



## STUDY PROTOCOL

# Protocol for a cross-sectional study on factors affecting health-related quality of life among Afghan refugees in Pakistan [version 1; peer review: awaiting peer review]

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**V1** First published: 27 Sep 2021, 10:971  
<https://doi.org/10.12688/f1000research.73005.1>

Latest published: 27 Sep 2021, 10:971  
<https://doi.org/10.12688/f1000research.73005.1>

## Abstract

**Background:** Pakistan served as a host for more than 1.4 million Afghan refugees for more than 40 years. Access to health care is the most important issue faced by refugees, because they might be at a higher risk for certain diseases. This risk can be attributed to a lack of awareness of health care facilities, health beliefs, inadequate hygiene, cultural differences, and malnutrition. Health of individuals is closely associated with their quality of life. Quality of life over the whole lifespan is pivotal to overall life satisfaction. It includes physical wellbeing, mental health, education, occupation, income, personal safety, as well as (religious) freedom. Until now, the health status of Afghan refugees has never been comprehensively investigated in Pakistan. Therefore, an assessment in this regard is needed to explore their health-related quality of life, for securing their human right to health.

**Methods:** A cross-sectional study has been designed to describe and explain the health-related quality of life of Afghan refugees in Pakistan. Multistage cluster sampling was applied for selection of study participants. The number of respondents from two regions in Pakistan was drawn through a proportionate sampling technique. A quantitative research method using pre-validated questionnaires was used for data collection. The questionnaire included items to assess well-being, mental health, health literacy, and factors affecting health and health care. Descriptive analysis was used, whereas inferential statistical tests (binary logistic regression model) was also performed. The study received ethically permission by the Advanced Studies and Research Board of the University of the Punjab, Lahore, Pakistan.

## Open Peer Review

**Reviewer Status** AWAITING PEER REVIEW

Any reports and responses or comments on the article can be found at the end of the article.

**Discussion:** The assessment of Afghan refugee's quality of life in Pakistan should lead to recommendations disseminated to public and health care officials. This evidence is needed for policymaking related to adequate measures for improving health conditions of Afghan refugees in Pakistan.

**Keywords**

Afghanistan, refugees, migration, health, quality of life

10/27/21

This article is included in the [Human Migration Research gateway](#).

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**Author roles:** **Ur Rehman A:** Conceptualization, Data Curation, Formal Analysis, Writing – Original Draft Preparation; **Zakar R:** Conceptualization, Supervision, Writing – Review & Editing; **Zakar MZ:** Conceptualization, Supervision, Writing – Review & Editing; **Hani U:** Writing – Review & Editing; **Fischer F:** Conceptualization, Supervision, Writing – Review & Editing

**Competing interests:** No competing interests were disclosed.

**Grant information:** The author(s) declared that no grants were involved in supporting this work.

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**How to cite this article:** Ur Rehman A, Zakar R, Zakar MZ *et al.* **Protocol for a cross-sectional study on factors affecting health-related quality of life among Afghan refugees in Pakistan [version 1; peer review: awaiting peer review]** F1000Research 2021, **10**:971 <https://doi.org/10.12688/f1000research.73005.1>

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## Abbreviations

AAHLS: All Aspects of Health Literacy Scale  
 QOL: Quality of life  
 SPSS: Statistical Package for the Social Sciences  
 UNHCR: United Nations High Commissioner for Refugees  
 WHO: World Health Organization

## Introduction

The World Health Organization (WHO) advocated health as a fundamental human right in its constitution of 1946. The availability of health care facilities to all individuals – irrespective of gender, religion, race, political, economic and social conditions – are essential to attain this right.<sup>1</sup> However, war is considered as a serious threat to this human right.<sup>2</sup> War may lead to displacement and refugees are usually most vulnerable in host countries and, therefore, are at high risk of developing certain diseases.<sup>3</sup> Refugees might face exploitation, prejudice and violence during travelling and stay in host countries which may negatively impact on their health.<sup>4</sup>

For about 40 years, Pakistan served as a host for more than 1.4 million Afghan refugees.<sup>5</sup> Health care is one of the most important issues faced by refugees during migration. Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.<sup>6</sup> Health of individuals living in a particular society is dependent on their quality of life. According to the WHO, quality of life is defined as “the individual’s 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”.<sup>7</sup> It describes well-being of individuals and society considering the positive and negative features of life. Quality of life across the whole span is pivotal to satisfaction in life. That includes physical well-being, mental health, academic achievements, job, income, personal safety, and (religious) freedom.<sup>8</sup> Health disparities are prevalent in almost all societies across the globe. Health inequalities and financial constraints may result in psychological health problems.<sup>9</sup>

Refugee’s health is mostly dependent on living conditions and health facilities in host countries. Refugees might be at a higher risk for getting certain diseases because of lack of awareness of health facilities, health beliefs, inadequate hygiene, cultural differences, and malnutrition. Their health problems and needs may vary over time.<sup>10</sup> At the time of arrival, refugees might face health problems related to injuries, gastrointestinal disorders, infectious diseases, cardiovascular disorders, hypothermia, skin diseases, mental health disorders, malnutrition and women’s health needs during pregnancy and delivery. After resettlement, refugees are at risk of mental health problems, communicable diseases, and non-communicable diseases. Particularly women and children are vulnerable populations. They may experience exposure to violence during their stay in refugee camps from local population as well as from other refugees.<sup>11</sup>

The pattern of migration has changed over time, but the factors affecting the quality of life and psychological well-being remain the same. The large influx of Afghan refugees has affected neighbouring countries such as Pakistan. Afghan’s presence in the labour market directly affects their quality of life, because they are often informally employed without access to social protection.<sup>12</sup> Although Afghan refugees are present in Pakistan for more than four decades, there is a lack of research to assess their quality of life. The quality of life of refugees affects not only their ability to fully participate in society but also acts as a barrier to learn new skills. Health-related quality of life is influenced by individual factors (age, sex, genes), lifestyle factors (socioeconomic, cultural, linguistic barriers and substance abuse),<sup>13</sup> living conditions (access to clean water, sanitation and housing), working conditions (access to work, job), social and community factors (discrimination, social inclusion) and governance (documentation).<sup>8</sup> Knowledge about the health care system as well as health literacy are also important factors.<sup>14</sup>

Mental health and psychological well-being are the basis for social functioning of any human being. Health care professionals used the terminology well-being to relate health-related quality of life and mental health.<sup>15</sup> Overall, major depression was found in 30.8% of refugees, whereas post-traumatic stress disorder prevalence rate was 30.6%.<sup>16</sup> Investigations on war-influenced youths have identified changes in psychological well-being on social encounters. Trauma memories, mental health, and resilience were investigated by Panter-Brick *et al.*<sup>17</sup> in Afghan youths (11–16 years old) with their caregivers in Kabul (Afghanistan) and Peshawar (Pakistan). This study provided evidence on the association between posttraumatic distress and depression in Afghan youth. Furthermore, it showed that posttraumatic distress was less frequently observed in males as compared to females.<sup>17</sup>

Badshah *et al.*<sup>18</sup> investigated maternal risk factors in Pakistani mothers compared to Afghan-refugees in Peshawar, Khyber Pakhtunkhwa, Pakistan. The study showed a 2.6 times higher likelihood for low birth weight of neonates among the Afghan refugees. The reasons for low birth weight include living in tribal areas, no access to fresh water, low income, abortion/miscarriages, unregistered pregnancies, short inter-pregnancy intervals, and old age. However, there is a need

for further research to assess the factors impacting on maternal health in Afghan refugees to overcome their health risks.<sup>18</sup> This assessment is needed to explore the determinants of health-related quality of life, health beliefs, and the current health status of refugees in Punjab and Khyber Pakhtunkhwa, Pakistan.

## Methods

### Hypotheses and aims

Firstly, we consider that individual and lifestyle factors are associated with health-related quality of life among Afghan refugees in Pakistan. Secondly, we presume that there are differences in health-related quality of life due to living and working conditions among Afghan refugees in Pakistan. Thirdly, we expect that there is an association between social and community factors affecting health-related quality of life among Afghan refugees in Pakistan.

The main objectives of the study are:

1. to determine the health-related quality of life among Afghan refugees in Punjab and Khyber Pakhtunkhwa, Pakistan,
2. to examine the factors affecting health-associated quality of life and study their association among Afghan refugees in Punjab and Khyber Pakhtunkhwa, Pakistan,

The results should support to suggest measures to improve the health status of Afghan refugees in Punjab and Khyber Pakhtunkhwa, Pakistan.

### Study design

The investigation design was cross-sectional. The sampling frame for the current investigation was refugee's population in Khyber Pakhtunkhwa and Punjab, Pakistan. based on data from the United Nations High Commissioner for Refugees (UNHCR).<sup>19</sup> Khyber Pakhtunkhwa is accommodating more than 58% of the Afghan refugee population. Punjab is the largest local educated population province with maximum human development index in the country. Thus, both provinces qualify as a favorable setting for Afghan refugees' survey. We used validated instruments to collect information from Afghan refugees.

### Sampling technique

Multistage sampling was used to collect on-site data. In the first stage, clusters of Afghan refugees (District) were selected from each province by online data available. Clusters were selected on the basis of both sexes' participation in the pilot survey, because in some districts husbands did not allow their wives to take part in the study due to sociocultural factors. In the second stage, the number of Afghan participants were estimated from each district through proportionate sampling technique based on the population in each district. Finally, in the third stage, the calculated sample size was completed systematically due to non-data (refugee list) sharing policy of organizations working with the refugees. From the first ten refugee household's, the second was selected through random number generator. The desired sample size was achieved through visiting the households at a regular interval. The Afghan Proof of Registration (PoR) card was observed as a proof of their refugee status in the resident area.

### Sample size calculation

Sampling formula for known population was used:

$$\begin{aligned}\text{Size of Sample } n &= N/[1 + N(e)^2] \\ &= 35,082/[1 + 35,082(.03)^2] \\ &= 1,077\end{aligned}$$

N is total population of refugee families 35,082 and  $e \pm 3\%$  level of precision (sampling error). The chances of rejection were assumed as 10%. Therefore, the sample size was estimated at 1,185.

Proportionate random sampling technique was used to calculate actual sample size. The formula used to calculate the number of sample families in each province is:

$$\text{Formula (Sampling)} = n/N * 100$$

Table 1 illustrates the selection of Afghan refugees within the provinces.<sup>5,20,21</sup>

**Table 1. Selection of sample size among the provinces.**

Province (City)	Total families	Sample size	Proportion
<b>Khyber Pakhtunkhwa</b>	<b>32674</b>	<b>1104</b>	<b>0.93</b>
Haripur	11731	396	0.36
Mardan	2226	75	0.07
Peshawar	11662	394	0.36
Nowshera	7055	239	0.21
<b>Punjab</b>	<b>2408</b>	<b>81</b>	<b>0.07</b>
Kot Chandana Mianwali	2408	81	0.07
<b>Total families</b>	<b>35082</b>	<b>1185</b>	<b>1.0</b>

### Inclusion and exclusion criteria

The refugee families accessible in the study area during the time of data collection willing to participate were included in the study. Refugees with inability to understand consent procedures and to reply a questionnaire were excluded from the investigation. The objectives of the study were clearly explained to the families before the questionnaires were administered and written informed consent was obtained. Sampled families were guaranteed confidentiality and anonymity of the data throughout the study.

### Tools of data collection

Data was collected by using pre-validated questionnaires (Table 2). Quality of life was assessed with the World Health Organization Quality-of-Life Scale (WHOQOL-BREF) by applying standardized age and gender sampling quota.<sup>22</sup> According to sampling quota, 50% of the participants must be female and age-wise 50% of the participants must be older than 45 years of age. Psychological well-being was assessed by WHO-Wellbeing index<sup>23</sup> and mental health by the Refugee Health Screener.<sup>24</sup> The All Aspects of Health Literacy Scale (AAHLS) was used to measure health literacy.<sup>25</sup> Questionnaires related to factors affecting health and health care were developed from Syrian Refugee Health Access Survey in Jordan and Lebanon according to local needs of the population.<sup>26–28</sup> The existing internationally used instruments version with documented validity and reliability of English, Urdu and Afghan national Dari language was used. Permissions to use the tools were given by the stakeholders/authors. Afghan national bilingual research assistants were engaged for the data collection and linguistic interpretations of the Afghan national language according to the guidelines of WHO. Forward and backward translations were conducted under supervision of the principal investigator. The paper-based research questionnaires were administered to male respondents by Afghan national bilingual research assistants under the supervision of the first author and to female respondents by the fourth author with the help of research assistants in the research area. A team of two principal investigators and four trained research assistants supported the participants to fill in the questionnaires where needed. The research assistants were trained for two weeks before the field work.

### Data analysis

The data of the filled-out forms has been entered in SPSS version 24 for data analysis. Descriptive analysis includes calculation of frequencies and percentages, whereas inferential statistical tests were applied to measure the level of association between variables.<sup>29</sup> Logistic regression was performed to examine the relationship between variables at a 0.05 level of significance. The power  $1-\beta$  of the test is 0.80 at 95% confidence level. The relevant differences should be observed by odds ratios.

**Table 2. Measurement instruments of research variables.**

Variables	Measurement tool
Quality of life	WHOQOL-BREF
Well-being	WHO-Wellbeing index
Mental health	Refugee Health Screener
Health literacy	All Aspects of Health Literacy Scale
Factors affecting health and health care	Syrian Refugee Health Access Survey in Jordan and Lebanon

The data of the current investigation will be shared with scientific journals and associated data repositories. The data was coded and sub-coded to ensure that participant identification may not be revealed. The analysis was carried out by the principal investigator who is trained. The supervisors and team members also supported and guided during the analysis.

### Sources of bias

We tried to remove selection bias from the project by choosing a representative sample by utilizing WHO quality of life standard age and gender sampling quota. According to this, 50% of the participants must be female and age-wise 50% of the participants must be older than 45 years. As the final sample was collected by applying systematic random sampling, we make sure that the randomization of the participants in terms of age and gender must be followed to complete the sample size from the selected cluster. Although the refusal rate was quite high in the refugee population, we tried to include at least 50% of the respondents that responded to any survey for the first time. Appropriate probability sampling techniques and internationally accepted questionnaires are used to avoid recall bias. Interviewees were given sufficient time for recall of memory. The sample size calculated was 1,185 so that maximum responses should be available to conclude the results. Specific inclusion and exclusion criteria were established at the design stage so that our outcomes are correctly identified.

### Ethical considerations

The study is ethically permitted by the Advanced Studies and Research Board of the University of the Punjab, Lahore. Written informed consent for voluntary participation was obtained from respondents. The objectives of the study had been clearly explained to the participating families before the questionnaires were administered and written informed consent was obtained. Sampled families were guaranteed voluntary participation, confidentiality, and anonymity of the data throughout the study.

### Plans for dissemination of the study outcome

The results are going to be disseminated to the public by open defence and health care officials via outcome sharing, as this evidence is needed for policymaking related to adequate measures for improving health conditions of Afghan refugees in Pakistan. This investigation results will be submitted in the form of draft to the University of the Punjab, Lahore, Pakistan and Higher Education commission library, Islamabad for the record and guidance for the future investigations. The research will be submitted in the form of research papers to international journals.

### Study status

Data collection was initiated in March 2020 and completed in May 2021. Currently, the data is analyzed. A first manuscript draft will be finished by October 2021.

### Discussion

The Pakistani health care system met a number of public health challenges over the past decades. Afghan refugees are a significant population group which has to be served by provincial health facilities. In the 1980s and 1990s, the government of Pakistan focused mainly on addressing basic health care needs of refugees related to epidemics like malaria. More recently, the attention shifted to providing antenatal care and child health immunization coverage among refugees in Pakistan.<sup>30</sup> The strong focus on infectious diseases relates to a study by UNHCR in 2012, which emphasizes that the main health problems faced by refugees were skin diseases, typhoid, malaria, diarrhoea, measles, dysentery, hepatitis C, thalassemia, cholera and tuberculosis.<sup>31</sup> Afghan refugees experience several health risks which may increase the risk of infectious diseases. For that reason, Afghan refugees contributed to the spread of polio in Pakistan.<sup>32</sup> However, their health status has never been comprehensively evaluated.

This study will provide an overview of the health-related quality of life of Afghan refugees in Punjab and Khyber Pakhtunkhwa. A comprehensive approach using pre-validated questionnaires was used for assessment. The outcomes of families in different provinces and clusters will be compared for living conditions and social inclusion in their host areas.

### Limitations

Study limitations are that participants with inability to response to consent procedures and questionnaires were not included in the investigation. As for all epidemiological surveys, the inclusion of marginalised groups, such as refugees, is a major challenge for all kinds of surveys, particularly for health surveys. Although a random sampling technique was applied, various sampling procedures have shown limited success in migrant health research. Despite these limitations, the findings of the study will provide information on the current health status of Afghan refugees. There is a need for research in this regard to provide better health care facilities to refugees.

## Data availability

No data are associated with this article.

## Acknowledgments

We acknowledge support from the German Research Foundation (DFG) and the Open Access Publication Fund of Charite – Universitätsmedizin Berlin.

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