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# Quality of Life, Depressive Symptoms, and Personality Traits in Syrian Refugee Adolescents

**Elif Erol**[1] · **Zehra Koyuncu**[2] · **Dilara Batgı**[1]

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## Abstract

**Purpose** Refugee adolescents' quality of life (Qol) was not investigated during the Covid-19 pandemic which have a potential impact on refugee adolescents' Qol. In this study, it is planned to investigate refugee adolescents' Qol and its association with depression and quality of life.

**Methods** 301 refugee adolescents aged between 14 and 18 who immigrated from Syria was included in the study. Personality Inventory for DSM-5 Brief Form (PID-5 BF), Beck Depression Scale, and Life Quality Scale was used as assessment tools. The data were tested using structural equation modeling.

**Results** Both depressive symptoms and personality traits are associated with low Qol. Also, depression mediated the relationship between personality disorder and Qol.

**Conclusion** This is the first study that investigates Qol in Syrian refugee adolescents during the pandemic. This study draws attention to the importance of depressive symptoms and personality traits management for improvement of Qol in Syrian refugee adolescent population.

## Highlights

- Depressive symptoms are associated with low Qol in refugee adolescents.
- Personality traits are associated with low Qol in refugee adolescents.
- Depressive symptoms have a mediator role between personality traits and Qol.

✉ Zehra Koyuncu
zboybay@gmail.com

Elif Erol
elifkoca5@yahoo.com

Dilara Batgı
dilarabatgi@gmail.com

[1] Clinical Psychologist, Department of Clinical Psychology, Istanbul Rumeli University, Istanbul, Turkey

[2] Medical Doctor, Department of Child and Adolescent Psychiatry, Cerrahpasa Medical Faculty, Istanbul University-C, Campus Kocamustafapasa Street No: 53 Cerrahpasa, 34098, Fatih, Istanbul, Turkey

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## 1 Introduction

The number of recently migrated refugees has increased considerably, and Turkey hosts a significant refugee population of 3.6 million (U. N. H. C. for R. UNHCR, 2021). However, many countries, including Turkey, were not ready to host many such refugees. For this reason, some difficulties arose in providing adequate conditions for immigrants (Kandemir et al., 2018). Refugees face problems in physical, social, and economic fields. These adverse experiences harm children and adolescents' mental health (Kandemir et al., 2018; Bhugra et al. 2011; Hebebrand et al., 2016; Hodes et al., 2018; Ceri et al. 2017)) and are also found to be associated with low quality of life (Qol) (Al Masri et al. 2021; Leiler et al. 2019). Covid-19 pandemic is another adverse event that causes social and economic limitations and may have an impact on Qol (Ferreira et al., 2021; Suryavanshi et al., 2020; Riiser et al., 2020). Consequently, refugee adolescents can be considered as a highly vulnerable population in terms of low Qol during the pandemic because of their age and belonging to a minority group (Zhou et al., 2020; Sayeed et al., 2020; Page et al., 2020; Yancy, 2020; Endale et al., 2020).

Refugees' Qol is associated with environmental factors such as housing problems (Leiler et al., 2019), socioeconomic status (Abdo et al., 2019), asylum duration, and family structure (Al Masri et al., 2021). There are also psychological correlates of Qol like depressive symptoms (Wong et al., 2012), psychological distress, coping skills (Wang et al., 2010), and personality traits (Emmons & Diener, 1985). Depression is a disorder that causes impairment in functionality and may result in morbidities and severe complications (APA, 2013; Thapar et al., 2012). Depressive symptoms, which were highly reported in refugee adolescents (Park et al., 2017), were one of the factors most strongly associated with refugee adolescents' Qol (Leiler et al., 2019). Additionally, a study was showed that refugee adolescents' Qol is inversely associated with depression in response to psychotherapeutic interventions (Doumit et al., 2018).

The primary issue in adolescence is the formation of personality and identity. However, profound personality traits also occur in this period (Klimstra, 2013). In developing personality and identity, one's personal history has a role and importance (Shiner, 2009). Unfortunately, this developmental background in refugee adolescents has been damaged by adverse events (Oppedal et al., 2018). Indeed, refugee adolescents have reported personality-related problems (Begovac et al., 2004; Huemer et al., 2013). Like adults, children and adolescents sometimes face severe difficulties in their lives because of their personalities. Personality-related problems in adolescence are already prevalent, moderately stable, and impairing (Shiner, 2009). Personality traits in adolescence predict mental disorders and poor functioning in the future (Krueger, 1999; Shiner, 2009). In addition, personality traits like neuroticism were associated with depressive symptoms (Vanhalst et al., 2012) and also Qol in various populations (Bal & Sahin, 2011; Quevedo & Abella, 2011).

The refugee adolescents' Qol was investigated in some aspects. However, this issue was not investigated during the Covid 19 pandemic, which potentially impacts refugee adolescents' Qol. Depression is considered among the correlates of Qol and is a treatable clinical problem. Personality traits with long-term mental health outcomes were also associated with low Qol. Identifying personality-related problems during adolescence may provide an opportunity for early interventions. Therefore, examined this study is planned to investigate refugee adolescents' Qol in the context of COVID-19 pandemic and its association with depression and quality of life. Our hypotheses can be listed as:

1. Higher depressive symptoms are negatively associated with quality of life in refugee adolescents.
2. Personality dysfunctional characteristics are negatively associated with quality of life in refugee adolescents.
3. Personality traits are positively associated with depressive symptoms.

## 2 Method

### 2.1 Participants

Kumkapı European Side Coordination Center (KESCC) is associated with İstanbul Provincial Immigration Administration. KESCC provides temporary protection documents, travel permission, temporary residence permission, the opportunity for financial help given by the government, and updates refugees' legal rights. In addition, more than half of the Syrian refugee population is under temporary protection. Due to this reason, refugees need to visit the center (U. N. H. C. for R. UNHCR, 2021) regularly. The sample of this study consisted of 301 Syrian refugee adolescents who visited the center. During interviews, a translator attended stand-by to ensure the adolescents understood each questionnaire item. Both Turkish and Arabic versions of the questionnaires were offered to the participants; only those who preferred the Turkish version were included in the study, not the derange group homogeneity. Also, Arabic versions of the questionnaires were with the interviewers during the discussions in case of any problem in understanding the Turkish translations.

### 2.2 Procedure

This is a cross-sectional survey study. In this article, we use a multitrait-multidiagnosis approach to examine the relation between personality and mental disorder in a large representative sample of young men and women emerging from adolescence and entering early adulthood. Personality assessed at age 18 and disorder assessed at ages 15 and 21. If the correlations reported thus far are due to the contemporaneous assessment of personality and diagnostic status, we would expect to observe highly attenuated relations between personality and diagnostic status measured at different points in time. To address this possibility, we first computed correlations among the

four symptom scales at each age (15, 18, and 21) and between ages. These correlations demonstrate both consistency and change in reported symptomatology across late adolescence.

Demographic Form, Personality Inventory for DSM-5 Brief Form (PID-5 BF), Beck Depression Scale, and Life Quality Scale were applied to the participants. Ethical approval was obtained from the Ethics Committee of Istanbul Rumeli University on April 1, 2021, with the number 2224. Written informed parental consent was obtained for all participants.

## 2.3 Measures

### 2.3.1 Beck Depression Scale

The validity and reliability study for adolescent population was performed by Uslu et al. (2008) at 2008. The scale consists of 21 items and is scored with a 4-point Likert-type scale. Internal consistency coefficient was found to be 0.90. Test–retest correlation was found to be significant as 0.89.

### 2.3.2 Personality Inventory for DSM-5 Brief Form (PID-5 BF)

The validity and reliability of the scale were conducted by Kruger et al. (2012). It is a 25-item self-report scale used to evaluate the personality traits of 11–17-year-old children. In addition to this Kruegers research is very likely used in researches with adolescents. According to a research conducted in 2019 by Sapkota et.al found out that predictors of dissociative experiences among adolescents in Nepal. Sapkota et al. referenced Krugers findings on adolescents in order to evaluate personality traits. Taking in consideration of Kruegers work Sapkota et al. (2019) found out that there is a strong relationship between dissociation and childhood trauma. Moreover, in another research conducted by Wickens et al. (2019) also referenced Krueger's work on their research on association of childhood symptoms of conduct disorder and collision risk late in adulthood. According to Kruegers findings children with conduct disorder have significant differences later on in the personality traits. These findings lead Wickens and her friends that children with conduct disorder effects personality traits of individuals which concludes to collision risk later in adulthood. Finally, another research that refrenced Krueger's finding in their research is Baardstu et al. (2017). Baardstu and his friends referenced Kruegers findings on how low agreeableness in childhood associated with personality disorders (Baardstu et al., 2017). Taking in consideration all of these studies it can be considered that Krueger et al. scale can be used in adolescent researches. Due to this reason, in this study, Krueger's self report scale is used to evaluate the personality traits of 11–17 year old children.

Assesses 5 personality domains: negative affect, distance, opposition/opposition, disinhibition, and psychoticism. In reliability analyses, the Cronbach alpha internal consistency coefficient was 0.776. The test–retest correlation coefficient was calculated as $r = 0.600$ ($p < 0.0001$). Higher scores indicate more personality dysfunction.

#### 2.3.3 Life Quality Scale

WHO developed the scale measuring health-related quality of life. Eser et al. (1999) studied the Turkish validity and reliability study with 349 people (Eser et al., 1999). The adaptation of the study was determined that the scale had a five-factor structure. These factors are; general physical health eight items, psychological health 5 items, social relations 4 items, environment 7 items (one item added in Turkish version as a national question), and health care needs 3 items. The Cronbach value of the factors ranged between 0.56 and 0.76. The lowest coefficient is social relations, and the highest score is generally physical health and environmental factors.

### 2.4 Statistical Analysis

The models proposed by the current investigation were tested using structural equation modeling using LISREL 8.51 (Jöreskog et al., 2001). First, the measurement model was estimated to see the factor loading of the latent constructs and intercorrelations among them. After evaluating the goodness of fit statistics, the structural and alternative models were calculated, and both models fit the data well. Finally, the significance of the indirect effects of the models was evaluated by the estimates produced by LISREL.

## 3 Results

The age of the participants ranged from 14 to 18 (mean:15.77, sd:1.27). 16.3% of the fathers and 25.2% of the participants' mothers were illiterate. More than half of them (55.1% of fathers, 57.% of mothers) graduated from elementary school. 90.7% of them had more than two siblings. 51.2% of them were girls, and 48.8% were boys. 88.1% of them immigrated to Turkey in less than seven years. 26.9% of them were employed.. Only half of them were going to school before the pandemic.

Their respective factors operationalized LQS and PID-5 BF. For the depression latent variable, Three parcels were created. Means, standard deviations, and intercorrelations of the observed variables are represented in Table 1.

To fit statistics for the measurement model, Goodness has shown in Table 2. The measurement model resulted in good or perfect goodness of fit statistics. All factor loading was moderate or high and statistically significant, as shown in Table 3. This means observed variables are reliable indicators of latent variables.

As shown in Table 4, correlations among latent constructs were moderate or strong in the measurement model.

### 3.1 Test of the Structural Models

A test of the structural model (which is represented in Fig. 1) resulted acceptable goodness to fit statistics: $\chi_2(52,\ N=301)=175.20,\ p<0.01$; GFI: 0.91;

**Table 1** Means, standard deviations, and intercorrelations of observed variable

| Observed Variables | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. DEPP1 | 10,19 | 3,78 | - | | | | | | | | | | |
| 2. DEPP2 | 10,24 | 3,60 | .838** | – | | | | | | | | | |
| 3. DEPP3 | 8,17 | 3,15 | .833** | .815** | – | | | | | | | | |
| 4. LQS HEALTH | 27,00 | 4,92 | –.440** | –.431** | –.434** | – | | | | | | | |
| 5. LQS EMOTION | 16,30 | 3,34 | –.496** | –.549** | –.496** | .562** | – | | | | | | |
| 6. LQS ENVIRONM | 17,77 | 2,95 | –.444** | –.470** | –.480** | .504** | .557** | – | | | | | |
| 7. LQS SCHOOL | 16,77 | 3,58 | –.383** | –.327** | –.321** | .378** | .444** | .446** | – | | | | |
| 8. PID-5-BF NEG AFFECT | 9,29 | 3,39 | .508** | .522** | .434** | –.426** | –.488** | –.383** | –.282** | – | | | |
| 9. PID-5-BF DETACHMENT | 8,95 | 2,90 | .557** | .564** | .558** | –.433** | –.480** | –.481** | –.418** | .642** | – | | |
| 10. PID-5-BF ANTAGONISM | 8,18 | 2,82 | .578** | .604** | .538** | –.406** | –.374** | –.507** | –.351** | .606** | .696** | – | |
| 11. PID-5-BF DISINHIBITION | 8,49 | 2,75 | .469** | .469** | .418** | –.422** | –.390** | –.491** | –.308** | .642** | .685** | .692** | – |
| 12. PID-5-BF PSYCHOTICISM | 8,34 | 3,29 | .600** | .590** | .561** | –.501** | –.529** | –.583** | –.347** | .688** | .738** | .776** | .747** |

Note. $N = 301$ *DEP* Beck Depression Scale, *LQS* Life Quality Scale, *PID-5 BF* Personality Inventory for DSM-5 Brief Form $^{*}p < 0.05$, $^{**}p < 0.001$

**Table 2** Goodness to fit statistics for measurement model

| Fit Measure | Good Fit | Acceptable Fit | Value | Result |
|---|---|---|---|---|
| $\chi^2$ | | | 111 | |
| sd | | | 51 | |
| $\chi^2$/ sd | 2 | 5 | 2.17 | Good fit |
| RMSEA | 0 < RMSEA < .05 | .05 < RMSEA < .10 | 0.06 | Good fit |
| SRMR | 0 < RMSEA < .05 | .05 < SRMR < .08 | 0.03 | Good fit |
| NFI | .95 < NFI < 1 | .90 < NFI < .95 | 0.96 | Perfect fit |
| CFI | .95 < CFI < 1 | .90 < CFI < .95 | 0.97 | Perfect fit |
| GFI | .95 < GFI < 1 | .90 < GFI < .95 | 0.94 | Good fit |

**Table 3** Factor loadings, standard errors, t-values for measurement model

| | Unstandardized Factor Loadings | SE | t | Standardized Factor Loadings |
|---|---|---|---|---|
| Life Quality Scale | | | | |
| LQS HEALTH | 3.35 | .54 | 12.56** | .68 |
| LQS EMOTION | 2.57 | .41 | 14.78** | .77 |
| LQS ENVIRONMENT | 2.41 | .33 | 16.07** | .82 |
| LQS SCHOOL | 2.16 | .64 | 10.74** | .60 |
| Personality Inventory | | | | |
| PID-5-BF NEG AFFECT | 2.58 | .42 | 15.22** | .76 |
| PID-5-BF DETACHMENT | 2.41 | .31 | 17.35** | .83 |
| PID-5-BF ANTAGONISM | 2.35 | .31 | 17.48** | .83 |
| PID-5-BF DISINHIBITION | 2.26 | .33 | 17.03** | .82 |
| PID-5-BF PSYCHOTICISM | 2.99 | .17 | 20.15** | .91 |
| Beck Depression Scale | | | | |
| DEPP1 | 3.47 | .16 | 20.42** | .92 |
| DEPP2 | 3.26 | .18 | 19.98** | .91 |
| DEPP3 | 2.77 | .33 | 19.02** | .88 |

*Note*. $N = 3*1$. DEP P1,2,3: Parcels of Beck Depression Scale $^{**}p < .001$

**Table 4** Correlations among latent constructs in measurement model

| Latent Constructs | LQS | PID-5 BF | DEP |
|---|---|---|---|
| 1. Life Quality Scale | – | | |
| 2. Personality Inventory | –.76 | – | |
| 3. Depression | –.65 | .66 | – |

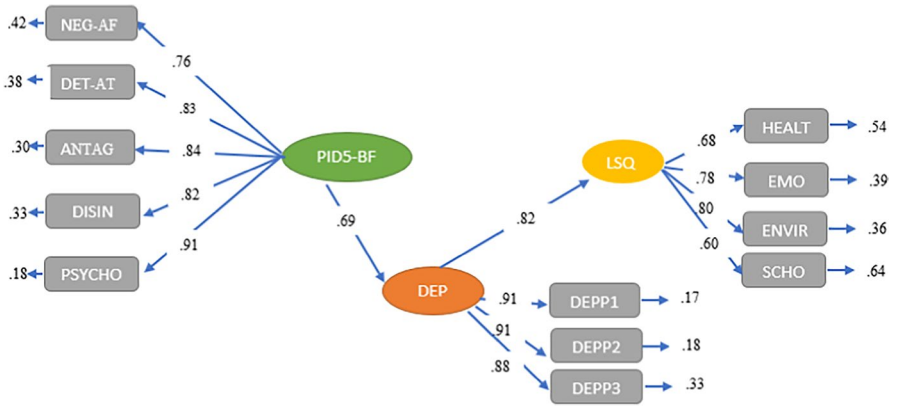



**Fig. 1** Structural model

CFI: 0.95; IFI: 0.95; SRMR: 0.09; RMSEA: 0.089 (90% confidence interval for RMSEA = 0.075—0.10). The alternative model also resulted acceptable goodness to fit statistics: $\chi_2(52, N = 301) = 129.06$, $p < 0.01$; GFI: 0.93; CFI: 0.97; IFI: 0.97; SRMR: 0.04; RMSEA: 0.07 (90% confidence interval for RMSEA = 0.055—0.086). In spite of test statistics were slightly better for alternative models, the mediating effect were stronger for the structural model.

It is estimated that the vigorous indirect effect (-0.47, SE: 0.06, $p < 0.01$) of life quality on personality traits through depression mediated this relationship. So that, in the model, 46% of the variance in life quality was accounted for by depression, while personality traits accounted for 47% of the variance in depression.

## 4 Discussion

As a result of the research, it was found that depression mediated the relationship between personality disorder and quality of life in the period of COVID-19 in refugee adolescents who migrated from Syria. In other words, the personality domain dysfunction intensity of Syrian refugee adolescents between the ages of 14–18 is related to their quality of life. In addition, a decrease is observed in the quality of life in the field of health, emotional quality of life, and perceived quality of life concerning the environment and school with the increase in personality field dysfunction among Syrian refugee adolescents. At the same time, the perceived low quality of life in different areas in Syrian refugee adolescents increases depressive symptoms; an increase in depressive symptoms also predicts quality of life. On the other hand, while the rise in personality dysfunction of Syrian refugee adolescents was found to be determinant on depression symptoms, depression symptoms were found to be determinant on the perceived quality of life.

### 4.1 Depressive Symptoms and Qol

There may be many stressful life events like adverse life conditions, problems in feeding, housing, and education in refugee children's lives, and traumatic experiences (Kandemir et al., 2018). These adversities may cause impairment in refugees' life quality (Abdo et al., 2019; Al Masri et al., 2021; Leiler et al., 2019). Additionally, there are some difficulties caused by Covid 19 pandemic in this period, and it was reported that individuals' mental health problems and support need to be increased during the COVID-19 pandemic period ( (Ferreira et al., 2021; Suryavanshi et al., 2020; Riiser et al., 2020). Inconsistent with the literature (Doumit et al., 2018; Leiler et al., 2019), our study showed that depressive symptoms are strong determinants of low Qol in refugee adolescents with a variance of 46%. In addition, a relationship was found between personality traits and Qol, which is mediated by depressive symptoms. Therefore, it was pointed to the critical role of depressive symptoms on the Qol in refugee adolescents in this study. Some factors pose a risk to depression in refugee children, such as loneliness (Solmaz et al., 2021), war-related traumatic experiences (Gunes and Guvenmez 2020; Kandemir et al., 2018), and depressive symptoms that may frequently be present in refugee adolescents (Park et al., 2017). Also, there may be some difficulties that refugees experience in achieving mental health services (Cole 1998). In the light of the literature and our research, it can be suggested that management and treatment of depressive symptoms in refugee adolescents may be seen as a target for supportive psychosocial interventions due to its association with Qol and its mediator role.

However, this is a cross-sectional study, and the relationship between depressive symptoms and quality of life may be bidirectional. Therefore, low quality of life may also be one of the reasons for the increase in depressive symptoms. In this respect, it can be considered that improving life satisfaction may help manage depressive symptoms.

### 4.2 Personality Traits and Qol

It was shown that refugee adolescents might have personality-related problems (Begovac et al. 2004; Huemer et al., 2013; Shiner, 2009). In our study, it was found that there is an association between personality traits and Qol. Also, this association was mediated by depressive symptoms. There are similar results in the literature regarding various populations (Vanhalst et al., 2012; Vanhalst et al., 2012; Quevedo & Abella, 2011; Bal & Sahin, 2011). However, the relationship between personality traits and quality of life in refugee adolescents was investigated for the first time in this study. Some mechanisms have been shown to be responsible, such as problems in the attachment and coping skills that may lead to emotional disturbances (Shiner, 2009). Emotional well-being is one of the dimensions of life quality (Felce & Perry, 1995). Also, impaired and maladaptive coping styles were identified in depression (Haskell et al., 2020). Associations between personality traits, low quality of life, and depression may result from

that similar mechanisms. In other words, personality traits, low quality of life, and depression can be seen as different manifestations of similar or related emotional processes. The pandemic period in which this current study was conducted also have some challenges that may affect the regulation of emotional processes (Ferreira et al., 2021; Suryavanshi et al., 2020; Riiser et al., 2020). Therefore, associations between Qol, personality and depression which was affected by emotional process might be more important in this period. Beyond being a psychiatric symptom, depression is a component of personality (Tsuda, 2005). The strong determinant role of the personality on the depression may be based on this originary relationship.

Personality-related problems may persist throughout life (Krueger, 1999; Schlüter-Müller, 2017; Shiner, 2009). Therefore, interventions that begin in adolescence can be recommended (Schlüter-Müller, 2017). Based on the findings of our study, it can be suggested that personality-related assessments and interventions may be necessary for the approach to depression and quality of life in refugee adolescents.

Our study has some strengths. First of all, this study was conducted with a considerable sample of refugees. Additionally, the relationship between personality traits and quality of life in refugee adolescents has not been investigated before. Lastly, the quality of life of refugee adolescents was not assessed during the COVID-19 pandemic. There are also limitations in this study. Although our sample is large, this study is a single-center study. Therefore, the study's findings cannot be generalized to all Syrian refugee adolescents. Moreover, due to the study's cross-sectional design, the impact of the COVID-19 pandemic could not be evaluated. Finally, results specific to the refugees could not be obtained because there was no comparison group of non-refugee adolescents.

## 5 Conclusion

This is the first study investigating Qol in Syrian refugee adolescents during the COVID-19 pandemic. This study draws attention to the importance of depressive symptoms and personality traits management to improve Qol in the Syrian refugee adolescent population. Both depressive symptoms and personality traits are associated with low life quality. Also, depressive symptoms have a mediator role between Qol and personality traits. As a result, the hypotheses of this study were confirmed.

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## Declarations

**Ethics Approval** An ethical approval was granted by the Ethics Committee of Istanbul Rumeli University on April 1, 2021, with the number 2224. The study was performed in accordance with the ethical standards of the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

**Informed Consent** Parents provided opt-in consent for their children to participate in the study. Children provided verbal consent.

**Financial interests** The authors declare they have no financial interests.

**Non-financial interests** None.

**Data Statement** The datasets analysed during the current study are available from the corresponding author on a reasonable request.

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