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PSYCHIATRIC SYMPTOMS AMONG TURKISH ADOLESCENTS

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SUMMARY: Çuhadaroğlu F, Yazıcı KM. Psychiatric symptoms among Turkish Adolescents. Turk J Pediatr 1999; 41: 307-313.

This research was planned to investigate psychiatric symptoms in a normal adolescent population. Four hundred and thirty-four students were selected randomly from three schools of different socioeconomic status. Symptom Check List 90-R was used to evaluate the psychiatric symptoms. The results were analyzed considering the effects of age, gender and socioeconomic status. It was concluded that being female, 15-16 years of age and having a lower socioeconomic status are risk factors for developing psychiatric symptoms. *Key words: adolescence, psychiatry.*

Adolescence is a period of rapid changes in the psychological world of the individual which leads to frequent mood swings. These characteristics make adolescents more vulnerable and increase the risk of their developing psychiatric symptoms. This period has been a subject of interest for quite a number of researchers[1-9]. In Turkey, studies investigating normal adolescents and the psychopathologies of this period have been increasing in number. Some investigated the adaptational and social problems related to adolescents[10-15], while others studied the psychiatric symptoms seen in this period[16-23]. Most of these studies were done among university students. Studies related to younger adolescents covered either youngsters living in orphanages[22,23] or those who applied to cilincs with psychiatric symptoms[16]. One of the studies evaluating normal adolescents included only female high school students[17] and another was done in a high school where most of the children were from families of upper socioeconomic class[17]. To what extent these sample groups represent normal adolescents in the Turkish population is open to discussion. This research was planned to study the psychiatric symptoms in normal adolescent populations of three different socioeconomic status (upper, middle and lower) to obtain more valid results which could be generalized for Turkish adolescents. This paper presents the data related to the psychiatric symptoms seen among high school students and is a part of a larger project planned to investigate normal adolescents in the Turkish population.

Material and Methods

In order to study the psychiatric symptoms seen among normal adolescents, three high schools from different socioeconomic regions (lower, middle and upper) in the city of Ankara were chosen randomly from a list published

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by the Ministry of Education which classifies schools according to the socieconomic status of the attending children. Eighth, ninth, tenth and eleventh grade classes (one of each) were selected randomly in each school. The number of adolescents screened in this study was 434 (239 female and 195 male). The distribution of the students according to socioeconomic groups and gender is shown in Table I. Age range for all groups is 13-21 years, with a mean age of 16.

Table I: Distribution of Students by Gender and Socio-Economic Status (SES)

SES	Females	Males	Total
Upper	58	66	124
Middle	95	54	149
Lower	86	75	161

Symptom Check List (SCL-90-R) was used to get a profile of the psychiatric symptoms. This self-rating screening instrument was developed by Derogatis et al.[24] and contains 90 items describing psychiatric symptoms which are evaluated in ten groups of psychopathologies: somatization, obsessive-compulsive symptoms, interpersonal vulnerability, depression, anxiety, hostility phobia, paranoid ideation, psychoticism, and other. The higher the scores, the more intense the symptoms. This instrument has been used in various studies[17,19-21] and has been shown to be valid and reliable for Turkish adolescents[25]. SCL-90 has three indices showing the level of psychopathology: General Symptom Index (GSI), Total Positive Symptoms (TPS) and Positive Symptom Index (PSI). GSI was used for evaluation in this research. The cut-off point for a pathological level of symptoms on GSI was 1.57 for Turkish adolescents[25].

Statistical analysis was done using one way analysis of variance and t-tests.

Results

The distribution of the mean scores for all subscales of SCL-90 and GSI according to the socioeconomic class and gender is given in Table II. GSI values for all groups were under the cut-off point showing that psychiatric symptoms are not at a pathological level.

The results were evaluated considering the effects of gender, socioeconomic level, and age.

The mean scores and the results of the analysis of the scores for all males and females in the group are given in Table III. ANOVA results show that all symptom groups except hostility were found more in females; GSI (psychopathology index) was also significantly higher in females.

Table II: Mean Scores of SCL-90 Among Groups and Genders

	Upper SES		Middle SES		Lower SES	
SCL-90	Females	Males	Females	Males	Females	Males
Somatization	0.80	0.82	0.72	0.52	0.80	0.74
Obsessive-Compulsive	1.32	0.82	1.02	0.75	1.25	0.99
Interpersonal Vulnerability	1.12	0.82	1.19	0.74	1.43	0.96
Depression	0.89	0.82	0.94	0.53	1.13	0.74
Anxiety	0.70	0.82	0.78	0.46	0.88	0.70
Hostility	0.83	0.82	0.97	0.62	1.00	0.84
Phobia	0.43	0.82	0.55	0.36	0.65	0.50
Paranoid Ideation	0.93	0.82	0.92	0.57	1.08	0.80
Psychoticism	0.66	0.82	0.73	0.44	0.88	0.62
Other	0.88	0.82	0.83	0.50	0.94	0.73
GSI	0.82	0.82	0.86	0.54	1.00	0.70

SES: Socioeconomic status; GSI: General Symptom Index.

Table III: Difference of SCL-90 Scores Between Females and Males

SCL-90	Total	Females	Males	t
Somatization	0.71	0.77	0.64	1.82*
Obsessive-Compulsive	1.01	1.11	0.88	3.82***
Interpersonal Vulnerability	1.08	1.26	0.87	3.96***
Depression	0.83	1.00	0.64	4.02***
Anxiety	0.72	0.80	0.61	2.13**
Hostility	0.88	0.95	0.81	1.66
Phobia	0.51	0.56	0.44	1.80*
Paranoid Ideation	0.86	0.98	0.72	3.54***
Psychoticism	0.64	0.76	0.61	2.14**
Other	0.78	0.88	0.65	3.20***
GSI	0.80	0.90	0.69	3.18***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, GSI: General Symptom Index.

When the adolescents were evaluated according to socioeconomic class groups (Table IV), significant differences were found on obsessive-compulsive symptoms ($F = 4.89$, $p < 0.01$), interpersonal vulnerability ($F = 3.81$, $p < 0.05$), depression ($F = 4.67$, $p < 0.01$) and GSI ($F = 3.11$, $p < 0.05$). T-tests revealed that higher scores for the lower socioeconomic status group caused the differences (Table IV.i).

SCL-90 scores were also analyzed in terms of age factor (Tables V and V.i). ANOVA and t-test showed that the 15-16 years of age had significantly higher scores than the other age groups for GSI ($F = 3.46$, $p < 0.05$), interpersonal vulnerability ($F = 3.73$, $p < 0.05$), depression ($F = 5,73$, $p < 0.01$) and paranoid ideation ($F = 6.18$, $p < 0.01$).

Table IV: SCL-90 Scores of the Three SES Groups and ANOVA Results

SCL-90	Upper SES	Middle SES	Lower SES	F
Somatization	0.70	0.65	0.68	1.93
Obsessive-Compulsive	0.95	0.92	1.13	4.89**
Interpersonal Vulnerability	0.99	1.02	1.21	3.81*
Depression	0.74	0.79	0.95	4.67**
Anxiety	0.67	0.67	0.79	2.25
Hostility	0.88	0.84	0.93	0.51
Phobia	0.44	0.48	0.58	2.34
Paranoid Ideation	0.84	0.80	0.95	1.90
Psychoticism	0.70	0.62	0.76	1.97
Other	0.78	0.71	0.84	1.78
GSI	0.77	0.74	0.88	3.11*

* $p < 0.05$, ** $p < 0.01$, SES: socioeconomic status; GSI: General Symptom Index.

Table IV.i: T-test Results of the Differences Between the SES Groups

SCL-90	Upper-Middle SES	Middle-Lower SES	Upper-Lower SES
Obsessive-Compulsive	0.34	-2.87**	-2.44**
Interpersonal Vulnerability	-0.39	-2.13**	-1.68
Depression	-0.66	2.24*	-2.95**
GSI	0.38	-2.28*	-1.94*

* $p < 0.05$, ** $p < 0.01$, SES: socioeconomic status; GSI: General Symptom Index.

Table V: SCL-90 Scores of the Three Age Groups and ANOVA Results

SCL-90	13-14 Years	15-16 Years	17-21 Years	F
Somatization	0.65	0.77	0.66	1.97
Obsessive-Compulsive	0.92	1.08	0.95	2.76
Interpersonal Vulnerability	1.07	1.18	0.96	3.73*
Depression	0.75	0.94	0.73	5.73**
Anxiety	0.61	0.78	0.67	2.71
Hostility	0.86	0.95	0.81	1.41
Phobia	0.53	0.56	0.42	2.96
Paranoid Ideation	0.83	0.98	0.73	6.18**
Psychoticism	0.70	0.75	0.62	1.94
Other	0.70	0.85	0.72	2.82
GSI	0.77	0.87	0.73	3.46*

* $p < 0.05$, ** $p < 0.01$, GSI: General Symptom Index.

Table V.i: T-test for Differences Between the Age Groups

SCL-90	13-14 Years/ 15-16 Years	15-16 Years/ 17-21 Years	13-14 Years/ 17-21 Years
Interpersonal Vulnerability	-1.03	2.78**	1.03
Depression	-2.25*	3.18***	0.19
Paranoid Ideation	-1.66*	3.54***	1.25
GSI	-1.45	2.58**	0.75

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, GSI: General Symptom Index.

Discussion

Normal adolescents demonstrated a mean score of 0.80 for GSI which was lower than the psychopathological cut-off point of 1.57 for Turkish adolescents as determined by Dağ[25]. Neither males nor females showed psychiatric symptoms at pathological levels. However, the mean scores of females on all scales except hostility were significantly higher than those of males. This result points to the possibility that females have more difficulties during adolescence and are more inclined to develop psychiatric symptoms, which is in parallel with the results of other studies on normal adolescents[12,19,26]. Casper et al.[27] studied gender differences in self-reported psychiatric symptoms in adolescents using SCL-90 and found that female adolescents, regardless of race, reported significantly higher levels of depression and anxiety than did male adolescents. Our results regarding gender differences were also similar to those obtained in studies with Ethiopian and Hawaiian adolescents[28,29].

When the students were evaluated according to socioeconomic status, those from the lower status school showed significantly higher scores on several subscales and GSI of SCL-90 compared to the students of the other two schools. This result shows that adolescents from lower socioeconomic classes are at greater risk for developing psychiatric symptoms. This result is similar to the result found in The Great Smoky Mountains Study of Youth, which states that poverty is the strongest demographic correlate of psychopathology, in both urban and rural children[30]. It was shown that the lower the socioeconomic status of adolescents, the lower is their self-esteem[31] and that low self-esteem is one of the major risk factors for developing psychiatric symptoms in teenagers[32].

Age is found to be another factor affecting the development of psychiatric symptoms in adolescents. Interpersonal vulnerability, depression and paranoid ideation increase at the age of 15-16 years and then decrease. This is also reflected on GSI scores. This result shows that adolescents at 15-16 years of age are at greater risk of developing psychiatric symptoms, and is similar to the results of another study done with Hawaiian youth which found that ninth graders reported more aggressive symptoms that did twelfth graders[29].

Increased interpersonal vulnerability is related to difficulties in coping with interpersonal relations, and these difficulties may lead to the development of depression and paranoid ideation symptoms. This result also confirms the results of another study showing that depression increases at the age of 15-16 and decreases afterwards[28]. It can be speculated that adolescents in Turkish society are suffering mostly from the turmoil of this period between the ages of 15-16.

Our results demonstrate that being female, coming from a lower socioeconomic class and being between 15-16 years of age are risk factors for developing psychiatric symptoms. This data is important in leading the preventive studies for adolescents. Fifteen-sixteen-years-old youngsters, especially females and those from economically lower groups, need more preventive work and support because they are psychologically at greater risk of developing psychiatric symptoms and perhaps some disorders.

This study is also of importance to pediatricians, especially those working with adolescents. Studies done with Turkish youth show that they usually express their psychological stresses by somatic symptoms. Thus, while treating adolescent patients having somatic complaints, consideration of the risk factors mentioned above may help the pediatrician to make a better differential diagnosis.

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