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Araştırma Makalesi

İstanbul'da Süryani-Suriyeli Mültecilerin Psikososyal, Manevi ve Beden Sağlığı Durumları: Zorluğun Ortasında Direnç Geliştirmek*

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Öz

Bu çalışma, İstanbul'daki Süryani-Suriyeli mültecilerin (n = 171, %70,2 erkek, ortalama yaş 31,08) iki ayrı zaman dilimindeki genel sağlık durumlarını tanımlamayı amaçlamıştır. Çalışmada "Hasta Sağlığı Ölçeği (PHQ)", "R-COPE Kısa Formu", "Genel Özyeterlilik Ölçeği (GSE)", "Connor-Davidson Psikolojik Dayanıklılık Ölçeği (CD-RISC)", "Birinci Basamak Post Travmatik Bozukluk Ölçeği (PC-PTSD)" gibi ölçme araçları yanında bazı sağlık maddeleri de kullanılmıştır. Daha önce bir çeşit travma geçirmiş katılımcıların %52,4'ünün %23,4'ünde "Travma Sonrası Stres Bozukluğu (TSSB)" kriterleri görülmüştür. Kişinin kendi bedensel sağlık düzeyi (p < .001), kendi psikolojik sağlığı (p < .05) ve PHQ puanları TSSB ile istatistiksel olarak anlamlıdır. Kadınlar, kendi bedensel sağlıklarını (p < .01) ve kendi psikolojik sağlıklarını (p < .01) erkeklerden daha kötü olarak değerlendirmişlerdir. Eşleştirilmiş Örneklemler t-Testi neticesinde, Zaman 1'den Zaman 2'ye Pozitif R-COPE (p < .08) için manidar bir artış, Negatif R-COPE için bir azalma (p < .05) ve GSE için bir de bir artış (p < .08) görülmüştür. Eşleştirilmiş örneklemler t-Testi, PHQ (p < .01) ve GSE (p < -.01) için anlamlı bir cinsiyet farkı göstermiştir. Sobel Testi kullanan bir arabulucu rolü, pozitif dinî başa çıkma stratejilerinin erkek katılımcıların kendi psikolojik iyi oluşlarına yönelik değerlendirmelerini geliştirerek erkeklerde semptomları azalttığını göstermiştir (p < .001).

Anahtar Kelimeler

Süryani-Suriyeli mülteciler • Beden sağlığı • Psikolojik sağlık • Dinî başa çıkma • Travma • İstanbul • Toplum çalışması

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Research Article

A Psychosocial, Spiritual, and Physical Health Study among Assyrian-Syrian Refugees in Istanbul: Cultivating Resilience in the Midst of Hardship*

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Abstract

This study aimed at describing the general health situation among Assyrian-Syrian refugees (n = 171, 70.2% males, mean age 31.08) in Istanbul, during two separate time periods. Measures included The Patient Health Questionnaire (PHQ), The Brief R-COPE, The General Self-Efficacy Scale (GSE), The Connor-Davidson Resilience Scale (CD-RISC), The Primary Care Post Traumatic Disorder Scale (PC-PTSD), together with a number of additional health items. The results showed that among the 52.4% of those who were found to have experienced some kind of trauma, 23.4% met the criteria for PTSD. Ratings of one's own physical health ($p < .001$), one's own psychological health ($p < .05$), and PHQ were statistically significant with PTSD. Females rated their own physical health ($p < .01$) and own psychological health ($p < .01$) worse than men. A paired-samples *t*-Test showed a significant increase from Time 1 to Time 2 for Positive R-COPE ($p < .08$), a decrease for Negative R-COPE ($p < .05$), and an increase for the GSE ($p < .05$). A paired-samples *t*-Test showed a significant gender difference for the PHQ ($p < .01$) and GSE ($p < .01$). A mediation model, using a Sobel Test, showed that positive religious coping strategies reduced symptoms in male participants by improving their evaluations toward their own psychological well-being ($p < .001$).

Keywords

Assyrian-Syrian refugees • Psychological health • Physical health • Religious coping • Trauma • Istanbul • Community work

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Background

Forced migration places people in terrible situations, often with severe consequences that are felt over several generations. One of the current countries experiencing a devastating war, internal displacement, and forced migration is Syria. At the end of 2015, almost 4.9 million individuals had left Syria (50.3% females), mainly to the neighboring countries of Turkey, Lebanon, Jordan, Iraq, and Egypt (United Nations High Commissioner for Refugees [UNHCR], 2016). Another 7.6 million people were internally displaced (IDPs) within the country. Unemployment in Syria is estimated at 54.3% and the consumer price index has increased by 179% since the beginning of the crisis in 2011 (United Nations Relief and Works Agency for Palestine Refugees & United Nations Development Programme [UNRWA & UNDP], 2014).

Turkey, the main receiving country focused upon in this article, hosts, as of August, 10th 2017, according to the estimates by Directorate General of Migration Management (DGMM), 3,128,074 Syrian refugees. Another 255,106 Syrian refugees (9.5%) are living in one of the 26 established camps (DGMM, 2017). The majority of refugees live in Istanbul (500,084), Sanliurfa (438,132), Hatay (401,473), and Gaziantep (338,872), the last three cities being in south along the Syrian border. Based on Article 91 of the new asylum law of Turkey, the Law on Foreigners and International Protection adopted in April 2013 and enforced one year later, Turkey officially uses "persons under temporary protection" when referring to Syrian refugees (Ahmadzadeh, Corabatir, Husseini, Hashem, & Wahby, 2014).

Turkey has signed the 1951 Refugee Convention Relating to the Status of Refugees, ratified in 1962, as well as Protocol 1967, however, with a geographical limitation, officially assuming full legal responsibility for refugees originating in European countries (Çorabatır, 2016). Thus, Syrians can only receive temporary protection in Turkey (Çorabatır, 2016) and are considered as guests and not refugees, which has led to a lack of administrative clarity and a poorly developed integration policy (Ahmadzadeh et al., 2014). AFAD (the Prime Ministry Disaster and Emergency Management Presidency of Turkey) initially coordinated all relief efforts in camps. In 2015, although the chief advisor of the prime minister assumed a coordinating role, today the leading role is unclear again (Çorabatır, 2016). According to the new Temporary Protection regulation of 2014, Syrians have a right to receive care, education, seek work, and social support, on condition that they register. However, negative coping methods have increased as their own resources decrease. Such negative coping methods include survival prostitution, informal housing, informal employment, debt, exploitation, abuse, child marriage, and child labor (Ahmadzadeh et al., 2014, Hassan et al., 2015).

Due to the collapse of internal production, increased needs, and security instability (UNRWA & UNDP, 2014), the health concerns for Syrians within the country are large. The health situation of the Syrian refugees in Turkey in particular is a multi-level area of concern, not to mention their educational, work, and settlement needs in their host countries. According to a report by UNICEF, the Regional, Refugee and Resilience Plan for 2015-2016 (2015), the Syrian refugees in Turkish camps have free access to all health-care, while refugees outside the camps have access to primary care, and non-registered refugees can receive acute care, but have to register if they want to continue receiving care. The same report highlights that their mental health and psychosocial issues require increasing attention in view of the fact that these services were already insufficient for the host populations.

In a larger public health perspective, there are many challenges, including gender-based violence, maternal and newborn morbidity, unwanted pregnancies, unprevented or not-treated sexually transmitted diseases, malnutrition among newly arriving refugees, weak mental health, and psychological problems, among others (UNRWA & UNDP, 2014).

Another major public health concern for the refugees relates to work conditions, according to the Regional, Refugee and Resilience Plan for 2015-2016 (UNICEF, 2015). Southeastern Turkey has been for a long time an economically deprived area, and with the new Syrian refugees, a competitive situation has arisen concerning low-paid jobs. Syrians are forced into bad working conditions, without any formal labor rights, earning very low salaries that are often way below the national minimum wage. It is common that salaries are a fifth of what they should be while living costs have doubled. Even child labor exists. Salaries as low as 2.50 USD per day or 250 USD per month are paid to the Syrian refugees, if and when they receive remuneration at all.

Lack of education is of great concern. While more than 576,000 Syrian children (age 6-17) needed to attend school by 2015, only 30% of these children enrolled in some sort of education (UNICEF, 2015).

Naturally, these public health concerns take prominence. However, the public health and public mental health framework used makes a fundamental difference in how initiatives are planned. The framework of public health and public mental health promotion not only investigates problem (risk) areas, but also the areas of potential (protective) areas, especially resilience, understood as self-empowerment, among vulnerable populations (Campion, Bhui, & Bhugra, 2012; DeMarinis, 2014). A public health and public mental health promotion framework incorporates a person-centered approach that understands that resilience is present and can be nurtured in the face of difficult and persistent traumatic experiences on the one hand, and that a holistic approach, including cultural and spiritual assessment, is needed, on the other

(DeMarinis, 2014; Silove, 2013). With this background to the refugee situation in Turkey and neighboring countries, we will now move on to the aims of this study.

Aims

The primary aim of this public health and public mental health promotion study was to understand the self-rated psychosocial, spiritual, and physical health situation of Assyrian-Syrian refugees in Istanbul, at two time periods. The time periods were pre- and post participation, generally spanning two months, in a refugee activity center. The study did not test a hypothesis, but was rather descriptive in nature, as there was and is very limited research on Syrian refugees in Turkey in general, and non-existent with respect to the specific sub-population studied here. The study also aimed to problematize some of the ethical and methodological challenges in conducting this kind of study with such a vulnerable population.

Previous Research

Aziz, Hutchinson, and Malby (2014) studied perceived quality of life of Syrian refugees (n = 270) residing in the Kurdistan Region of Iraq using the WHOQOL-BREF, which measures Quality of Life within four dimensions: physical, psychological, social relationships, and environment. A comparison between the Syrian refugees and overall norm data for the WHOQOL-BREF, where the former scored was significantly lower on physical health (M = 13.26 against M = 16.2), psychological (M = 12.62 against M = 15.0), and environment (M = 11.66 against M = 13.5), but significantly higher on social relationships (M = 15.23 against M = 14.7).

Alpak et al. (2015) studied the prevalence of PTSD and its relation with various socioeconomic variables among Syrian refugees (n = 352, 49.1% females, Mean age 37.58, time period in asylum 6.52 months, married 86.4%, high school and university education 18.2%), who have sought asylum in a tent city in Gaziantep, Turkey. Among the participants, 33.5% were diagnosed with PTSD. There were statistically significant correlations between a PTSD diagnosis and gender (46.2% females and 21.2% males), occupation (housewife), previous diagnosis with a psychiatric disorder, having a family history of psychiatric disorder, and the number of traumatic events experienced. However, there were no statistically significant correlations between a PTSD diagnosis and education level, asylum, or time period in the new location.

For the psychological well-being of Syrian refugees in Lebanon, El Chammy, Kheir, and Alaouie (2014) refer to a report by WHO-UNHCR Assessment Schedule of Serious Symptoms in Humanitarian Settings, where 58% had feelings of fear and 56% of hopelessness, whereas 62% were uninterested in things, and 65% were unable to perform essential activities for daily living. The authors also refer to another

study by IMC (2011) showing that refugees report anxiety, feelings of depression, lethargy, eating and sleeping problems, anger, and fatigue, all of which affect family relationships, daily functioning, and health. They also expressed positive coping mechanisms, such as going out, exercising, and playing with one's children.

A review of earlier studies on Syrian refugees (Hassan et al., 2015) highlights mental health disorders and psychosocial distress, such as emotional disorders or problems (including depression, prolonged grief disorder, posttraumatic stress disorder, anxiety disorder, sadness, fear, frustration, anger, and despair), cognitive problems (loss of control, helplessness), physical symptoms (fatigue, sleeping problems, loss of appetite), and social and behavioral problems (withdrawal, aggression, and interpersonal difficulties). Coping with psychological distress among Syrians occurs primarily in one's circle of family and friends, but may also include strategies such as praying, listening to music, watching TV, drawing, social activities, community activities, talking with trusted individuals, and distraction by keeping oneself busy. Even passive or negative coping strategies are used, such as sleeping, crying, seeking time alone, denial, behavioral withdrawal, smoking, obsessively watching the news, worrying about others in Syria, and becoming angry.

A study by Tufan, Alkin, and Bosgelmez (2013) focused on post-traumatic stress disorder among a mixed asylum and refugee population (though not Syrians) receiving psychiatric and psychological support from a refugee support program in Istanbul between 2005 and 2007. The results revealed that 55.2% scored for PTSD. The authors concluded that uncertainty about the future, periods of detention, extended periods of waiting for processing of their refugee application, and hopelessness increased psychopathology among refugees.

An overview analysis of articles on religious coping during 2005-2010 by Pargament, Feuille, and Burdzy (2011) showed that among the 30 studies reviewed, no studies had been conducted with refugees. Referring to one of these studies (Bradley, Schwarts, & Kaslow, 2005, as cited in Pargament et al., 2011) among 134 African American women with a history of intimate partner violence and suicidal behaviors showed that self-esteem was positively associated with positive religious coping ($r = .21$*).

The CD-RISC, in its different versions (25, 10, and 2-items), has been used with different populations, though sparingly with refugee populations. The 25-item version was used with adolescent refugees originating from Bosnia, Serbia, Iran, Iraq, Afghanistan, and Liberia residing in Australia at the time of the study (Ziaian, Anstiss, Antoniou, Baghurst, & Sawyer, 2012) and with Chinese refugees in Hong Kong. Although CD-RISC 2 has not been used with a refugee population, results of other samples reveal a mean ranging from 4.53 to 6.91 with the lower range being

found among PTSD subjects exposed to severe trauma and the highest range being found in a national random sample (CD-RISC, User Guide).

One important notation concerning the studies citied here is that very little information has been included related to methodological and ethical challenges when conducting research among refugees, including research participation problems and ethical responsibilities. This is also one of the aims in this paper, and one means of contributing to the topic of this book on how we approach and work with cases involving migrants and refugees, and especially in forced migration circumstances.

Population

Modern Syria emerged from foreign rule, passing from Ottoman to French rule after World War I and then gaining independence from France in 1946. After a period of political infighting, Hafez al-Assad gained power in 1971. His son Bashar al-Assad succeeded him in 2000. The country consists of many ethnic and religious groups; the main ones being Sunnis, Alawites, Kurds, Assyrians, and Druze. Anti-government protests began in March 2011, and with a violent response by the army, the first refugees began fleeing Syria soon after. Today, many parties are involved in the civil war, including government forces, external countries, Kurdish forces, IS (Islamic State), and other secular and Islamist rebel groups (Sirin & Rogers-Sirin, 2015; Thomas Reuters Foundations, 2014).

The Assyrians, who are the study population in focus here, including all linguistic and denominational branches, comprise an indigenous population of north Mesopotamia, around the Tigris and Euphrates rivers, scattered between southeast Turkey, Syria, Iraq, and Iran. Today, they use the Modern Assyrian (Neo-Syriac) language, with dialectical differences in their respective countries. While Ashurism was the old religion of Assyrians, they adopted Christianity early on, today consisting of the Syriac-Orthodox Church, Church of the East, Chaldean Church, Syriac Catholic, and Syriac Protestant. During the latter centuries, the Assyrians have witnessed several genocides, the most severe occurring in 1915 during the fall of the Ottoman Empire. From the 19th century, but mainly in the mid 20th century, a massive emigration by Assyrians to most continents of the world has taken place. The population finds itself in a struggle for survival, facing challenges related to denominationalism, fragmentation, Arabization, and the threat of Islamic fundamentalism, all of which consolidate in a mass migration to the West, and assimilation. Today, more Assyrians live in the diaspora than in their native area. The majority of the Assyrian population is found in Iraq, followed by Syria, United States, Sweden, Lebanon, Germany, Russia, and Iran. Assyrian culture, being formed in the Middle East, was characterized by a collectivistic and patriarchal family structure. However, this is changing rapidly through encounters with Western societies. Endogamy, religious and linguistic

identification, entrepreneurship, and holding a high value on education are among the characteristics of Assyrians (BetBasoo, 2013; Cetrez, 2005; Countries and their Cultures, 2015).

Christian Syrian Refugees have an Infected Historical Relation to Turkey

Even though the refugee camps in southeast Turkey are open for people of different religious backgrounds and despite the fact that a specific part of the camp in Midyat was designated for Christian refugees, the Christian refugees prefer to live outside the camps. The majority of the Christian refugees prefer not to be registered, which limits their possibilities for support in different ways. Two reasons for not registering appear through our interview contacts. First, they have an infected historical relation with Turkey, from which their grandparents fled the 1915 massacres and its consequences. The stories of the genocide and the feeling of distrust and fear are today still vivid among the Christians from Syria (Cetrez, 2017). The Turkish involvement in the Syrian war and the fact that it may be supporting a number of violent groups adds to this suspicion. Second, the Christian refugees have their mind set on Europe or some other western countries, with no vision of returning to Syria, and therefore see Turkey only as a transit country. Many have relatives in Europe and thereby feel a connection to Europeans, whom they identify as also having a Christian cultural background. The number of Christian refugees in Turkey is difficult to calculate, as they do not register and are very transitory.

Initiation of an Activity Center

As researchers working through a public health and public mental health promotion framework including an ethical guideline of benevolence, i.e., giving back to the research participants, we initiated the creation of a multi-function activity center with the refugees. Inspiration for this initiative came from the center component of the Mental Health and Psychosocial Program of UNHCR in Syria (Quosh, 2014). In conversation with community members, mostly Assyrian-Turkish individuals, as well as with the refugees themselves, the idea of finding a way to involve people became an abiding vision. The aim was two-fold: (1) to create a space and provide a support center where the refugees could gather socially and (2) to structure their own activities, such as kindergarten, sports, sewing, school lessons for the children, language courses, cooking, yoga, and art therapy for women groups. Activities were held seven days a week, with some days offering up to three classes. The adult refugees taught the majority of the children's classes, while qualified international student volunteers taught the adult language courses. The refugees named the centre "Qnushyo," meaning gathering or collecting in Syriac (see more in www.qnushyo.com). We anticipated that these activities might have a positive effect on the participants' health and foster resilience in the midst of their hardships. The center

was initially financed by a help organization based in Sweden (Assyrians Without Borders) as well as private donors and all activities were free of charge. Since its inauguration in August of 2014, more than 500 people have passed through the center. Currently, although changing continuously as the refugee situation changes, approximately 150 persons (20 children, 60 youth, and 70 adults) are active to different degrees at the center. By creating an environment where the refugees have become more self-sufficient, organized and engaged, the center has allowed them not only to continue to use their skills, talents, and professions, but also to develop new ones. They have been able to support each other and create both a routine and structure while in a 'transit' period of living.

Method

During 2013 and 2014, we conducted a mixed-method multi-stage design, incorporating qualitative and quantitative techniques, thus increasing the validity and generalizability of the results. Stage 1 included 20 individual (equally divided by gender and age, ranging from 18 to 70 years) and three focus group semi-structured interviews, biographical network maps, and closed-ended instruments. Additionally, we had one interview with a key person providing practical support to the refugees. Based on the selection in Stage 1, the instruments for Stage 2 were decided and a survey was conducted. In Stage 2, a convenience sample was used among the 171 participants attending the center. The survey was distributed among participants at the center before they started activities and again after a two-month period. The validated instruments included have been used in earlier migration research projects. All interviews were conducted at the center in Arabic, Syriac, Turkish, or English, depending on the preference of the participants. As the research team had competency in the relevant languages as well as included well-trained Arabic speaking colleagues, the use of translators was not needed (also recommended by Hassan et al., 2015). It took an average of 30 minutes to complete the survey. The internal board at the center, consisting of Syrians themselves, was able to assist in organizing the interview hours, informing newly arrived participants about the research project, as well as inform the research team of any specific issues or problems of relevance. The participants at the center lived either in one of the two collective houses for the male youth or in the apartments for families and females. In this article, only the quantitative results are presented. Results from the semi-structured interviewed were deductively analyzed using a software program, while the survey study data was analyzed via SPSS.

Ethical Concerns with Refugee Populations and Ethical Approval

In research where human beings are involved, ethical considerations are important, and perhaps even more so when the population consists of a refugee group with war

trauma experiences. Having used the instruments among other refugee populations in Sweden, the researchers involved in this study have had previous experiences working with similar groups. However, what was new for all of us was the location; here, refugees lived in a transitional space. This challenge required finding a safe environment where the research participants felt unthreatened and comfortable. Another challenge was access to psychosocial counseling support in Arabic when needed. The documentation of material and how it is safely kept were two specific challenges in this kind of fieldwork context. Information about the study and consent were also important aspects before starting the study. As researchers, we needed to be aware of possible risks that the participants might be in or were being exposed to, be they psychological or physical, short or long term.

As in other studies, we formed a written information letter, both in Arabic and English that we shared with each participant before conducting an interview. This was also read aloud for them before the interview. They were informed about the purpose of the study, how the interview was to be structured, the benefits and possible risks of the study, and that the participants could at any moment withdraw from the study without any question or hindrance. The internal board had an important role in safeguarding the participants, informing the researchers in case someone was not feeling well to take part in an interview. The participants were also informed about the level of confidentiality of the study and how the data material was kept, who had access to the material, and how it would be analyzed and presented.

In many studies, it is standard to create a coding list with a name and number that is kept in a special repository. Not feeling comfortable with this however, the research participants in this study did not want a code list to be constructed and kept by the research team outside of their own environment. Instead, a coding list was kept with the refugee center coordinator, who was the only person they felt that they could trust. Thus, as researchers, we had to rely on the coordinator to keep the code list when we had to contact the participants anew. As a result, we only asked for oral consent, which was recorded, before starting the interview. The interviews were tape-recorded and later transcribed by researchers in the team and kept in a lockable memory stick.

The possible risks identified in this study were the fact that our interview questions may awaken difficult memories among the participants. Such memories could be those of the war or memories of fleeing Syria, which they had tried to forget. With our questions of trauma experiences in the past and challenges during their present vulnerable conditions, it was possible that we might expose them to short term risks. Though we tried to decrease our questions about previous difficulties, we needed to have questions pertaining to experiences of trauma as well as physical

and psychological conditions of themselves and of their children. In order to meet participants' need, one of the local researchers identified a psychiatrist whom the participants could consult after the interview. An interpreter was available for them if needed. Though none of the participants consulted the psychiatrist, it was a service provided without any cost. There were also anticipated benefits for the research participants. Among these was the knowledge gained from the results, which could be shared among the participants as well as used to form specific group and cultural support activities at the refugee center. These activities helped the participants to cope with their daily life as refugees. An ethical application was sent to the Regional Ethical Board in Uppsala, Sweden, and as the study was conducted outside Sweden, the board didn't have any objections to the Swedish led part of the study.

Application Related Instruments and Information in This Study

For the purpose of this study, five validated questionnaires were used to measure the Syrian refugees' health conditions. Included in a single survey to be completed by respondents were the following instruments: The Patient Health Questionnaire (PHQ-15), The Brief Religious Coping Instrument (R-COPE), The General Self-Efficacy Scale (GSE), The Connor-Davidson Resilience Scale (CD-RISC), and The Primary Care Post Traumatic Stress Disorder Scale (PC-PTSD).

The PHQ-15 is a 15-item scale (with item d only for females, thus 14 items for males), ranging from 0: Not bothered at all, 1: Bothered a little, to 2: Bothered a lot, providing a total severity score ranging from 0 to 30. The PHQ-15 is used to assess somatic symptom severity and the potential presence of somatization and somatoform disorder (Kroenke, Spitzer, & Williams, 2002). Two of the items assess depression (sleep and tired). Cutpoints 5, 10, and 15 represent mild, moderate, and severe levels of somatic symptoms, respectively. Cronbach's α, a well-known statistic of internal consistency used especially for Likert type rating scales, was calculated to investigate the reliability of PHQ-15. An alpha above .70 is a desired level of reliability, as it is regarded as an indicator of to what extent the items in the scale measure the same construct (Kaplan & Saccuzzo, 2009). To calculate Cronbach's α in this study, item d was discarded for males. Thus, α was calculated separately for males (14 items) and females (15 items). Note: The internal consistency of the PHQ-15 in this study was acceptable for both gender groups (α = .87 for females [n = 41] and α = .85 for males [n = 98], respectively).

The Brief R-COPE instrument consists of seven items, comprising two subscales that measure two patterns of religious coping methods, positive, and negative coping. Additionally, one item measures general religious coping. There is empirical evidence that religious/spiritual methods of coping can affect people's psychological, social, physical, and spiritual adjustment to crisis either positively or negatively

(Fetzer Institute, National Institute on Aging Working Group, 2003). The same report indicates that in times of crisis, people translate their general religious orientation into specific methods of religious/spiritual coping. The items in the Brief R-COPE range from 1: A great deal, 2: Quite a bit, 3: Somewhat, to 4: Not at all. Pargament et al. (2011) describe positive religious coping methods as reflecting a secure relationship with a transcendent force, a sense of spiritual connectedness with others, and a benevolent understanding and dealing with life stressors. They describe negative religious coping methods as reflecting underlying spiritual tensions and struggles within oneself, with others, and with the divine. In this study, the three items of Positive R-COPE scale reflected an acceptable level of internal consistency ($\alpha = .85$, $n = 143$) Note: For the three item-Negative R-COPE scale, Cronbach's α was much lower than the accepted level of .70 ($\alpha = .30$, $n = 143$). The correlations among the items in the Negative R-COPE ranged between -.044 and .337, most probably because many participants showed exceptionally strong disagreement with the statements in the Negative R-COPE (4: Not at all).

The GSE instrument assesses a general sense of perceived self-efficacy, with the aim to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. GSE consists of 10 items, and responses are given on a 4-point scale (from 1: Not at all true to 4: Exactly true), resulting in a final score ranging from 10 to 40. The construct of Perceived Self-Efficacy reflects an optimistic self-belief; i.e., that one can perform a difficult task or cope with adversity in various life situations. Perceived self-efficacy facilitates goal-setting, effort investment, persistence in the face of barriers, and recovery from setbacks (http://userpage.fu-berlin.de/~health/engscal.htm). Note: The internal consistency of the GSE in this study was exceptionally high ($\alpha = .90$, $n = 143$), indicating that the scale reliably measures GSE.

For the CD-RISC 2-item version, each item was scored from 0: Not true at all to 4: True nearly all the time, resulting in a total score ranging from 0 to 8. The scale measures adaptability and the ability to "bounce back." Since the scale contains only two items, Cronbach's α was not an appropriate measure of reliability. One way to assess this particular scale's reliability is to calculate Pearson's r. This approach is akin to a split-half reliability technique. However, this technique underestimates the "true" reliability of the scale, which requires a well-known correction, i.e. Spearman Brown (S-B) correction (Kaplan & Saccuzzo, 2009). For this reason, both Pearson's r and split-half reliability (with S-B correction) were calculated for the scale.[1] Note: Findings indicated that the correlation between the two items was exceptionally high ($r(141) = .55$, $p < .001$) and that its internal reliability was acceptable (S-B = .71).

1 See Eisinga, Grotenhuis, and Pelzer (2013) for a comparison of various internal consistency coefficients for two-item scales.

The PC-PTSD (Prins et al., 2003) is a five-item screen designed for use in primary care setting. Items are scored dichotomously (yes or no). Each item links one symptom factor that underlines the construct of PTSD. The items ask about symptoms experienced in the past month that were related to a traumatic event occurring anytime in one's life. The PC-PTSD was adapted and validated by the Unit for Transcultural Psychiatry, Uppsala Academic Hospital, starting with one additional item about the experience of a very difficult situation. A response to PTSD is considered positive only if the participant answers yes to the first item and yes to three of any of the additional four items.

Additionally, participants were asked to respond to two questions on how they viewed their children's physical and psychological health as well as two questions on how they viewed their own physical and psychological health. The scale ranged from 1: Excellent to 5: Poor. One item asked whether they felt safe in their current neighborhood, with answers ranging from 1: Not at all to 4: Much. One item asked what option best described their daily physical activities while another item asked which option helps them to cope with the day-by-day living in Turkey.

Results

The results of this study are presented in tables, using different forms of analyses, frequency, percentages, correlations, *t*-Tests, and regression analyses.

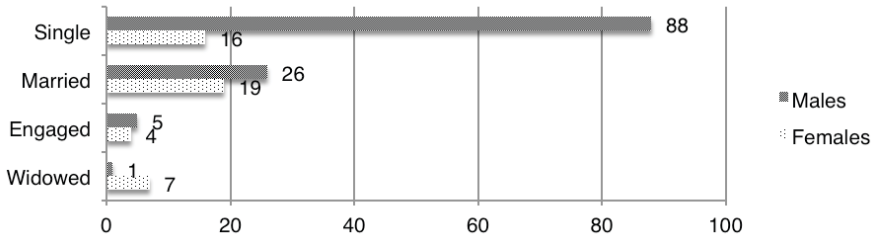
Descriptive Analyses

Table 1
Gender, Age, and Residence Time in Turkey

Variables	n (%)	Mean (SD)	*p*
Gender			
Female	47 (27.5)		
Male	120 (70.2)		
Age		31.08 (12.99)	< .01
Female		37.21 (16.55)	
Male		28.67 (10.58)	
Residence time in Turkey (months)		3.9 (4.34)	> .05
Female		3.39 (3.62)	
Male		4.10 (4.59)	

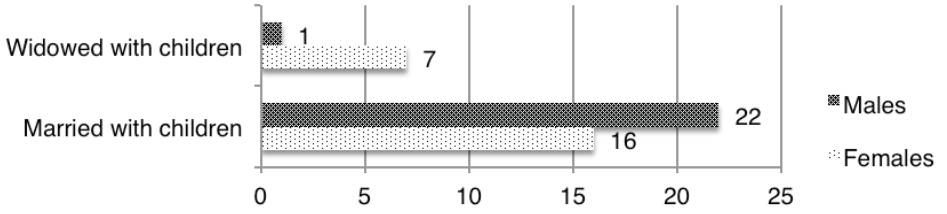
The sample of the study was composed of 171 participants (120 males (70.2%) and 47 females (27.5%). Only four individuals chose not to report their gender (2.3%). Age distribution of the sample indicated that females ($\bar{x}$ = 37.21, *SD* = 16.55) were significantly older than males ($\bar{x}$ = 28.67, *SD* = 10.58; *U* = 3613, *z* = 2.93, *p* < .01, *r* = .23). Participants' average time of residence in Turkey was 3.9 months (*SD* = 4.34). Both males ($\bar{x}$ = 4.10, *SD* = 4.59) and females ($\bar{x}$ = 3.39, *SD* = 3.62) were found to have resided in Turkey for a similar period of time (*U* = 2655, *z* = -.836, *p* > .05, *r* = .06).

Table 2
Relationship Status by Gender and Frequency (N = 166)



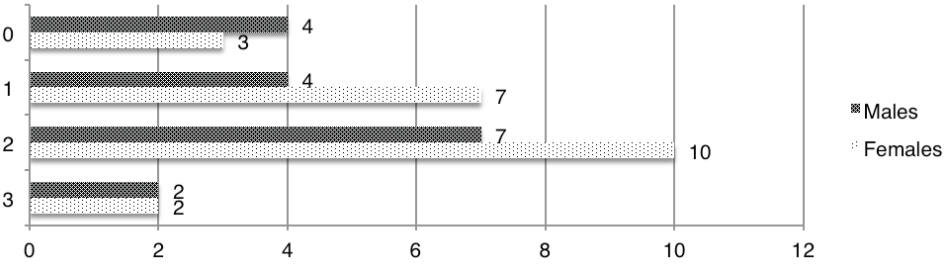
The distribution of relationship status revealed that most of the participants (62.7%) were single. Married individuals were the second most frequently observed category (27.1%), followed by engaged (5.4%), and widowed (4.8%) individuals.

Table 3
Children Status, by Gender and Frequency (N = 46)



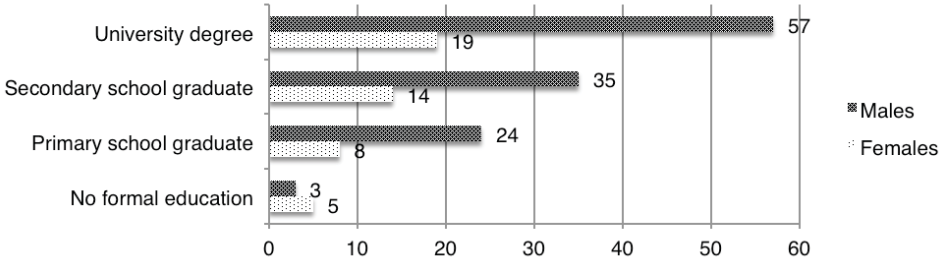
Most of the married participants reported having children (84.4%). All widowed participants reported having children.

Table 4
Number of Accompanying Children, by Gender and Frequency (N = 39)



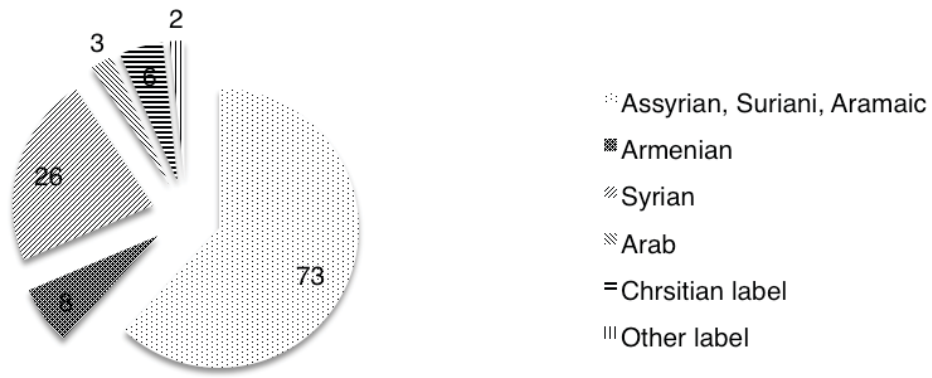
Of the participants who reported having children, 17.1% stated that none of their children were with them, 26.8% were with one child, 41.5% were with two children, 9.8% were with three children, and 4.9% were with four children. More importantly, only 39% of participants reported that they did not have any children living elsewhere. Thus, most of the participants (60.9%; 62% females and 60.9% males) stated that at least one of their children had been separated from them.

Table 5
Level of Education, by Gender and Frequency (N = 165)



The distribution of education revealed that most of participants had earned a university degree (46.1%). The second most frequent group was secondary school graduates (29.7), followed by primary school graduates (19.4). Only 4.3% of participants had received no formal education. The vast majority had completed their education in Syria (98.1%; females 100% and males 97.3%).

Table 6
Classification of Ethnicity, by Frequency (N = 118)



Distribution of ethnicity revealed that the most predominately used label was Assyrian (61.9%, including the closely linked labels) and Syrian (22%). It is most probable to think that the two do not necessarily reflect two different identities, but rather different way of expressing one's identity. Almost all participants (98%) answered they had a Christian belonging.

Table 7
Daily Physical Activities and Coping (n = 171)

Variables	N (%)	χ^2	*p*
Daily physical activities			
No job or other work and mainly sleep and stay close to where I live	67 (40.1)	4.65	< .05
Female	25 (53.2)		
Male	42 (35.0)		
No job or other work, but I try to keep fit by walking or other physical activity	65 (38.9)	6.65	< .05
Female	11 (23.4)		
Male	54 (45.0)		
I have responsibility for others	28 (16.8)	3.60	.07
Female	12 (25.5)		
Male	16 (13.3)		
I work or volunteer my time and this keeps me busy	21 (12.6)	3.60	.07
Female	3 (6.4)		
Male	18 (15.0)		
What helps one to cope with the day by day living in Turkey			
Hope	113 (67.7)	.09	> .10
Female	31 (66.0)		
Male	82 (68.3)		
Social activities	39 (23.4)	.65	> .10
Female	9 (19.1)		
Male	30 (25.0)		
Religious activities	24 (14.4)	.01	> .10
Female	7 (14.9)		
Male	17 (14.2)		
Physical activities	19 (11.4)	3.29	> .10
Female	2 (4.3)		
Male	17 (14.2)		

The responses regarding daily activities showed that 40.1% of the participants reported not having any job or other work, and that they mainly slept and stayed close to where they lived. Chi square statistics showed that gender and staying home unemployed are significantly correlated ($\chi^2(1) = 4.65$, $p < .05$), and odd ratios revealed that the number of unemployed females staying home was 2.11 times higher than their male counterparts. Similarly, 38.9% of the participants stated that they had no job or other work, but that they tried to keep fit by walking or doing some other form of physical activity. Gender and physical activity were also significantly correlated ($\chi^2(1) = 6.65$, $p < .05$); however, this time the number of unemployed males who engaged in physical activities was 2.68 times higher than their female counterparts. Only 16.8% of the participants confirmed that they had responsibility for others (children, elderly or sick relatives, friends) and were kept busy with these activities. However, gender and responsibilities for others were not significantly correlated ($\chi^2(1) = 3.60$, $p = .07$), indicating that males and females were similar in terms of their responsibility to others. Finally, 12.6% of the participants reported that they worked or volunteered their time and thus kept themselves busy, with no gender correlation here.

Participants' responses regarding questions about those activities or thoughts that helped them cope with daily life in Turkey revealed that hope for the future was the most frequently reported way of coping (67.7%). It was followed by social activities (23.4%), religious activities (14.4%), and physical activities (11.4%). A Chi square test revealed that none of these responses were correlated with gender ($\chi^2 < 3.29$, $p > .10$).

Table 8
Trauma Experience, in Percentage (n = 171)

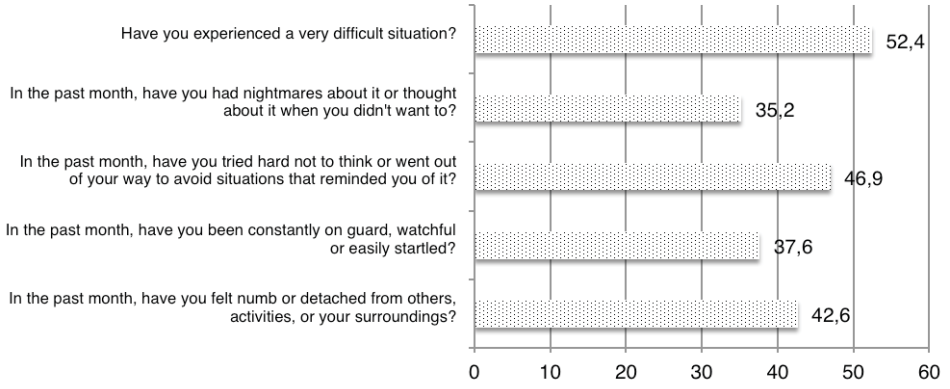


Table 9
PTSD by Gender, Rating of own and Children's Physical and Mental Health (n = 171)

Variables	N (%)	Mean (SD)	χ^2	*p*
PTSD by Gender			2.28	= .097
PTSD: Yes	40 (23.4)			
Female	15 (9.0)			
Male	25 (15.0)			
PTSD: No	127 (74.3)			
Female	32 (19.2)			
Male	95 (56.9)			
Rating of children's physical health				> .05
PTSD: Yes	10 (20.8)	3.20 (.92)		
PTSD: No	38 (79.2)	3.60 (.95)		
Rating of children's psychological health				> .05
PTSD: Yes	10 (21.7)	2.40 (1.35)		
PTSD: No	36 (78.3)	3.14 (1.17)		
Rating of own physical health				< .001
PTSD: Yes	40 (23.4)	2.77 (.95)		
PTSD: No	131 (76.6)	3.45 (1.07)		
Rating of own psychological health				< .05
PTSD: Yes	40 (23.4)	1.85 (.80)		
PTSD: No	131 (76.6)	2.94 (1.27)		
PHQ-15				
PTSD: Yes	34 (23.8)	10.2 (5.85)		< .001
PTSD: No	109 (76.2)	5.25 (4.8)		

40 participants (23.4%) met the criterion for PTSD. To analyze whether the number of females in the PTSD group differed significantly from the number of males in the same group, a Chi square test was conducted. Thus, it was calculated whether the frequencies of females and males in each PTSD group differed from expected, as such a case would indicate chance. The Chi square test statistics revealed a marginally significant relation between PTSD and gender ($\chi^2(1) = 2.28$, $p = .097$). To investigate the source of the effect, an odds ratio was calculated. An odds ratio is a proportion of the ratio of females with PTSD (to without PTSD) to that of males with PTSD (to without PTSD). The odds ratio indicated that the risk of females developing PTSD was 1.81 times higher than that of males.

Independent sample comparisons, in which mean scores of two different groups are compared, were conducted to investigate the relations between Participants' health ratings and their PTSD state. Participants' health ratings toward their child(ren) were not related to their PTSD state ($t(46) = -1.21$, $p >$. 05 and $t(44) = -1.70$, $p >$. 05 for physical and psychological health, respectively (two-tailed). However, their PTSD state had a significant impact on their ratings of their own physical health ($M = 2.77$, $SD = .95$ and $M = 3.45$, $SD = 1.07$ for participants with and without PTSD, respectively) and own-psychological health ($M = 1.85$, $SD = .80$ and $M = 2.94$, $SD = 1.27$ for participants with and without PTSD, respectively). Overall, the findings showed that participants with PTSD rated their own health, but not that of their child(ren), worse than those without PTSD ($t(169) = -3.57$, $p < .001$, $r = .26$ and $U = 3500$, $z = -2.16$, $p < .05$, $r = .16$ for their own physical and their own psychological health, respectively). A similar pattern was observed in participants' PHQ-15 levels. The findings show that participants with PTSD ($M = 10.2$, $SD = 5.85$) exhibited more symptoms than those without PTSD ($M = 5.25$, $SD = 4.8$; ($t(141) = 4.90$, $p < .001$, $r = .38$).

Participants were asked to rate physical and psychological health for themselves and their children on a 5-point Likert type scale (1: Poor; 3: Good; 5: Excellent). Similarly, they rated to what extent they felt secure in their neighborhood on a 4-point Likert type scale (1: Not at all, 4: Much). The findings indicated that males and females were similar in terms of how they rated not only their children's physical and psychological health, but also their feeling secure ($U < 2687$, $z < 1.35$, $p > .05$, $r < .20$). When they rated their own health however, females rated both their physical ($\bar{x} = 3.08$, $SD = 1.00$) and psychological ($\bar{x} = 3.85$, $SD = 1.02$) health worse than did males ($\bar{x} = 2.58$, $SD = 1.09$ and $\bar{x} = 3.12$, $SD = 1.28$; $U = 3535$, $z = 2.64$, $p < .01$, $r = .20$ and $U = 3728$, $z = 3.32$, $p < .001$, $r = .26$, respectively).

Table 10
Cross Tabulation by Gender for Children's and their own Physical and Mental Health as well as Feeling Secure in their Neighborhood

	Man				Woman				Total				
	n	%	M	SD	n	%	M	SD	n	%	M	SD	*p*
How would you say your child(ren)'s physical health is?	24		2.29	1.00	23		2.65	.88	47		2.47	.95	> .05
Good – Excellent	21	87.5			20	87.0			41	87.2			
Fair - Poor	3	12.5			3	13.0			6	12.8			
How would you say your child(ren)'s psychological health is?	24		2.92	1.25	21		3.10	1.26	45		3.00	1.24	> .05
Good – Excellent	18	75.0			13	61.9			31	68.9			
Fair - Poor	6	25.0			8	38.1			14	31.1			
How would you say your physical health is?	120		2.57	1.09	47		3.09	1.00	167		2.72	1.09	< .01
Good – Excellent	94	78.3			33	70.2			127	76.0			
Fair - Poor	26	21.7			14	29.8			40	24.0			
How would you say your psychological health is?	120		3.12	1.28	47		3.85	1.02	167		3.32	1.25	< .01
Good – Excellent	69	57.5			17	36.2			86	51.5			
Fair - Poor	51	42.5			30	63.8			81	48.5			
Do you feel safe and secure in your neighborhood?	120		2.81	.83	47		2.74	.71	167		2.79	.80	> .05
Somewhat - Much	83	69.2			34	72.3			117	70.1			
Not at all - Little	37	30.8			13	27.7			50	29.9			

To further examine participants' self-evaluations, their responses were re-coded into two categories (1: Excellent, Very good and Good, and 2: Fair and Poor). Frequencies indicated that the majority of participants tended to rate their children's physical and psychological health in a positive way. A total of 87.2% (87.5% of males and 87.0% of females) rated their children's physical health positively, and a total of 68.9% (75.0% of males and 61.9% of females) rated their children's psychological health positively. When they rated their own physical health, the majority of participants stated that they were good or better. A total of 76.0% (78.3% of males and 70.2% of females) rated their own physical heath positively. However, when they rated their psychological state, only half of the participants rated themselves as good or better. A total of 51.5% (57.5% of males and 36.7% of females) rated their psychological state as positive. A similar analysis was run by re-categorizing the security ratings into two categories (1: not at all or little, and 2: somewhat or much). Frequencies indicated that the majority of participants felt safe in their neighborhood. A total of 70.1% (69.2% of males and 72.3% of females) stated that they felt secure in their neighborhood.

Correlation Analysis

Correlations between pre-test variables. To examine the relations between study variables, Pearson's r was calculated for the correlations among age, residence in Turkey, evaluations regarding health status of the participant and his/her child(ren),

PHQ-15, feeling secure in their neighborhood, positive and negative R-COPE, a general evaluation of religious coping strategies, GSE, and CD-RISC. Possible scores for the health related questions ranged from 1: Poor to 5: Excellent. For R-COPE subscales and the general evaluation of religious coping, lower scores reflected a higher tendency of using religious coping strategies.

Table 11
Pearson Correlation

	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	-	.00	.11	-.14	-.14	-.27***	-.04	-.02	-.16	-.01	-.31***	.11
2. Safety in neighborhood		-	-.07	-.17*	.09	-.04	.03	.01	.29	.31*	.10	.28***
3. PHQ-80%			-	.16	-.02	.03	-.24**	-.11	-.47***	-.40**	-.44***	-.58***
4. Positive R-COPE				-	-.06	.49***	-.16	-.11	-.23	.06	-.07	-.26***
5. Negative R-COPE					-	-.09	-.05	-.03	-.02	-.01	-.04	.10
6. R-COPE general						-	-.04	-.10	-.09	.01	-.05	-.11
7. GSE							-	.64***	.40**	.29	.31***	.24**
8. CD-RISC								-	.37*	.18	.35***	.26**
9. Children's physical health									-	.60***	.53***	.58***
10. Children's psychological health										-	.37*	.54***
11. Own physical health											-	.51***
12. Own psychological health												-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The findings related to age indicated that older participants had a higher tendency to rate their physical health in a negative way ($r(142) = -.31$, $p < .001$), and vice versa. Age was also related with the general evaluation of religious coping ($r(142) = -.27$, $p < .001$), revealing that older participants tended to use religious coping strategies more often. Evaluations regarding children's physical health was strongly correlated with children's psychological health ($r(42) = .60$, $p < .001$), personal physical health ($r(44) = .53$, $p < .001$), personal psychological health ($r(44) = .58$, $p < .001$), and more importantly, with PHQ-15 ($r(44) = -.47$, $p < .001$). All these correlations indicated that participants tended to rate both their children's and their own health in the same direction. Moreover, children's physical health ratings were positively correlated with GSE ($r(42) = .40$, $p < .01$) and CD-RISC ($r(43) = .37$, $p < .05$), indicating that participants who evaluated their child's(ren's) physical health in a negative way also rated their own psychological and physical health in a similar way, and vice versa. There was also a positive trend between children's physical health and feeling secure, but the correlation was not significant ($r(44) = .29$, $p = .059$).

Evaluations regarding children's psychological health reflected a similar pattern, revealing a positive correlation between itself and one's own health ratings ($r(42) = .37$, $p < .05$ for physical health, $r(142) = .54$, $p < .001$ for psychological health, and $r(142) = -.40$, $p < .01$ for PHQ-15). However, children's psychological health was not significantly correlated with participants' evaluations toward themselves (i.e. GSE and CD-RISC). Finally, children's psychological health ratings were positively correlated with feeling secure ($r(42) = -.31$, $p < .05$).

Participants' rating of their own physical health was positively and strongly correlated with their own psychological health rating ($r(143) = .51$, $p < .001$) and negatively correlated with PHQ-15 ($r(143) = -.44$, $p < .001$), showing that as their rating regarding their own physical health increased, they rated their own psychological health as better and reported less symptoms, and vice versa. Similarly, ratings of their own physical health were positively correlated with GSE ($r(141) = .31$, $p < .001$) and CD-RISC ($r(141) = .35$, $p < .001$), showing that the better they perceived their own physical health to be, the more their self-esteem and resilience improved, and vice versa. Ratings of their own psychological health was negatively and strongly correlated with PHQ-15 ($r(143) = -.58$, $p < .001$) and positively correlated with GSE ($r(141) = -.24$, $p < .01$) and CD-RISC ($r(141) = -.26$, $p < .01$), showing that as ratings of their own psychological health improved, they not only reported less symptoms, but also higher levels of self-esteem and resilience, and vice versa. More interestingly, one's own psychological health was positively correlated with feeling secure ($r(141) = -.28$, $p < .001$), and negatively correlated with positive-RCOPE ($r(141) = -.22$, $p < .01$).[2] These findings indicate that feeling secure and one's own psychological health improved or declined together and that positive R-COPE might be a protective factor for one's own psychological health. Partly supporting the present argument, ratings of feeling secure were negatively correlated with positive-R-COPE ($r(143) = -.17$, $p < .05$), indicating that as participants increasingly used positive religious strategies, they felt more secure, and vice versa.

Ratings on the PHQ-15 were negatively correlated with GSE ($r(141) = -.24$, $p < .01$), indicating that as somatization increased, self-esteem decreased, and vice versa. The relation between PHQ-15 and positive-R-COPE reflected a positive trend; however, the correlation was not significant ($r(141) = .16$, $p = .057$). Although Positive-R-COPE was neither correlated with Negative-R-COPE nor with CD-RISC (rs $< -.11$, $p > .209$), it showed a negative tendency with GSE, indicating that positive-R-COPE contributed to participants' self-esteem, albeit not at a significance level ($r(141) = -.26$, $p = .062$). Positive R-COPE was also correlated with the general evaluations of religious coping strategies ($r(143) = .49$, $p < .001$). In contrast to Positive-R-COPE, Negative-R-COPE was not correlated with any of the study variables. Finally, GSE was positively and strongly correlated with CD-RISC ($r(139) = .64$, $p < .001$), indicating that participants' ratings toward themselves were in the same direction.

The overall correlations between the study variables seemed to reflect one important pattern: positive religious coping strategies might be more strongly related to psychological functioning, but not physical functioning.

2 As responses for the Positive R-COPE are given in reverse order, higher scores indicate LESS use of positive coping. Take one's rating of own psychological health, for example, a better assessment of one's own psychological health correlates with greater positive coping.

t-Test.

Table 12
t-Test for Intervention from Time 1 to Time 2

	Time 1		Time 2		*n*	*t*	*p*
	M	SD	M	SD			
PHQ-15	.42	.30	.51	.30	31	-.66	< .55
Positive R-COPE	1.99	1.01	2.17	1.01	32	-1.83	< .08
Negative R-COPE	3.29	.54	3.11	.63	32	-2.02	< .05
GSE	2.72	.68	2.94	.65	31	-2.05	< .05
CD-RISC	2.87	.85	2.65	1.02	31	1.12	< .27

A paired-samples *t*-Test was conducted to evaluate the change of psychosocial health from Time1 to Time 2 on participants' PHQ-15, Positive R-COPE, Negative R-COPE, GSE, and CD-RISC following a two-month long participation period at the center. A paired sample *t*-Test is a statistical procedure to test the hypothesis concerning the difference between two related sample means (in the case of the present study, pre and post test means) in terms of whether the apparent difference between sample means can be explained by chance. We were hoping that the center's activities would contribute to participants' psychological functioning, such that the difference between the means of pre and post tests would be significant, instead of stemming from chance. This was confirmed for all psychosocial levels, except for one dimension.

There was a statistically significant increase in Positive R-COPE from Time 1 (M = 1.99, SD = 1.01) to Time 2 (M = 2.17, SD = 1.01), $t(32) = -1.83$, $p < .08$ (two-tailed). The mean increase in Positive R-COPE scores was -.18 with a 95% confidence interval ranging from -.38 to -.02, indicating that if the study was replicated one hundred times, 95 of the studies would find a mean difference ranging from -.38 to .02. The eta squared statistics (.01), i.e. a measure of how strong the impact of the treatment is, indicated a small effect size.

There was a statistically significant decrease in Negative R-COPE from Time 1 (M = 3.29, SD = .54) to Time 2 (M = 3.11, SD = .63), $t(32) = -2.02$, $p < .05$ (two-tailed). The mean decrease in Negative R-COPE scores was -.18 with a 95% confidence interval ranging from -.001 to .36. The eta squared statistics (.12) indicated a large effect size.

There was a statistically significant increase in GSE from Time 1 (M = 2.72, SD = .68) to Time 2 (M = 2.94, SD = .65), $t(31) = -2.05$, $p < .05$ (two-tailed). The mean decrease in GSE scores was -.22 with a 95% confidence interval ranging from -.44 to -.001. The eta squared statistics (.13) indicated a large effect size.

An independent-samples *t*-Test was conducted to evaluate whether there was a difference based on gender for participants' total scores on the General R-COPE, PHQ-15, Positive R-COPE, Negative R-COPE, GSE, and CD-RISC.

There was a statistically significant difference in the PHQ-15 between males (M = .42, SD = .33) and females (M = .57, SD = .38), $t(165) = -2.65$, $p < .01$ (two-tailed) in which females scored higher. The mean difference in the PHQ-15 scores was -.16 with a 95% confidence interval ranging from -.28 to -.41. The eta squared statistics (.20) indicated a small effect size.

There was a statistically significant difference in the GSE between males (M = 3.04, SD = .52) and females (M = 2.68, SD = .64), $t(161) = 3.62$, $p < .01$ (two-tailed) in which males scored higher. The mean difference in GSE scores was 3.51 with a 95% confidence interval ranging from .16 to .54. The eta squared statistics (.27) indicated a medium effect size.

A mediation model. The previous findings seem to indicate that participants' ratings regarding their physical health is shaped mainly by how they evaluated their psychological health. This trend might be responsible for the relatively low correlation between positive-R-COPE and PHQ-15. Furthermore, gender seems to have an important impact on the study's variables, which requires further investigation. In light of these findings, it was expected that the relation between the PHQ-15 and positive R-COPE would be mediated by how participants rated their psychological health. It was also expected that the proposed correlations might be stronger for one gender than the other.

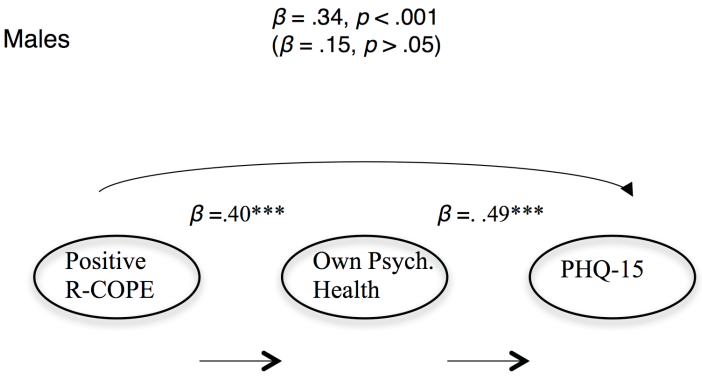


Figure 1. A Regression Model for PHQ-15, Positive R-COPE and One's Own Psychological Health.
Note. Sobel's $z' = 3.36$, $p < .001$.

To test this model, a series of regression analyses were run for males and females separately.[3] For this reason, hierarchical regression is a preferred regression procedure to analyze mediation models. It was investigated whether the impact of a predictor (e.g. Positive R-COPE) in the first step (order) would diminish when a

3 Regression is a general name for a set of statistical procedures aimed to predict the outcome variable based on its correlation with a (set of) predictor variable(s). Hierarchical regression is a regression procedure in which researchers can add each predictor to the regression model in a preferred order.

mediator variable (e.g. own psychological health) was introduced in the second step (see Baron and Kenny [1986] for the steps of the regression analysis). In the first regression model, a hierarchical regression of the PHQ-15, positive R-COPE was introduced as the predictor in the first step and evaluation of one's own psychological health was entered as the mediator in the second step. The findings related to males showed that a positive R-COPE significantly predicted PHQ-15 scores (R^2 = .11, $F(1,96) = 12.84$, $p < .001$), revealing that as males' tendency to use positive religious coping methods increased, their symptoms decreased ($\beta = .343$, $t(97) = 3.58$, $p < .001$). The contribution of the second step was significant (ΔR^2 = .20, $\Delta F(1,95) = 28.12$, $p < .001$). The impact of positive-R-COPE in the second step was not significant ($\beta = .145$, $t(97) = 1.57$, $p = .12$), while self-evaluation toward one's own psychological health contributed significantly (β = -.491, $t(97)$ = -5.30, $p < .001$), showing that as male participants' rated their psychological health well, they reported less symptoms. To reveal the relation between the predictor and mediator variables, a second regression analysis was conducted in which positive-R-COPE was the predictor and one's own psychological health was the outcome. The findings showed that positive-R-COPE significantly contributed to how one evaluated his own psychological health (R^2 = .16, $F(1,96) = 18.67$, $p < .001$), revealing that male participants rated their psychological health better when they used positive religious coping strategies (β = -.40, $t(97)$ = -4.32, $p < .001$).[4] To test whether the link between the predictor (positive-R-COPE) and the outcome (PHQ-15) were significantly reduced after controlling for the mediator (one's own psychological health), the Sobel test was run. The Sobel test is aimed to test whether the difference between two beta coefficients (i.e. a measure of the strength of the relation between the predictor and outcome variables) is significant (not occurred by chance). The Sobel test supported the mediation model ($z' = 3.36$, $p < .001$), revealing that for male participants, positive religious coping strategies reduced symptoms by improving how they evaluated their own psychological well-being.

To analyze female participants' ratings, the same strategy was followed. The hierarchical regression revealed that the contribution of positive R-COPE in the first step was not significant. However, the model explained a significant amount of variance in the second step (ΔR^2 = .35, $\Delta F(1,38) = 20.08$, $p < .001$), showing that evaluations of one's own psychological health reduced the number of reported symptoms ($\beta = .59$, $t(97) = 4.59$, $p < .001$). However, positive R-COPE's contribution was not significant. Since the first criterion of Baron and Kenny (1986) was not established, no further mediation analyses were run.

4 All these findings are in line with Baron and Kenny's (1986) criteria for mediation establishing that (1) the predictor variable must significantly predict the outcome variable, (2) the predictor variable must be correlated with the mediator variable, and (3) the link between the predictor and outcome must become weaker (and preferably non-significant) when the impact of the mediator is controlled.

Discussion

Compared to the overview analysis on religious coping (Pargament et al., 2011), our study also showed a positive association between self-esteem, physical well-being, and positive religious coping, albeit neither strong nor statistically significant.

Compared to the study among Syrian refugees in Gaziantep, Turkey (Alpak et al., 2015), where 33.5% of the participants scored positively for PTSD, with a statistical significant difference for gender that was higher for women, our results showed that 23.4% scored positively for PTSD, without a significant difference for gender. However, the risk of females developing PTSD was 1.81 times higher than that of males. Our results are also lower than the scores by Tufan, Alkin, and Bosgelmez (2013), whose study included non-Syrian refugees in Istanbul, finding 55.2% to score positively for PTSD.

Similar to other studies of CD-RISC (CD-RISC, User Guide) (M = 4.53 to 6.91) our study indicates a mid level of resiliency (M = 5.74).

Though the qualitative material from this study is not presented in this paper, similarities to the previous studies by El Chammy et al. (2014) express feelings of disinterest and hopelessness. The qualitative material also reveals coping mechanisms comparable to the study by Hassan et al. (2015), such as social and community activities. Being active at the center also helped both adults and children to be active in other areas of daily functioning.

Considering the large and increasing number of Syrian refugees that Turkey has received during the last six years, it is puzzling that so little health research has been done. Some reasons are probably the difficulties to gain access and build trust among the refugees. It is today difficult to obtain permission to do any research in the refugee camps. It is also very challenging to build up trust, a necessary aspect for the gathering of data, among people who have been hurt and traumatized in such multiple, negative ways as is the case with the Syrians. Still, the need to conduct further research is extremely acute. Firstly, the refugee situation continues as no end to the Syrian war is in sight, and secondly, as Turkey is undertaking a huge burden and will continue to do so, the importance of meeting the needs of the Syrians is very important. In this respect, a focus on health, perceived discrimination, and acculturation – including motivations, culture learning, and changes – are very central. Some critical points in Turkish society affecting Syrian refugees are that Syrians are not given refugee status, but only temporary protection. Two other aspects are their limited access to work permits and their need for education. All these, we assume, have implications for their acculturation of both physical and mental health consequences.

The findings in this study have shown that the Assyrian-Syrian refugees living in a transit reality in Istanbul are in a very delicate situation. They have lost much and for various reasons, are in a very vulnerable situation in Turkey. They had very little meaningful activities available to them or a safe space to work with their own activities when coming to Istanbul. Many had experienced traumas before leaving Syria in addition to their current PTSD scores. However, they generally rate both their own and their children's health in a positive way. One's own psychological health seems to be the most effective factor shaping one's physical health, with gender also having an important impact. The Time 1 and Time 2 results show that engagement in the center's activities appears to have had some impact on participants' health, though a control group had not been used. However, according to Gerring and McDermott (2007), a longitudinal study from Time 1 and Time 2 provides more reliable evidence of a treatments true effect rather than using a control group. Since a control group must be similar to the treatment group in all relevant aspects, we argue that in studies with refugees, it would be near impossible to determine similarity between treatment group and control group, in all relevant aspects. However, the participants themselves evaluated the center's activities as being in a safe space that was very important for their lives. Their positive religious coping strategies, as well as general self-efficiency improved during this two-month period, while neither physical health nor resiliency deteriorated significantly during the same period.

Conclusions

Our conclusions are based on research through a public health and public mental health promotion framework. In this framework, a person-centered and holistic model for investigation is essential in psychosocial and physical health research, which includes a spiritual dimension. This framework, when applied to vulnerable populations such as the refugee group here, needs to give particular attention to certain methodological aspects of refugee studies, specifically the ethical aspects, but also to the challenges relating to data collection and analysis procedures. Conducting research with highly vulnerable groups, researchers need to clarify for themselves and for the population being studied just how their research can benefit the refugees themselves. In this respect, we recommend that researchers also involve themselves in improving the social and living conditions for the refugees in a parallel process or as a result of longer-term planning. This can be done even in our study's context where only limited intervention was possible. In this case, through the center's activities for children as well as adults. Without jeopardizing the methodological stringency of the research, volunteer help and scientific work can be combined in a constructive way. The researchers naturally need to calculate any possible negative risks for the participants. The activities at the refugee center had all been carefully planned for in order not to cause any negative consequences. Dialogue, respect, and community-based-problem-solving processes were all guiding principles at the center. This, together with the internal board that the refugees formed at the center where all activities at the center would be discussed before implementation following specific rules and policies,

limited the negative risks. As the results show, the changes from Time 1 to Time 2 were mainly positive. Yet, sometimes even good intentions are not enough. What may be seen as positive for us as outsiders may turn out differently for the participants. The center has certainly created specific group dynamics and sometimes tensions and concerns among the participants sprung up. However, these were addressed and resolved with the support of the internal board. Sometimes the participants felt objectified by the media wanting to report on their situation. Therefore, knowing about the culture and history of the participants, knowing their language, and understanding their past and current circumstances proved to be important factors aiding in conducting this research.

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