The Assessment of Family Functions, Dyadic Adjustment, and Parental Attitude in Adolescents with Substance Use Disorder

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ABSTRACT

Introduction: Family structure and family attitudes have been reported to be important factors in the development of substance use disorders. In this study, we aimed to assess the relationship between substance use and family functions, parental attitude, and parental dyadic adjustment of adolescents with substance use disorder.

Methods: The study was conducted on 50 patients, comprising 9 female and 41 male adolescents between the ages of 14 and 18 years, treated at Bakırköy Mental Health Hospital, Substance Abuse Research, Treatment and Education Center for Children Adolescents (ÇEMATEM), Turkey, with the diagnosis of substance use disorder according to DSM-5 and their parents and a control group comprising 50 healthy adolescents without any psychopathology or substance use disorder and their parents. The study was designed as a matched case-control study for age and gender. Sociodemographic Data Form (SDF), Parental Attitude Scale (PAS), Dyadic Adjustment Scale (DAS), and Family Assessment Device (FAD) were applied to both groups.

Results: When the study and control groups were compared with regard to the PAS, the study group scores determined for "involvement-

acceptance," "psychological autonomy," and "control-supervision" dimensions were significantly lower than the control group scores. Compared with the control group, dyadic adjustment was lower in terms of "dyadic cohesion," "dyadic consensus," and "affectional expression." Living with biological parents and the togetherness of parents were lower in the study group. "Problem solving," "communication," "roles," "affective responsiveness," "affective involvement," "behavior control," and "general functioning" dimension scores according to FAD were also significantly higher in the study group.

Conclusion: Compared with togetherness of the controls, the dyadic adjustment of their parents was lower and family functions as perceived by the parents and adolescents were unhealthier in the adolescents using substances. These findings indicate that the family functions, dyadic adjustment, and parental attitude styles need to be assessed in the risk groups to determine familial risk factors and to structure protective measures. These assessments may guide clinicians and policy-makers toward good clinical practice and help build protective measures.

Keywords: Adolescence, substance use disorder, family functions

INTRODUCTION

Substance use is a worldwide health problem involving whole populations, but primarily affecting adolescents (1). In Turkey, the age at which the use of substances is started is gradually decreasing in line with the increase in the prevalence of substance use, with adolescents forming a significant risk group of substance use disorders (2). The structure and attitudes of the family are important risk factors in the development of substance use disorders. Researchers have demonstrated that insufficient parenting practice is associated with the risk of substance use in adolescence. Among the parenting practices, difficulties in parental supervision and closeness have been found to be connected with substance use in adolescence (3,4,5).

The quality of parent and child relationship is a predictor of the child's skills regarding adaption to society. In child development, quality and nourishing, supportive, and monitoring elements of parental attitude are important indicators for the direction of adolescent behavior. Making requests appropriate for the capacity of the child, setting some rules, discipline methods, and family support are some examples of behaviors determining the quality of parenting (6). Rejection of the adolescent by the parent, indifferent and passive attitudes toward the adolescent, excessive authoritarian style, unstable and inconsistent behavior, perfectionism, excessive allowances, and tolerance of the parents or insufficient monitoring of the adolescent's behaviors are risky attitudes that can lead to conduct problems (7). In families exhibiting these manners, children cannot develop a sense of responsibility and coping skills. It is suggested that children who grow up in negative reinforcement environments, which determine the quality of the relationship between the mother, father, and child, are less self-confident and cannot say "no" to substance use similarly by exhibiting unconfident and passive behaviors (8).

A strong parent-child relationship is an important protective factor in preventing substance abuse in adolescence and young adulthood (9,10). A positive and protective relationship is determined by the degree of parental intimacy, expression of excitement and pride for success and skills of the child, and expression of intimacy and love (11). Studies have demonstrated that qualified interaction between parents

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Received: 17.04.2014 **Accepted:** 25.11.2014

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and the child, consistent and effective discipline methods, and a positive parenting model reduce the risk of the child developing substance use disorders (12).

Parental supervision refers to the parents' having information about the activities and friendships of their child and being sure that the child's behaviors are not harmful for their development and safety. Poor parental supervision was found to be associated with an increase in substance use and a poor prognosis in terms of treatment outcomes (13,14). A remarkable decrease in parental supervision also enhances alcohol consumption in adolescents (15,16). The presence and strength of bonding and attachment between parents and the adolescent are protective factors against substance use (16).

In Turkey, there is a limited number of studies on determining environmental factors, and these primarily cover familial factors that influence the development of substance use disorders. Therefore, the present study aimed to evaluate the relation between family functioning, parents' attitude, and dyadic adjustment and substance use in the adolescents with substance use disorder. It also aimed to help prevent substance use among adolescents and to contribute to the course of treatment by determining parents' attitude and familial factors that influence substance use in Turkish adolescents based on the data obtained.

METHODS

Subjects

The case group of the present study comprised 50 adolescents aged 14 to 18 years, who were treated between August and October 2013 in Bakırköy Prof. Dr. Mazhar Osman Mental Health and Neurological Diseases Training and Research Hospital, Pediatric Adolescent Substance Research, Treatment and Training Center (CEMATEM) Outpatient and Inpatient Units, Turkey, and who had been diagnosed with substance use disorder by a psychiatrist via a semi-structured face-to-face interview created by the researchers based on DSM-5 (Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition) (17) Substance Use Disorders Diagnostic Criteria, and their parents. The adolescents enrolled in the study, who had substance use disorder, were consecutively selected among the cases that admitted to the CEMATEM polyclinic for the first time as outpatients or who were patients that had been hospitalized for the first time. The control group comprised a case group, who had been admitted to the Kanuni Sultan Süleyman Training and Research Hospital polyclinics and diagnosed with neither substance use disorder nor any psychopathology, as well as age- and gender-matched 50 adolescents and their parents.

Exclusion criteria for the adolescents were being not literate and having any physical or mental disorder (such as an alcohol-substance effect, abstinence or intoxication, being in delirium tremens period, having mental retardation, psychotic disorder, mood disorder, psychotic disorder due to general medical condition or to substance abuse, or the presence of other organic mental disorder) that could hinder participation in the study. Cases having substance use disorder with cigarette or alcohol use alone were excluded from the study. Exclusion criteria for parents were being older than 65 years of age, having mental retardation, mental disorder or any psychotic disorder due to general medical condition, and both parents' being not literate.

The present study was approved by Bakırköy Prof. Dr. Mazhar Osman Mental Health and Neurological Diseases Training and Research Hospital Local Ethics Committee, dated 06.08.2013 and protocol number 40045-305. All the volunteers participating in the study were informed about the aim and nature of the study, and written consents were obtained from both the participants and their families.

Instruments

Sociodemographic Data Form (SDF)

The SDF is a form created by the researchers to evaluate sociodemographic and clinical characteristics of the case and control groups. Age, gender, socioeconomic status, education status, occupational status, history of mental disease, history of crime, family characteristics (mother-father togetherness, education and occupation status, smoking/alcohol/substance use in the family, mental disease in the family), and substance usage characteristics of the users were inquired by the clinician.

Family Assessment Device (FAD)

The FAD is a self-reporting scale that allows evaluation of the families for the fields which they perform or not as family functions. The validity and reliability study of the scale, which was developed in 1983 by Epstein et al. (18), in Turkish was done by Bulut (19). This scale, which can be performed for all family members aged over 12 years, consists of a total of 60 items and has 7 subscales that define 7 dimensions of family functionality. These include Problem Solving (PS), Communication (C), Roles (ROL), Affective Responsiveness (AR), Effective Involvement (AI), Behavior Control (BC), and General Family Functioning (GFF). Scores of 7 subscales are calculated for each family member. Theoretically, "two" is the cut-off value, and mean scores over 2 are considered as the indicators for unhealthy family functioning (20). In the present study, the scale was completed separately by the parents and adolescents.

Parental Attitude Scale (PAS)

The PAS was developed by Lamborn et al. (21). The scale was completed by children and adolescents over the age of 10 years and consists of 3 dimensions, including "acceptance-involvement," "strictness-supervision," and "psychological autonomy." The acceptance-involvement dimension is evaluated by 9 items, while the strictness-supervision dimension is evaluated by 8 items, and the psychological autonomy dimension is evaluated by 9 items. The validity and reliability study of this scale in Turkish was done by Yılmaz (22). An increase in the scores obtained from the test indicates that the dimension evaluated is more positive. In the present study, this scale was completed by the adolescents.

Dyadic Adjustment Scale (DAS)

The DAS was developed in 1976 by Spainer (23). DAS is a 32-item scale developed to measure the characteristics of the dyadic relationships of the couples perceived by each partner within the couple. It is widely used also for the measurement of satisfaction with marriage. It consists of 4 subscales: "dyadic satisfaction," "dyadic cohesion," "dyadic consensus," and "affectional experience." The dyadic satisfaction subscale contains 10 items inquiring about positive and negative communication between partners via negative and positive thought models. The dyadic cohesion subscale consists of 5 items evaluating the time spent together and the communication. Dyadic consensus consists of 13 items demonstrating the level of agreement between partners on basic issues of marital relationship. Affectional expression indicates the degree of agreement in expressing love and includes 4 items inquiring about behaviors that express love. The validity and reliability of the scale in Turkish was done in 1995 by Yavuz (24). An increase in the score obtained from the test indicates that the dimension evaluated is more positive. In the present study, this scale was completed by the parents.

Statistical Analysis

Data were evaluated by Statistical Package for the Social Sciences (SPSS Inc; Chicago, IL, USA) 18.0 for Windows. Descriptive statistics (mean and standard deviation) were used for the statistical evaluation. A Student t-test was used for paired group comparison of parametric variables that

show normal distribution, whereas the Mann–Whitney U test was used for paired comparisons of parametric variables that did not show normal distribution. Qualitative data were compared using Chi-square test; Fischer's exact test was used in case the estimated frequency was not met. The correlation between adolescents and parents in the case and control groups in terms of the scores of the FAD was calculated by the Pearson correlation test. A p value smaller than 0.05 was considered statistically significant.

RESULTS

The present study was conducted between August and October 2013 with a total of 100 adolescents and their parents, of whom, 50 formed the control group and 50 formed the case group. The age of the adolescents in the case group was between 14 and 18 years, with a mean age of 16.08 ± 0.98 years. Of the case group, 18% (n=9) were girls and 82% (n=41) were boys, with a mean age of 16.26 ± 0.99 years. Of the control group, 18% (n=9) were girls and 82% (n=41) were boys, with a mean age of 15.90 ± 0.95 years. No difference was determined between the case and the control groups in terms of age, gender, and monthly income of the families (Table 1).

Information on the education status, the ratio of attending school, and the ratio of being an employee for the case and the control groups is presented in Table 1. With regard to the education status, a statistical significant difference was determined between the case and control groups. It was observed that the ratio of attending school was significantly lower in the case group than in the control group. It was observed that the ratio of employed adolescents was statistically significantly higher in the case group.

With regard to parent togetherness in the case group, the parents of 37 (74%) subjects were together; whereas the parents of 13 (26%) subjects were separated, due to death of one of the couples or due to divorce. In the control group, parents of 48 (96%) subjects were together and parents of 2 (4%) subjects were separate. Parent togetherness was statistically significantly low in the case group (Table 2).

No statistically significant difference was determined between the groups in terms of maternal education status, maternal occupational status, paternal education status, paternal occupational status, and history of smoking, alcohol consumption, and substance use in the family (Table 2).

The characteristics of the case group in terms of substance use are demonstrated in Table 3. The age at which the use of substances was started was determined to be 13.82 ± 1.67 years in the case group. Among the initially used substances, cannabinoids were reported most commonly, and it was observed that using cannabinoids together with stimulants was reported as the preference substance (the substance used and desired most commonly). It was observed that 8 (16%) patients in the case group had been treated as inpatients.

The PAS scores and categorical evaluation of the scores in the case group are demonstrated in Table 4. Comparing PAS scores, it was determined that scores of the "acceptance-involvement," "psychological autonomy," and "strictness-supervision" dimensions were statistically significantly lower in the case group versus the control group.

Categorical evaluation of parents' attitudes revealed statistically significant differences between the case and control groups. It was determined that a negligent attitude is more common (48%) in the case group, whereas a democratic attitude (46%) is more common in the control group (Table 4).

The distribution of FAD scores of the parents and adolescents in the case and control groups is demonstrated in Table 5. Comparing FAD scores of the parents and adolescents between the groups, it was determined that the mean scores of "problem solving," "communication," "roles," "affective responsiveness," "effective involvement," "behavior control," and "general functioning" were significantly higher in the case group than in the control group.

Table 1. Distribution and comparison of the sociodemographic characteristics of the case and control groups

		Case group (n=50)	Control group (n=50) Mean±SD	p
Gender	Male	41 (82%)	41 (82%)	
	Female	9 (18%)	9 (18%)	
Age	All group	16.26 ± 0.99	15.90 ± 0.95	0.0664
	Male	16.41 ± 0.89	15.98 ± 0.91	
	Female	15.56 ± 1.13	15.56 ± 1.13	
Education status	Left primary school	5 (10%)	2 (4%)	<0.0001
	Primary school student	0 (0%)	3 (6%)	
	Left high school	36 (72%)	3 (6%)	
	High school student	9 (18%)	42 (84%)	
Occupation status	Working	24 (48%)	5 (10%)	0.0001
	Not working	26 (52%)	45 (90%)	
Continuing school	Yes	9 (18%)	45 (90%)	<0.0001
	No	41 (82%)	5 (10%)	
Socioeconomic status	0-1000 TL	23 (46%)	17 (34%)	0.1423
	1000-2000 TL	24 (48%)	24 (48%)	
	>2000 TL	3 (6%)	9 (18%)	

A p value smaller than 0.05 was considered statistically significant, Chi-Square test. SD: standard deviation

Table 2. Distribution and comparison of the sociodemographic characteristics of parents

		Case group (n=50)	Control group (n=50)	p
Parent togetherness	Together	37 (74%)	48 (96%)	0.0038
	Separated	13 (26%)	2 (4%)	
Parents alive	Both alive	47	49	0.3
	One alive	3	1	
Education status of mother	Not literate	3	8	0.107
	Literate	2	6	
	Primary school	37	25	
	Mid-school	5	5	
	High school and above	3	6	
Occupation status of mother	Laborer	9	9	0.6347
	Servant	0	1	
	Self-employment	5	3	
	Retired	1	0	
	Not working	35	37	
Education status of father	literate	3	2	0.8748
	Primary school	29	30	
	Mid-school	11	8	
	High school and above	7	10	
Occupation status of father	Laborer	25	26	0.6865
	Servant	4	3	
	Self-employment	11	15	
	Retired	9	4	
	Not working	1	2	
Smoking in the family	Yes	38	28	0.0567
	No	12	22	
Alcohol use in the family	Yes	4	2	0.6777
	No	46	48	
Substance use in the family	Yes	4	1	0.3622
	No	46	49	

A p value smaller than 0.05 was considered statistically significant, Chi-Square test

With regard to the correlation between adolescents and parents in terms of FAD scores, a significantly positive correlation was determined between the scores of all the subscales, excluding affective responsiveness and effective involvement (Table 6).

The mean overall scores of the DAS and the scores of the dyadic consensus and affectional experience were found to be significantly lower in the parents of the case group than in those of the control group (Table 7).

Comparing inpatients (n=8) and outpatients; outpatients obtained a higher ($p=0.018$, $t=-2.458$) mean score from the affectional experience subscale of DAS, which was completed by the parents, whereas inpatients obtained a lower mean score ($p=0.49$, $t=-2.023$) from the psychological autonomy subscale of PAS, which was completed by the adolescents. A comparison of inpatients and outpatients revealed no statistically significant finding with regard to the evaluation of the other scales.

DISCUSSION

Although sociodemographic characteristics are not the basic topic of the present study, it is observed that some findings about the gender, education status, occupational status, and status of attending school were conspicuous. With regard to the gender ratios, it was determined that

Table 3. Distribution of the case group's substance use characteristics

		Case group (n=50)
First used substance	Inhalant/solvent	15 (30%)
	Cannabis	19 (38%)
	Synthetic cannabinoid	13 (26%)
	Stimulant	3 (6%)
	Opioids	0 (0%)
Preference substance	Inhalant/solvent	1 (2%)
	Cannabis	1 (2%)
	Synthetic cannabinoid	12 (24%)
	Stimulant	0 (0%)
	Opioids	7 (14%)
	Cannabis+stimulant	21 (42%)
	Cannabis+stimulant+inhalant	4 (8%)
	Cannabis+stimulant+opioid	4 (8%)

Table 4. Comparison of Parental Attitude Scale (PAS) scores and categorical features between the case and control groups (PAS was completed by the adolescents)

	Case group (n=50)		Control group (n=50)		p
PAS scores*	Mean	SD	Mean	SD	
Acceptance-involvement	25.12	6.62	29.02	4.19	0.001
Psychological autonomy	19.8	5.58	22.78	4.18	0.003
Strictness-supervision	21.18	5.99	26.38	4.96	<0.0001
PAS categorical evaluation**	Case group (n=50)		Control group (n=50)		p
Democratic	11 (22%)		23 (46%)		0.001
Negligent	24 (48%)		6 (12%)		
Authoritarian	7 (14%)		11 (22%)		
Permissive	8 (16%)		10 (20%)		

A p value smaller than 0.05 was considered statistically significant, *Student t-test, **Chi-Square, and Fisher exact test. SD: standard deviation

Table 5. Evaluation of Family Assessment Device (FAD) scores of the case and control groups

Adolescents	Case group (n=50)		Control group (n=50)		p
	Mean	SD	Mean	SD	
Problem solving	2.38	0.79	1.8	0.55	<0.0001
Communication	2.26	0.54	1.85	0.44	<0.0001
Roles	2.4	0.61	1.94	0.33	<0.0001
Affective responsiveness	2.38	0.68	1.85	0.55	<0.0001
Effective involvement	2.56	0.44	2.32	0.38	0.005
Behavior control	2.23	0.42	2.06	0.35	0.035
General family functioning	2.32	0.69	1.68	0.44	<0.0001
Parents	Case group (n=50)		Control group (n=50)		p
	Mean	SD	Mean	SD	
Problem solving	2.01	0.7	1.59	0.52	0.001
Communication	2.1	0.52	1.75	0.45	<0.0001
Roles	2.34	0.55	1.89	0.43	<0.0001
Affective responsiveness	2.2	0.71	1.75	0.58	0.001
Effective involvement	2.74	0.51	2.33	0.43	<0.0001
Behavior control	2.29	0.42	2.11	0.36	0.018
General family functioning	2.15	0.64	1.52	0.4	<0.0001

A p value smaller than 0.05 was considered statistically significant, Mann–Whitney U test

the male ratio was extremely higher. This is consistent with many studies demonstrating that substance use is more prevalent among male adolescents than females (6,25). The results of the study demonstrated that the rates of attending school and education status were lower but the ratio of being employees was higher in the adolescents with substance use disorder than in the other group. These findings are consistent with the results of studies suggesting that the ratio of dropping out of school is higher among adolescents with substance use disorder and that substance use disorder is less prevalent among adolescents that continue education and are academically successful (26,27). Contrary to the results of previous studies that found the prevalence of low socioeconomic status to be higher in adolescents with substance use disorder (28), the present study determined no significant difference between the 2 groups in terms of the level of income of the family. The absence of difference may have resulted from the fact that the control group was being selected among the cases that had been hospitalized.

Evaluating smoking, alcohol consumption, and substance use among first-degree relatives, no significant difference was determined between the groups. Although this result is not consistent with the results of some studies conducted in Turkey (29,30), this may be associated with the fact that substance and alcohol use has recently become more widespread in Turkey (2).

In the present study, with regard to the characteristics of substance use, the age at which the use of substances was started was determined to be 13.82 ± 1.67 years, which was closer to the results of other studies conducted in Turkey (31). Similar to literature data, it was determined that cannabinoids are the leading substance among the substances used first and that cannabinoids together with stimulants are the leading preference substance (31).

In the present study, with regard to the PAS scores of the case and control groups, it was determined that the scores of “acceptance-involvement,”

Table 6. Correlation between adolescents and their parents' Family Assessment Device (FAD) scores

FAD subscale scores	Case group (n=50)		Control group (n=50)	
	R	p	R	p
Problem solving	0.347	0.025	0.521	0.008
Communication	0.295	0.038	0.513	<0.001
Roles	0.359	0.01	0.408	0.003
Affective responsiveness	0.238	0.097	0.512	<0.001
Effective involvement	0.118	0.413	0.576	<0.001
Behavior control	0.317	0.05	0.576	<0.001
General family functioning	0.351	0.012	0.518	0.001

A p value smaller than 0.05 was considered statistically significant, Pearson Correlation test FAD: Family Assessment Device

Table 7. Evaluation of the case and control groups' Dyadic Adjustment Scale (DAS) scores (DAS was completed by parents)

	Case group n=50	Control group n=50	p
	Mean±SD	Mean±SD	
Total score	82.18±23.67	98.56±17.68	<0.0001
Dyadic satisfaction	21.26±6.16	22.54±4.43	0.236
Dyadic cohesion	10.48±6.05	13.34±5.07	0.012
Dyadic consensus	42.76±14.77	52.76±11.45	<0.0001
Affectional experience	7.68±2.87	9.72±2.78	<0.0001

A p value smaller than 0.05 was considered statistically significant, Student t-test. SD: standard deviation

"psychological autonomy," and "strictness-supervision" subscales were statistically significantly lower in the case group and that parents' attitudes showed statistically significant differences between the adolescent groups with and without substance use disorder. It was conspicuous that negligent parental attitude was more common in the adolescent group with substance use disorder (48%) and democratic parental attitude was more common in the control group (46%). Consistent with the results of the present study, inadequate parental supervision and weak parent-child relationship have been associated with increased substance-alcohol use in the medical literature (9,10,11,13,14,15). Baumrind et al. conducted a study of adolescents aged 15 years and stated that those with substance use had been exposed to more authoritarian parental attitudes from the age of 4 years than those without substance use (32). In addition, it is known that the risk of substance use in the future is lower in the children of parents with high levels of acceptance-involvement and support (33).

Lower psychological autonomy in the PAS scores were determined in hospitalized patients, in whom substance use disorder was likely to be more chronic and severe, or may be associated with extremely obdurate and authoritarian parental attitudes, whereas poorer affectional expression in DAS might be associated with a higher expression of negative emotions and less sharing loving expressions within the family. Extremely obdurate parental attitudes and a higher expression of negative emotions within the family might be enhancing the severity of substance use (7,13,14,15,16).

It was determined that the prevalence of mother-father togetherness was significantly lower in the case group than in the control group. Many studies until today have reported that adolescents with separated families due to various reasons, including abandonment, death, or divorce, have a higher risk for substance use disorder (34). Warm emotional relationships between mother, father, and the child and adequate familial supervision of the adolescent are known to protect adolescents against substance use disorder (35).

With regard to dyadic adjustment, it was significantly lower in the case group than in the control group. With regard to the subscales, the scores of "dyadic cohesion," "dyadic consensus," and "affectional expression" were significantly lower in the parents of the case group as than in those of the control group. According to the results of a study conducted in Turkey, it was determined that parents who were happier in their marital relationship and showed acceptable attitude toward the adolescent and the level of conflict in the family were lower among the adolescents without substance use disorder than among the adolescents with substance use disorder (36). In general, considering these findings, we can say that the quality of parents' marital relationship is an important variable for substance use.

With regard to the scores of FAD for adolescents and parents in the case and control groups, the scores of the "Problem Solving," "Communication," "Roles," "Affective Responsiveness," "Effective Involvement," "Behavior Control," and "General Family Functioning" dimensions were statistically significantly higher in the case group. It was observed that adolescents without substance use disorder perceive their families more healthily in terms of overall functioning assessed by FAD (mean scores were under 2, which is the cut-off value of FAD) than the adolescents with substance use disorder. Similar to the results of the present study, Wills and Yaeger stated that approaching the problems of children with empathy and sympathy and emotional support in the family are protective factors for substance use (37). Gürol reported that strong and positive family bonds, the family's paying satisfactory attention to the children, clear intrafamilial rules and everyone obeying these are the protective factors against substance use (38). Likewise, Bulut et al. (39) determined that exceptional behaviors are more common among adolescents with families that exhibit unhealthy functioning than among adolescents with families that exhibit healthy

functioning. There are studies suggesting that parental inattention and ineffective parental supervision on the child and adolescent are important risk factors for adolescents' substance use (40,41,42,43,44). Burlew et al. (41) conducted a study in 2009 and determined a positive correlation between the unfavorable living environment and low parental supervision and starting to use substance among 8th grade students. Peltzer et al. (42) published another study in 2009 and reported that parental supervision and loyalty are protective factors in substance use. Kaltiala-Heino et al. (45) reported that low parental supervision is associated with smoking, alcohol consumption, and using marijuana in adolescents. Wang et al. (46) reported a low prevalence of smoking and alcohol consumption among adolescents having high parental supervision.

In the present study, on evaluating the correlation between FAD scores of adolescents and parents, a significant relation was generally determined between the case and control groups. However, it was observed that statements on "affective responsiveness" and "effective involvement" showed differences between adolescents and parents of the case group; compared with the parents, adolescents with substance use disorder perceived their family worse in terms of these functions. These findings appear to support the study data indicating that adolescents with substance use disorder are not satisfied with the verbal or behavioral expression of positive and negative emotions and with mutual attention and dignity in the family (43,44,45,47). It has been propounded that an unsupportive parent-child relationship characterized by conflicts enhances the risk of alcohol consumption in the adolescent by weakening the skills of the adolescent in organizing goal-oriented behavior and self-control (48). It has been suggested that adolescents use the substance as a way of coping in the event there is conflict in familial relationships, as well as a low degree of intimacy and emotional expression within this relationship (49).

The present study has several limitations. The leading limitation is the fact that only the relationship between familial factors and substance use has been explored, but not the cause and effect relationship, due to the cross-sectional design of the study. Low sample size, evaluation of only the adolescents that applied for treatment, and not including the adolescents and parents with mental retardation and psychotic disorder in the study hinder the generalization of the results. The assessment tools used in the present study are self-reporting scales; therefore, they are not based on objective statements of the adolescents and parents and may comprise deficiencies such as unawareness, ignorance, or concealing. Not determining the severity of substance use disorder in the case group is also an important limitation.

In conclusion, in the present sample, it was determined that the prevalence of mother-father togetherness is low, dyadic adjustment in terms of cohesion, consensus, and affectional expression is low in the parents, and problems are encountered in the problem solving, communication, roles, affective responsiveness, effective involvement, behavior control, and general familial functioning dimensions of family characteristics and intrafamilial interaction in the adolescents with substance use disorder in comparison with the control group. These findings are consistent with the results of studies indicating that there are problems in family functionality and parental attitudes among adolescents using substance. Preventive measures could be provided against familial risk factors determined via the present study and similar studies, which evaluated family functionality, dyadic adjustment, and parents' attitudes among adolescents with substance use disorder. The present study and studies with a larger sample size will be a guide not only for clinicians in terms of family-oriented interventions that could be performed over the course of the treatment period but also for policy-makers and non-governmental organizations in terms of which familial characteristic they should dwell on while the adolescent is struggling against substance use.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

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