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Psychological Well-Being Among Refugee Pregnant Adolescents: A Controlled Study From Turkey

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ABSTRACT

This study aimed to compare psychiatric profiles and self-concept between Turkish and refugee pregnant adolescents, and to investigate the associated factors of psychiatric problems and low self-concept among pregnant refugee adolescents.
A total of 100 pregnant adolescents participated in the study (50 citizens of The Republic of Turkey and 50 refugees). Beck's Depression Inventory **(**BDI)**,** The Rosenberg Self-Esteem Scale, and The State-Trait Anxiety Inventory (STAI) tests were administered to the study sample. The socio-demographic and obstetric variables were obtained from hospital records and an interview during hospital appointment.
Education level (p=0.012), and the frequency of living without a husband (p=0.008) in daily life were significantly lower in refugees. BDI total score was significantly higher in refugees (p=0.032). Regarding the Rosenberg subcategories; self-esteem (p=0.019), faith in people (p=0.029), and daydreaming (p=0.039) scores were significantly lower in refugees. Among Turkish and refugee pregnant adolescents, high BDI score was found to be associated with living without a husband (p=0.001 and p=0.023), low income (p=0.024 and p=0.001) and Rosenberg subscores of interpersonal threat (p=0.025 and p=0.028), respectively. In addition, Rosenberg subscores of interparental interest (p=0.031), smoking (p=0.002), and STAI Trait score (p=0.011) were associated with high BDI score among refugees. The pregnant refugees who were living without their husbands had lower self-esteem than the pregnants who were living with their husbands (p=0.032).
Pregnant adolescent refugees have a higher risk of depression and low self-esteem than Turkish adolescents. Living without a supportive social, economic and familial environment results to low self-esteem and depression in refugee pregnant adolescents.

Keywords: Adolescent pregnancy; refugee; self-esteem scale**;** depression

Introduction

Turkey has been an extraordinary host to the world's largest refugee population of approximately 4 million refugees, and a large part of these refugees consists of children and adolescents (1). Besides, it was shown that almost half of the marriages among refugee women was under age 18 (2). Moreover, in October 2018, it was reported that 345,000 Syrians had been born in Turkey between 2011 to 2018 (3).

Pregnant adolescents have to face obstetric challenges such as low birth weight, infant death, preterm delivery, preeclampsia (4-6). In addition to these obstetric complications, researches suggested that pregnant adolescents have a higher risk of depression, anxiety, and other psychiatric disorders than non-pregnants and adult pregnancies (7, 8). It has been shown that the lack of regular occupation, inadequate financial situation, low level of education, the lack of partner support, frequent unplanned pregnancy, and future concerns might be the main causes of the psychiatric negativities among adolescent pregnancies (1, 9).

Adolescence is a period that includes robust biological and psycho-social changes. Through this challenging transition from childhood to adulthood, pregnancy may be considered as an additional burden on the maturation of social skills, behaviors, sexuality, and a sense of responsibility. For some youngsters, pregnancy may have a negative effect on psychological well-being in relation to individual and social risk factors. Although many studies have been

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conducted on adolescent pregnancy and psychiatric examination, only a limited number of previous studies investigated the relationship between psychiatric assessment of adolescent pregnancies and being a refugee. The present study has two main purposes; first one is to compare psychiatric profiles and self-concept between Turkish and refugee pregnant adolescents, and second is to investigate the associated factors of psychiatric problems and low self-concept among pregnant refugee adolescents.

Materials and Methods

Sample and Design

Participants: The participants of the study included pregnant adolescents who attended to Obstetrics and Gynecology Department of Nevşehir State Hospital. The inclusion criteria of the present study were as follows; 1) adolescents in 2nd and 3rd trimesters of pregnancy, aged between 15 and 18 years, 2) officially marriage approved by judicial consent, 3) normal intelligence based on either a WISC-R (Wechsler Intelligence Scale for Children-Revised) full-scale IQ score above 80 or the average/above average intelligence based on clinical interview. Participants who had an inability to speak or understand the Turkish language, and developmental delay, motor and visual handicaps, uncontrolled seizure disorder, and other chronic diseases were excluded from the study. In order to better understand the effects of being pregnant and refugee in the test reliability, the duration of a year and gestational weeks defined in the inclusion criteria were taken care of account. In some participants, the inventories applications were scheduled at the appropriate time.

Sixty-two refugees who met these criteria were recommended to participate in the study. Of these 62 refugees, 9 had inconsistencies in the scale scores, and 3 of them refused to participate in the study. In total, 50 refugee patients fulfilled the study requirements and were included. In order to compare the refugees with the same number of control subjects; 50 patients were selected to have matched pairs cohorts from the Turkish adolescents. The number of fifty Turkish pregnant women was attained from 93 adolescents that met inclusion criteria asked to participate in the study. Of these 93 Turkish pregnant adolescents, 35 of them did not want to participate in this study, and 8 of them were excluded from the study due to inconsistencies in the scale scores.

Communication with refugees who could not speak adequate Turkish was provided by professional language translators. After making sure that all the questions in the scales were understood by the participants, the surveys were conducted as a direct interview in both study groups. To ensure data collection quality, approximately 40 to 45 minutes were spent for each participant to fill the study scales. Before the study procedure, participants were informed that participating in the study was voluntary. All participants were given detailed information about the study, and informed consent was obtained. The study protocol was approved by the ethics committee of the Nevşehir Hacı Bektaş Veli University (Reference number: 55831188-619-E.94). The study duration was between 2019 January to December 2019.

Measurements

Socio-Demographic and Social Variables: During the study interview, various questions were asked to collect data on the demographic information, socioeconomic, familial, educational, and economic status of the participants. The demographic variables included the age of participants, educational status, to identify economic status. According to the monthly family income, participants were divided into three groups: a) low income; b) moderate income; and c) high income. The limits of incomes in present study were determined according to Confederation of Turkish Trade Union (10).

Obstetric Variables: The data of gravidity, Body Mass Index (BMI), and the gestational week were collected. The gestational week was calculated according to the pregnant's last menstrual period or first-trimester ultrasonography, and patients were grouped in trimesters according to their current gestational weeks. The pregnancies were documented according to whether they were intended or unintended. Participants' bad habits, such as smoking, alcohol use, and drugs were questioned.

Beck's Depression Inventory (BDI): BDI is a currently used assessment scale for the cognitive and emotional symptoms of depression with 21 items. The scores from the scale ranged from 0 to 63, and higher scores indicate severe depression symptoms. The cutoff score for clinical depression was taken as 17. This inventory was adapted into Turkish by Hisli with acceptable reliability and validity findings (11).

Rosenberg Scale: The scale is a self-reported scale with 63 questions with twelve subcategories (Rosenberg Self-esteem Scale, the stability of self-concept, faith in people, sensitivity to criticism, depressive affect, daydreaming, psychosomatic symptoms, interpersonal threat, parental interest, relationship with father and psychic isolation). This scale is commonly scored as a Likert scale (1 = strongly disagree to 4 = strongly agree). In the present study, the unrevised version of this scale has been

Table 1. Sociodemographic and obstetric variables of participants

Variables	Turkish adolescents (n=50)	Refugee adolescents (n=50)	p
Age (years), Mean±SD	17.36±1.19	17.18±1.92	0.272
Gestational week, Mean±SD	32.2±4.5	33.32±5.8	0.471
BMI (kg/m2), Mean±SD	26.4±3.1	25.54±3.7	0.212
Nulliparous, n (%)	47 (94)	45 (90)	0.467
Smoking, n (%)	6 (12)	5 (10)	0.563
Alcohol use, n (%)	1 (2)	0	NA
Unintended pregnancy, n (%)	30 (60)	31 (62)	0.830
Education, n (%)			
Less than secondary school	11 (22)	37 (74)	0.012
Secondary school	33 (66)	13 (26)	
Continue education	6 (12)	0	NA
Economic status, n (%)			
Low income	11 (22)	17 (34)	
Modarete income	26 (52)	26 (52)	0.212
High income	13 (26)	7 (14)	
Living without the husband, n (%)	4 (8)	14 (28)	0.008

BMI, Body Mass Index; NA, Not Available, SD: Standart Deviation
p value and test values are determined by Student's t test and Chi-square test as appropriate

utilized. The Turkish version of the Rosenberg Self-esteem Scale was adapted by Çuhadaroğlu (12).

The State-Trait Anxiety Invantory (STAI): This scale consists of 40 questions which divide into two scales that measure momentary and chronic anxiety. The state anxiety scale evaluates the current state of anxiety, and the trait anxiety scale evaluates anxiety proneness. The range of scores is 20–80 for each subtest. And the higher score indicates greater anxiety. The cutoff score for clinical anxiety was taken as 40. The adaption of the Turkish population was adapted by Le Compte and Öner (13).

Statistical Analysis: The collected data were analyzed by using the SPSS version 21.0. Demographic variables were presented by using descriptive statistics. The Chi-square test was used for continuous and categorical variables. Normally distributed parametric variables were compared between groups by using independent samples t-test. The Mann–Whitney U test was used for the comparison of continuous variables which were not normally distributed. Kolmogorov-Smirnov test was used to assess normal data distribution. The maximum number of refugee participants we can reach in a certain period of time in our study was 50. For this reason, 50 of the 69 Turkish adolescents were randomly included in the study for the groups to be balanced. The p-value <0.05 was accepted to be statistically significant.

Results

Table 1 shows the comparison of sociodemographic and obstetric variables of participants. The mean age of the patients in the study groups was 17.24 years (range: 15–18). The mean±SD of age of the Turkish adolescents and the refugees were 17.36±1.19 years, and 17.18±1.92 years, respectively (p=0.272). Both groups were similar in gestasyonel weeks and BMI (p=0.471 and p=0.212). There was no significant difference between groups for nulliparity, smoking, alcohol use, unintended pregnancy, and economic status. As seen in the table, education level and the frequency of lack of husband in daily life were significantly lower in the refugee group (Table 1).

The frequency of having a BDI score indicative of clinical depression was 28% in refugees while the same frequency was 12% in Turkish adolescents (p=0.032). Regarding the Rosenberg subcategories; scores of self-esteem (p=0.019), faith in people (p=0.029), and daydreaming (p=0.039) were found to be lower in refugees. And there were no significant differences regarding the remaining Rosenberg subcategories. There were no significant differences between the two groups in terms of the scores of STAI State and Trait (Table 2).

Table 2. Comparison of BDI, Rosenberg, STAI Scores Between Turkish Adolescents and Refugee Adolescents

Scales	Turkish Adolescents n (%)	Refugee Adolescents n (%)	p
High BDI score (≥18)	6 (12)	14 (28)	0.032
Rosenberg Self-esteem Scale			
Self-esteem*	8 (16)	14 (28)	0.019
The stability of self-concept	30 (60)	31 (62)	0.839
Faith in people	9 (18)	19 (38)	0.029
Sensitivity to criticism	20 (40)	22 (44)	0.137
Depressive affect	27 (54)	19 (38)	0.286
Daydreaming	13 (26)	26 (52)	0.039
Psychosomatic symptoms	22 (44)	19 (38)	0.226
Interpersonal threat	22 (44)	17 (34)	0.114
Participation in discussions	18 (36)	22 (44)	0.600
Parental interest	12 (24)	20 (40)	0.135
Relationship with father	18 (36)	19 (38)	0.668
Psychic isolation	33 (66)	35 (70)	0.663
	Mean±SD	Mean±SD	
STAI State	42.52±8.1	42.74±10.1	0.900
STAI Trait	43.10±7.3	42.04±7.6	0.475

BDI, Beck's Depression Inventory; STAI, The State-Trait Anxiety Inventory. '*' refers to a poor Rosenberg subscore. The Mann–Whitney U and Chi-square test are used

Table 3 shows the comparison of selected study variables with normal and high BDI scores among study groups. The frequency of low score, as defined in the methods section, was used in the comparisons. As seen in the table; living without a husband (p=0.001), low income (p=0.024), and Rosenberg subscores of interpersonal threat (p=0.025) were significantly associated with high BDI score in Turkish adolescents. High BDI score was found to be associated with smoking (p=0.002), living without a husband (p=0.023), STAI state score (p<0.05), low income (p<0.05), Rosenberg subscores of interpersonal threat (p=0.028), and parental interest (p=0.031) among refugees (Table 3).

Table 4 shows the comparison of self-esteem with study variables among refugee adolescents. The pregnant refugees who were living without their husbands had lower self-esteem than the pregnants who were living with their husbands (p=0.001). No significant difference was found on smoking (p= 0.672), unintended pregnancy (p= 0.651), low income (p=0.340), nulliparity (p= 0.256), and education level (p=0.293).

Discussion

The present study, which was amongst the first studies to investigate the psychological well-being of pregnant refugee adolescents in Turkey, revealed several significant findings. First of all, refugee adolescents were found to be distinct, and mostly worse, than Turkish adolescents in terms of scale scores and psycho-social variables. Secondly, the mood and self-concept of the study sample were found to be associated with several individuals, familial, social, and psychiatric variables. Many factors, including the cultural and economic variables, should be taken into account to interpret our findings.

It has been widely established that adolescent pregnancy is associated with a poor psychological profile, including mood symptoms and self-esteem (14). In the present study, the comparison of refugees with native adolescents in Turkey has

Table 3. Comparison of Study Variables With Normal And High Bdi Scores Among Study Groups

Variables	Turkish adolescents			Refugee adolescents		
	Normal BDI Score, N=44, n (%)	High BDI Score, N=6, n (%)	p	Normal BDI Score, N=36, n (%)	High BDI Score, N=14, n (%)	p
Rosenberg Self-esteem Scale						
Self-esteem*	7 (15.9)	1 (16.6)	0.963	12 (33.3)	2 (14.2)	0.172
The stability of self-concept	20 (45.4)	3 (50)	0.125	15 (41.6)	4 (28.5)	0.095
Faith in people	21 (47.7)	2 (33.3)	0.237	24 (66.6)	7 (50)	0.174
Sensitivity to criticism	25 (56.8)	3 (50)	0.650	19 (52.7)	8 (57.1)	0.105
Depressive affect	23 (52.2)	4 (66.6)	0.090	20 (55.5)	11 (78.5)	0.125
Daydreaming	29 (65.9)	4 (66.6)	0.324	17 (47.2)	7 (50)	0.950
Psychosomatic symptoms	19 (43.1)	2 (33.3)	0.677	19 (52.7)	12 (85.7)	0.067
Interpersonal threat	12 (27.2)	5 (83.3)	0.025	22 (33.3)	11 (78.5)	0.028
Participation in discussions	27 (61.3)	3 (50)	0.456	18 (50)	10 (71.4)	0.153
Parental interest	33 (75)	3 (50)	0.328	24 (66.6)	4 (28.5)	0.031
Relationship with father	13 (29.5)	2 (33.3)	0.240	15 (41.6)	5 (35.7)	0.395
Psychic isolation	28 (63.6)	4 (66.6)	0.873	22 (61.1)	10 (71.4)	0.137
Unintended pregnancy	26 (59)	4 (66.6)	0.776	23 (63.8)	8 (57.1)	0.658
Smoking	4 (9)	2 (33.3)	0.138	1 (2.7)	4 (28.5)	0.002
Living without a husband	1 (2.2)	4 (66.6)	0.001	5 (13.8)	9 (64.2)	0.023
Low income	8 (18.1)	3 (50)	0.024	5 (3.8)	12 (85.7)	0.001
Education						
Less than secondary school	5 (11.3)	1 (16.6)	0.556	27 (75)	10 (71.4)	0.795
	Mean±SD			Mean±SD		
STAI State	42.1±8.5	42.9±6.4	0.263	40.1±7.9	44.1±8.4	0.011
STAI Trait	42.8±6.7	43.7±7.7	0.545	41.7±6.9	42.3±7.5	0.870

shown that being a refugee is associated with worse self-concept scores, including self-esteem, faith in people, and daydreaming. Almost one/third of the refugee sample were found to have low self-esteem, which was comparable to the mixed frequencies reported by previous studies (15). Given the accommodation difficulties and poor adjustment to society, these findings should not be considered as surprising. In addition to these known correlates of being a refugee, our refugee sample was found to have a lower education status than Turkish adolescents.

On the other hand, mood symptoms were not found to be different between our study groups. It may be proposed that being a pregnant refugee adolescent has a stable impact on personality development and self-perception rather than causing episodic depression and anxiety symptoms. In the available literature, although there is no identical study for comparison, similar findings have been reported. A study from Jordan, which also used Rosenberg self-esteem scale, investigated adult pregnant refugees. Findings of the study revealed that 90% of the participants had normal self esteem (16). The authors attributed this to the fact that the majority of their sample completed university education and had moderate to high social support, which may enhance self esteem and confidence. In line with this assumption, a previous study in pregnant women found dissatisfactory self esteem to be linked to low educational level (17). A Turkish

Table 4. Comparison of Selected Study Variables With Low and High To Modarete Self-Esteem Among Refugees

	Rosenberg self-esteem		p
Variables	Low n (%)	High n (%)	
Smoking (n=5)	4 (80)	1 (20)	0.672
Unintended pregnancy (n=31)	25 (80.6)	6 (19.4)	0.651
Living without a husband (n=14)	11 (78.5)	3 (21.5)	0.032
Low income (n=17)	5 (29.4)	12 (70.6)	0.340
Nulliparity (n=45)	12 (26.6)	33 (73.4)	0.256
Education (Less than secondary school) (n=37)	27 (72.9)	10 (27.1)	0.293

p value and test values are determined by Student's t test and Chi-square test

study of married adolescents also reported that self-esteem was correlated with education level (18). Specifically, among refugee minors, El Arab and Sagbakken has underlined lack of education as a strong underlying factor which creates challenges in regards to limited understanding of informed consent, child marriage and access to reproductive rights (19).

The associated psycho-social and psychiatric factors of depression risk among the refugees were separately examined in the study. The Rosenberg scores of stability of self-concept, psychosomatic symptoms, participation in discussions, and psychical isolation were found to be higher in those with depression risk. The link between various dimensions of self-concept and depression risk is essential in refugee pregnant adolescents. Firstly, depression in adolescence and especially in pregnancy is a severe clinical condition, and the identification of risk factors may facilitate the early diagnosis. Secondly, self-concept of an adolescent may be developed and improved with simple interventions, including changes in familial and educational conditions and participation in social activities. These interventions may help to alleviate depression risk without a need for clinical treatment. Regarding the psycho-social variables, living without a husband and having a low income were found to be significantly associated with depression risk. Our findings showed that, although the informed consent in minor marriage was highly controversial, the presence of the husband in-home environment was protective against depression in pregnant refugee adolescents.

The correlates of low self-esteem among the refugees were found to have certain similarities with that of depression risk. As we found for depression, living without a husband, and having a low income were found to be significant predictors of low self-esteem. Among adolescence, self-esteem may be considered as one of the most critical domains of personality development and a stable identity. In the case of pregnant refugees, it is even more important for adaption to society and daily life responsibilities. Adolescent refugee mothers who have low self-esteem are under the risk of marital problems, unemployment, depression, and substance abuse (20). One of the negative consequences of low esteem was insufficiency in parenting and the resulting problematic behaviors in the offspring. Our preliminary findings suggest that strengthening the familial and husband support, and improving the economic status may be protective for positive self-esteem. Future studies with larger sample size and prospective design are needed to conclude the correlates of self-esteem among adolescent refugees.

The present study has several noteworthy limitations, mainly the small sample size and the crossectional design. The lack of a structured psychiatric interview was also a limitation since self-report scales have a moderate level of reliability for depression and anxiety disorders. Besides the emotional symptoms and self-esteem, the investigation personality traits would be valuable to assess the psychosocial adaption of refugees to a foreign country. Finally, the investigation of marriage life quality would also be helpful to interpret our findings since it has a strong impact on the self-esteem and emotional status of married adolescents.

One of the forgotten areas in refugee research is pregnant adolescents. Although there are a bunch of studies on the psychological well-being of pregnant refugees and females adolescents, research in this specific population is scarce. Struggling against the difficulties of being a refugee, facing the responsibilities of marriage and psychological adaptation to pregnancy are all significant challenges for a youngster. The

psychological well-being of an adolescent in pregnancy is strongly connected with a stable and confident identity, self-satisfaction, future hopes, and social adaptation. As a familial cycle; if the young mother is living in a supportive social, economic and familial environment, then she will have high self-esteem without emotional problems, and all of these, in turn, may be protective for the offspring against lifetime psychiatric risks. In contrast, low self-esteem and severe depressive symptoms in young mothers may be considered as additional socio-economic burdens not only for a nuclear family but also for the country the family took refuge in. Given the recent huge increase in the refugee population in Turkey, our preliminary findings suggest that large sample sized-studies are needed to investigate the associated factors and predictors of self-esteem and psychological well-being of pregnant refugee adolescents in Turkey.

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