



The Effectiveness of a Training Program Based on Health Education to Improve Health Empowerment Level among Refugees in Jordan

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Received: 19/1/2022

Revised: 17/10/2022

Accepted: 4/9/2023

Published: 30/7/2024

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Citation: Al-Shraifin, A. A. ., Megdadi, M. ., Shatnawi, A. ., AlSobeh, A. A., & Akkawi, A. . (2024). The Effectiveness of a Training Program Based on Health Education to Improve Health Empowerment Level among Refugees in Jordan. *Dirasat: Human and Social Sciences*, 51(4), 204–222. <https://doi.org/10.35516/hum.v51i4.210>



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Abstract

Objectives: The study aimed to assess the effectiveness of a health education-based training program in enhancing the level of health empowerment among refugees in Jordan. Health empowerment is a crucial component of health promotion, enabling individuals to take control of their health, manage their health outcomes, and improve them. Refugees are a vulnerable population group with limited access to healthcare.

Methods: The study sample consisted of 38 refugees in Irbid governorate, Jordan, who were conveniently selected in coordination with some organizations working in the field of asylum in the governorate. They were randomly divided into two groups: an experimental group (n = 19) that received the health education training program, and a control group (n = 19) that did not receive any health education training. The Health Empowerment Scale (HES), a validated tool, was used to collect data from both groups in pre-tests and post-tests, and a follow-up test was conducted for members of the experimental group only.

Results: The results showed a statistically significant increase in the health empowerment scores for the experimental group that received the training program compared to the control group. The mean of the pre-test for the experimental group was (1.97 ± 0.27) , and for the control group, it was (1.84 ± 0.21) . The post-test mean for the experimental group became (3.88 ± 0.13) , while for the control group, it was (1.85 ± 0.20) . The follow-up test indicated sustained enhanced levels of health empowerment in the experimental group, with little difference between the post-test and follow-up scores, indicating the effectiveness of the health education training program in enhancing health empowerment for refugees in Jordan.

Conclusions: Healthcare providers and policymakers in Jordan and other countries hosting large numbers of refugees have significant responsibilities. Giving sufficient priority to health education and awareness programs is essential to enhance the health empowerment of refugees and improve their health literacy, which ultimately impacts their overall public health.

Keywords: Refugees, health education, health empowerment, vulnerable populations, Jordan.

فاعلية برنامج تدريبي مستند إلى التثقيف الصحي في رفع مستوى التمكين الصحي لدى اللاجئين في الأردن

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ملخص

الأهداف: هدفت الدراسة إلى تقييم فعالية برنامج التدريب القائم على التثقيف الصحي في تعزيز مستوى التمكين الصحي بين اللاجئين في الأردن. يعد التمكين الصحي مكوناً رئيساً لتعزيز الصحة؛ حيث إنه يمكن الأفراد من التحكم في صحتهم وإدارة نتائجهم الصحية وتحسينها. اللاجئون هم فئة من الفئات السكانية المستضعفة والتي لها محدودة الوصول إلى الرعاية الصحية.

المنهجية: تكونت عينة الدراسة من 38 لاجئاً في محافظة إربد، الأردن، والذين جرى اختيارهم بالطريقة المتيسرة من خلال التنسيق مع بعض المنظمات العاملة في مجال اللجوء في المحافظة، إذ تقسمهم عشوائياً إلى مجموعتين: مجموعة تجريبية (n = 19) تلقت برنامج التدريب على التثقيف الصحي، ومجموعة ضابطة (n = 19) لم تتلق أي تدريب على التثقيف الصحي. استُخدم مقياس التمكين الصحي (HES)، وهو أداة جرى التحقق من صحتها، بغرض جمع البيانات من كلا المجموعتين في الاختبارات القبلي والبعدي، وأُجري اختبار متابعة لأعضاء المجموعة التجريبية فقط.

النتائج: أظهرت النتائج زيادة ذات دلالة إحصائية في درجات التمكين الصحي للمجموعة التجريبية التي تلقت البرنامج التدريبي مقارنة بالمجموعة الضابطة؛ حيث كان الوسط الحسابي للاختبار القبلي للمجموعة التجريبية (1.97 ± 0.27) ، وللمجموعة الضابطة (1.84 ± 0.21) ، وأصبح للاختبار البعدي في المجموعة التجريبية (3.88 ± 0.13) ، بينما للمجموعة الضابطة (1.85 ± 0.20) . كما أظهر اختبار المتابعة الحفاظ على مستويات التمكين الصحي المعززة في المجموعة التجريبية، مع عدم وجود فرق كبير بين درجات الاختبار البعدي والمتابعة؛ مما يدل على فاعلية برنامج التدريب على التثقيف الصحي في تعزيز التمكين الصحي للاجئين في الأردن.

الخلاصة: هناك مسؤوليات كبيرة على مقدمي الرعاية الصحية وصانعي السياسات في الأردن وغيرها من الدول التي تضم أعداداً هائلة من اللاجئين. من الضروري إعطاء أولوية كافية للتعليم الصحي وبرامج النشاط التوعوي لتعزيز التمكين الصحي للاجئين وتحسين ثقافتهم الصحية؛ مما ينعكس على الصحة العامة لديهم.

الكلمات الدالة: اللاجئون، التثقيف الصحي، التمكين الصحي، السكان المستضعفون، الأردن

Introduction

The number of refugees and displaced persons has increased rapidly in recent decades, becoming a major global challenge (Reynolds, 2019). The most important challenges facing host countries include the provision of protection and basic services such as shelter, food, health care, and education (Chemali et al., 2018; Thoresen et al., 2016). During the past two to three decades, there has been growing awareness of the psychological, social, and material needs of refugees (Esses et al., 2017).

The situation of Syrian refugees in Jordan is similar to that of refugees in other parts of the world in terms of economic, social, political, legal, and psychological aspects. Refugees endure poverty, discrimination, exploitation, lack of access to health services, and social exclusion, in addition to a number of health and psychological problems resulting from their ordeal since the beginning of the crisis (Al-Qdah and Lacroix, 2016).

No matter how different and varied the circumstances, refugees remain worthy of respect and deserve the rights that guarantee them a decent life. This was stressed by the United Nations Convention (UNC) of 1951 and its Protocol of 1967 concerning international human rights (UNHCR, 2018). Jordan is not a signatory to the 1951 UNC or its 1967 Protocol (Francis, 2015). However, Jordan is committed to the Arab Charter on Human Rights of 2004 (League of Arab States, 2004).

Jordan makes its government services, such as education and health, accessible to Syrian refugees (Al Shobaki, 2018). Jordan also cooperates with the UNHCR to assist refugees, including Syrians, under the 1998 Memorandum of Understanding (UNHCR, 2018), which states that refugees can enter Jordan without a visa or residence permit and stay. This allows them to receive various mental and physical health services at public health care centers.

However, refugees still experience many problems that require periodic evaluation during their asylum in Jordan. Periodic evaluation would provide stakeholders with a sound understanding on which to base their assistance to refugees and find sustainable solutions to their problems. The psychological distress of the refugees is worsened by several factors, including economic, social, health, and psychological issues. The most prominent needs are housing, security, food, income, and the poor distribution of foreign aid. This leads some refugees to sell food aid to obtain money for other needs, such as accommodation rental. Notably, these needs fall under economic needs (Wells et al., 2016).

Estimating the precise number of Syrian refugees in Jordan is challenging due to the registration process and the documents available. However, around five million Syrian refugees are in Jordan, Lebanon, and Turkey, most of whom suffer from economic and health problems (Krafft et al., 2018). Although international agencies cover the cost of the health services provided to Syrian refugees in Jordan, the majority of Syrian refugees live outside the camps, making it difficult to determine the number of beneficiaries (Verme et al., 2015). Jordan is the second-largest host of Syrian refugees in the region, with refugees making up around 10% of its population. Most of these refugees are female, which may be attributed to cultural preferences in Arab countries, leading them to choose neighboring countries over traveling to European countries (Ajlan, 2021; Stevens, 2016).

Syrian refugees in Jordan suffer from various physical problems, some related to the consequences of war and others not. About 16% of Syrian refugees in Jordan have chronic conditions, and they face challenges related to personal care behaviors and walking ability, which is twice as high as that of the general population in Jordan. Most refugees' medical cases require regular follow-ups. More than sixty percent of Syrian refugees in Jordan seek medical help within their immediate surroundings, while the rest have enough money to travel farther in search of better medical services (Tiltne et al., 2019).

The integration of refugees into Jordanian society is not only achieved through environmental factors (e.g., community tolerance and non-discrimination policies) but also through individual factors (e.g., personal skills and abilities) and psychological empowerment factors. Therefore, empowering refugees is critical to their integration into society (The European Council on Refugees & Exiles, 2002). This empowerment is the primary objective behind their resettlement as active members of society (Tomlinson and Egan, 2002).

Although empowering refugees is complex (Steimel, 2017), it is an active and multidimensional process, which is

defined as the idea of people having the ability to understand and control themselves and their environments (including health, social, economic and political factors), expand their capabilities and horizons, and elevate themselves to higher levels of achievement and satisfaction (Lee, 2005). This gives them a chance to become agents of change within their communities. It is more than just the acquisition of knowledge and skills by refugees. This involves the acquisition of knowledge and skills that are relevant and important to their lives, and the ability to apply them to real-world situations, communities and environments with the aim of strengthening and improving them (Acree, 2018). Moreover, it contributes to enhancing the ability of the individuals or groups to make meaningful choices and transform those choices into desirable actions and results (Alsop et al., 2006) through the individuals' realization that they possess the knowledge, ability, and competency to be effective members in their societies (Adams, 2003). It is a collective action, in which members of marginalized or oppressed communities unite to create social change (Bookman & Morgen, 1988). The empowerment actively involves people in making decisions about their well-being, potential, life satisfaction, and outcomes of achieving control over their lives to the fullest extent possible (Nachshen, 2005).

Cowger and Snively (2002) pointed out that individuals are able to make their own choices and decisions. This does not merely mean that individuals possess the strengths and capabilities to solve their difficult life situations, but that they also increase their strength and contribute to the well-being of their community. The role of psychologists and social workers here is to nurture, encourage, help, empower, support, motivate, and unleash the power within people; and to promote equity and justice at all social levels (Alsop et al., 2006). To do this, psychologists help clients clarify the nature of their situations, define what they want, and explore alternatives to achieve those desires.

Chamberlain (1997) views empowerment from the perspective of mental health rehabilitation, referring to it as a process characterized by decision-making power and access to information and resources (Perkins & Zimmerman, 1995; Zimmerman, 1995, 2000). In contrast, disempowerment includes stress, frustration, and despair (Koegel et al., 2003). From the perspective of humanitarian work with refugees, empowerment is achieved by supporting individuals to meet their needs and achieve their personal goals (Hiegemann, 2013).

Various governmental and non-governmental institutions, as well as international organizations, are making great efforts to promote health empowerment among refugees by providing appropriate health education and awareness programs and establishing health centers that offer suitable health services (Almoshmosh, 2016). The significant increase in the number of refugees, especially between 2014 and 2015, has urged international institutions to prioritize the need for refugees and displaced persons to obtain adequate and appropriate health care services. This requires concerted efforts at regional and international levels (Samara et al., 2022).

It is evident that modern life has changed our lifestyle. On the one hand, we have become physically inactive as most tasks can be accomplished with minimal physical effort. On the other hand, we have become less interested in maintaining healthy practices due to living in a state of ease and comfort, leading to the emergence of many health problems, especially obesity and its associated consequences. As a result of modern life, obesity has been viewed as a pandemic that has spread in many societies (Sudikno et al., 2021). The failure to maintain a balance between the desire to avoid exertion and the need to preserve good health exposes individuals to various health issues. Therefore, efforts should be made to introduce positive changes to people's lifestyles with a focus on raising health awareness in the community (Razak et al., 2020).

Practicing a healthy lifestyle is not limited to physical activity but includes any behavior that affects an individual's health, such as smoking, inappropriate diet and eating habits, lack of physical activity, alcohol intake, and other behaviors that strongly influence overall health (Leyland & Groenewegen, 2020). Societies place great importance on behaviors that significantly affect individuals' health. Norman and Conner (1996) stated that the importance of healthy lifestyle behaviors stems from statistics indicating that several different unhealthy behaviors are associated with a marked increase in deaths worldwide. Moreover, health-related behaviors can be altered, modified, and improved, which contributes to reducing related health risks.

Interest in healthy behavior has had several definitions over different periods; it was once called "health education." In the 1970s, health education was known as the process that aims at "bringing about positive behavioral changes in individuals

which are conducive to their present and future health" (Glanz et al., 2008, p. 49). In the 1980s, it was defined by Green et al. (1980) as a set of learning experiences designed to facilitate behavioral changes that improve an individual's overall health. According to the World Health Organization (WHO), as mentioned in Nutbeam (1998), "Health education comprises consciously constructed opportunities for learning that are built to contribute to the improvement of individual and community health. This involves some form of communication with different parties such as individuals, schools, and workplaces to improve health literacy, including improving knowledge and developing life skills that are conducive to individual and community health." Health education is not only concerned with the communication of information but also with fostering the motivation, skills, and confidence necessary to take action to improve health, all of which contribute to improving and maintaining health awareness (Nutbeam, 1998).

The term "health literacy" has been used by Zumbo et al. (2006). It refers to the degree to which people can access, understand, and communicate information to engage with the demands of different health contexts to increase opportunities for promoting and maintaining good health across the life course (Sørensen, 2012). Moreover, promoting health is the process of enabling people to increase control over and improve their health. The focus is moving from individual behavior toward a wide range of social and environmental interventions (WHO, 2016; Shearer & Fleury, 2006). In sum, health education, whether for individuals or societies, is a crucial component in the process of public health management and protection. Despite the different terms being used, they are all identical in meaning (Glanz et al., 2008).

Healthy behavior contributes to public health in all societies, but when it comes to the health of refugees, it becomes more complex. This complexity arises from the different life priorities and needs of refugees. For example, securing the basic needs required for maintaining a decent standard of living for the family often takes precedence over concerns about the various health needs of an individual or even their family members. Refugee and asylum issues in modern times are often associated with political issues, which reduce opportunities for growth and development within the refugee community, including access to health care services. Additionally, refugees continue to face health problems even after integration into the host community; they often find themselves obliged to do jobs that lack proper safety and health protection or that members of the host community are usually unwilling to do (Bempong et al., 2019).

Rechel et al. (2011) noted that there has been a lack of understanding of the health needs of refugees and immigrants in the European Union and limitations in the accessibility and delivery of proper healthcare. Moreover, communication between refugees and migrants and their health care providers has been assessed, and findings indicate significant limitations in effective communication, with local healthcare systems failing to adapt adequately to the specific needs of this population. Scholz (2016) pointed out that most refugees and migrants originate from countries with weak health systems, and the various factors of poverty and conflicts in those countries have affected these systems' ability to provide proper healthcare services.

The World Health Organization (WHO, 2016) believes that the health problems of refugees and migrants are similar to those of the rest of the population, although some groups may have a higher prevalence. The most frequent health problems of refugees and migrants include accidental injuries, hypothermia, burns, gastrointestinal illnesses, cardiovascular diseases, pregnancy- and delivery-related complications, diabetes, and high blood pressure. The suffering of refugees is also associated with poor living conditions, such as unemployment and poor housing, which increase their risks for various health problems and limit their ability to access health care services and meet their basic health needs (Daynes, 2016; Androutsou & Metaxas, 2019).

Planning public health programs that aim to protect and improve the health of people and their communities requires effective planning and management. This is essential for achieving the program's overall objectives and ensuring the best chance of success when implementing various public health initiatives. Health program planners can overcome risks that might threaten program success by using health behavior models and theories to understand and explain health behavior. Although addressing multiple unhealthy behaviors can be challenging, these models can help in planning different health programs (Simpson, 2015).

Some studies (Bolzman, 2014; Rizkalla et al., 2020) have indicated that children and older refugees are at greater risk

and are the most in need of health empowerment. Social networks play a significant role in the health care and health empowerment of the elderly. Shearer and Fleury (2006) noted that social connections have powerful effects on the health and well-being of older people, enhancing health empowerment and helping them manage their health needs. On the other hand, refugee children notably suffer from many health problems such as malnutrition and vitamin deficiencies, particularly deficiencies in vitamins D, B12, and A, as well as iron deficiency (Shah et al., 2020).

A brief review of the literature reveals that researchers have found several studies addressing aspects of health in refugees, which can be divided into two categories:

First: Studies that are related to healthcare services provided and its obstacles:

Rousan et al.'s study (2018) sought to determine how Syrian refugees perceive the healthcare services provided. The research findings showed that health problems, particularly chronic diseases and mental health issues, are the main challenges facing Syrian refugees in Jordan. Economic problems, such as poverty and the inability to secure income, are significant obstacles to accessing healthcare. The study also indicated that refugees see increased livelihood opportunities as a potential solution to these problems.

Frost et al.'s study (2018) aimed to evaluate the feasibility, acceptability, and perceived impact of a yearlong health education intervention to empower Burmese refugee women living in Houston, Texas, in the United States. This formative qualitative study included interviews with Burmese refugee women who participated in the intervention. The final sample consisted of 11 refugee women. After a qualitative content analysis, the study results indicated that the motivation to participate in the intervention was influenced by the women's perception of the relevance of the health education material to Burmese cultural values.

Khan-Gökkaya and Mösko (2020) conducted a study to identify the challenges and barriers faced by refugee health professionals (RHPs) in Germany as they reenter their original occupations and to explore the policies used to address these challenges. The study used a qualitative research method, and interviews were conducted with 24 participants. The interviews were analyzed using qualitative content analysis. Several main barriers were identified, most notably a lack of language competencies, unfamiliarity with the healthcare system, difficulties in dealing with staff members, relationships with patients, and experiences of discrimination. The results also indicated the need to create an appropriate professional environment to address these barriers. The most prominent personal strategies used by health professionals included being patient, believing in their qualifications, and sharing experiences with staff members. Regarding barriers to dealing with the work team, positive communication and mutual support were found to be effective strategies.

Price et al. (2020) demonstrated the urgent need for greater accessibility to comprehensive sexual and reproductive healthcare services among Syrian refugees residing in Jordan. They conducted an ethnographic case study involving 21 male and female Syrian refugees residing in Amman, purposefully selected as participants. The study interviews examined participants' experiences regarding their pregnancy outcomes, influencing factors for their reproductive decisions, and gaps in sexual and reproductive healthcare in Amman. The findings indicated a significant need specifically related to education on contraceptive methods.

Riza et al. (2020) aimed to identify the most promising best health practices for migrants and refugees. They performed a scoping review of the international academic literature on effective community-based healthcare models and interventions for migrants and refugees, as well as academic publications of international organizations. Data collection involved a systematic search in several databases, such as EMBASE, PubMed, and Scopus, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology. Data extracted from eligible publications included information on general study characteristics, a brief description of the intervention/model, and reported outcomes in terms of effectiveness and challenges. Specific criteria were then developed to assess these interventions. A total of 118 academic publications were critically reviewed and categorized into thematic areas. The results indicated that elements such as good communication, linguistic barriers, and cultural differences played crucial roles in the effective application of the interventions. Additionally, the close collaboration of various stakeholders, local communities, migrant/refugee

communities, and partnerships were key elements in the successful implementation of primary healthcare provision.

Kiani et al.'s study (2021) aimed to illustrate the status of refugees' access to healthcare and the main initiatives to improve their health status in Iran. The authors conducted a mixed-method study with two consecutive phases: qualitative and quantitative. In the qualitative phase, the right of refugees to access healthcare services in the Iranian health system was examined through a review of seven documents and interviews with purposively selected healthcare providers. In the quantitative phase, data on refugees' insurance coverage and their utilization from community-based rehabilitation (CBR) projects were collected and analyzed. Quantitative data were collected from refugees covered under the Universal Health Insurance Scheme and several refugees with physical disabilities who were included in the Community Based Rehabilitation project (CBR). The results indicated the existence of international and upstream policies, laws, and practical projects that support refugees' health in Iran. Refugees and immigrants have free access to most healthcare services provided in the healthcare network in Iran. They can also access curative and rehabilitation services, the costs of which depend on their health insurance status.

Second: Studies that are related to refugee's health problems:

Strong et al. (2015) conducted a study aimed at identifying the physical and emotional conditions, dietary habits, coping practices, and living conditions of elderly Syrian refugees in Lebanon. The study involved a sample of 210 elderly individuals aged 60 years and older selected from a list of 1800 elderly people receiving assistance and support from The Caritas Lebanon Migrant Center (CLMC) and the Palestinian Women's Humanitarian Organization (PALWHO). Social workers from CLMC and PALWHO collected qualitative and quantitative information in 2013. The Katz Index of Independence in Activities of Daily Living (Katz ADL) was used. The findings revealed a high level of health problems among the study sample, with two-thirds of the older refugees describing their health status as poor or very poor. Most reported at least one non-communicable disease, with 60% having hypertension, 47% reporting diabetes, and 30% indicating some form of heart disease. Difficulties in affording medicines were reported by 87%. The results also indicated that the diet was inadequate for most older refugees.

Nelson-Peterman et al. (2015) conducted a study aimed at identifying the factors influencing the public health of a sample of Cambodian refugee women in the United States. The researchers designed a questionnaire involving a set of factors affecting health, which was applied to a sample of 160 women in Massachusetts aged 35 to 60 years. The findings showed low smoking rates (4%) and low rates of walking exercise, with 50% of the participants indicating that they did not practice walking twice a week. Additionally, 73% of them suffered from obesity according to the criteria of the World Health Organization.

Khan and Amatya's study (2017) aimed to provide an overview of the health conditions of refugees and potential challenges from a rehabilitation perspective. The authors conducted the study using medical and health science electronic databases and internet search engines from 2001 to 2016. Both authors independently selected studies, and due to the heterogeneity of the selected studies, a narrative analysis was performed for best-evidence synthesis to outline the current health and rehabilitation status of refugees. The results indicated that infectious diseases requiring treatment in refugees are a minority, while some non-communicable diseases, such as musculoskeletal conditions, are more prevalent. Additionally, one in every six refugees suffers from a physical health problem severely affecting their lives, and nearly two-thirds experience mental health problems. The study also emphasized the important role of health rehabilitation for refugees.

Rizkalla et al. (2020) conducted a study aiming to examine Syrian refugee mothers' accounts of the physical and mental health of their children affected by war traumas and displacement challenges. The study recorded interviews with 23 mothers aged 21 to 55 residing in Jordan after obtaining consent from participants. Using a narrative approach in data collection and analysis, major themes related to the diverse war-related traumatic events the children experienced in Syria or during their escape journey, and the difficulties the children currently face, were identified. The study provides empirical findings that war events and displacement have adversely impacted both the physical and mental health of Syrian refugee children, with many of them struggling to secure a decent life. Instances of sexual violence against children were reported,

and displacement exposed them to poverty, decreased food quality, hostility from local peers, and educational and recreational challenges.

Previous studies clearly indicate relatively high health problems among refugees (Nelson-Peterman et al., 2015; Strong et al., 2015). Some of these studies aimed to evaluate health education interventions (Frost et al., 2018), while others investigated refugees' access to health services (Doocy et al., 2016; Kiani et al., 2021). The studies also involved different categories of the refugee community; some included refugee women (Nelson-Peterman et al., 2015; Frost et al., 2018), others included elderly refugees (Strong et al., 2015), while some investigated the impact of displacement on the general health of children (Rizkalla et al., 2020). It is evident from the above review that previous investigations have focused on multiple health issues of refugees, which is crucial for understanding the refugees' health conditions. However, previous research did not directly investigate the impact of a health education program on the target refugee community, highlighting the significance of the current research.

Significance of the Study

This study aims to address one of the major issues affecting the lives of refugees, namely the health condition of Syrian refugees. Providing health education to Syrian refugees can significantly increase awareness of health issues across all population categories, including children, adults, the elderly, and women, thereby facilitating their access to specialized medical resources. It is crucial to recognize that physiological needs represent the most basic requirements at the lowest level of the individual hierarchy of needs, which must be fulfilled before addressing more advanced needs. By aligning priorities according to the hierarchy of needs, efforts can be made to restore a sense of balance among refugees.

Despite the commitments made by countries and various international organizations to provide health support and medical assistance to refugees, the outcomes often fall short of expectations. Therefore, this study aims to explore the health status and healthcare access of Syrian refugees in Jordan. The insights gained from this research will inform decision-makers and international organizations in the development of health empowerment programs tailored to Syrian refugees in Jordan. Successful outcomes from this study will also pave the way for generalizing the findings to refugee communities beyond Jordan and across different countries worldwide.

Statement of the Problem

The problem addressed in this study arises from findings of previous research indicating the prevalence of various health issues among refugees and migrants (Nelson-Peterman et al., 2015; Strong et al., 2015; Khan & Amatya, 2017). Pinheiro and Jaff (2018) highlighted difficulties faced by Syrian refugees in Jordan in accessing healthcare services, underscoring the need for health education and promotion programs to enhance awareness of public health and available resources. Sharp et al. (2018) reported a higher prevalence of chronic diseases among Syrian refugees in Jordan compared to their Jordanian counterparts. Rechel et al. (2011) emphasized the importance of focusing on refugee health to gain comprehensive knowledge and understanding of their specific healthcare needs. Additionally, Khan and Amatya's study (2017) highlighted the effectiveness of rehabilitation interventions in improving health-related quality of life and community health.

Despite Jordan's advanced healthcare system, recognized as one of the best in the region, the influx of refugees inevitably strains its capacity to deliver adequate health services (Pinheiro and Jaff, 2018). Health issues persist as a significant challenge in all societies, with countries and governments prioritizing the provision of quality healthcare for all citizens. However, addressing the healthcare needs of refugees, given the myriad challenges they encounter, becomes particularly crucial. Therefore, this study aims to propose a health education program tailored to Syrian refugees in Jordan.

Research Questions

This study aims to answer the following questions:

1. How effective is a training program based on health education to raise the level of health empowerment among refugees in Jordan?
2. How effective is a continuing health education-based training program in raising the level of health empowerment among refugees in Jordan?

Study Hypotheses

1. The first hypothesis: There are no statistically significant differences at the level of significance ($\alpha = 0.05$) between the average scores of the members of the experimental group and the average scores of the members of the control group on the health empowerment scale.
2. The second hypothesis: There are no statistically significant differences at the level of significance ($\alpha = 0.05$) between the average performance of the experimental group in the post-test of the health empowerment scale (HES) and their average scores in the follow-up test a month after the end of the program.

Limitations of the study

The possibility of generalizing the study findings depends on several factors. Firstly, it relies on the demographic characteristics of the study sample, consisting of refugees in Irbid Governorate, Jordan, who exhibited poor health behaviors. Secondly, it hinges on the research design employed, which utilized a quasi-experimental approach with two groups (experimental and control) subjected to random assignment, along with pre-post and follow-up measurements. Additionally, the study's findings' generalizability is influenced by the psychometric properties of the data collection tools, predominantly based on self-report data and participants' responses on the health behavior scale. Moreover, the elements of the training program utilized in the study and the Spatio-temporal model employed throughout the research procedures also contribute to determining the generalizability of the findings.

Key Terms

Health Empowerment: Health education is the process aimed at fostering positive behavioral changes in individuals conducive to their present and future health (Glanz et al., 2008). In the context of the current study, health empowerment is defined as the degree to which respondents score on the scale used to measure health empowerment.

Syrian Refugees: These are individuals from Syria who have fled the country amid the Syrian Civil War that began in 2011, seeking safety and stability in Jordan to protect themselves and their families from various acts of violence. For the purposes of the current study, Syrian refugees are defined as those participating in the health education-training program.

Methods and Procedures:

Study Sample

The study sample comprises a selection of refugees residing in Irbid Governorate, Jordan, during the period from October 1st, 2021, to March 30th, 2021. Utilizing convenience sampling, several associations and organizations offering psychosocial and health support services to refugees in Irbid were chosen. These entities collaborated with the researchers to announce the training program, which was conducted in the premises of one of these associations. The Health Empowerment Scale (HES) was adapted and administered to all beneficiaries of the various services. Subjects were randomly chosen from a large pool of Syrian refugees receiving assistance from the selected associations and organizations engaged by the researchers. A sample size of $n = 38$ refugees, who expressed interest in participating in the program and obtained the lowest scores on the HES, was selected to represent the study sample. The subjects were then randomly assigned to two groups: the experimental group ($n = 19$) consisting of refugees who underwent the training program, and the control group ($n = 19$) comprising refugees who did not receive any training intervention.

Study Tools

First: Health Empowerment Scale (HES): Serrani Azcurra DJL (2014). Elders Health Empowerment Scale. Spanish adaptation and psychometric analysis was adapted because of its excellent validity and reliability criteria while reflecting the attributes of health empowerment. The scale consists of (8) items to which the refugee responds to a five-point scale and has psychometric properties (validity and reliability) used in similar studies.

Psychometric Properties of the Scale in its Current Form

To assess the psychometric properties of (HES) in its current form, the scale has been translated from English into

Arabic by a group of specialized faculty members to assess the translation validity. Their comments about the validity, clarity, comprehensibility, and conceptual and operational comparability of the translation were taken into consideration.

Face Validity

The translated version of the Health Empowerment Scale (HES) was presented to 10 specialist professors who were asked to review the validity, language clarity, and conceptual equivalence of the translated items for the study sample. Based on the reviewers' feedback, modifications were proposed regarding the modes of expression and wording of the scale items. Researchers adopted the proposed modifications when 80% of the reviewers reached a consensus agreement on the drafted scale items, resulting in the scale comprising 8 items.

Indicators of Construct Validity

An initial sample of $n = 30$ refugees, who were not part of the target group, was used to measure construct validity. Construct validity indicators were assessed using the item coefficient correlation with dimension. It was observed that the coefficient correlation values of the items with the total score on the scale ranged between 0.48 and 0.63. Acceptance of item construct validity was demonstrated by the fact that the correlation coefficient should not be less than 0.20, as stated by Zuckerman and colleagues (Zuckerman et al., 2004). Thus, all scale items were deemed acceptable.

Scale Reliability

Internal Consistency Reliability: Internal consistency of the (HES) was indicated with a Cronbach's alpha coefficient of (0.86) in the initial sample.

Test-Retest Reliability: The **reliability of (HES)** was tested by using **test-retest**.

To assess the test-retest reliability, the scale was re-applied to the initial sample ($n= 30$) two weeks later. It was tested with the Pearson correlation coefficient which was (0.89).

The Training Program

The training program utilized in the current study was crafted after a thorough consideration of the diverse needs of Syrian refugees pertaining to their health issues. It was developed through collaboration and consultation with various specialists and refugees who were interviewed by the researchers. Drawing inspiration from analogous programs targeting the study variables and referencing numerous scientific sources and literature specialized in psychological support and health empowerment, the program was meticulously constructed.

The implementation phase of the program spanned five days over a three-week period, encompassing a total of 10 training sessions. Each session typically lasted around 120 minutes, contingent upon the content covered. However, owing to Covid-19 restrictions, the program's duration was condensed to three days, with intensified training sessions held each day.

The design of the training program adhered to the ADDIE model for instructional design, which comprises five stages characterized by a logical sequence, as delineated by Davis (Davis, 2013). These stages are as follows:

Analysis: The authors conducted a comprehensive analysis of various aspects, including the characteristics of the refugees, the physical environment of the training centers, the skills and competencies of the training staff, and the existing programs offered to refugees within the centers and organizations. This analysis aimed to ensure that there was no overlap in the content covered in the program sessions focused on psychosocial support.

Design: The articles of the training content were identified, and the general and specific objectives of the program were defined. Studies and research that dealt with support programs for refugees were reviewed. The ways and means of preparing the program were identified, and how to apply it procedurally to the members of the current study sample.

Development: At this stage, the training program based on health education was developed as follows:

The program aims to investigate the effectiveness of health education in improving the level of health empowerment among refugees. This is to enhance their ability to deal with the health problems they face in their lives and help them become aware of self-health and its requirements and understand the foundations of reducing communicable and infectious diseases, and the foundations of limiting their complications. The program also aims to develop their skills in general health care for children, pregnant women, and the elderly. Each session includes specific objectives, techniques, exercises, activities, and homework.

Tools and methods used: The following tools and methods were used in the program: Dialogue and discussion, reinforcement, role-playing, questions, self-affirmation, feedback, self-monitoring, self-control, positive self-talk, homework, storytelling, board, toys, boosters, crayons, cuddly stimuli, sketchbooks, wooden pens, and boards.

The content of the program in its initial form: The program initially consisted of (5) sessions, one session per week, and the duration of each session was (90) minutes.

Indications of the validity of the program: To verify the validity of the program, it was presented to specialized 10 reviewers. The reviewers recommended the following: correcting some language errors, increasing the time period for the sessions, changing some topics of the sessions, modifying the content of some sessions, and increasing the number of sessions.

The content of the program in its final form: All reviewers' recommendations were taken into consideration and the necessary changes were made such as correcting the language errors and increasing the time period for one session. Thus, the number of sessions of the program in its final form reached (10) training sessions, each session lasting (120) minutes. Here is a summary of the program:

- The program is founded on a fundamental concept that underscores the strong correlation between endeavors to instill positive changes in individuals' lifestyles, with a particular emphasis on raising awareness of health behaviors within the community. This, in turn, bolsters the sense of health empowerment among refugee individuals through psychosocial support rooted in health education. It systematically incorporates a series of sequential objectives, providing a cohesive framework, the adherence to which facilitates the optimal attainment of health empowerment. These objectives are dispersed across the ten sessions comprising the program. Each session encompasses a diverse array of sensory and cognitive exercises aimed at realizing the objectives delineated within them. These objectives encompass: understanding the prevailing health conditions of refugees, recognizing the significance of safeguarding fundamental resources such as food and water safety, fostering awareness of self-health and its requisites, and establishing the foundations for its maintenance. Additionally, the objectives encompass introducing strategies for mitigating communicable and infectious diseases, mitigating the exacerbation of chronic illnesses, cultivating an understanding of the principles of pediatric, maternal, and geriatric healthcare, and acquainting participants with appropriate avenues for accessing healthcare services.

Implementation: During this phase, the program was executed at Yarmouk University by specialists who underwent thorough preparation to ensure mastery of the program's content. The program sessions, their contents, and the dates of their implementation were collaboratively planned and executed by researchers and trainers. It's worth noting that trainers were chosen based on their experience and expertise in health. The program was administered to the experimental sample comprising (19) male and female refugees, with the sessions conducted in a dedicated training hall tailored to the application requirements and the needs of the refugees.

Evaluation: Evaluation of the program was conducted continuously throughout all stages of its design and implementation. Following each phase of program development, the outputs were reviewed by a panel of specialized reviewers to assess the program's design quality and the alignment of its objectives with the target group's needs. Feedback from the trainers, who underwent training to deliver the program, as well as input from the refugees, was also taken into account.

Study variables

The independent variable: It is the variable being tested and measured in the two study groups: The experimental group (which received the training program) and the control group (which did not receive the training program). **The dependent variable:** It is the level of refugees' health empowerment.

Statistical Analysis

After collecting data from the study sample, the researchers calculated the means and standard deviations using a pre, post, and follow-up measures, ANCOVA methods, and (T-Test).

Study Results

First: Results related to the first question.

To answer the first question: How effective is a training program based on health education to raise the level of health empowerment among refugees in Jordan?

The following hypothesis was formulated: There are no statistically significant differences at the significance level ($\alpha = 0.05$) between the average scores of the members of the experimental group and those of the control group on the Health Empowerment Scale (HES). To test the validity of the study's first hypothesis, which posits that "there are no statistically significant differences at the significance level ($\alpha = 0.05$) between the average scores of the experimental group and the control group in the post-test of the HES," the arithmetic means and standard deviations of the pre- and post-measures of refugees' health empowerment were calculated based on the group variable (experimental and control). Table (1) illustrates these results.

(Table 1): The means and standard deviations of the responses of the study groups (experimental and control) (n= 38) on (HES) in the pre and post-tests according to their variables

GROUP		pre	post
EXPERIMENTAL	Mean	1.9737	3.8837
	N	19	19
	Std. Deviation	.27091	.13817
CONTROL	Mean	1.8411	1.8595
	N	19	19
	Std. Deviation	.21494	.20748
TOTAL	Mean	1.9074	2.8716
	N	38	38
	Std. Deviation	.25039	1.04032

Table (1) shows that there are significant differences between the means of the experimental and control groups (n = 30) on (HES). To verify the significant differences, the one-way ANCOVA analysis was used after taking into account (HES) pre-test for both groups as a common variable for the presence of variance in the (HES) post-test. Table (2) illustrates these results.

(Table 2) One-way analysis of covariance (ANCOVA) of (HES) post-test according to the group variables

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	39.292 ^a	2	19.646	913.956	.000	.981
Intercept	2.533	1	2.533	117.816	.000	.771
a_pre	.366	1	.366	17.036	.000	.327
GROUP	34.195	1	34.195	1590.820	.000	.978
Error	.752	35	.021			
Total	353.391	38				
Corrected Total	40.044	37				

a. R Squared = .981 (Adjusted R Squared = .980)

Table (2) indicates that there are statistically significant differences ($\alpha = 0.05$) between the mean Health Empowerment Scale (HES) scores measured before and after the intervention among the refugees who participated in the study. To ascertain which of

the two study groups (experimental and control) exhibits the most noticeable differences, the adjusted mean of HES scores among refugees was computed based on the group, along with their standard errors, as depicted in Table (3).

Table (3): The modified mean and standard errors of (HES) post-test according to the group variable.

Standard error	Modified arithmetic mean	Group	Variable
0.034	3.856	Experimental	Health Empowerment
0.034	1.887	Control	

Table (3) demonstrates that the notable differences favor the experimental group, which underwent training on health empowerment, compared to the control group, which did not receive any training. Consequently, the researchers rejected the null hypothesis in favor of accepting the alternative hypothesis, signifying a distinction between the two groups. With the program's impact reaching 97.8%, it indicates a significant influence of the Health Empowerment Training Program based on HES. This suggests that the training program significantly contributed to the health improvement of the refugees who participated in it.

Second: Results related to the second question.

To address the second question: How effective is a continuing health education-based training program in raising the level of health empowerment among refugees in Jordan?, the following hypothesis was formulated: Second Hypothesis: There are no statistically significant differences at the level of significance ($\alpha = 0.05$) between the average performance of the experimental group in the post-test of the Health Empowerment Scale (HES) and their average scores in the follow-up test a month after the end of the program.

To verify the validity of the second hypothesis of the study, which posits that "there are no statistically significant differences ($\alpha = 0.05$) between the average performance of the experimental group on (HES) in the post-test, and their average scores on the same scale in the follow-up test one month after the end of the test", the mean and standard deviations were calculated, and the Paired-Sample t-test was employed to assess the experimental group's performance in the post and follow-up tests on (HES).

Table (4) presents the means and standard deviations of the post and follow-up tests, along with the results of the "T-Test" for the differences between the two scales of the post and follow-up tests on (HES) among the experimental group, which comprised 19 refugees.

Table (4): The means, standard deviations, and "t-test" results for the differences between the two scores of the post and follow-up tests on (HES) for the members of the experimental group (n = 19)

Variable	Measurement	Arithmetic means	Standard deviation	(t) value	Statistical significance
Health Empowerment	Pre	3.8837	.13817	1.797	0.089
	Follow-up	3.8463	.13188		

***Statistical function at the level of significance ($\alpha \geq 0.05$)**

Table (4) suggests that there are no statistically significant differences ($\alpha = 0.05$) between the scores of the participants in the pilot study who underwent the training program on the Health Empowerment Scale (HES). This indicates that the refugees have achieved the objectives of the training program by their participation.

Discussion

The preceding result can be elucidated through the goals of empowerment, which seek to enhance individuals' capabilities to make meaningful choices and translate those choices into desired actions and outcomes (Alsop et al., 2006).

Alternatively, it can be explained by individuals' realization that they possess the knowledge, skills, and capacity to be effective members of their lives and society (Adams, 2003). This aligns with the objectives of the educational program, which aimed to augment refugees' knowledge about physical ailments and methods of safeguarding their health, as well as to instill healthy behaviors. Consequently, refugees may have acquired the capacity to make informed decisions regarding their health and well-being.

The results obtained can be interpreted through the lens of the educational program's principles, where empowerment is viewed as an active process through which refugees strive to effect change in relationships, attitudes, or contexts (Brodsky and Cattaneo, 2013). Empowerment entails individuals' ability to take action to prevent issues, regain or enhance their capacity to engage with the social environment, and expand the resources available to meet their needs (Long et al., 2006). It actively engages individuals in decision-making regarding their well-being, potential, life satisfaction, and outcomes, aiming to maximize control over their lives (Nachshen, 2005), aligning with the diverse goals of the program.

Furthermore, the results can be understood in line with the perspective of Cowger and Snively (2002, p.110), who suggest that promoting empowerment involves believing in individuals' capacity to make their own choices and decisions. This belief acknowledges not only individuals' strengths and capabilities to navigate challenging life situations but also their potential to increase their power and contribute to societal welfare. Psychologists and social workers play a pivotal role in nurturing, encouraging, empowering, and supporting individuals, helping them unlock their inherent strengths within their environments, and advocating for equity and justice across society (Alsop et al., 2006). In this context, psychologists assist individuals in clarifying their circumstances, identifying their aspirations, and exploring alternative pathways to realize their desires. Through this support, refugees may discover and harness their inner strengths, leading to enhanced empowerment.

The results can also be understood within the framework of the program's emphasis on the fundamental pillars of empowerment, which involves the control of two forces: internal and external. The internal force encompasses psychological factors such as the sense of control, efficiency, responsibility, and future orientation, while the external force includes social factors related to controlling personal and work resources, as well as the ability to influence the social environment (Jha and Nair, 2008).

Moreover, the findings can be explained by considering the characteristics of the experimental group and their strong motivation to engage with the educational program. The program aims to stimulate the psychological empowerment process through various offerings, with psychological and social support programs being among the most important. Fawcett et al. (1994) suggested, according to the contextual model of empowerment, that both environmental and personal variables can either facilitate or hinder empowerment. Theoretical literature indicates that psychosocial factors, such as social support, self-esteem, internal locus of control, and self-efficacy, play a significant role in empowerment. Additionally, as highlighted by Rousan et al. (2018), health problems, including chronic diseases and mental health issues, are major challenges faced by Syrian refugees in Jordan. These factors likely influenced the effectiveness of the empowerment program among the participants.

The current study aimed to assess the effectiveness of a health education-based training program in enhancing the health empowerment of refugees in Jordan. The analysis of the first hypothesis revealed statistically significant differences ($\alpha = 0.05$) between the experimental and control groups. Notably, the experimental group, which received the health empowerment training, demonstrated substantial improvements in healthy behaviors compared to the control group, which did not undergo any training.

These findings align with previous descriptive studies highlighting the necessity of health education for refugees to adopt healthier lifestyles. For instance, Shearer and Fleury (2006) underscored the positive impact of social connections on the health and well-being of older individuals, suggesting that such networks can bolster health empowerment and assist in addressing health needs. Similarly, the study by Nelson-Peterman et al. (2015) observed a decline in healthy behaviors among Cambodian refugees in the United States, with low rates of walking exercise and a high prevalence of obesity. This underscores the importance of educational interventions to promote healthy practices.

Furthermore, the results corroborate the findings of Strong et al. (2015), which documented a high prevalence of health issues among older refugees, including non-communicable diseases such as hypertension and diabetes. Many participants reported poor health status, financial difficulties in accessing medications, and inadequate dietary habits. These findings underscore the pressing need for targeted health education programs to address the specific health challenges faced by refugee populations.

The observed positive impact of the educational program on the experimental group's adoption of healthier behaviors can be contextualized within the broader framework of health education. As highlighted by numerous researchers, health education serves as a catalyst for instigating positive behavioral changes conducive to individuals' current and future well-being. Nutbeam (1998) conceptualizes health education as a deliberate process aimed at fostering opportunities for learning, thereby contributing to individual and community health improvement. Moreover, health education equips individuals with the necessary knowledge and skills to navigate various health contexts, thereby enhancing their capacity to promote and maintain good health throughout their lives (Zumbo et al., 2006).

The success of the current program can also be attributed to its adaptability and inclusivity, as it addressed the diverse needs of the sample population. By incorporating a range of educational topics and employing various instructional methods and activities, the program effectively engaged participants, fostering a conducive learning environment that facilitated the adoption of healthier behaviors. This approach is consistent with the findings of Rechel et al. (2011), who underscored the detrimental effects of overlooking refugees' unique health needs on public health outcomes.

In essence, the positive outcome of this research underscores the importance of tailored health education initiatives in empowering individuals to take control of their health and make informed decisions regarding their well-being. By equipping refugees with the necessary knowledge and skills, such programs play a vital role in promoting healthier lifestyles and mitigating the adverse health effects associated with displacement and adversity.

Given that this research is targeting refugees, the positive results of this research project can be viewed through its contribution to enhancing the refugees' ability to make decisions about health behaviors as a result of the program's implementation by health care professionals which enhanced the communication and consultation with them in various specific health issues because effective communication between health care providers, refugees, and migrants help to improve practicing healthy behaviors and improve public health in general. The health needs and issues of refugees in Jordan vary greatly depending on their subjective culture, and on their confidence to adapt to the living conditions they encountered in Jordan. Therefore, group and open discussions will be a way to solve problems and help them feel that they are not the only ones who suffer from such health problems.

The effectiveness of the program implementation process and the attainment of positive outcomes can be attributed to several key factors, including the role of program providers, the alignment of procedures with refugees' needs, and the conducive learning environment fostered during the sessions.

Firstly, the pivotal role of program providers in leading the group effectively and facilitating meaningful interactions cannot be overstated. Their personal characteristics, such as flexibility, empathy, and cultural sensitivity, played a crucial role in establishing rapport with participants and creating a safe and supportive environment conducive to learning. By demonstrating acceptance, respect, and originality, program providers cultivated an atmosphere of trust and collaboration, encouraging participants to actively engage with the educational content and share their concerns.

Moreover, the implementation procedures were carefully planned in accordance with the specific needs of refugees, ensuring that the program content resonated with their experiences and addressed relevant health challenges. Prior collaboration with healthcare centers and institutions catering to refugees facilitated the identification of these needs and enhanced the effectiveness of the implementation process. This proactive approach not only encouraged participants to interact with the program topics but also fostered a sense of ownership and investment in their health outcomes.

Furthermore, the adeptness of program providers in asking effective questions played a pivotal role in eliciting participants' input and addressing their individual concerns while respecting privacy and cultural norms. Leveraging the expertise of healthcare professionals among the program implementers further enriched the learning experience, as they

were able to offer specialized insights and guidance tailored to participants' medical needs.

Overall, the success of the program can be attributed to the concerted efforts of program providers in creating a supportive learning environment, the strategic alignment of implementation procedures with refugees' needs, and the cultivation of active participation and engagement among participants. These factors collectively contributed to the attainment of positive outcomes and the realization of the program's objectives.

The findings of this study align with those of previous research, such as the study conducted by Yang et al. (2015) on immigrant women in Taiwan and Frost et al. (2018) on immigrants in Texas, USA, despite differences in the demographic characteristics of the participants. These studies underscore the universal effectiveness of health education programs in promoting positive behavioral changes among diverse populations.

Regarding the second hypothesis, which posited no statistically significant differences between the post-test and follow-up test scores of the experimental group on the Health Empowerment Scale (HES), the results suggest the enduring impact of the program on participants' health behaviors. This indicates that the program not only induced immediate improvements but also facilitated the maintenance of these gains over time, as evidenced by sustained positive outcomes even one month after program completion.

The sustained impact of the program can be attributed to its comprehensive approach, which equipped participants with a range of skills and knowledge essential for promoting health behaviors. By fostering critical thinking about the consequences of their health-related decisions, the program heightened participants' awareness of their health issues and motivated them to initiate positive changes. Moreover, the emotional preparation provided by the program contributed to participants' readiness for behavioral change, reinforcing their commitment to addressing health concerns.

Overall, the findings underscore the lasting efficacy of the educational program in enhancing health behaviors among participants. By empowering individuals with the necessary skills and awareness, the program facilitated enduring improvements in participants' health outcomes, highlighting its potential as a valuable intervention for promoting public health and well-being.

In addition, the educational program provides several therapeutic alternatives, which allows the participants to make the appropriate decision and enhance their thinking about the consequences of their various decisions. It is also useful in providing realistic solutions and helping participants find the medical care centers that provide all healthcare services to refugees free of charge, and this helps in maintaining therapeutic gains. The participants' awareness of their health problems also contributes to enhancing the awareness of their strengths, and thus the possibility of employing these aspects in maintaining therapeutic gains.

Study Recommendations

Based on the results of the study, the following recommendations are made:

- Training those working with refugees on the methods of implementing the program to use it with other participants and recommending its application in the field.
- Adopting the program used in this study to deal with refugees in organizations specialized in refugees' issues.
- Directing the attention of international and local organizations to the importance of developing programs to raise the level of health empowerment among refugees.
- Applying such program on other refugees (e.g., males working in the private sector, women researchers/unemployed, informal workers, etc.) and examining the effectiveness of the program in order to generalize its results.
- Holding training workshops for psychological counselors, social, and educational institutions to train them on the use of the health education program, and how can they employ it to deal with various refugees' problems.

Acknowledgment and financing

We gratefully acknowledge the interest and efforts of the persons and institutions that have participated in this investigation, financed by the European Union through the Horizon 2020 program for the project "Reshaping Attention and Inclusion Strategies for Distinctively vulnerable people among the forcibly displaced (RAISD)" (grant agreement 822688).

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