%) areas. Health records or diagnostic tests were not used to confirm parental reports of asthma. Data were collected only in the Ramallah district, which may not be representative of Palestinian refugees living in other areas or host countries.

Using the Global Youth Tobacco Survey, Khader and colleagues (2009) assessed the prevalence of tobacco use among 14,315 Palestinian refugee students, 13 to 15 years, who attended UNRWA schools in 2008 and lived inside and outside of camps in Jordan, Lebanon,

and Occupied Palestinian Territories of the West Bank and Gaza Strip. In Jordan, the response rate for the self-administered questionnaire was 89% ( $n = 2,866$ ). The cigarette smoking prevalence was 11.1% (CI: 6.5-18.4) for camp-refugee students compared to 14% (CI: 6.7-27.0) for non-camp refugee students and 10.3% (CI: 7.9-13.3) for non-refugee students. Biomarkers, such as saliva cotinine, were not used to validate self-report data and only students present on the day of survey administration were included in the study.

Khader and colleagues (2012) examined the prevalence of hypertension, a chronic disease, in Palestinian refugees living inside and outside camps in Amman, Jordan. Data were extracted from the electronic health record system, initiated in 2009, of UNRWA's Nuzha primary healthcare clinic, which provided services to 50% of registered Palestinian refugees in Jordan. Of the 55,000 refugees who received healthcare, 4,130 (7.5%) had hypertension and were 40 years or older. The prevalence of hypertension was higher for camp refugees (81%,  $n = 3,333$ ) as compared to non-camp refugees (19%,  $n = 797$ ). Socioeconomic factors were not controlled for in the analysis.

Physical and psychological health are important to the wellbeing of populations and communities. Yet, few studies address the psychosocial needs of refugees. Llosa and colleagues (2013) estimated the prevalence of mental disorders in 1,063 Palestinian refugees living in the Burj el-Barajneh camp in Lebanon, which hosts 20,000 Palestinian refugees as 19.4% (CI: 12.6-26.2) in the year 2009. The mean age of the sample was 39 years and was comprised of 48.9% males and 51.1% females. Refugees had a range of mental health conditions, including major depression (8.3%, CI: 4.4-12.2), dysthymic depression (1.4%, CI: 0.4-2.5), suicidality (8.1%, CI: 3.8-12.4), manic episodes (1.1%, CI: 0.0-2.4), hypomanic episodes (0.4%, CI: 0.0-1.0), panic disorder (5.9%, CI: 0.0-12.7), agoraphobia (1% , CI: 0.0-2.2), social phobia (0.4%, CI: 0.0-1.0),

obsessive-compulsive disorder (2.2%, CI: 0.0-4.4), post-traumatic stress disorder (2.2%, 0.5-3.9), psychotic mood (0.3%, CI: 0.0-0.8), and generalized anxiety disorder (1.0%, CI: 0.0-2.0). The prevalence of mental health treatment gap was 96% (CI: 92-100). A concern was that a single psychologist performed the mental health appraisal.

Madianos and colleagues (2011) examined depression in 916 Palestinian adult refugees living inside ( $n = 285$ , 31%) and outside ( $n = 631$ , 69%) camps of Occupied Palestinian Territory of the West Bank between February and September 2007 during the Al-Aqsa Intifada, a violent conflict between the Occupation Authorities and the Palestinian Resistance in the West Bank. The mean age of the sample was 39.7 years, half males and half females. The lifetime depression rate was 25.7% for males and 22.9% for females. The one-month depression rate was 11.3% for males and 9.7% for females. Similar to non-camp refugees, the lifetime depression rate was 23.1% and the one-month depression rate was 12.6% for camp refugees.

### **Social Outcomes**

Tiltnes and Zhang (2013) conducted a comprehensive study to describe the sociodemographic and environmental living conditions of Palestinian camp ( $n = 40,342$  households) and non-camp ( $n = 8,526$  households) refugees between 2011 and 2012. All 13 of Jordan's Palestinian refugee camps (10 official and three unofficial) were included in the study. The survey refusal rate for the stratified, probability sample was 25%. Among the Palestinian refugee population, 96% of non-camp refugees compared to 85% of camp refugees hold Jordanian citizenship. Camp refugees married earlier than non-camp refugees. In the 15- to 19-year old age group, 12% of female camp refugees were married compared to 6% of female non-camp refugees.

Camp refugee households (5.1 persons) were larger than non-camp refugee households (4.7 persons) (Tiltne & Zhang, 2013). More camp refugees lived in houses (59%) as compared to non-camp refugees who lived in apartments (83%), which are more spacious and better quality and have more outdoor space than camp housing. As compared to non-camp refugees, three times as many camp refugees considered crime, violence and alcohol and drug use as problems in their residential area. Thus, crowding and safety were more of a problem for camp refugees than they were for non-camp refugees. Satisfaction with housing conditions was greater among non-camp refugees than camp refugees. These social determinants were shown to impact refugee's health. Palestinian refugees living inside camps reported poorer health than refugees living outside camps; 3.5% of non-camp refugees had a chronic condition compared to 5% for camp refugees. Cigarette smoking, a male habit, was more common among camp refugees as compared to non-camp refugees. There was a positive association between health outcomes and income and education, indicating refugees with less education and income had worse health outcomes. Healthcare services provided by UNRWA and the public sector was used by a higher proportion of both camp and non-camp refugees than were private healthcare services.

Habib and colleagues (2006) examined the association between disease and living conditions of Palestinian refugees living in the Burj Barajneh camp near Beirut, Lebanon, where 3,548 refugee households reside. Data were collected in 2002 from a two-stage probability sample of 860 Palestinian refugee households. Thirty-six percent of households comprised of persons 14 years and younger. The average household consisted of five persons in a male-headed (84%) nuclear family (81.4%). Similar to findings reported by Tiltne and Zhang (2013), discussed above, there was a positive association between poor living conditions and the presence of illness; 70% of households reported the presence of illnesses among household



members. Illnesses reported were circulatory (21.5%), musculoskeletal (18.9%), and respiratory (15.2%). As compared to households with none to four housing problems, illnesses were 1.5 times more likely (OR 1.53, CI = 1.02-2.29) in households with five to seven housing problems and twice as likely (OR = 2.08, CI = 1.40-3.11) in households with eight to 15 housing problems. Housing infrastructure and quality were not reported.

Al-Khatib and colleagues (2005) reported findings similar to the aforementioned studies (Habib et al., 2006; Tiltne & Zhang, 2013), which indicate housing reforms are needed to improve the health of refugee families, particularly refugees who live inside camps. Al-Khatib and colleagues surveyed 150 women, 19 to 80 years, from the Al- Ein Refugee Camp in Nablus, West Bank, between January and February 2002, about their living conditions. The women reported their dwelling had inadequate heating, insulation and ventilation, mold and other microorganisms and carcinogenic building materials; were damped, crowded and lacked communal space, clean water, sufficient electricity, proper sanitation and refuse disposal; and had inadequate roads for transportation. The small sample size and self-reported data were limitations of the study.

Civic engagement has been shown to be a significant predictor of self-rated health for Palestinian refugees living inside camps in poor communities of Jordan (Khawaja, Tewtel-Salem, Obeid, & Saliba, 2006). A sample of 1,615 households were surveyed during the spring and summer of 1999. The sample was comprised of 809 males (50.1%) and 806 females (49.9%); 630 (39%) refugees were aged 15 to 24 years and 626 (38.8%) refugees were aged 25 to 44 years. There was a significant, positive association between civic engagement (e.g., club membership) and self-rated health in men only (OR = 3.40, CI: 1.34-8.64). In contrast, women's

civic engagement was not significantly associated with self-rated health. As compared to men, women reported lower levels of education and income and higher levels of unemployment.

### **Discussion**

Palestinian refugees and descendants have been displaced from their homeland since 1948 because of complex historical, sociocultural, religious, political and military conflicts. The studies included in the integrative review were conducted in the host countries of Jordan, Lebanon, and the Occupied Palestinian Territories of the West Bank and Gaza Strip with a particular focus on Palestinian refugees living in Jordan. The sparse literature suggests the health and social outcomes, including physical and mental health and social and living conditions, are likely to be worse and persistent for Palestinian camp refugees than for non-camp Palestinian refugees and non-refugees. In contrast, the prevalence of infant and child mortality, childhood asthma and adolescent tobacco use among Palestinian camp refugees were found to be lower or comparable to non-camp Palestinian refugees and non-refugees. It appears for these particular health indices, accessibility to UNRWA public health services in the host countries may account for the better or comparable health outcomes among Palestinian refugees living inside camps as compared to Palestinian refugees living outside camps and non-refugees (Tiltnes & Zhang, 2013).

Along with access to quality healthcare services, socioecological approaches also must be considered in order to improve the health of refugees. Social determinants are significant because these contextual factors influence the way individuals, populations, communities and societies live and function as well as influence the risks associated with preventable disease morbidity, premature mortality and satisfaction with and quality of life (Commission on Social Determinants of Health, 2008; Marmot, 2005). Findings suggest that social and living conditions

inside camps appear to be far from ideal. As compared to non-camp refugees and non-refugees, Palestinian refugees living inside camps appear to live under persistent strain related to poor quality and crowded housing with inadequate electricity, refuse disposal and clean water, socioeconomic deprivation and lack of safety, which negatively impacts physical and mental health (Al-Khatib et al., 2005; Habib et al., 2006; Tiltnes & Zhang, 2013). Mental health conditions were found to increase during violent conflicts, which some Palestinian refugees frequently experience, depending on the region in which they live (Madianos et al., 2011). Furthermore, there was a 96% mental health treatment gap for Palestinian refugees living in camps (Llosa et al., 2013).

Improved socioeconomic and educational levels may be key factors to Palestinian camp refugees' obtaining adequate housing and employment opportunities outside of camps in the host country. According to the Palestinian Central Bureau of Statistics (2015), households headed by refugees were poorer than households headed by non-refugees in 2011, and Palestinian refugees had lower percentages of participation in the labor market compared to non-refugees in 2013. In 2008, the poverty level in Jordan was 13% for non-refugees and non-camp refugees, but 30% for Palestinian camp refugees (World Bank, 2014). Khawaja and Tiltnes (2002) reported that 87% of Palestinian refugees living inside camps expressed a strong desire to live outside camps, but chose to continue to live inside camps because of the costs associated with leaving the camp (40%) and having friends and relatives who lived in the camps (60%). Higher socioeconomic status is associated with better health in both industrialized and developing countries and in both welfare states and liberal democracies (Cutler, Lleras-Muney, & Vogl, 2008).

## **Limitations**

A major limitation of the studies included in the integrative review was the descriptive, cross-sectional design in which study variables were assessed at one point in time as opposed to assessing variables over time, which may have shown cause-and-effect trends (see Table 1). More than 10 years have passed since two of the 12 articles were published (El-Sharif et al., 2002; Khawaja, 2004). Two studies relied on dated data sources from the 1990s (Khawaja, 2004; Khawaja et al., 2006). Since the literature was sparse, the studies were included because findings provided insight in to this understudied, vulnerable population. Self-reported data, which can be subjected to recall bias and under- and over-reporting, was another limitation. A majority of the studies included relatively large, probability samples and multiple data collection sites, which strengthened the external validity and generalizations of study findings. Not all of the studies, however, included camp refugees, non-camp refugees and non-refugees; and thus, comparisons could not always be made among the three groups.

## **Conclusions, Implications and Recommendations**

Depending on residency, there are disparities in health and social outcomes for Palestinian refugees in Jordan. Palestinian refugees living inside camps seem to fare worse for most social and health indices as compared to Palestinian refugees living outside camps and the non-refugee population in the host country. Further cross-sectional and longitudinal research is warranted in order to provide current, prospective data about the variations in health and social outcomes that may impact refugees' quality of life as the military and sociopolitical landscapes change. Nursing's perspective on refugee health is important and is a needed contribution to the literature.

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Table 1

*Summary Table of Studies Included in the Integrative Review by Health and Social Outcomes of Palestinian Refugees*

Study (Year)	Topic	Sample	Study Design	Host Country					Residency		Main Results	Major Limitations
				Jordan	Palestinian Territories	Occupied	Lebanon	All <sup>a</sup>	Camp	Non-Camp		
<b>HEALTH OUTCOMES</b>												
Khawaja (2004)	Infant and child mortality	27,822 households	Descriptive, cross-sectional secondary analysis					×	×		In Jordan, camp refugees had lower infant and child mortality rates as compared to non-refugees.	Dated data sources (1995 to 1999)
Riccardo et al. (2011)	Infant mortality	14,202 infants	Descriptive, cross-sectional					×		×	In Jordan, non-camp refugees' infant mortality rate was comparable to Jordan's national population.	Data reported by mothers; wide confidence interval for infant mortality rate of non-camp refugees
Khader et al. (2009)	Anemia	1,740 pregnant women	Descriptive, cross-sectional	×				×	×		In OPT, prevalence of anemia was similar for non-camp and camp refugee pregnant women.	Potential covariates (metabolic, toxic, genetic and social factors) not assessed



Study (Year)	Topic	Sample	Study Design	Host Country					Residency		Main Results	Major Limitations
				Jordan	Palestinian Territories	Occupied	Lebanon	All <sup>a</sup>	Camp	Non-Camp		
El-Sharif et al. (2002)	Asthma	3,382 children	Descriptive, cross-sectional		×				×		In the West Bank, camp-refugee children had a higher prevalence of asthma as compared to non-refugee children.	Health record or diagnostic test not used to confirm parental report of asthma
Khader et al. (2009)	Tobacco use	14,315 adolescents	Descriptive, cross-sectional					×	×	×	In Jordan, the cigarette smoking prevalence was lower for camp-refugee students as compared to non-camp refugee students, but was higher than non-refugee students.	Youth self-reported data; biomarkers not used to confirm smoking
Khader et al. (2012)	Hypertension	3,119 adults	Descriptive, cross-sectional, retrospective, chart review	×					×	×	In Jordan, prevalence of hypertension was higher for camp refugees as compared to non-camp refugees.	Socioeconomic factors not controlled for in analysis
Llosa et al. (2013)	Mental health	1,063 adults	Descriptive, cross-sectional				×		×		In Lebanon, camp refugees had a range of mental health disorders that were not being treated.	Mental appraisal done by a single psychologist
Madianos et al. (2011)	Depression	916 adults	Descriptive, cross-sectional		×				×	×	In the West Bank, depression rates were similar for men and women and were comparable between camp and non-camp refugees.	Depressive symptoms self-reported and assessed during the time of a violent conflict

Study (Year)	Topic	Sample	Study Design	Host Country					Residency		Main Results	Major Limitations
				Jordan	Occupied Palestinian Territories	Lebanon	All <sup>a</sup>		Camp	Non-Camp		
<b>SOCIAL OUTCOMES</b>												
Tiltnes & Zhang (2013)	Living conditions	40,342 camp households 8,525 non-camp households	Descriptive, cross-sectional	×					×	×	In Jordan, disproportionate and worse disparities were seen for camp refugees in social, health, housing and economic conditions as compared to non-camp refugees.	
Habib et al. (2006)	Living conditions	860 households	Descriptive, cross-sectional			×			×		In Lebanon, a positive association was found between poor living conditions and the presence of illness among camp refugees.	Housing infrastructure and quality not reported
Al-Khatib et al. (2005)	Living conditions	150 women	Descriptive, cross-sectional		×				×		In the West Bank, inadequate housing, environmental and living conditions were found among camp refugees.	Small sample size; self-report
Khawaja et al. (2006)	Civic engagement	1,615 households	Descriptive, cross-sectional	×					×		In Jordan, civic engagement was a significant predictor of self-rated health for men, but not for women with low literacy among camp refugees.	Dated data source (1999); included only poor communities
<sup>a</sup> All refers to all locations: Jordan, Lebanon, and Occupied Palestinian Territories (OPT) of the West Bank and Gaza Strip.												

CHAPTER III  
HEALTH-RELATED QUALITY OF LIFE, DEPRESSION AND HOPEFULNESS IN  
PALESTINIAN REFUGEES LIVING IN JORDAN

Abstract

**Objective:** Guided by the socioecological perspective, the study purpose was to describe health-related quality of life (HRQOL), depression and hopefulness to return to Palestine, taking into consideration the influence of age, gender, education and poverty on HRQOL of Palestinian refugees living in Jordan.

**Method:** 177 adult Palestinian refugees (55% men and 45% women) were recruited from two community locations in Amman, Jordan. Participants provided sociodemographic information and responded to the World Health Organization QOL Brief Questionnaire, the Patient Health Questionnaire for anxiety, and a statement about hopefulness to return to Palestine in the future.

**Results:** Despite being relatively healthy, Palestinian refugees living in Jordan were depressed and nearly half experienced low HRQOL, particularly if refugees were older and poorer. Participants were ‘very hopeful’ about returning to Palestine in the future. Hopefulness, however, was not significantly associated with HRQOL or depression.

**Conclusion:** Mental health needs of Palestinian refugees in Jordan need to be systematically screened and treated. Community health nurses in Jordan can play a major role in informing public health supports and policies that can improve the socioeconomic and living conditions of refugees, especially older and poorer refugees. Further research is needed to examine differences in HRQOL and other aspects of health for camp and non-camp refugees.

**Keywords:** health-related quality of life, depression, hope, Palestinian refugees, Jordan

## Health-Related Quality of Life, Depression and Hopefulness in Palestinian Refugees Living in Jordan

The conditions into which people in a community are born, develop, socialize, live, work, age and die that influence health, functioning and health-related quality of life (HRQOL) are referred to as the social determinants of health (World Health Organization [WHO], 2010; United States Department of Health and Human Services [USDHHS], 2016a). A person's individual health is determined largely by social determinants, which include a person's age, gender, education, income, social relationships, physical environment, among other biological, demographic and environmental characteristics (USDHHS, 2016a). Social determinants are significant because these contextual factors influence the way individuals, populations, communities and societies live and function as well as influence the risks associated with preventable disease morbidity, premature mortality and HRQOL (Commission on Social Determinants of Health, 2008).

Health-related quality of life influences the individual and the community (Bakas et al., 2012). At the individual level, HRQOL is concerned with a person's physical and psychological health and functioning, social relationships, daily living and circumstances. At the community level, HRQOL is concerned with the physical environs, legal and sociopolitical aspects and how these aspects influence individual perception of his or her community's wellbeing and functioning. The U.S. DHHS (2016c) and WHO Quality of Life Group (1995) assert that assessing, monitoring, tracking and evaluating HRQOL help to determine physical, psychological, social and environmental well-being related to the burden of disease and disability for individuals, populations, communities and societies, which can, subsequently, guide public health practice, research and policy in order to achieve public health goals locally, nationally and globally.

Since 1948, the unresolved Arab-Israeli conflict has forced Palestinians to leave their homes and seek refuge in the Occupied Palestinian Territories of West Bank and Gaza Strip and the neighboring countries of Syria, Lebanon, Egypt and Jordan (Young, 2011). Studies related to Palestinian refugees' hopefulness to return to Palestine were not found in the literature. Palestinians are one of the largest and longest-standing refugee caseload in the world. Jordan, an upper middle-income country in the Middle East (World Bank, 2016), hosts more Palestinian refugees than any other country in the world (United Nations' Relief and Work Agency for Palestinian Refugees in the near East [UNRWA], 2016). Palestinian refugees and descendants are a substantial and integral part of Jordan's population. Almost half the population of Jordan consists of nearly two million Palestinian refugees who are officially registered with UNRWA as refugees (UNRWA, 2016).

While the poor health and socioeconomic conditions of Palestinian refugees in Jordan have been documented, albeit a sparse literature (Khawaja & Tiltnes, 2002; Tiltnes & Zhang, 2013), HRQOL has not been described in the Palestinian refugee population living in Jordan. Nineteen percent of Palestinian refugees living in Lebanon and Occupied Palestinian Territories of West Bank and Gaza Strip were found to have psychological health disorders, with depression being the most common mental health condition (Llosa et al., 2013). Palestinian refugees living in the Gaza Strip have witnessed three wars in the past 10 years, which may have different psychological impacts from Palestinian refugees living in Jordan who have witnessed less military conflicts, but who are also displaced from their homeland and have been forced to live in a host country. No psychological health-related studies of Palestinian refugees living in Jordan were found in the published literature.

### **Purpose of the Study**

The uniqueness of the Palestinian refugee population living in Jordan is the result of complex historical, sociocultural, religious, political and military forces (Young, 2011). Understanding the impact of these forces on the health, functioning and wellbeing, taking into consideration social determinants, of refugees is essential to adhering to basic health and human rights (Gruskin, Mills, & Tarantola, 2007) and humanitarian and public health nursing principles (Easley & Allen, 2007). Guided by the socioecological perspective, the purposes of this study were to describe HRQOL, depression and hopefulness to return to Palestine, taking into consideration the influence of age, gender, education and poverty on HRQOL in Palestinian refugees living in Jordan.

### **Socioecological Perspective**

The socioecological perspective considers the complex person-environment interplay among individual, interpersonal, community and societal factors that influence a person's health (Stokols, 1992). Within the socioecological framework, health is shaped by personal (e.g., culture, language, geography, gender, age, education, income, religion, etc.) and environmental (e.g., community norms, values, regulations, policies, etc.) characteristics. The premises of the socioecological perspective are individual health is determined by the social environment; facilitators and barriers to individual health are shared among the community as a unit, making optimal health either an achievement or an obstacle, respectively; and, change in health is the synergy of efforts at individual, interpersonal, community and societal levels of influence (Stokols, 1992).

The U.S. Healthy People 2020 (USDHHS, 2016b) and the WHO Commission on Social Determinants of Health (2008) are initiatives that recognize the socioecological perspective to

understanding and intervening on health and disease at individual and population levels with the aim of achieving health equity (Marmot, 2005). The Healthy People 2020 initiative identifies five key social determinants of health: economic stability, education, social and community context, healthcare access, and neighborhood and built environment, which are inextricably linked to a population's access to and benefits from healthcare (USDHHS, 2016b). Social determinants include gender, education, occupation, income, ethnicity, place of residence, among other characteristics. In this study, serving as socioecological proxies, the social determinants—age, gender, education and poverty—along with depression, were hypothesized to influence HRQOL in the Palestinian refugee population living in Jordan.

## **Method**

### **Study Design**

The study was a descriptive, correlational cross-sectional research design. The Institutional Review Board of the University of California, San Francisco approved the study. In addition, the study had the support and approval of UNRWA's camp administration in Amman, Jordan and the University of Jordan. Study inclusion criteria were a Palestinian refugee registered with UNRWA who had Jordanian citizenship, was an adult, 18 years or older, and was able to read, speak and comprehend Arabic. There were no specific exclusion criteria.

### **Data Collection Procedure**

Recruitment of Palestinian refugees occurred in two community locations in Jordan: Abu Nsair in northern Amman, the capital of Jordan, and Al-Baqa'a Palestinian refugee camp, which is about 40 miles northwest of Amman. Abu Nsair is an area that has a predominance of Palestinian refugees. Al-Baqa'a is an official UNRWA camp for Palestinian refugees that is located in a suburban community with agricultural and industrial businesses. Data were collected

by the primary author, who is Jordanian, and a trained research assistant, who is also Jordanian and was a second-year master's student in mental health nursing at the University of Jordan. The research assistant was trained on the eligibility, consent and data collection procedures and the guidelines for referring participants, if necessary, to the researcher.

A total of 210 adult refugees were approached at primary healthcare centers, markets and mosques in Abu Nsair and Al-Baqa'a. Twenty-three refugees refused, resulting in 187 (89%) refugees who agreed to participate in the study. Of the 187 refugees, 10 (5%) refugees did not meet the eligibility criteria, yielding a non-probability, convenience sample of 177 Palestinian refugees living in Jordan (see Figure 1). An a priori power analysis calculation indicated a minimum sample size of 91 would be adequate to compute multiple linear regression analysis with five predictors (depression, gender, age, education and poverty) for a medium squared multiple correlation ( $R^2$ ) effect size of .15 at 80% power and a probability level of  $p \leq .05$  (Cohen, Cohen, West, & Aiken, 2003).

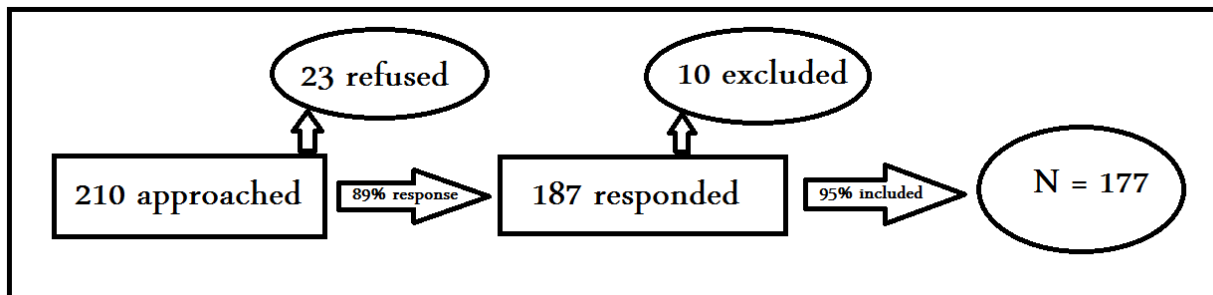


Figure 1. Sample recruitment, screening and eligibility.

The study purpose, potential impact, data collection procedure, rights as a human subject and one-page information sheet were explained to participants. A printed copy of the information sheet, which included information about the study, consent and permission to complete the self-administered five-page questionnaire, was provided to each participant. After consent, the participant's questions were answered and the questionnaire was given to the participant to



complete in the presence of the researcher or research assistant in a quiet, private location. Time to complete the questionnaire averaged 20 minutes. Upon completion of the questionnaire and before the participant left, the researcher or research assistant checked the questionnaire for missing responses. If there were missing responses, the participant was asked to consider answering the missing items after being reminded that he or she has the right to not answer the items without consequences. The participant was thanked for his or her time and reassured that responses would be handled confidentially and professionally as explained in the information sheet. Data collection occurred for 2 months from October 2015 to November 2015. Completed questionnaires were numbered sequentially, contained no personal identifying information and were kept in a locked cabinet.

### **Variables and Measures**

Participants were assessed on HRQOL, perceived health, depression, hopefulness to return to Palestine, and sociodemographic characteristics.

**Health-related quality of life.** The Arabic version of the 26-item WHO Quality of Life Brief (WHOQOL-BREF) questionnaire was used to assess perceived HRQOL that includes physical health, emotional, spiritual and psychological wellbeing, social and interpersonal relationships and support and environmental resources (Skevington, Lotfy, & O'Connell, 2004; WHO, 1996). The timeframe was 'in the past 2 weeks.' Response options range from 1 (lower HRQOL) to 5 (higher HRQOL). Scores were summed and transformed for continuous scores that can range from 0 to 100, with 100 representing the greatest quality of life and 0 representing the poorest quality of life. Based on Skevington and colleagues' WHOQOL-BREF mean scores adjusted for age and gender, the HRQOL cutoff scores for this study were set at 50 or less (lower HRQOL) and above 50 (higher HRQOL). The Arabic version of the WHOQOL-BREF

questionnaire has been shown to have adequate psychometric properties (Eljedi et al., 2006) and has been cross-culturally validated as a measurement of HRQOL in Arabic-speaking populations (Al-Sayah, et al., 2012). In the current study, Cronbach's alpha internal consistency reliability coefficient for the WHOQOL-BREF questionnaire was adequate at .91.

**Perceived Health.** Perceived health was assessed using two items from the RAND 36-item Short Form Survey (Hays & Morales, 2001). One item assesses the participant's rating of his or her perceived health on a scale of 1 (*poor*) to 5 (*excellent*). The other item assesses the participant's rating of his or her health now as compared to 1 year ago on a scale of 1 (*much better now than one year ago*) to 5 (*much worse now than one year ago*).

**Depression.** The 9-item Patient Health Questionnaire (PHQ-9) is a multipurpose instrument for screening, diagnosing and measuring the severity of depressive symptoms over the past 2 weeks (Kroenke, Spitzer, & Williams, 2001). Response options range from 0 (*not at all*) to 3 (*nearly every day*) for items such as "little interest or pleasure in doing things" and "feeling down, depressed or hopeless." Scores were summed for continuous scores that can range from 0 to 27 and were categorized as mild depression (5 to 9), moderate depression (10 to 14), moderately severe depression (15 to 19), and severe depression (20 or greater). Higher scores indicate more symptoms of depression. The diagnostic validity of the PHQ-9 has been established in the ambulatory care population and has a sensitivity of 88% and a specificity of 88% for major depression (Kroenke et al., 2001). In the current study, Cronbach's alpha internal consistency reliability coefficient for the PHQ-9 was adequate at .80.

**Hopefulness to Return to Palestine.** The 1-item investigator-developed question about hopefulness to return to Palestine was: "On a scale of 1 to 5, how hopeful are you about the

possibility of returning to Palestine in the future?” The response options were 1 (*not hopeful at all*), 2 (*somewhat not hopeful*), 3 (*neutral/unsure*), 4 (*somewhat hopeful*), and 5 (*very hopeful*).

**Sociodemographic Characteristics.** The following sociodemographic data were collected: gender (male or female), age in years, education (less than Tawjihi/high school, Tawjihi/high school, undergraduate degree, or graduate degree), marital status (single, married, divorce, or widow/widower), employment (employed or unemployed), family size (number of family members living in household), household monthly income in Jordanian Dinar (JD), and healthcare insurance (UNRWA basic health or UNRWA basic health and another type of healthcare insurance). Poverty was based on per capita monthly income (household monthly income divided by family size). Per individual, the 2010 annual poverty line in Jordan was JD813.70 (~1,140 U.S dollars) or JD68 (~95 U.S. dollars) per month (World Bank, 2014). Poverty level was categorized as below the poverty line (JD68 or less) and above the poverty line (greater than JD68).

### **Data Analysis**

All data were self-reported. There were no missing data. Data were entered, verified and analyzed using the Statistical Package for Social Sciences for Windows version 23 (IBM, 2015). Descriptive statistics were calculated to describe the study variables; mean scores were normally distributed. Pearson’s *r* correlations were computed to examine the relationships among HRQOL, depression, hopefulness to return to Palestine, and specific social determinants (gender, age, education and poverty). Based on the socioecological perspective, multiple linear regression analyses were computed to determine the influence of depression (predictor variable) and specific social determinants (gender, age, education and poverty) as covariates on HRQOL (outcome variable). Prior to regression analysis, preliminary analyses were performed to ensure

that there was no violation of the assumptions of normality, linearity and homoscedasticity. An alpha level of  $p \leq .05$ , two-tailed, determined statistical significance for  $n = 177$ .

### **Participants**

See Table 1 for the profile of the sample of 177 adult Palestinian refugees living in Jordan. The sample was comprised of 97 (54.8%) males and 80 (45.2%) females. The mean age of the sample was 37 ( $SD = 14$ ) in a range of 18 to 75 years. A majority of the sample was 50 years and younger (82%) and married (66%). Among the sample, 28% of participants reported less than a high school (Tawjihi) education, 28% of participants reported a high school (Tawjihi) education and 43% of participants reported earning undergraduate and graduate degrees.

Over half of the sample was employed (57.6%). Of the 102 participants who were employed, 28 (27.5%) owned small businesses, 27 (26.5%) were workers, 18 (17.6%) worked for the United Nations or the Jordanian government, 10 (9.8%) worked in healthcare, 13 (12.7%) worked in education, and six (5.9%) were engineers. Unemployment was high at 42%; most of the unemployed participants were women ( $n = 75$ , 73.3%). The mean family size was 5.57 ( $SD = 2.3$ ) and the mean number of rooms in the household was 3.4 ( $SD = 1.2$ ). The mean household monthly income was JD502.7 (~703 U.S. dollars) and the mean per capita monthly income was JD108.6 (~152 U.S. dollars). Forty-two percent ( $n = 75$ ) of the sample's monthly income was below Jordan's national poverty level.

Table 1

*Sample Profile of Palestinian Refugees in Jordan (n = 177)*

Characteristic	<i>n</i>	%	<i>M</i>	<i>SD</i>
<b>Gender</b>				
Male	97	54.8		
Female	80	45.2		
<b>Age (years)</b>				
			37.0	14.0
18 to 30	73	41.2		
31 to 50	73	41.2		
Older than 50	31	17.5		
<b>Education</b>				
Less than Tawjihi (high school)	50	28.2		
Tawjihi (high school)	51	28.8		
Undergraduate degree	30	16.9		
Graduate degree	46	26.0		
<b>Marital Status</b>				
Single	53	29.8		
Married	117	66.1		
Divorced	4	2.3		
Widowed	3	1.7		
<b>Employment</b>				
Employed	102	57.6		
Unemployed	75	42.4		

Characteristic	<i>n</i>	%	<i>M</i>	<i>SD</i>
Family Size			5.57	2.3
Household Monthly Income (JD <sup>a</sup> )			502.7	272.3
			<i>Md</i> = 400.0	
Per Capita Monthly Income (JD)			108.6	89.6
			<i>Md</i> = 80.0	
Jordan's National Poverty Level				
Below poverty line	75	42.0		
Above poverty line	102	58.0		
Healthcare Insurance				
UNRWA <sup>b</sup> basic health	91	51.4		
UNRWA basic health plus other	86	48.6		

<sup>a</sup>JD = Jordanian Dinars. One JD = ~\$1.40 in United States Dollars.

<sup>b</sup>UNRWA = United Nations Relief and Work Agency for Palestinian Refugees in the Near East.

The proportion of participants who perceived health as *excellent* was 18.1% ( $n = 32$ ), 35% ( $n = 62$ ) as *very good*, 27.1% ( $n = 48$ ) as *good*, 17.5% ( $n = 31$ ) as *fair*, and 2.3% ( $n = 4$ ) as *poor*. Compared to 1 year ago, three (1.7%) participants rated health as *much worse health than last year*, 32 (18.1%) participants rated health as *somewhat worse*, 87 (49.2%) participants rated health as *almost the same*, 30 (16.9%) participants rated health as *somewhat better* and 25 (14.1%) participants rated health as *much better*. Over half ( $n = 91$ ) of participants had UNRWA's basic health insurance and 48.6% ( $n = 86$ ) of participants had UNRWA's basic and another type of health insurance.

## Results

Participants' mean scores for depressive symptoms, HRQOL and hopefulness to return to Palestine in the future are presented in Table 2. The mean depressive symptom score was 9.43 ( $SD = 5.11$ ). A majority of sample had depressive symptomatology ( $n = 144, 81.4\%$ ); 33 (18.6%) participants had no depressive symptoms. The mean scores for 68 (38.4%) participants indicate mild depression, moderate depression for 45 (25.4%) participants, moderately severe depression for 24 (13.6%) participants, and severe depression for six (3.4%) participants.

Table 2

*Summary Descriptive Statistics for Depression, Health-related Quality of Life, and Hopefulness to Return to Palestine ( $n = 177$ )*

Subscale	Scale Range	Range	<i>M</i>	<i>SD</i>
Depression	0-27	0-25	9.43	5.11
Mild ( $n = 68, 39.4\%$ )				
Moderate ( $n = 45, 25.4\%$ )				
Moderately severe ( $n = 68, 39.4\%$ )				
Severe ( $n = 6, 3.4\%$ )				
Health-related Quality of Life	0-100	16-90	55.50	15.69
Lower ( $n = 82, 46.3\%$ )				
Higher ( $n = 95, 53.7\%$ )				
Hopefulness to Return to Palestine in the Future	1-5	1-5	4.24	1.13
Very ( $n = 107, 60.5\%$ )				
Somewhat ( $n = 18, 15.8\%$ )				

Subscale	Scale Range	Range	M	SD
Not hopeful ( <i>n</i> = 14, 7.9%)				
Don't know ( <i>n</i> = 28, 15.8%)				

The mean score for HRQOL was 55.50 (*SD* = 15.69) and ranged from 16 to 90, indicating average HRQOL. The proportion of the sample who had a mean score of 50 or less (lower HRQOL) was 43.6% and was 53.7% for participants who had a mean score above 50 (higher HRQOL). There were statistically significant correlations between HRQOL and poverty ( $r = -.18, p = .05$ ) and HRQOL and depression ( $r = -.67, p = .01$ ), indicating refugees who had less per capita monthly income and more depressive symptomatology were more likely to have worse HRQOL, respectively. A majority of the sample was *very hopeful* about returning to Palestine in the future (60.5%, *n* = 107). Eighteen (15.8%) participants were *somewhat hopeful*, nine (5.1%) participants were *not hopeful at all*, five (2.8%) participants were *somewhat not hopeful*, and 28 (15.8%) participants responded *neutral/unsure*.

See Table 3 for results of the multiple linear regression analysis, which indicates the model for HRQOL was statistically significant:  $R^2 = .48, F(5, 169) = 29.593, p < .0005$ . Approximately 48% of the variance in HRQOL can be explained by a combination of depression, gender, age, education and poverty. Gender was coded as 0 (female) and 1 (male). Education was coded as 0 (high school or lower) and 1 (higher than high school). The other variables were continuous. Depression ( $\beta = -.67, p = .0005$ ), age ( $\beta = -.14, p = .01$ ) and poverty ( $\beta = -.15, p = .01$ ) were the predictors that had statistically significant unique contributions to the variance in HRQOL. Gender and education did not have statistically significant unique



contributions to HRQOL. The results suggest that older, poorer and more depressed Palestinian refugees living in Jordan have worse HRQOL.

Table 3

*Regression Analysis of Health-related Quality of Life Assessed in Gender, Age, Education, Poverty and Depression among Palestinian Refugees Living in Jordan (n = 177)*

Variable	Health-related Quality of Life Model <sup>a</sup>		
	Standardized $\beta$	<i>t</i>	<i>p</i>
Gender	.04	.72	.47
Age	-.14	-2.479	.01
Education	.11	1.873	.06
Poverty	-.15	-2.579	.01
Depression	-.67	-11.308	.0005

<sup>a</sup>Health-related quality of life model:  $R^2 = .48$ ,  $F(5, 169) = 29.593$ ,  $p < .0005$ .

## Discussion

For 68 years, Palestinian refugees have been displaced from their homeland and forced to live in a host country due to military conflicts, which may have physical, psychological, emotional and sociocultural consequences on the humanity and daily lives of refugees (Young, 2011). Findings of this study indicate there were health consequences for Palestinian refugees living in Jordan as the host country. Although participants had some form of basic health insurance and reported being relatively healthy, nearly half of Palestinian refugees living in Jordan experienced lower HRQOL. While studies in the literature could not be found for

HRQOL estimates for Jordanians, a study by Skevington and colleagues (2004) demonstrated that, typically, HRQOL was acceptable to very good in 23 countries. Although Jordan was not one of the countries, culturally, one of the included countries, Turkey, is similar to Jordan. The HRQOL of Turkey was acceptable to good as compared to only acceptable HRQOL in this study's sample.

A majority of the study sample of Palestinian refugees living in Jordan had depressive symptomatology that ranged from mild depression to severe depression, and depression was significantly associated with worse HRQOL. Psychological health is important to the wellbeing of populations and communities. Few studies, however, addressed the psychosocial needs of refugees which have been shown to increase during violent conflicts (Madianos et al., 2011) and for which there was a major gap in mental health treatment for Palestinian refugees living in camps (Llosa et al., 2013). Yet, a majority of the study sample of Palestinian refugees in Jordan were 'very hopeful' about returning to Palestine in the future, although hopefulness was not significantly related to HRQOL or depression. To our knowledge, refugees' hopefulness about returning to the homeland has not been documented in the literature.

Guided by the socioecological perspective, the social determinants—age, gender, education and poverty—served as socioecological proxies in this study of Palestinian refugees living in Jordan. Along with depression, these social determinants, in particular age and poverty, added to the understanding of HRQOL for Palestinian refugees living in Jordan. Refugees who were older and reported less per capita monthly income, in particular refugees who lived below Jordan's national poverty level, were significantly more likely to report worse HRQOL.

According to the Palestinian Central Bureau of Statistics (2015), households headed by refugees

were poorer than households headed by non-refugees in 2011. Improved socioeconomic conditions, especially among older refugees, may be a major factor to improving HRQOL.

Socioeconomic status has been shown to be a strong predictor of health status, outcomes, longevity and quality of life (Commission on Social Determinants of Health, 2008; Marmot, 2005). When individuals and countries were ranked by income, education or occupation, those in the top social determinant hierarchy were healthier, had longer longevity and reported better HRQOL (Marmot, 2005). Even among populations at risk or have illness, those with higher incomes and/or education levels had better health outcomes and HRQOL than those at the bottom of the social determinant hierarchy (Braveman & Gottlieb, 2014). For these reasons, the Commission on Social Determinants of Health (2008) and other organizations recommend interventions and policies that build health equity across all populations worldwide (Marmot, 2005). Gender and education not being significant, unique predictors of HRQOL may be due to the sample being well-educated and a majority of women in the sample being unemployed. Khawaja and colleagues (2006) found that women had lower levels of education and income and higher levels of unemployment as compared to men.

### **Limitations**

This study was descriptive, cross-sectional in design, which has the inherent limitation of not being able to establish causality and a temporal relationship between the outcome and predictors. To minimize the limitation of temporality, individuals, registered as refugees for their entire lives, were exclusively included in the study. Although recruitment of refugees was broad and diverse across gender, income, education and other sociodemographic characteristics, the non-probability, convenience sample was a study limitation. Thus, sampling bias and lack of

representativeness of the refugee population may have influenced the external validity of the study, limiting generalization of the findings.

Although average mean scores for the WHOQOL-BREF have been reported for the adult population in 23 countries, Jordan was not among the countries included in the study (Skevington et al., 2004). Israel and Turkey were the only included Middle Eastern countries. Norms for WHOQOL-BREF scores for Jordan were not found. Investigation of the WHOQOL-BREF scores' norms in the Jordanian and broader Middle-Eastern context is recommended for future research.

### **Conclusions, Implications and Recommendations**

Palestinian refugees hope to return to Palestine in the future. Despite being relatively healthy, Palestinian adult refugees living in Jordan were depressed and experienced low HRQOL, particularly if refugees were older and poorer. Study findings suggest the mental health needs of Palestinian refugees in Jordan need to be systematically screened, diagnosed and treated by healthcare professionals. In addition, future mental health research should include objective assessments, in addition to self-reporting questionnaires, of psychological wellbeing at multiple time points in refugees' lives in order to better understand the nature and pattern of refugees' psychological health within the context of an ever-changing sociopolitical landscape. Sociocultural considerations of mental health issues also should be taken into account in this population to prevent stigmatization.

Since a majority of refugee health services are provided in community settings, community/public health nurses in Jordan, with specialization or expertise in mental health, would be ideal to design and implement interprofessional, community-based health screening, treatment and follow-up programs that are holistic, evidence-based and focus on the

biopsychosocial and cultural aspects of refugee life. The experiences of nurses who are also refugees could be utilized to design refugee-focused programs and services. These nurses would likely have an awareness and understanding of refugees' experiences and the impact of being a refugee has on one's life. For better HRQOL outcomes, community health nurses in Jordan can play a major role in informing public health supports and policies that can improve the socioeconomic and living conditions of refugees, especially for refugees who are older and live in poverty. Further research is needed to examine differences in HRQOL and other aspects of health for camp and non-camp refugees as compared to non-refugees of the host country.

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## CHAPTER IV

### HEALTH-RELATED QUALITY OF LIFE BETWEEN CAMP AND NON-CAMP RESIDENCY IN THE PALESTINIAN REFUGEE POPULATION IN JORDAN

#### Abstract

**Objective:** Within the context of an integrated health-related (HRQOL) ecological framework, the study purpose was to compare HRQOL between Palestinian refugees who live inside and outside camps in Jordan, taking into consideration sociodemographic characteristics.

**Method:** The sample of 177 adult Palestinian refugees living in Jordan was recruited from inside of UNRWA's Al-Baqqa'a Palestinian refugee camp ( $n = 86$ ) and outside of the camp from surrounding communities in Abu Nsair ( $n = 91$ ). Participants provided sociodemographic information and completed the World Health Organization QOL Brief Questionnaire.

**Results:** Refugees living inside and outside of camps in Jordan were significantly different by education, type of health insurance and poverty. Physical health, environment and overall HRQOL were significantly higher for non-camp refugees than camp refugees. Regression analyses indicate poverty and residency, individually and/or in combination, were significant predictors of environment, physical health and social relationships HRQOL.

**Conclusion:** Palestinian refugees in Jordan who lived inside camps fared worse than refugees who lived outside camps in terms of financial resources, education and certain aspects of HRQOL. Even if camp refugees had financial resources, they still did not fare better than non-camp refugees for environment HRQOL. Community/public health programs and social policies need to be bolstered or created and implemented inside camps in Jordan for Palestinian refugees.

**Keywords:** health-related quality of life, Palestinian refugees, Jordan, refugee camp

## Health-Related Quality of Life Between Camp and Non-Camp Residency In the Palestinian Refugee Population in Jordan

The 1948 and 1967 Arab-Israeli Wars resulted in over five million Palestinian refugees and descendants under the care of the United Nations Relief and Works Agency (UNRWA), which is committed solely to this group of refugees, defined as “persons whose normal place of residence was Palestine during the period 1 June 1946 to 15 May 1948, and who lost both home and means of livelihood as a result of the 1948 conflict” (UNRWA, 2016a, “Who are Palestinian refugees,” para. 1). Two million Palestinian refugees live in Jordan, which hosts more Palestinian refugees than any country in the world (UNRWA, 2016b). Most Palestinian refugees who live in Jordan have full Jordanian citizenship. Although the majority, about 1.6 million, of Palestinian refugees live in communities with other Jordanians, nearly 370,000 or 18% of Palestinian refugees in Jordan live in camps, defined as land allocated and administered by the host government to accommodate refugees (UNRWA, 2016b). Education, health and social services programs inside and outside of camps, however, are administered by UNRWA.

The living and socioeconomic conditions of the Palestinian refugee population in Jordan’s camps have been shown to be inferior as compared to refugees living outside camps and to Jordan’s general population. Problems inside camps include high unemployment, lack of adequate sanitation and refuse disposal, inadequate housing infrastructures, inadequate heating insulation and ventilation, carcinogenic building materials, dampness, crowding and lack of communal space, lack of sustainable and clean drinking waters, inadequate electricity and roads for transportation, among other issues (Tiltnes & Zhang, 2013). These persistent problems can create not only longstanding humanitarian, environmental, socioeconomic and health inequities, if not addressed, but also can affect health-related (HRQOL) for Palestinian refugees living

inside camps. Yet, documentation of HRQOL in the Palestinian refugee population is sparse in the literature for refugees living inside and outside of camps in Jordan. Globally, extant data strongly indicate there is a gradient between health and social, economic and living conditions; that is, worse health outcomes are associated with poorer social, economic and living conditions, which often lead to health inequities (Marmot, 2005).

In the past decades, the study of health has shifted from merely measuring traditional health indicators, such as morbidity and mortality, to measuring also HRQOL to determine the physical, psychological, social and environmental wellbeing of individuals as well as the communities in which they live. Health-related quality of life is a multidimensional concept that represents the subjective evaluation of health, functioning and wellbeing and has been defined as “individuals’ perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns” (World Health Organization [WHO] Quality of Life Group, 1994, p. 1405). Understanding HRQOL in the Palestinian refugee population, a vulnerable group, living inside and outside of camps in Jordan, is imperative for identifying and addressing this population’s unique needs and circumstances, which may require targeted, strategic planning and modifying existing and creating new health and social services policies in order to reduce inequities and disparities. The purpose of this study was to compare HRQOL between Palestinian refugees who live inside and outside camps in Jordan, taking into consideration sociodemographic characteristics.

### **Integrated Health-related Quality of Life Framework**

Health-related quality of life inequities and disparities between nations or within the same nation often are shaped by and are the result of complex global, national and local sociopolitical structures, systems and dynamics related to the distribution of power and resources, including the

social and physical environments in which people live and the health services available in the community (Marmot, 2005). The study was underpinned by a proposed integrated HRQOL ecological framework (see Figure 1) that combines Bronfenbrenner's (1979) ecological model and Wilson and Cleary's (1995) HRQOL model. Bronfenbrenner's ecological model in human development incorporates a nested set of micro-, meso-, exo-, and macro-systems, involving biological, physical, psychological, social, cultural, economic and political dynamics, that influence the development and wellbeing of individuals, families, populations and communities. The emphasis is on the extent to which individuals adapt to internal and the external changes under the assumption that individuals interact, interchange and mutually depend on each other and their social context and supports.

Wilson and Cleary's (1995) HRQOL model, later revised by Ferrans and colleagues (2005) to encompass the socioecological perspective, includes individual and environmental characteristics related to HRQOL. Individual-level HRQOL consists of four dimensions: biological and physiological function, symptoms (frequency, intensity and distress of physical and psychological symptoms), functional status (physical, psychological, social and role functioning), and general health perceptions (perceived health). Along with environmental influences (social and physical supports) and the individual's personality, motivation, values, preferences and sociodemographic characteristics, HRQOL is defined as a "person's sense of well-being that stems from satisfaction or dissatisfaction with the areas of life that are important to him or her" (Ferrans, Zerwic, Wilbur, & Larson, 2005, p. 21).

Within the context of the proposed integrated HRQOL ecological framework, based on Wilson and Cleary's (1995) HRQOL model and Bronfenbrenner's (1979) ecological model, the perceived HRQOL of the Palestinian refugee population was hypothesized to be informed by

their social context, whether living inside or outside camps in Jordan. The integrated HRQOL ecological framework is a person-environment interaction model that is centered on the Palestinian refugee individual, whose personal sociodemographic characteristics are the results of the ever-present mutually-dependent, multi-level interactions with surrounding ecosystems, including complex historical, sociocultural, religious, political and military influences, that are posited to shape one’s HRQOL (see Figure 1).

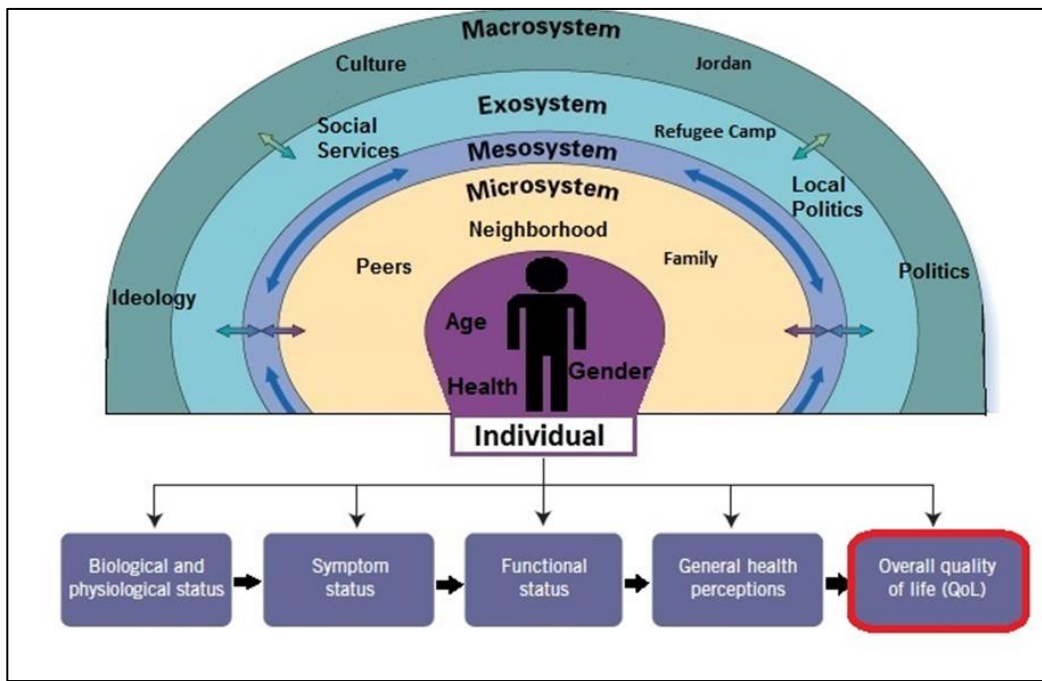


Figure 1. Integrated health-related quality of life socioecological framework.

## Method

### Study Design

A descriptive, comparative cross-sectional design was used to compare HRQOL between Palestinian refugees living inside and outside camps in Jordan. Data collection occurred over a 2-month period between October 2015 and November 2015. The study was supported by UNRWA’s camp administration in Amman, Jordan and the University of Jordan and was

approved by the University of California, San Francisco Committee on Human Research.

Participants had to be an adult, 18 years or older, who was a Palestinian refugee registered with UNRWA, had Jordanian citizenship, and was able to read, speak and comprehend Arabic.

### **Data Collection Procedure**

The Al-Baqa'a Palestinian refugee camp, which is about 40 miles northwest of Amman, was the location of recruitment for Palestinian refugees who lived inside the camp in Jordan. Al-Baqa'a is an official UNRWA camp for Palestinian refugees that is located in a suburban community with agricultural and industrial businesses. Recruitment of Palestinian refugees living outside camps occurred in the surrounding communities of Abu Nsair, located in northern Amman, the capital of Jordan, where there is a predominance of non-camp Palestinian refugees. Data were collected by the primary researcher, who is Jordanian, and a trained research assistant, who is also Jordanian and was a second-year master's student in mental health nursing at the University of Jordan. The research assistant was trained on the study eligibility criteria and procedures as well as on guidelines for referring participants to the primary researcher.

In the camp setting, 105 Palestinian refugees were approached at primary healthcare centers, markets and mosques inside the Al-Baqa'a camp. Twelve refugees declined, resulting in 93 (88.5%) refugees who agreed to participate in the study. Of the 93 refugees, seven (7.5%) refugees did not meet the eligibility criteria, yielding 86 refugees who lived inside the camp. See Figure 2. In the non-camp setting, 105 Palestinian refugees were also approached at mosques, markets and primary healthcare centers in communities located in Abu Nasir. Eleven refugees declined, resulting in 94 (89.5%) refugees who agreed to participate in the study. Of the 94 refugees, three (3%) refugees did not meet the eligibility criteria, yielding 91 refugees who lived outside of camps.

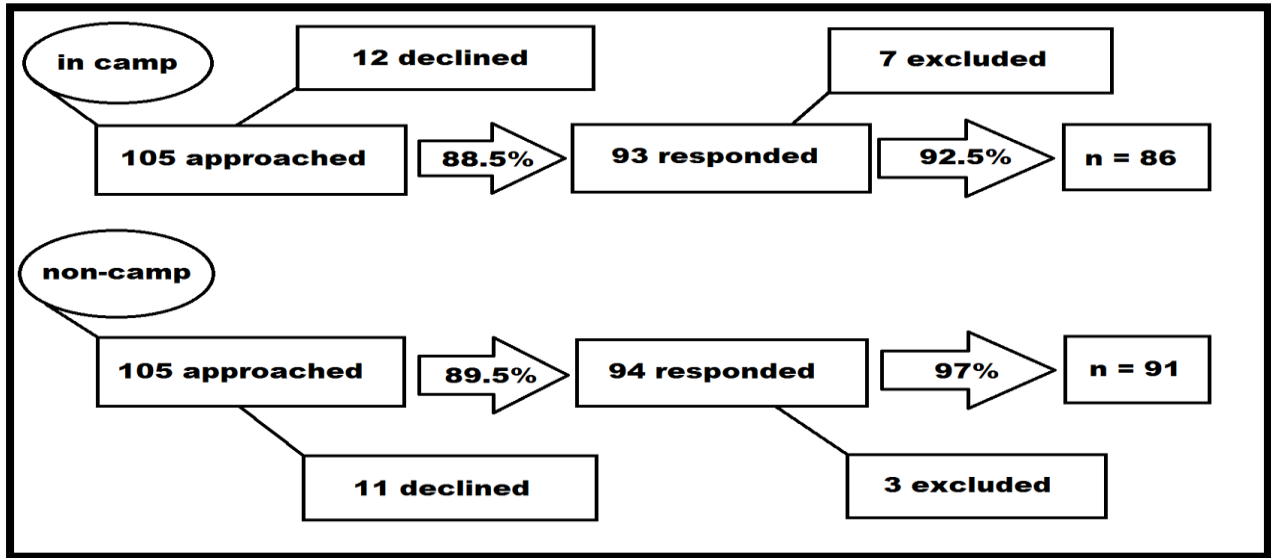


Figure 2. Sample recruitment, screening and eligibility.

The total non-probability, convenience sample was comprised of 177 adult Palestinian refugees, 86 (48.6%) of whom lived inside the Al-Baqa'a camp in Jordan and 91 (51.4%) of whom lived outside the camp in Jordan. A priori independent Student *t*-test power analysis calculation indicated a minimum sample size of 64 in each group would be adequate to compare means between refugees living inside the camp and refugees living outside the camp with power set at .80, medium effect size ( $d = 0.5$ ) and  $p \leq .05$ , two-tailed (Cohen, 1988). Power analysis calculation for a priori hierarchical multiple linear regression with one predictor (poverty) in the first block and two predictors (poverty and residency) in the second block for an anticipated medium squared multiple correlation ( $R^2$ ) effect size of .15 at 80% power and  $p \leq .05$  alpha level indicated a minimum sample size of 68 (Cohen, Cohen, West, & Aiken, 2003).

Participants were explained the study purpose, potential impact, data collection procedure and rights as a human subject. In addition, a one-page sheet containing informed consent information was provided to participants. Following the informed consent process, participants' questions were answered and the five-page questionnaire was self-administered in the presence



of the researcher or research assistant in a quiet, private location. Average completion time of the questionnaire was 20 minutes. Before participants left, the questionnaire was checked for missing items and participants were asked to consider answering the missing items. A reminder that he or she has the right to refuse without consequences was verbalized to participants. After completing the questionnaire, participants were thanked and reassured that responses would be handled confidentially and professionally and that the completed questionnaire would be kept in a locked file cabinet with no personal identifying information.

### **Variables and Measures**

Health-related quality of life and sociodemographic characteristics, including residency, gender, age, education, marital status, employment, healthcare insurance, and poverty based on family size and household monthly income, were assessed.

**Health-related quality of life.** The Arabic version of the 26-item WHO Quality of Life Brief (WHOQOL-BREF) questionnaire was used to assess perceived HRQOL in the past 2 weeks (Skevington, Lotfy, & O'Connell, 2004). Four domains or subscales of HRQOL were assessed: physical health (7 items), psychological (6 items), social relationships (3 items), and environment (8 items) (WHO, 1996). The physical health domain includes items about pain and discomfort, energy and fatigue, sleep and rest, medication, mobility, activities of daily living, and work. The psychological domain includes items about positive feelings, negative feelings, self-esteem, thinking, body image, and spirituality. The social relationships domain includes items about personal relations, sex, and social support. The environment domain includes items about financial resources, information and skills, recreation and leisure, home environment, access to health and social care, physical safety and security, physical environment, and transport.

Depending on the subscale of the WHOQOL-BREF questionnaire, response options range from 1 (*not at all*) to 5 (*completely*) for 12 items, from 1 (*very poor*) to 5 (*very good*) for one item about ability to get around, from 1 (*very dissatisfied*) to 5 (*very satisfied*) for 10 items, and 1 (*never*) to 5 (*always*) for one item about negative feelings (WHO, 1996). Scores for the total scale and each subscale were summed and transformed for continuous scores that can range from 0 to 100, with 100 representing the greatest quality of life and 0 representing the poorest quality of life. Based on the WHOQOL-BREF mean scores adjusted for age and gender (Skevington et al., 2004), the HRQOL cutoff scores for this study were set at 50 or less (low HRQOL) and above 50 (high HRQOL).

The Arabic version of the WHOQOL-BREF questionnaire has been shown to have adequate psychometric properties (Eljedi et al., 2006) and has been cross-culturally validated as a measurement of HRQOL in Arabic-speaking populations (Al-Sayah, et al., 2012). In the current study, Cronbach's alpha internal consistency reliability coefficient for the WHOQOL-BREF questionnaire was adequate at .91 for the total scale, .80 for the physical health subscale, .78 for the psychological subscale, .51 for the social relationships subscale, and .78 for the environment subscale.

**Sociodemographic characteristics.** Sociodemographic data collected were residency (camp or non-camp setting), gender (male or female), age in years, education (less than high school, high school, undergraduate degree, or graduate degree), marital status (single, married, divorce, or widow/widower), employment (employed or unemployed), family size (number of members living in household), household monthly income in Jordanian Dinar (JD), and healthcare insurance (UNRWA basic health or UNRWA basic and another type of healthcare insurance). Poverty level was based on per capita monthly income (household monthly income

divided by family size) and categorized as below the poverty line (JD68 or less) and above the poverty line (greater than JD68) based on the 2010 annual poverty line in Jordan (World Bank, 2014).

### **Data Analysis**

The self-reported data were entered, verified and analyzed using the Statistical Package for Social Sciences for Windows version 23 (IBM, 2015). There were no missing data. Descriptive statistics were calculated to describe study variables. Depending on the level of data, chi-square or independent Student *t*-test analyses were computed to determine differences between Palestinian refugees living inside camps and Palestinian refugees living outside camps for HRQOL (physical health, psychological, social relationships and environment) and sociodemographic characteristics (gender, age, marital status, education, employment, poverty and health insurance).

Hierarchical multiple linear regression analyses were computed to determine the influence of poverty (coded as 0 for below the poverty line and 1 as above the poverty line) in the first block and then poverty and residency (coded as 0 for camp and 1 for non-camp) in the second block (predictor variables) on physical health, psychological, social relationships and environment HRQOL (outcome variable). There was no violation of the assumptions of normality, linearity and homoscedasticity. The alpha level was set at  $p \leq .05$ , two-tailed, for statistical significance and was adjusted using a Bonferroni correction for multiple chi-square and independent Student *t*-test comparisons.

### **Participants**

See Table 1 for the sociodemographic profile of the sample of 177 adult Palestinian refugees living in Jordan by residency. Among refugees living inside camps, the sample was

comprised of 36 (41%) males and 50 (58%) females, who ranged in age from 18 to 75 years with a mean age of 37.8 years ( $SD = 13.1$ ). A majority of refugees living inside camps was married (66%), educated at the high school level and higher (65%), employed (58%), lived below Jordan's poverty line (55%), and had UNRWA basic health insurance (66%). Palestinian refugees living outside camps in Jordan had a similar sociodemographic profile as refugees living inside camps except for education, poverty and health insurance.

Statistical differences in education, poverty and health insurance existed between refugees living inside and outside camps (see Table 1). Seventy-eight percent of refugees living outside camps were educated at the high school level and higher as compared to 65% of refugees living inside camps ( $\chi^2(4, N = 177) = 18.29, p < .0005$ ). The mean per capital monthly income was JD138.50 for refugees living outside camps as compared to JD76.50 for refugees living inside camps ( $t(174) = -4.99, p < .0005$ ). A statistically significant proportion of camp refugees (55%) as compared to non-camp refugees (30%) were living below Jordan's poverty line ( $\chi^2(1, N = 177) = 11.84, p \leq .001$ ). Significantly more non-camp refugees (63%) had UNRWA basic plus another type of health insurance as compared to 34% of camp refugees ( $\chi^2(1, N = 177) = 14.80, p < .0005$ ).

Table 1

*Sample Profile of the Palestinian Refugee Population Living in Jordan by Residency (n = 177)*

Characteristic	Residency								<i>t</i>	$\chi^2$
	Inside Camp				Outside Camp					
	<i>n</i>	%	<i>M</i>	<i>SD</i>	<i>n</i>	%	<i>M</i>	<i>SD</i>		
Gender										.752
Female	36	41.9			44	48.4				
Male	50	58.1			47	51.6				
Age (years)			37.8	13.1			36.0	14.5	.894	
Marital Status										4.744
Single	24	27.9			29	31.9				
Married	57	66.3			60	65.9				
Divorced	4	4.7			0	0.0				
Widowed	1	1.1			2	2.2				
Education										18.291**
Less than high school	30	34.9			20	22.0				
High school	30	34.9			21	23.1				
Undergraduate degree	16	18.6			14	15.4				
Graduate degree	10	11.6			36	39.5				
Employment										.018
Employed	50	58.1			52	57.1				
Unemployed	36	41.9			39	42.9				
<sup>a</sup> Per Capital Monthly Income (JD)			76.5	41.6			138.5	110	-4.99**	

Characteristic	Residency								<i>t</i>	$\chi^2$
	Inside Camp				Outside Camp					
	<i>n</i>	%	<i>M</i>	<i>SD</i>	<i>n</i>	%	<i>M</i>	<i>SD</i>		
Below poverty line	47	55.3			27	29.7				11.842*
Above poverty line	38	44.7			64	70.3				
Health Insurance										14.80**
UNRWA <sup>b</sup> basic health	47	66.3			34	37.4				
UNRWA basic health plus other	29	33.7			57	62.6				

<sup>a</sup>Poverty was based on per capita monthly income (household monthly income divided by family size).

JD = Jordanian Dinars. One JD = ~\$1.40 in United States Dollars.

<sup>b</sup>UNRWA = United Nations Relief and Work Agency for Palestinian Refugees in the Near East.

\* $p \leq .001$ . \*\* $p \leq .0005$ .

## Results

### Sociodemographic Differences in Health-related Quality of Life

Comparisons of mean scores for HRQOL by sociodemographic characteristics are presented in Table 2. Results indicate refugees aged 18-30 years ( $M = 50.99$ ,  $SD = 18.98$ ) as compared to refugees aged 31-50 years ( $M = 43.36$ ,  $SD = 16.96$ ) and those older than 50 years ( $M = 48.49$ ,  $SD = 15.18$ ) had a significantly higher mean score for environment HRQOL ( $F(2,174) = 3.476$ ,  $p = .03$ ). Married ( $M = 59.19$ ,  $SD = 21.56$ ) and single ( $M = 58.25$ ,  $SD = 20.42$ ) refugees as compared to divorced ( $M = 33.33$ ,  $SD = 15.21$ ) and widowed ( $M = 38.89$ ,  $SD = 17.35$ ) refugees had significantly higher mean scores for social relationships HRQOL ( $F(3,173) = 3.436$ ,  $p = .02$ ). As compared to refugees living above Jordan's poverty line,

refugees living below the poverty line had significantly lower mean scores for social relationships HRQOL ( $t(174) = 3.612, p < .0005$ ) and environment HRQOL ( $t(174) = 3.022, p = .003$ ). The mean scores for refugees living below the poverty line were 49.77 ( $SD = 21.05$ ) for social relationships HRQOL and 42.74 ( $SD = 18.59$ ) for environment HRQOL. The mean scores for refugees living above the poverty line were 61.27 ( $SD = 20.70$ ) for social relationships HRQOL and 50.83 ( $SD = 16.73$ ) for environment HROQL. Refugees who had health insurance in addition to UNRWA basic health insurance had a significantly higher environment HRQOL mean score ( $M = 50.11, SD = 16.65$ ) as compared to refugees who had only UNRWA basic health insurance ( $M = 44.85, SD = 18.72$ ) ( $t(175) = 1.971, p = .05$ ).

Table 2

*Health-related Quality of Life Mean Scores by Sociodemographic Profile of Palestinian Refugees in Jordan (n = 177)*

Characteristic	n	Health-related Quality of Life			
		Physical Health	Psychological	Social	
				Relationships	Environment
<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>		
Gender					
Female	80	50.95 (15.63)	54.95 (16.96)	55.94 (22.97)	49.10 (19.14)
Male	97	52.29 (14.25)	57.30 (18.58)	56.79(20.32)	46.01 (16.75)
Age (years)					<i>p = .03</i>
18 to 30	73	53.22 (14.32)	57.82 (20.42)	55.02 (21.28)	50.99 (18.98)
31 to 50	73	49.81 (15.74)	53.94 (17.54)	58.22 (21.63)	43.36 (16.96)

Health-related Quality of Life					
Characteristic	<i>n</i>	Social			
		Physical Health	Psychological	Relationships	Environment
		<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Older than 50	31	52.68 (14.86)	57.93 (16.26)	55.38 (22.11)	48.49 (15.18)
Marital Status				<i>p</i> = .02	
Single	53	54.38 (13.37)	58.25 (20.42)	52.99 (20.35)	49.88 (20.56)
Married	117	56.27 (17.82)	56.27 (17.82)	59.19 (21.56)	47.30 (16.31)
Divorced	4	44.49 (18.81)	41.67 (9.00)	33.33 (15.21)	31.25 (12.24)
Widowed	3	44.05(17.62)	38.89 (6.36)	38.89 (17.35)	29.17 (17.89)
Education					
< High school	50	51.31 (14.34)	54.58 (17.78)	52.33 (20.48)	43.31 (18.84)
High school	51	52.74 (16.11)	56.70 (20.38)	56.54 (23.11)	50.37 (19.33)
College	30	50.36 (12.94)	57.22 (14.78)	55.56 (22.25)	46.15 (14.46)
University	46	51.68 (15.52)	56.88 (19.49)	61.23 (19.89)	47.40 (17.89)
Employment					
Employed	102	53.03 (13.84)	56.58 (17.80)	55.88 (21.03)	46.81 (16.86)
Unemployed	75	49.86 (16.06)	55.78 (19.71)	57.11 (22.25)	48.21 (19.29)
Poverty Level				<i>p</i> < .0005	<i>p</i> = .003
Below poverty	74	51.21 (16.35)	53.72 (18.00)	49.77 (21.05)	42.74 (18.59)
Above poverty	102	52.15 (13.77)	58.13 (18.95)	61.27 (20.70)	50.83 (16.73)
Health Insurance					<i>p</i> = .05
UNRWA basic	91	52.58 (14.29)	56.41 (17.38)	54.49 (21.92)	44.85 (18.72)



Health-related Quality of Life					
		Social			
		Physical Health	Psychological	Relationships	Environment
Characteristic	<i>n</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
UNRWA basic					
plus other	86	50.74 (15.47)	56.06 (19.87)	58.43 (20.99)	50.11 (16.65)

*Note.* Rated on a scale of 0 (lowest health-related quality of life) to 100 (greatest health-related quality of life). UNRWA = United Nations Relief and Work Agency for Palestinian Refugees in the Near East.

### Health-related Quality of Life Living Inside and Outside Camps

The statistically different overall HRQOL mean score was 49.51 ( $SD = 15.05$ ) for camp refugees and 54.33 ( $SD = 13.68$ ) for non-camp refugees ( $t(175) = 2.2309, p \leq .05$ ). Camp refugees' mean scores for HRQOL ranged from a low of 43.28 ( $SD = 19.49$ ) for environment to a high of 55.91 ( $SD = 17.66$ ) for psychological (see Table 3). Non-camp refugees' mean scores for HRQOL ranged from a low of 51.30 ( $SD = 15.35$ ) for environment to a high of 58.33 ( $SD = 21.48$ ) for social. Statistically significant differences in HRQOL between refugees living outside camps and refugees living inside camps were for physical health ( $t(175) = 2.230, p \leq .05$ ) and environment ( $t(175) = 3.054, p \leq .005$ ). Refugees living outside camps reported significantly better physical health HRQOL ( $M = 54.15, SD = 14.17$ ) and environment HRQOL ( $M = 51.30, SD = 15.35$ ) as compared to refugees living inside camps ( $M = 49.07, SD = 15.21$  versus  $M = 43.28, SD = 19.49$ , respectively). For physical health, 65% of non-camp refugees reported high HRQOL as compared to 52% of camp refugees. Mean scores for environment HRQOL was low for both refugees living inside and outside camps; 47% of non-camp refugees as compared to

31% of camp refugees reported high environment HRQOL. Psychological and social relationships HRQOL were similar between camp and non-camp refugees.

Table 3

*Summary Descriptive Statistics for Health-related Quality of Life in the Palestinian Refugee Population Living in Jordan by Residency (n = 177)*

HRQOL	Residency										t
	Inside Camp (n = 86)					Outside Camp (n = 91)					
	Range	M	SD	n	%	Range	M	SD	n	%	
Physical Health	11-79	49.07	15.21			11-86	54.16	14.17			2.307*
High				45	52.3				59	64.8	
Low				41	47.7				32	35.2	
Psychological	8-100	55.91	17.66			0-96	56.55	19.51			.227
High				48	55.8				53	58.2	
Low				38	44.2				38	41.8	
Social Relationships	8-100	54.36	21.46			8-100	58.33	21.48			1.231
High				43	50.0				54	59.3	
Low				43	50.0				37	40.7	
Environment	3-91	43.28	19.49			23-83	51.30	15.35			3.054**
High				27	31.4				43	47.3	
Low				59	68.6				48	52.7	

*Note.* HRQOL = health-related quality of life. Rated on a scale of 0 (lowest HRQOL) to 100 (greatest HRQOL). The cutoff scores are 50 or less (low HRQOL) and above 50 (high HRQOL).

\*  $p \leq .05$ . \*\*  $p \leq .005$ .

### **Predictors of Health-related Quality of Life**

See Table 4 for results of the hierarchical multiple linear regression analyses. The environment and social HRQOL models were statistically significant; the physical health and psychological HRQOL models were not statistically significant. Poverty accounted for 5% of the variance in the environment HRQOL model. The difference between 0% and 5% was statistically significant ( $F = 9.131, p < .0005$ ). Adding residency to the model increased  $R^2$  from 5% to 8%, a statistically significant increase of 3% ( $F = 5.587, p = .02$ ). Poverty and residency accounted for 8% of the variance in environment HRQOL, which was statistically significant ( $F(2, 173) = 7.48, p = .001$ ). In addition, both poverty ( $\beta = -.18, p = .02$ ) and residency ( $\beta = -.18, p = .02$ ) individually contributed significantly to the variance in environment HRQOL. For the social relationships HRQOL model, poverty accounted for 7% of the variance. The difference between 0% and 7% was not statistically significant. Adding residency to the model did not increase  $R^2$ . In this model, poverty and residency accounted for 7% of the variance in social relationships HRQOL, which was statistically significant ( $F(2, 173) = 6.541, p = .002$ ). Poverty was the only predictor that individually contributed significantly to the variance in social relationships HRQOL ( $\beta = -.26, p = .001$ ). For physical HRQOL, although adding residency to the model significantly increased  $R^2$  from 0% to 3%, the overall model was not significant. And for psychological HRQOL, neither poverty nor residency made any significant contribution, and the overall model was not significant either.

Table 4

*Hierarchical Regression Analysis of Health-related Quality of Life Assessed in Poverty and Residency among Palestinian Refugees in Jordan (n = 177)*

Model Step	$R^2$	$\Delta R^2$	$\Delta F$	$df$	$p$
Environment: $R^2 = .08, F(2, 173) = 7.48, p = .001$					
1. Poverty ( $\beta = -.18, p = .02$ )	.05		9.131	1, 174	.00
2. Residency ( $\beta = -.18, p = .02$ )		.03	5.587	1, 173	.02
Physical Health: $R^2 = .03, F(2, 173) = 2.52, p = .08$					
1. Poverty ( $\beta = .01, p = .86$ )	.00		.168	1, 174	.68
2. Residency ( $\beta = -.17, p = .03$ )		.03	4.869	1, 173	.03
Social Relationships: $R^2 = .07, F(2, 173) = 6.541, p = .002$					
1. Poverty ( $\beta = -.26, p = .001$ )	.07		13.05	1, 174	.00
2. Residency ( $\beta = -.02, p = .75$ )		.00	.102	1, 173	.75
Psychological: $R^2 = .01, F(2, 173) = 1.228, p = .30$					
1. Poverty ( $\beta = -.12, p = .12$ )	.01		2.426	1, 174	.12
2. Residency ( $\beta = .02, p = .84$ )		.00	.043	1, 173	.84

### Discussion

Results indicate the study sample of Palestinian refugees living inside and outside of Jordan were significantly different in regards to education, type of health insurance and poverty level. Refugees living inside camps were less educated, typically lived below Jordan's poverty line, and primarily had only UNRWA basic health insurance as compared to refugees living outside camps, who were more educated, typically lived above Jordan's poverty line, and had not

only UNRWA basic health insurance, but also another type of health insurance. These social determinants, along with age and marital status, had significant influence on differences in social relationships and environment HRQOL, but not in physical health and psychological HRQOL among refugees. Environment HRQOL was lower for poorer refugees, older refugees and refugees with only UNRWA basic health insurance. Poorer refugees and divorced and widowed refugees had lower social relationships HRQOL as compared to less poor refugees and single and married refugees. There was no significant difference in any of the HRQOL domains among different educational levels.

In their report, Tiltnes & Zhang (2013) studied social determinants of health among Palestinian refugees in Jordan; they found that those determinants shown to impact refugee's health. In consistence with the findings of this study, Tiltnes & Zhang (2013) reported that Palestinian refugees living inside camps had poorer physical health than refugees living outside camps. Furthermore, Tiltnes & Zhang (2013) found a positive association between health outcomes and both income and education, indicating that refugees with less education and income had worse health outcomes. In regards with access to health insurance, Tiltnes & Zhang (2013) also found that healthcare services provided by UNRWA and the public sector were used by a higher proportion of both camp and non-camp refugees than were private healthcare services. They, however, did not compare types of health insurance accessible to camp- versus non-camp refugees in Jordan.

The findings of this study were also constant with Khawaja and colleagues (2006) study on social capital among Palestinian refugees in Jordan, in which they reported that compared to men, Palestinian refugee women had lower levels of education and income and higher levels of unemployment (Khawaja, Tewtel-Salem, Obeid, & Saliba, 2006). In terms of poverty level, the

findings of this study were consistent with the World Bank's (2014) report, which stated that in 2008, the poverty level in Jordan was 13% for non-refugees and non-camp refugees, but 30% for Palestinian camp refugees (World Bank, 2014).

Findings of this study's sample of Palestinian refugees living in Jordan suggests, in general, HRQOL was higher for non-camp refugees as compared to camp refugees. In particular, differences in HRQOL were significant for physical health and environment. Physical health HRQOL was acceptable and higher for non-camp refugees than it was for camp refugees, who had below acceptable physical health HRQOL. Although environment HRQOL was below acceptable among refugees living inside and outside camps, it was even lower for camp refugees as compared to non-camp refugees. Slightly above acceptable psychological and social relationships HRQOL were similar between camp and non-camp refugees.

The nature of the Palestinian culture, as part of the Arab, Middle-Eastern culture, values and emphasizes family and social bonds, regardless of the place of residency (Tiltne & Zhang, 2013). Preconditioning might explain the similarity in psychological HRQOL between camp and non-camp refugees. Most camp refugees are typically descendants of first and second generation refugees and have spent most of their lives inside camps and have not experienced non-camp life. Thus, camp refugees may not have had a point of reference with which to compare perceived satisfactory or unsatisfactory psychological wellbeing.

Studies in the literature could not be found for typical levels of HRQOL for Jordanians nor for Palestinian refugees living in Jordan inside or outside camps. A study by Skevington and colleagues (2004) demonstrated that, typically, HRQOL was acceptable to very good in 23 countries. Although Jordan was not one of the countries included in the study, culturally, Turkey, which was included, is similar to Jordan. The Turkey population had good physical health

HRQOL and acceptable psychological, social relationships and environment HRQOL. In comparison to the Turkey population, non-camp refugees in this study had acceptable HRQOL across all domains; whereas, camp refugees had acceptable psychological and social relationships HRQOL that were comparable to non-camp refugees, but below acceptable HRQOL for physical health and environment. It should be noted in the Skevington et al study, environment HRQOL, although acceptable, was lowest among the HRQOL domains for all of the 23 countries.

Uniquely and in combination, poverty and residency were significant predictors of environment HRQOL. Palestinian refugees in Jordan who were poorer and lived inside camps were more likely to have had lower environment HRQOL. Controlling for the effect of poverty, residency also had an impact on environment HRQOL, suggesting that living inside a camp had a negative impact on environment HRQOL regardless of whether camp refugees lived above or below the poverty line. Poverty was a unique predictor of social relationships HRQOL, independent of residency, suggesting that refugees who were poorer were more likely to have had lower social relationships HRQOL, whether they lived inside or outside of camps. The sparse existing literature addresses differences in the social determinants of health, but not HRQOL, among and/or between camp and non-camp Palestinian refugees living in the Middle East (Al-Khatib et al., 2005; Habib et al., 2006; Tiltnes & Zhang, 2013). This study's findings fill a gap in the literature by providing evidence specific to the influence of residency status (camp versus non-camp) on HRQOL, taking into consideration sociodemographic characteristics, in the Palestinian refugee population living in Jordan.

## **Study Limitations**

Study limitations were related to the descriptive, cross-sectional research design, which has the inherent limitation of not being able to establish causality and a temporal relationship between the outcome and predictors. Individuals, registered as refugees for their entire lives, were exclusively included to the study to minimize the temporal limitation. Recruitment of the study sample was broad and diverse across gender, income, education and other sociodemographic characteristics. The non-probability, convenience sample, however, was a study limitation. Sampling bias and lack of representativeness of the refugee population may have influenced the external validity of the study, limiting generalization of the findings.

In this study, the WHOQOL-BREF cutoff score of 50 or less (low HRQOL) and above 50 for (high HRQOL) was based on a study by Skevington and colleagues (2004) who used cross-sectional data obtained from a WHOQOL-BREF survey of adults in 23 countries. Jordan was not one of the countries. The only Middle-Eastern countries included in the study were Turkey and Israel. Turkey, instead of Israel, was chosen as a comparison country because of the cultural similarity to Jordan. Investigation of the WHOQOL-BREF scores' norms and cutoffs in the Jordanian and broader Middle-Eastern context is recommended for future research.

## **Conclusions, Implications and Recommendations**

Palestinian refugees in Jordan who lived inside camps fared worse than refugees who lived outside camps in terms of financial resources, education and HRQOL. Camp refugees were typically poorer, less educated and had lower HRQOL as compared to non-camp refugees. Among refugees, being younger, having more financial resources and having extended health insurance coverage seem to have been protective social determinants for environment HRQOL; having more financial resources and being single or married seem to have been protective social



determinants for social relationships HRQOL. Living inside camps appear to lower significantly refugees' HRQOL for physical health and environment. Even if camp refugees had financial resources, their environment HRQOL was still worse than non-camp refugees. In contrast, living inside camps, but not having financial resources, was associated with lower HRQOL in physical health. Not having financial resources, however, was the single most predictor of lower social relationships HRQOL, irrespective of residency status.

Community/public health programs and policies need to be bolstered or created and implemented inside camps in Jordan in order to improve environment HRQOL by ensuring and adhering to quality environmental standards for refugee camps' physical infrastructures, housing conditions, water and air quality, sewer systems, transportation and safety and security. Refugee camps' healthcare facilities may need to increase health promotion and disease prevention efforts, community outreach in camps, and training of healthcare staff in order to improve camp refugees' physical health HRQOL. To address poverty, financing for micro and small projects should be made available to camp and non-camp refugees and their families. Social welfare programs should be expanded in a manner that minimizes poverty and equalizes financial resources for refugees that are comparable to the general population in Jordan.

Recommendations for further research include longitudinal, prospective cohort studies to assess, track and evaluate changes in HRQOL and the incidence and prevalence of physical and psychological health conditions that develop over time among refugees. Furthermore, randomized-controlled studies should be conducted to test the efficacy of interventions that address HRQOL among refugees by residency status, using Jordan's general population as a comparison group.

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## CHAPTER V

### DISCUSSION

#### **Summary**

Because of complex historical, sociocultural, religious, political and military conflicts, Palestinian refugees have been displaced from their homeland for 68 years and forced to live in a host country due to military conflicts, which may have physical, psychological, emotional and sociocultural consequences on the humanity and daily lives of refugees (Young, 2011). The studies included in the integrative review of the literature (Chapter II) were conducted in the host countries of Jordan, Lebanon, and the Occupied Palestinian Territories, with a particular focus on Palestinian refugees living in Jordan. Most reviewed articles suggest the health and social outcomes, including physical and mental health and social and living conditions, are likely to be worse and persistent for Palestinian camp refugees than for non-camp Palestinian refugees and non-refugees.

Along with access to quality healthcare services, socioecological approaches also must be considered in order to improve the health of refugees. Social determinants are significant because these contextual factors influence the way individuals, populations, communities and societies live and function as well as influence the risks associated with preventable disease morbidity, premature mortality and satisfaction with and quality of life (Commission on Social Determinants of Health, 2008; Marmot, 2005). Findings of the reviewed literature suggest that social and living conditions inside camps appear to be far from ideal. As compared to non-camp refugees and non-refugees, Palestinian refugees living inside camps appear to live under persistent strain related to poor quality and crowded housing with inadequate electricity, refuse disposal and clean water, socioeconomic deprivation and lack of safety, which negatively

impacts physical and mental health (Al-Khatib et al., 2005; Habib et al., 2006; Tiltnes & Zhang, 2013). Mental health conditions were found to increase during violent conflicts, which some Palestinian refugees frequently experience, depending on the region in which they live (Madianos et al., 2011). Furthermore, there was a 96% mental health treatment gap for Palestinian refugees living in camps (Llosa et al., 2013).

Improved socioeconomic and educational levels may be key factors to Palestinian camp refugees' obtaining adequate housing and employment opportunities outside of camps in the host country. According to the Palestinian Central Bureau of Statistics (2015), households headed by refugees were poorer than households headed by non-refugees in 2011, and Palestinian refugees had lower percentages of participation in the labor market compared to non-refugees in 2013. In 2008, the poverty level in Jordan was 13% for non-refugees and non-camp refugees, but 30% for Palestinian camp refugees (World Bank, 2014). Khawaja and Tiltnes (2002) reported that 87% of Palestinian refugees living inside camps expressed a strong desire to live outside camps, but chose to continue to live inside camps because of the costs associated with leaving the camp (40%) and having friends and relatives who lived in the camps (60%). Higher socioeconomic status is associated with better health in both industrialized and developing countries and in both welfare states and liberal democracies (Cutler, Lleras-Muney, & Vogl, 2008).

Findings of the HRQOL, Depression and Hopefulness study (Chapter III) indicate there were health consequences for Palestinian refugees living in Jordan as the host country. Although participants had some form of basic health insurance and reported being relatively healthy, nearly half of Palestinian refugees living in Jordan experienced lower HRQOL. A majority of the study sample of 177 Palestinian refugees living in Jordan had depressive symptomatology that ranged from mild depression to severe depression, and depression was significantly associated

with worse HRQOL. Psychological health is important to the wellbeing of populations and communities. Yet, a majority of the study sample of Palestinian refugees in Jordan were ‘very hopeful’ about returning to Palestine in the future, although hopefulness was not significantly related to HRQOL or depression. To our knowledge, refugees’ hopefulness about returning to the homeland has not been documented in the literature.

Guided by the socioecological perspective, the social determinants—age, gender, education and poverty—served as socioecological proxies in this study of Palestinian refugees living in Jordan. Along with depression, these social determinants, in particular age and poverty, added to the understanding of HRQOL for Palestinian refugees living in Jordan. Refugees who were older and reported less per capita monthly income, in particular refugees who lived below Jordan’s national poverty level, were significantly more likely to report worse HRQOL. Improved socioeconomic conditions, especially among older refugees, may be a major factor to improving HRQOL.

Findings of the HRQOL Between Camp and Non-Camp Residency in the Palestinian Refugee Population in Jordan (Chapter IV) indicate the study sample of Palestinian refugees living inside ( $n = 86$ ) and outside ( $n = 91$ ) of Jordan were significantly different in regards to education, type of health insurance and poverty level. Refugees living inside camps were less educated, typically lived below Jordan’s poverty line, and primarily had only UNRWA basic health insurance as compared to refugees living outside camps, who were more educated, typically lived above Jordan’s poverty line, and had not only UNRWA basic health insurance, but also another type of health insurance. These social determinants, along with age and marital status, had significant influence on differences in social relationships and environment HRQOL, but not in physical health and psychological HRQOL among refugees. Environment HRQOL

was lower for poorer refugees, older refugees and refugees with only UNRWA basic health insurance. Poorer refugees and divorced and widowed refugees had lower social relationships HRQOL as compared to less poor refugees and single and married refugees. There was no significant difference in any of the HRQOL domains among different educational levels.

Findings of this study's sample of Palestinian refugees living in Jordan suggest, in general, that HRQOL was higher for non-camp refugees as compared to camp refugees. In particular, differences in HRQOL were significant for physical health and environment. Physical health HRQOL was acceptable and higher for non-camp refugees than it was for camp refugees, who had below acceptable physical health HRQOL. Although environment HRQOL was below acceptable among refugees living inside and outside camps, it was even lower for camp refugees as compared to non-camp refugees. Slightly above acceptable psychological and social relationships HRQOL were similar between camp and non-camp refugees.

Uniquely and in combination, poverty and residency were significant predictors of environment HRQOL. Palestinian refugees in Jordan who were poorer and lived inside camps were more likely to have had lower environment HRQOL. Controlling for the effect of poverty, residency also had an impact on environment HRQOL, suggesting that living inside a camp had a negative impact on environment HRQOL regardless of whether camp refugees lived above or below the poverty line. Poverty was a unique predictor of social relationships HRQOL, independent of residency, suggesting that refugees who were poorer were more likely to have had lower social relationships HRQOL, whether they lived inside or outside of camps.



## Conclusions

Socioeconomic status has been shown to be a strong predictor of health status, outcomes, longevity and quality of life (Commission on Social Determinants of Health, 2008; Marmot, 2005). When individuals and countries were ranked by income, education or occupation, those in the top social determinant hierarchy were healthier, had longer longevity and reported better HRQOL (Marmot, 2005). Even among populations at risk or have illness, those with higher incomes and/or education levels had better health outcomes and HRQOL than those at the bottom of the social determinant hierarchy (Braveman & Gottlieb, 2014). For these reasons, the Commission on Social Determinants of Health (2008) and other organizations recommend interventions and policies that build health equity across all populations worldwide (Marmot, 2005). Gender and education not being significant, unique predictors of HRQOL may be due to the sample being well-educated and a majority of women in the sample being unemployed. Khawaja and colleagues (2006) found that women had lower levels of education and income and higher levels of unemployment as compared to men.

The results of the two cross-sectional studies (Chapters III & IV) were consistent with the reviewed literature (Chapter II) in reporting that, in general, depending on residency, there are disparities in health and social outcomes for Palestinian refugees in Jordan. Palestinian refugees living inside camps seem to fare worse for most social and health indices as compared to Palestinian refugees living outside camps and the non-refugee population in the host country. Furthermore, Palestinian refugees hope to return to Palestine in the future. Despite being relatively healthy, Palestinian adult refugees living in Jordan were depressed and experienced low HRQOL, particularly if refugees were older and poorer. Palestinian refugees in Jordan who lived inside camps fared worse than refugees who lived outside camps in terms of financial

resources, education and HRQOL. Camp refugees were typically poorer, less educated and had lower HRQOL as compared to non-camp refugees. Among refugees, being younger, having more financial resources and having extended health insurance coverage seem to have been protective social determinants for environment HRQOL; having more financial resources and being single or married seem to have been protective social determinants for social relationships HRQOL. Living inside camps appear to lower significantly refugees' HRQOL for physical health and environment. Even if camp refugees had financial resources, their environment HRQOL was still worse than non-camp refugees. In contrast, living inside camps, but not having financial resources, was associated with lower HRQOL in physical health. Not having financial resources, however, was the single most predictor of lower social relationships HRQOL, irrespective of residency status.

### **Limitations**

This two studies (Chapters III & IV) were descriptive, cross-sectional in design, which has the inherent limitation of not being able to establish causality and a temporal relationship between the outcome and predictors. To minimize the limitation of temporality, individuals, registered as refugees for their entire lives, were exclusively included in the study. Although recruitment of refugees was broad and diverse across gender, income, education and other sociodemographic characteristics, the non-probability, convenience sample was a study limitation. Thus, sampling bias and lack of representativeness of the refugee population may have influenced the external validity of the study, limiting generalization of the findings.

Although average mean scores for the WHOQOL-BREF have been reported for the adult population in 23 countries, Jordan was not among the countries included in the study (Skevington et al., 2004). Israel and Turkey were the only included Middle Eastern countries.

Norms for WHOQOL-BREF scores for Jordan were not found. Investigation of the WHOQOL-BREF scores' norms in the Jordanian and broader Middle-Eastern context is recommended for future research.

### **Implications for Health and Nursing**

Studies' findings suggest the mental health needs of Palestinian refugees in Jordan need to be systematically screened, diagnosed and treated by healthcare professionals. In addition, future mental health research should include objective assessments, in addition to self-reporting questionnaires, of psychological wellbeing at multiple time points in refugees' lives in order to better understand the nature and pattern of refugees' psychological health within the context of an ever-changing sociopolitical landscape. Sociocultural considerations of mental health issues also should be taken into account in this population to prevent stigmatization.

Since a majority of refugee health services are provided in community settings, community/public health nurses in Jordan, with specialization or expertise in mental health, would be ideal to design and implement interprofessional, community-based health screening, treatment and follow-up programs that are holistic, evidence-based and focus on the biopsychosocial and cultural aspects of refugee life. The experiences of nurses who are also refugees could be utilized to design refugee-focused programs and services. These nurses would likely have an awareness and understanding of refugees' experiences and the impact of being a refugee has on one's life. For better HRQOL outcomes, community health nurses in Jordan can play a major role in informing public health supports and policies that can improve the socioeconomic and living conditions of refugees, especially for refugees who are older and live in poverty. Further research is needed to examine differences in HRQOL and other aspects of health for camp and non-camp refugees as compared to non-refugees of the host country.

Community/public health programs and policies need to be bolstered or created and implemented inside camps in Jordan in order to improve environment HRQOL by ensuring and adhering to quality environmental standards for refugee camps' physical infrastructures, housing conditions, water and air quality, sewer systems, transportation and safety and security. Refugee camps' healthcare facilities may need to increase health promotion and disease prevention efforts, community outreach in camps, and training of healthcare staff in order to improve camp refugees' physical health HRQOL. To address poverty, financing for micro and small projects should be made available to camp and non-camp refugees and their families. Social welfare programs should be expanded in a manner that minimizes poverty and equalizes financial resources for refugees that are comparable to the general population in Jordan.

### **Recommendations for Further Research**

Recommendations for further research include longitudinal, prospective cohort studies to assess, track and evaluate changes in HRQOL and the incidence and prevalence of physical and psychological health conditions that develop over time among refugees, as well as qualitative research to investigate the lived experiences of refugees inside and outside camps in Jordan. Furthermore, randomized-controlled studies should be conducted to test the efficacy of interventions that address HRQOL among refugees by residency status, using Jordan's general population as a comparison group. In addition to those of Palestinian refugees, future research should also address the HRQOL and other health outcomes of the emerging and growing Syrian refugee population in Jordan.

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## CHAPTER VI

### APPENDICES

#### A. Information Sheet

### UNIVERSITY OF CALIFORNIA, SAN FRANCISCO INFORMATION TO PARTICIPATE IN A RESEARCH STUDY

**Study Title:** Health-Related Quality of Life of Palestinian Refugees in Jordan.

This is a research study about the health-related quality of life (HRQOL) of Palestinian refugees in Jordan's camps. The researcher, Hamza Alduraiddi, from the University of California, San Francisco (UCSF), Department of Community Health sciences will explain this study to you.

Research studies include only people who choose to take part. Please take your time to make your decision about participating, and discuss your decision with your family or friends if you wish. If you have any questions, you may ask the researcher.

You are being asked to take part in this study because you are a Palestinian refugee living in Jordan.

#### **Why is this study being done?**

The purpose of this study is to investigate the relationship between living in a refugee camp and the HRQOL of Palestinian refugees in Jordan, taking into consideration age, gender, marital status, educational level, family size, access to healthcare, and household monthly income.

#### **How many people will take part in this study?**

Three hundred (300) Palestinian refugees living in Jordan will be recruited.

#### **What will happen if I take part in this research study?**

If you agree, the following procedures will occur:

- The researcher or one of his research assistants will obtain a verbal consent from you.
- The researcher or one of his research assistants will explain the study to you, then give you a printed copy of the study's questionnaire.
- You will read and answer the questionnaire. You, however, have the right to not answer any of the questions if you do not wish to.
- The researcher or one of his research assistants will remain present while you are answering the questionnaire in case you need any clarification or have any questions.

- The researcher or one of his research assistants will collect the questionnaire and review it with you to make sure that you did not accidentally miss any of the questions.

**Study location:** This data collection process will take place in a quiet and comfortable environment in a primary healthcare center in Jordan.

### **How long will I be in the study?**

Participation in the study will take a total of 15-20 minutes in order to read and answer the questionnaire.

### **Can I stop being in the study?**

Yes. You can decide to not participate in the study at any time, including to not answer questions on the questionnaire. Just tell the study researcher or the research assistant right away if you wish to stop being in the study. There will be no consequences to you if you decide to stop answering questions or decide you no longer want to be a participant in the study.

Also, the researcher may stop you from taking part in this study at any time if he believes it is in your best interest, if you do not follow the study rules, or if the study is stopped.

### **What side effects or risks can I expect from being in the study?**

- Some of the questionnaire items may make you uncomfortable or upset. You are free to decline to answer any questions you do not wish to answer. Your status as a refugee or Jordanian citizen will not be affected if you choose not to answer questions or be a participant in this study.
- Time commitment for the study could be up to 20 minutes.

For more information about risks and side effects, ask the researcher.

### **Are there benefits to taking part in the study?**

There will be no direct individual benefit to you from participating in this study. However, the information that you provide may help to understand better the effects of living in a refugee camp. The findings will, hopefully, inform social, public and health policies and future research regarding refugees.

### **What other choices do I have if I do not take part in this study?**

You are free to choose not to participate in the study. If you decide not to take part in this study, there will be no penalty to you.



## **Will information about me be kept private?**

We will take all possible actions to make sure that the personal information gathered for this study is kept private. The questionnaire that you will fill out will be kept totally anonymous. If information from this study is published or presented at scientific meetings, your name and other personal information will not be used.

Organizations that may look and/or copy your research records for the purpose of research, quality assurance, and data analysis include:

- The University of California & The University of Jordan.

Participation in research may involve a loss of privacy, but information about you will be handled as confidentially as possible. If you give contact information to the researchers, it will be kept separate from all other information you provide in interviews or demographic questionnaires.

## **What are the costs of taking part in this study?**

You will not be charged for participating in this study.

## **Will I be paid for taking part in this study?**

You will not be paid for taking part in this study.

## **What are my rights if I take part in this study?**

Taking part in this study is your choice. You may choose either to take part or not to take part in the study. If you decide to take part in this study, you may leave the study at any time. No matter what decision you make, there will be no penalty to you in any way. You will not lose any of your regular benefits, and you can still get your care from our institution the way you usually do.

## **Who can answer my questions about the study?**

You can talk to the researcher about any questions, concerns, or complaints you have about this study. Contact the researcher, Hamza Alduraidi, via email at [Hamza.Alduraidi@ucsf.edu](mailto:Hamza.Alduraidi@ucsf.edu), or via phone at cellphone number: +1 (415) 889-7828 (in the United States) OR +962-796116242 (in Jordan).

## **CONSENT**

You have been given a copy of this information sheet to keep.

PARTICIPATION IN RESEARCH IS VOLUNTARY. You have the right to decline to be in this study, or to withdraw from it at any point without penalty or loss of benefits to which you are otherwise entitled.

If you wish to participate in this study, please tell the researcher or the research assistant.

**Thank you!**

**Hamza Alduraidi, RN, MPH, MS, PhD(c)**

**University of California, San Francisco**

## **B. Questionnaire**

### **Health-Related Quality of Life of Palestinian Refugees in Jordan**

#### **Introduction**

Greetings,

This research aims to investigate the relationship between living in a refugee camp and the health-related quality of life of Palestinian refugees in Jordan. This research is approved by the Committee for Human Research at the University of California, San Francisco (UCSF), and supported by the United Nations' Relief and Work Agency for Palestinian Refugees in the Near East (UNRWA) and the University of Jordan (UJ). You will be asked a group of questions regarding your basic demographic data and your health-related quality of life. You have the right to not answer any of the questions. Your answers will be handled with confidentiality according to UCSF's and UJ's protocols. Your answers will be analyzed anonymously and reported in a publishable manuscript that will serve as part of the doctoral dissertation of the graduate student, HamzaAlduraidi, in the School of Nursing, Department of Community Health Systems. The findings of this research will be disseminated to UNRWA and UJ, and presented in relevant public health and global health conferences national and globally.

Your participation in this research is highly appreciated. If you have any questions or concerns regarding this questionnaire, you are welcome to contact me via email at

[Hamza.Alduraidi@ucsf.edu](mailto:Hamza.Alduraidi@ucsf.edu) or phone number +962-787402403 (in Jordan).

Thank you in advance!

Hamza Alduraidi, RN, MPH, PhD(c)

### First: Sociodemographic Data

1. Are you registered with UNRWA as a Palestinian refugee?  Yes  No
2. Are you a Jordanian citizen?  Yes  No
3. Do you currently live in a Palestinian refugee camp?  Yes  No
4. If you answered "Yes" to living in a Palestinian refugee camp in question number 3, how long have you lived in this camp or any other camp? \_\_\_\_ years.
5. If you answered "No" to living in a Palestinian refugee camp in question number 3, have you ever lived in a camp for 5 years or longer in the past?  Yes  No
6. Your age: \_\_\_\_ years.
7. Your gender:  Male  Female
8. Your marital status:  
 Single  Married  Divorced  Widow/er
9. Your educational level:  
 Less than High School (Tawjihi)  High School (Tawjihi)  
 Community College Degree  Bachelor's or Graduate Degree
10. Do you currently work?  Yes  No
11. If you answered "Yes" to the previous question, what is your occupation? \_\_\_\_\_.
12. How many family members live with you in the same household? \_\_\_\_ members.
13. How many rooms in your household? \_\_\_\_\_ rooms.
14. To which of the following healthcare systems do you currently have access? (Choose all that applies)  
 UNRWA Primary Health Centers  Jordanian Ministry of Health  
 Royal Military Health Services  Private Healthcare Facilities  
 None of the above
15. What is the total monthly income of your household approximately? JD \_\_\_\_\_.
16. Have you been hospitalized over the past 12 months for a day or longer?  Yes  No

**Second: General Health Status**

1. 1. In general, would you say your health is:  
 Excellent     Very good     Good     Fair     Poor
2. Compared to one year ago, how would you rate your health in general now?  
 Much better now than one year ago     Somewhat better now than one year ago  
  
 About the same  
  
 Somewhat worse now than one year ago     Much worse now than one year ago
3. Over the last 2 weeks, how often have you been bothered by any of the following problems? (Use “✓” to indicate your answer)

		Not at all	Several days	More than half the days	Nearly every day
1	Little interest or pleasure in doing things	0	1	2	3
2	Feeling down, depressed, or hopeless	0	1	2	3
3	Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4	Feeling tired or having little energy	0	1	2	3
5	Poor appetite or overeating	0	1	2	3
6	Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7	Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8	Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9	Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

4. How hopeful are you that you will return to Palestine in the future?  
 Extremely hopeful     Somewhat hopeful     Neutral  
  
 Somewhat not hopeful     Extremely not hopeful

### Third: Health-Related Quality of Life

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the last four weeks.

		Very poor	Poor	Neither poor nor good	Good	Very good
1.	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2.	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about how much you have experienced certain things in the last four weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3.	To what extent do you feel that physical pain prevents you from doing what you need to do?	5	4	3	2	1
4.	How much do you need any medical treatment to function in your daily life?	5	4	3	2	1
5.	How much do you enjoy life?	1	2	3	4	5
6.	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
7.	How well are you able to concentrate?	1	2	3	4	5
8.	How safe do you feel in your daily life?	1	2	3	4	5
9.	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about how completely you experience or were able to do certain things in the last four weeks.

		Not at all	A little	Moderately	Mostly	Completely
10.	Do you have enough energy for everyday life?	1	2	3	4	5
11.	Are you able to accept your bodily appearance?	1	2	3	4	5
12.	Have you enough money to meet your needs?	1	2	3	4	5
13.	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14.	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	Poor	Neither poor nor good	Good	Very good
15.	How well are you able to get around?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16.	How satisfied are you with your sleep?	1	2	3	4	5
17.	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18.	How satisfied are you with your capacity for work?	1	2	3	4	5
19.	How satisfied are you with yourself?	1	2	3	4	5

20.	How satisfied are you with your personal relationships?	1	2	3	4	5
21.	How satisfied are you with your sex life?	1	2	3	4	5
22.	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23.	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24.	How satisfied are you with your access to health services?	1	2	3	4	5
25.	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to how often you have felt or experienced certain things in the last four weeks.

		Never	Seldom	Quite often	Very often	Always
26.	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	5	4	3	2	1

**Do you have any comments about the assessment?**

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## C. UCSF CHR Approval



### Human Research Protection Program Committee on Human Research

#### Notification of Expedited Review Approval

Principal Investigator  
Catherine M Waters

Co-Principal Investigator  
Hamza A Alduraidi

**Type of Submission:** Submission Correction for Initial Review Submission Packet

**Study Title:** The Health-Related Quality of Life of Palestinian Refugees in Jordan: A Comparative Cross-Sectional Study

**IRB #:** 15-17464

**Reference #:** 147377

**Committee of Record:** Laurel Heights Panel

**Study Risk Assignment:** Minimal

**Approval Date:** 09/23/2015                      **Expiration Date:** 09/22/2018

#### Regulatory Determinations Pertaining to this Approval:

**This submission was eligible for expedited review as:**

Category 7: Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

This research is not subject to HIPAA rules.

A waiver of the requirement to obtain a signed consent form is acceptable for this study because, as detailed in the application, the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

The waiver applies to all subjects.

#### IRB Comments:

1. Please submit the final approval letter/e-mail correspondence from Dr. Ishtiwi Abu-Zayed, Chief of Health Department UNRWA Field (Amman), to the CHR via a Modification Form when received.

## D. UNRWA Support Letter

UNRWA

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### Refugee-Related Doctoral Research Approval Request

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**ABU-ZAYED, Ishtaiwi** <I.ABU-ZAYED@unrwa.org>  
To: "Hamza Alduraidi (hamza.draidi@gmail.com)" <hamza.draidi@gmail.com>  
Cc: "HAMDAN, Rashad" <R.HAMDAN6@unrwa.org>

Wed, Nov 11, 2015 at 11:26 PM

Dear Hamza

Please note that your research proposal has been reviewed by health department and approved, therefore you are now allowed to proceed in collecting data effective Sunday 15 Nov 2015 till 4 Dec. 2015 as requested using your questionnaire by selecting the random sample needed among refugees attending UNRWA health centres.

Please ensure that the mission is carried smoothly with no interruption of service.

Should you need further clarification please don't hesitate to contact me or Dr.Rashad Hamdan the Area Health Officer copied in this email (0799799593)

Regards



Ishtaiwi Abuzayed | Chief Field Health programme

unrwa | Health Department| Jordan field office

t:+962 6 5809279 | m:+962 796008297 | f: +962 6 5809281 | e: [i.abu-zayed@unrwa.org](mailto:i.abu-zayed@unrwa.org)

[unrwa.org](http://unrwa.org) | [facebook](#) | [youtube](#) | [twitter](#)

## E. University of Jordan Support Letter

8/9/2015

### Letter of Support

To whom it may concern

Greetings,

The Faculty of Nursing at the University of Jordan is willing to support their scholar, UCSF's nursing doctoral candidate, Mr. Hamza Alduraidi in the process of collecting his dissertation research data in the two locations of Al-Baqa'a Palestinian refugee camp primary healthcare center, and Abu Nsair's primary healthcare center in Jordan.

All the logistic support that Mr. Alduraidi may need during the data collection process will be provided by the faculty member(s) and/or administrative staff of the Faculty of Nursing as needed. The department of Community Health Nursing has worked in both the locations for long time and is maintaining partnerships with the management bodies of each of the two locations. The undergraduate nursing students complete a mandatory community health nursing course, in which they are expected to practice a set of community health nursing skills in several rotations including the two sites in which Mr. Alduraidi is interested in collecting his dissertation research data. Thus, the Community Health Nursing Department's faculty members will provide Mr. Alduraidi and his team (if he has any) with the necessary access and support.

Please feel free to reach out to me via email if you have any further questions.

Regards,

**Dr. Maysoon S. Abdalrahim**

Associate Professor  
Faculty of Nursing/ The University of Jordan  
Amman 11942 Jordan  
Office Tel: +9626 5355000 Ext: 23185  
Fax : +9626 5300244  
Email: maysoona@ju.edu.jo



## Curriculum Vita

### Hamza Alduraidi, RN, MPH, MS, PhD(c)

246 Ottawa Avenue, San Francisco, CA 94112

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Email: [hamza.alduraidi@ucsf.edu](mailto:hamza.alduraidi@ucsf.edu) OR [hamza.draidi@gmail.com](mailto:hamza.draidi@gmail.com)



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**Biographic Data:**

Birth Date:	August 22 <sup>nd</sup> , 1986
Birth Place:	Sahab, Jordan
Gender:	Male
Nationality:	Jordanian
Marital Status:	Single
U.S. residency status:	J-1 student visa

### Education:

#### Graduate

1. **Ph.D. (candidate):** Doctorate of Philosophy in Nursing. University of California San Francisco (UCSF), USA, 2013-current. G.P.A: 3.87/4
  - Quantitative research track, expected graduation by June, 2017.
  - Research interest: The health-related quality of life of refugee camp communities.
  - Courses completed covered the topics of quantitative and qualitative research, epidemiology, biostatistics, grant writing, healthcare policy, environmental health, and public/community health nursing.
2. **M.S.:** Master of Science in Advanced Practice Public Health Nursing; University of California, San Francisco (UCSF)\*, USA, 2011-2013, G.P.A: 3.54/4
  - Comprehensive Exam topic: health of Palestinian refugees in Jordan's camps.
  - Courses completed covered: research, statistics, healthcare policy and politics, healthcare economics, global perspective of health, communicable and non-communicable diseases, caring for the underserved and vulnerable populations.
3. **G.H.M.:** Global Health Minor. University of California, San Francisco (UCSF), USA. 2011-2013.
  - Courses covered the topics of assessing, planning, implementing and evaluating community health programs in global settings, developing

world health burdens, fundamentals of global health and international nursing.

4. **M.P.H.:** Master of Science in Public Health; The University of Jordan (Faculty of Medicine) Amman-Jordan, 2008-2010, G.P.A: 3.41/4
  - Research topic: the health of poor and underserved communities in the Middle East.
  - Courses finished covered the topics of population health, public health laws and policies, health transitions, health management, biostatistics, environmental health and social justice.

#### *Undergraduate*

5. **B.Sc.:** Bachelors of Science in Nursing;  
The University of Jordan (Faculty of Nursing) Amman-Jordan, 2004-2008, G.P.A: 3.31/4

#### *High School*

6. **Tawjihi:** The Jordanian National High School Degree, Scientific Sector Secondary Certificate; Sahab Public Secondary School – Jordan, July, 2004

#### **Awards:**

September 2011: Awarded a full scholarship from the University of Jordan to pursue Master's and PhD degrees in Public/Community Health Nursing in the United States

January 2015: UCSF's Science of Caring Magazine addressed the personal and academic journey of Hamza Alduraidi in the article, "Hamza Alduraidi: Forging a Path for Better Lives for Refugees" by Diana Austin.

- See more at: <http://scienceofcaring.ucsf.edu/global-health/global-health-minor-aims-bridge-gap-between-passion-and-experience-nursing-students>

February 2015: The University of Jordan's News Journal addressed the research and academic goals of Hamza Alduraidi in the article, "Hamza Alduraidi: A Study Abroad Student With a Social Mission" by Suha Alsubeihi.

- See more at:  
[http://ujnews2.ju.edu.jo/en/english/Lists/News/Disp\\_FormNewsSport.aspx?ID=4713](http://ujnews2.ju.edu.jo/en/english/Lists/News/Disp_FormNewsSport.aspx?ID=4713)

#### **Credentials:**

**Registered Nurse;** Jordanian Nurses and Midwives Council (JNMC); licensed since February 2008

### **Experiences (Chronologically):**

1. Registered Nurse (III) in King Hussein Cancer Center - Amman "JCIA-Accredited" – Bone Marrow Transplantation (BMT) Unit (June 2008 - May 2009)
2. Part-time Clinical Instructor in University of Jordan – Faculty of Nursing – community health nursing clinical course, (Jan. 2009 – Sep. 2010).
3. Teaching assistant at University of Jordan – Faculty of Nursing, Community Health Nursing Department, since (Sep.2010 – Sep.2011)
4. Connection manager for Quality insurance affairs at University of Jordan – Faculty of Nursing (second semester 2010-2011)
5. Representative to Media and Public Relations at University of Jordan – Faculty of Nursing (second semester 2010-2011)
6. Steering Committee Member for the Global Partnership in Nursing Forum, University of Jordan, Amman (April 2011).
7. Founder Committee Member for Jordan Database Nursing Research website <http://jdnr.ju.edu.jo> University of Jordan, Amman (academic year 2010-2011)
8. Research Assistant at UCSF School of Nursing, Department of Community Health Systems, with Dr. Catherine Waters, San Francisco, CA (Oct. 2011 – Jan. 2012)
9. Teaching Assistant at UCSF School of Pharmacy, Department of Clinical Pharmacology, with Dr. Lisa Bero, San Francisco, CA (Jan. 2013 – March 2013)
10. Teaching Assistant at UCSF, School of Nursing, The Dean's Office, Education Technologist, with Mrs. Xinxin Huang, San Francisco, CA (June 2014-current)
11. Teaching Assistant at UCSF, School of Nursing, Department of Physiological Nursing, N234A, Evidence-Based Project Planning I, with Dr. Lynda Mackin, San Francisco, CA (Summer 2014 and Summer 2015)
12. Teaching Assistant at UCSF, School of Nursing, Department of Community Health Systems, N234B Evidence-Based Project Planning II, with Dr. Catherine Waters, San Francisco, CA (Fall 2014 and Fall 2015)

13. Tutor, Biostatistics, UCSF, School of Nursing, the Dean's Office, with Dr. Linda Sawyer, (Academic Year 2014-2015).
14. Nursing doctoral program students' representative, Global Nursing Forum, UCSF, School of Nursing (Academic Year 2014-2015).
15. Guest Speaker, N260K, Global Health Issues: Non-Communicable Diseases, UCSF, School of Nursing. Host Faculty: Dr. Lisa Thompson. Topic: (Mental Health & Psychological Support in the Refugee Camp Context) March, 2015.
16. President, Muslim Community Association at UCSF, A Recognized Student Organization (Academic year 2014-2015).
17. Presenter, UCSF ePoster palooza, Spring 2015. The health of Palestinian refugees in Jordan's camps: a literature review. San Francisco, CA.
18. Quantitative Research Methodology Courses/ Curricular Renovation Assistant, with UCSF's Nursing Doctoral Program Committee Chair, Dr. Jyu-Lin Chen, School of Nursing, Dean's Office, San Francisco, CA (Summer 2015).
19. Teaching Assistant: N262A: Advanced Scholarship in Research I, UCSF, School of Nursing, Dr. Laura Wagner, San Francisco, CA (Winter 2016).
20. Teaching assistant: N143: Effective Communication, UCSF, School of Nursing, Dr. Melinda Cuthbert, San Francisco, CA (Winter 2016).
21. Teaching Assistant: N260H: Global Health Nursing & Policy, UCSF, School of Nursing, Dr. Carol Dawson-Rose, San Francisco, CA (Spring 2016).
22. Teaching Resident: GHS 101: Introduction to Global Health Sciences, UCSF, Department of Global Health Sciences, Dr. Christopher Stewart, San Francisco, CA (Spring 2016).
23. Panelist, 'Global is Local' inaugural event and network celebration, UCSF School of Nursing Center for Global Health, San Francisco, CA (January 2016). See more: <http://nursing.ucsf.edu/news/global-local>

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**Hamza Alduraidi**

Author Signature

**April 16, 2016**

Date

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