

Family Dynamics: A Comparative Study Between Adolescents with and Without Substance Use Disorder

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Abstract: *Substance use disorder (SUD) during adolescence is associated with significant psychosocial and developmental consequences, with family functioning being an important contextual factor. The present study aimed to examine family dynamics among adolescents with substance use disorder in comparison with adolescents without substance use disorder. A comparative study was conducted among 80 adolescents aged 15–19 years, comprising 40 adolescents with SUD and 40 adolescents without SUD. Participants with SUD were recruited from clinical settings and rehabilitation facilities, while the comparison group was recruited from a school. Following an intake session to determine eligibility, participants were assessed using the Family Environment Scale. Descriptive statistics and the Mann–Whitney U test were used to examine between-group differences. Significant differences were observed across nine of the ten dimensions of family functioning. Adolescents with SUD reported significantly lower levels of cohesion, expressiveness, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis, and organisation, and significantly higher levels of conflict. No significant between-group difference was observed for control ($p = .738$). The findings suggest that adolescents with SUD may experience less cohesive and supportive family environments and greater family conflict than adolescents without SUD. The findings highlight the relevance of family functioning in understanding adolescent substance use and indicate the potential value of considering family factors in prevention and intervention.*

Keywords: Substance use disorder; adolescents; family dynamics; family environment; Family Environment Scale

1. Introduction

Substance Use Disorder in Adolescence

Substance use disorder (SUD) is an important public health and psychosocial concern, particularly during adolescence. SUD is characterised by a persistent pattern of substance use associated with cognitive, behavioural, and physiological symptoms and continued use despite related problems. Although substance use and misuse do not necessarily result in SUD, persistent and problematic use during adolescence may increase the risk of long-term substance-related difficulties.

Adolescent substance use is also a concern in the Indian context. The National Commission for Protection of Child Rights has identified tobacco and alcohol as commonly used substances among children and adolescents, followed by inhalants and cannabis (Jiloha, 2017). Tikoo et al. reported that the age of initiation varies across substances, with tobacco and inhalants generally initiated earlier than cannabis, alcohol, and opioids. Qadri et al. (2013) similarly reported substantial substance use among schoolchildren in North India, with higher prevalence among adolescents aged 17–19 years. Adolescent substance use may have implications for psychological, educational, social, and developmental functioning.

Adolescent Vulnerability to Substance Use

Adolescence is a period of substantial cognitive, emotional, and social development. Ongoing developmental changes may increase vulnerability to stress, emotional reactivity, and risk-taking behaviours. Family tensions, social

difficulties, and adverse experiences may further contribute to vulnerability to problematic substance use.

The developmental context is therefore important when understanding adolescent substance use, particularly when considering the interaction between individual vulnerability and the family environment. Individual vulnerabilities interact with social environments, of which the family is one of the earliest and most influential. Family relationships, parental involvement, supervision, conflict, and behavioural models may shape adolescents' adjustment and substance-related behaviours.

Family Environment and Adolescent Substance Use

The family provides an important context for the development of interpersonal relationships, behavioural patterns, values, and expectations. Family Systems Theory conceptualises the family as an interconnected system in which the experiences and behaviours of individual members are related to the functioning of the family (Boss, 2002).

Research has linked adverse family experiences and relationship difficulties with poorer psychosocial adjustment and substance-related outcomes. Amato and Afifi (2006) found that marital conflict was associated with poorer parent–child relationships and lower well-being, while Jenkins et al. (2005) reported associations between parental conflict and problematic child behaviour. These findings suggest that family functioning may influence adolescent behaviour through interconnected processes involving relationships, communication, supervision, conflict, and parental involvement.

Family Dynamics Relevant to Substance Use

Family dynamics encompass multiple dimensions of family functioning, including cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis, organisation, and control. Examining these dimensions together provides a broader understanding of the family environment experienced by adolescents with and without SUD.

Family Cohesion, Expressiveness, and Conflict

Emotional connectedness and communication are important components of family functioning. Families characterised by greater cohesion and open expression may provide greater emotional support, whereas persistent conflict may contribute to behavioural and adjustment difficulties. Amato and Afifi (2006) and Jenkins et al. (2005) demonstrated associations between family conflict, parent-child relationships, and child adjustment. From a systems perspective, difficulties within one family relationship may influence other relationships and contribute to broader patterns of family dysfunction (Boss, 2002).

Parental Monitoring, Independence, and Control

Parental monitoring and adolescent autonomy are particularly relevant during adolescence. Dishion et al. (2000) described "premature adolescent autonomy," whereby reduced parental involvement and monitoring may increase exposure to deviant peer influences. Similarly, Dodge et al. (2009) highlighted the interaction of family, peer, and behavioural factors in the development of later substance-related problems. These findings suggest that both appropriate parental involvement and opportunities for healthy independence may be relevant to adolescent adjustment.

Achievement, Intellectual-Cultural, and Recreational Orientation

Family environments also provide opportunities for achievement, intellectual and cultural engagement, and shared recreational activities. Such activities may promote positive interaction, communication, and social support. McHale et al. (2012) further highlighted the importance of sibling relationships and everyday family interactions in adolescent development, indicating that family influence extends beyond parent-child relationships.

Parenting Styles and Family Values

Parenting practices and family values may also shape Martínez, I., & García, J. F. (2007) reported that parenting styles were associated with adolescent self-esteem, value internalisation, and adjustment, while Brewer (2017) highlighted the importance of positive parental behaviour in addressing adolescent substance-related problems.

Family values may also influence attitudes toward substance use. Abide et al. (2001) examined moral beliefs regarding potentially harmful substance use and found that moral disapproval was associated with lower substance use. Moral development theories, including Kohlberg's framework, further emphasise the role of moral reasoning in the development of behavioural standards (Ísaksson, 1979). However, these findings concern broader values and moral

beliefs and do not establish a direct causal relationship between family values and adolescent substance use.

Parental Substance Use and Family Structure

Parental substance use is another important familial risk factor. Biederman et al. (2000) reported associations between parental substance use disorders and adolescent alcohol and drug use, highlighting the role of familial exposure in adolescent substance-related behaviour.

Family structure has also been examined in relation to adolescent substance use. Hoffman (2018) reported increased risk of adolescent drug use among youth living in single-parent or stepparent families, while Eitle et al. (2013) identified associations between family structure, socioeconomic circumstances, and alcohol use problems. In addition, Ogai et al. (2015) found associations between childhood abuse, family and social difficulties, and drug addiction severity. Together, these findings indicate that family influences on adolescent substance use extend across relational, structural, and environmental factors.

Empirical Evidence

Overall, empirical research indicates that adolescent substance use is associated with multiple aspects of family functioning. Family conflict and relationship difficulties have been linked with poorer adjustment (Amato & Afifi, 2006; Jenkins et al., 2005), while parental monitoring and supervision may influence exposure to deviant peers and subsequent behavioural problems (Dishion et al., 2000; Dodge et al., 2009). Parental substance use has also been identified as a relevant familial risk factor (Biederman et al., 2000). Research further highlights the potential contribution of family structure, parenting practices, sibling relationships, and family values to adolescent adjustment and substance-related behaviours (Eitle et al., 2013; Hoffman, 2018; McHale et al., 2012; Martínez, I., & García, J. F. 2007; Abide et al., 2001).

Taken together, the literature suggests that adolescent substance use should be understood within a broader family context rather than solely as an individual behaviour. However, existing research has often examined individual family factors separately. A multidimensional assessment of family functioning may therefore provide a more comprehensive understanding of the family environment associated with adolescent SUD.

Research Gap and Rationale

Although previous research has examined individual family-related factors associated with adolescent substance use, such as parental monitoring, parenting style, family structure, parental substance use, and family conflict, fewer studies have examined multiple dimensions of family functioning within a single framework. A broader assessment may therefore provide a more comprehensive understanding of the family environment of adolescents with and without substance use disorder.

The present study addresses this gap by examining ten dimensions of family functioning- cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, active-recreational

orientation, moral-religious emphasis, organisation, and control- and comparing these dimensions between adolescents with and without substance use disorder.

2. Aim

The aim of the study was to examine family dynamics among adolescents with substance use disorder in comparison with adolescents without substance use disorder.

3. Objectives

To compare family dynamics between adolescents with substance use disorder and adolescents without substance use disorder.

4. Research Methodology

Design

The study employed a comparative cross-sectional research design to examine family dynamics among adolescents with and without substance use disorder. The methodology included details regarding study design, sampling and participant selection, procedure, assessment measures, statistical analysis, and ethical considerations.

Sample

A sample of 40 adolescents with substance use disorder was selected through purposive sampling from private clinics and rehabilitation facilities in Guwahati. The participants were between 15 and 19 years of age. A comparison group of 40 adolescents without substance use disorder, within the same age range, was selected from schools and compared with the SUD group.

Procedure

Participants were recruited through purposive sampling from private clinics and rehabilitation facilities across Guwahati. The researcher scheduled the assessment sessions according to the availability and feasibility of the participants. As the participants were minors, parental/guardian consent was obtained prior to their participation. The participants were then informed about the purpose and procedures of the study, their role in the research, and their right to clarify any doubts. Written informed assent/consent was obtained from the participants. The assessments were completed over a period of two weeks. Following completion of the assessment, feedback was provided to the participants.

Statistical Analysis

The data were analysed using the Statistical Package for the Social Sciences (IBM SPSS Statistics, Version 20). Descriptive statistics, including mean and standard deviation, were calculated for the study variables. The Chi-square test was used to examine differences in categorical socio-demographic variables between the two groups. The Mann-Whitney U test was used to compare the two groups on the dimensions of family dynamics measured using the Family Environment Scale. A significance level of $p \leq .05$ was considered statistically significant.

5. Result and Analysis

The sample was comprised of participants who were diagnosed as having substance use disorder at private clinics and rehabilitation facility across Guwahati and selected based on an intake session. And the comparison group was selected from a school.

SPSS was used for descriptive analysis to analyze the data obtained for evaluating the objectives of the research. Findings for all the research objectives have been explained, with the help of accompanying tables in the sections that follow. They have been discussed in accordance with the outline presented

Demographic Characteristics

Socio demographic and other details of the participants have been illustrated in Table 1, 2, 3. All the participants selected for the study were within the age range of 15-19. There were two samples which were compared. One was the sample which consisted of adolescent who were diagnosed with substance use disorder (group 1) and the other was the adolescent without substance use disorder (group 2).

Table 1: Socio-Demographic Characteristics

Variable		Adolescent with substance use disorder n=40 (%)	Adolescent without substance use disorder n=40 (%)	p value
Gender	Males	40 (100)	21 (52.5)	0
	Females	0 (0)	19 (47.5)	
Education	Below class 5	18 (45)	0 (0)	0
	Class 5 and more	22 (55)	40(100)	
Income	Low income (<Rs5000)	25 (62.5)	0(0)	0
	High income (≥Rs5000)	15 (37.5)	40 (100)	

Chi-square test

$p \leq 0.05$

We could also see that there is a significant difference between the two groups in the level of education. The figures 1, 2, 3 and 4 depict the graphical representation of the difference in the socio-demographic data of both the groups.

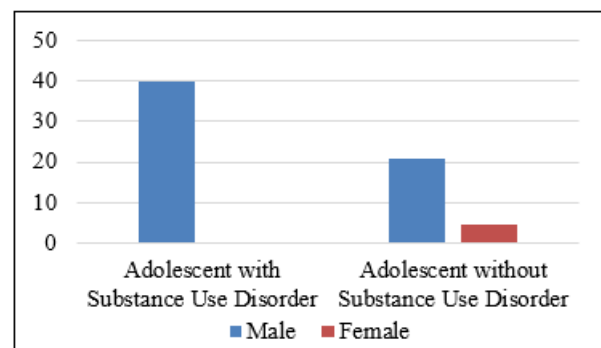


Figure 1: Depicting the Gender of Adolescent with Substance Use Disorder and Adolescent without Substance Use Disorder

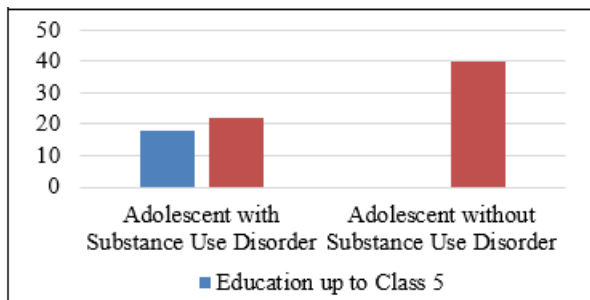


Figure 2: Depicting the Education Level of Adolescent with Substance Use Disorder and Adolescent without Substance Use Disorder

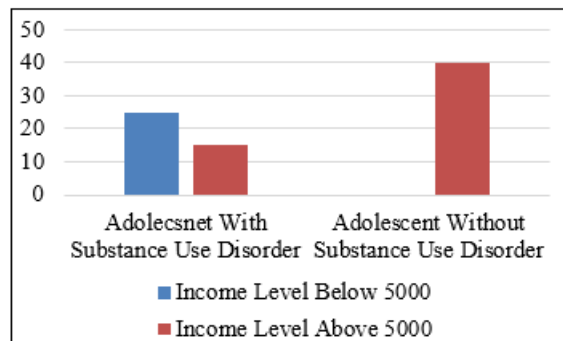


Figure 4: Depicting the Income Level of both Adolescent with Substance Use Disorder and Adolescent without Substance Use Disorder

Table 2: Socio-demographic Variables of Adolescent with Substance Use Disorder and Adolescent without Substance Use Disorder and their comparison

Variable		Adolescent with substance use disorder (n=40)	Adolescent without substance use disorder (n=40)
Substance use	No substance	0	35
	One substance	21	5
	Two substances	15	0
	Poly-substance	4	0
History of substance use by Parents	No use	24	30
	Use by a single parent	13	8
	Use by both the parents	3	2

Table 2, on the previous page, depicts the number of substances used by adolescent with substance use disorder and adolescent without substance use disorder and their comparison. It also conveys the history of substance used by parents by both the samples. Figure 5 and 6 gives the graphical representation of the same.

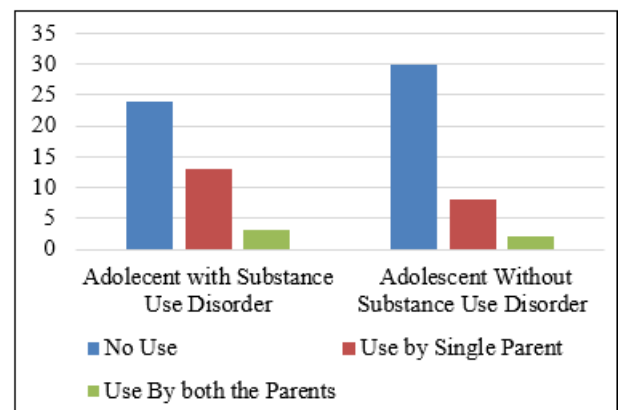


Figure 5: Depicting the Use of Substance by Parents of Adolescent with Substance Use Disorder and Adolescent without Substance Use Disorder

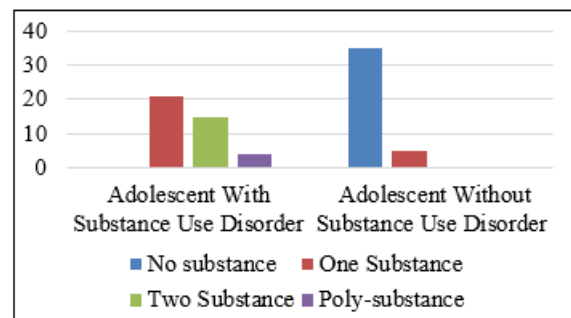


Figure 6: Depicting the number of Substance by both the samples

Table 3: Socio-demographic Variables of Adolescent with Substance Use Disorder and Adolescent without Substance Use Disorder and their comparison

Variable		Adolescent with substance use disorder	Adolescent without substance use disorder
Type of Substance use	Alcohol	8	2
	Tobacco	10	1
	Cannabis	10	2
	Opioids	9	0
	Volatile Solvents	3	0

Table 3 represents the types of substance used majorly by both adolescent with substance use disorder and adolescent without substance use disorder. This also depicts which substance has caused more dependence on that individual. The Figure 7 depicts the graphical representation of the comparison between the groups.

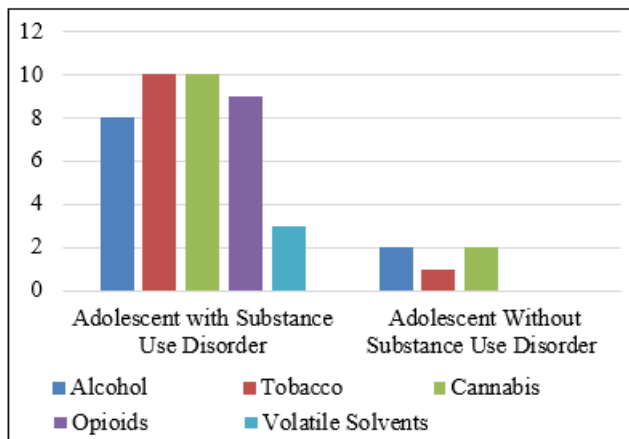


Figure 7: Depicting the different types of Substance Use by both the samples

Comparative study of various scales of Family Dynamics

The various scales along with its respective dimensions have been depicted in Table 4, Accordingly Figures 8 depicts the same using

Table 4: Descriptive Statistics for Variables in Family Environment Scale

Variables	Adolescent with substance use disorder (n=40)	Adolescent without substance use disorder (n=40)	p value
	Mean(±SD)	Mean(±SD)	
Cohesion	4.41 (0.74)	7.41 (0.70)	0
Expressiveness	3.80 (0.60)	6.14 (0.71)	0
Conflict	5.40 (0.69)	2.85(0.65)	0
Independence	5.06 (0.70)	7.28 (0.54)	0
Achievement orientation	4.41 (0.73)	5.70 (.59)	0
Intellectual cultural orientation	3.95 (0.71)	6.58 (0.85)	0
Active recreational orientation	3.75 (0.55)	5.99 (0.80)	0
Moral religious emphasis	3.85 (0.67)	5.59 (0.77)	0
Organisation	4.49 (0.80)	5.94 (0.69)	0
Control	4.98 (0.52)	4.90 (0.66)	0.738

Mann-Whitney Test $p \leq 0.05$

Table 4, on the previous page, and Figure 8 provides the mean and standard deviation of each dimension of the Family Environment Scale of both the groups. As seen in the table there is significant difference in all the dimensions between the group which adolescent with substance use disorder. But for the dimension Control as the p value is 0.738 there is no significant difference between the adolescent with substance use disorder and adolescent without substance use disorder.

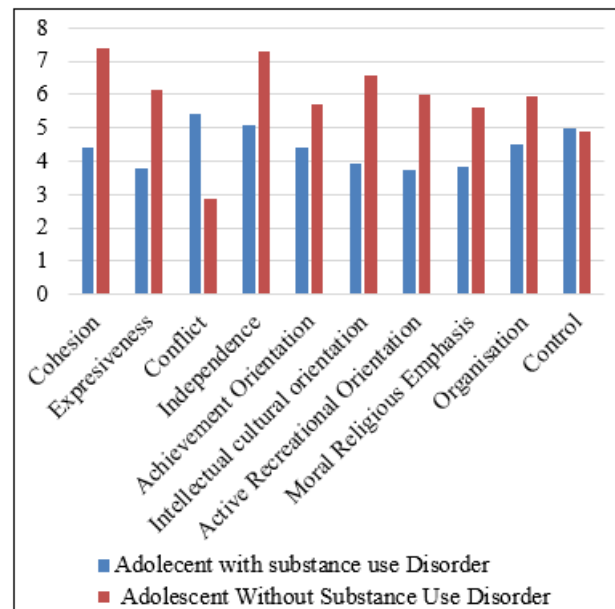


Figure 8: Provides the mean of each dimension of the Family Environment Scale between the adolescent with substance use disorder and adolescent without substance use disorder

6. Discussion

The present study examined family dynamics among adolescents with substance use disorder (SUD) in comparison with adolescents without SUD. Significant differences were observed across nine of the ten dimensions of the Family Environment Scale. Adolescents with SUD reported lower cohesion, expressiveness, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis, and organisation, and higher conflict. No significant difference was observed in control. Overall, the findings indicate that differences in family functioning were particularly evident in emotional connectedness, communication, conflict, developmental support, shared activities, and family organisation.

Sample Characteristics and Group Differences

The groups differed significantly in gender, education, and income. The SUD group consisted entirely of males, whereas the comparison group included both males and females. The groups also differed in educational and income characteristics, with the SUD group having a greater proportion of participants from lower educational and income categories. Parental substance use was reported in both groups, although it was more frequent in the SUD group. This is consistent with evidence linking parental substance use with adolescent substance-use patterns (Biederman et al., 2000).

Within the SUD group, most participants reported using one or two substances, while a smaller proportion reported polysubstance use. Alcohol, tobacco, cannabis, opioids, and volatile solvents were reported, with tobacco and cannabis among the more frequently used substances. These demographic and substance-use differences are important when interpreting the findings because gender, socioeconomic circumstances, parental substance use, and

patterns of substance use may also be related to family functioning. Therefore, the observed differences in family environment cannot be attributed solely to SUD.

Family Cohesion, Expressiveness, and Conflict

Adolescents with SUD reported significantly lower cohesion and expressiveness and higher conflict than adolescents without SUD. Lower cohesion and expressiveness suggest comparatively weaker emotional connectedness and openness in family interactions, whereas higher conflict indicates greater interpersonal tension.

These findings are broadly consistent with previous research linking family relationship quality and conflict with adolescent adjustment. Amato and Afifi (2006) found that marital conflict was associated with poorer parent-child relationships and adjustment, while Jenkins et al. (2005) similarly demonstrated associations between parental relationship difficulties and children's behavioural problems. From a family-systems perspective, these findings highlight the interconnected nature of family relationships, whereby difficulties in one relationship may affect interactions elsewhere in the family system (Boss, 2002).

However, because the present study was cross-sectional, these findings demonstrate an association rather than establishing that poor family functioning causes substance use.

Independence and Achievement Orientation

The SUD group also scored significantly lower on independence and achievement orientation. These differences may indicate less emphasis on autonomy, personal responsibility, and achievement-related development within the family environment.

Adolescence involves increasing autonomy and the development of personal goals; therefore, family environments that balance autonomy with appropriate involvement may be particularly relevant during this period. Dishion et al. (2000) described premature adolescent autonomy as a pattern involving reduced parental involvement and monitoring that may increase exposure to deviant peer influences. Similarly, Dodge et al. (2009) highlighted the dynamic interaction of family, peer, and behavioural factors in the development of substance-use-related outcomes. Nevertheless, the present findings should be interpreted as differences in family functioning rather than evidence that lower independence or achievement orientation directly causes substance use.

Intellectual-Cultural and Active-Recreational Orientation

Significantly lower intellectual-cultural and active-recreational orientation was also observed in the SUD group. These dimensions reflect opportunities for intellectual, cultural, recreational, and shared family activities. Lower scores may indicate fewer opportunities for constructive family engagement and shared experiences.

McHale et al. (2012) emphasised the importance of sibling relationships and everyday family interactions in adolescent development. Thus, differences in intellectual-cultural and recreational orientation may reflect broader differences in the social and relational environment available to

adolescents. However, the present study does not establish whether reduced family engagement contributes to substance use or occurs alongside it.

Moral-Religious Emphasis and Organisation

Adolescents with SUD reported significantly lower moral-religious emphasis and organisation. Lower organisation may indicate a less structured family environment, with potentially fewer predictable routines, expectations, and responsibilities. This finding is relevant to research highlighting the importance of parental involvement, supervision, and family structure in adolescent substance use (Dishion et al., 2000; Dodge et al., 2009).

The lower moral-religious emphasis indicates differences in the extent to which moral, ethical, and religious values are emphasised within the family. Abide et al. (2001) highlighted the relevance of moral beliefs to substance-use decisions. However, because the present study assessed family environment rather than adolescents' personal moral beliefs or attitudes toward substance use, the finding should be interpreted as a difference in family context and not as evidence that lower moral or religious emphasis causes substance use.

Family Control

In contrast to the other dimensions, no significant difference was found in family control ($p = .738$). The similar scores across groups suggest that control or regulation alone did not distinguish adolescents with and without SUD in the present sample.

This finding is important because it suggests that family functioning in adolescent SUD may not be adequately understood in terms of parental control alone. Rather, the significant differences across cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis, and organisation point to broader relational and environmental characteristics. This is consistent with the view that adolescent substance use is influenced by multiple interacting family and social processes rather than a single aspect of parenting (Dishion et al., 2000; Dodge et al., 2009).

Overall Interpretation

Taken together, the findings indicate a consistent pattern of differences in family functioning between adolescents with and without SUD. The SUD group showed lower levels across most positive family-environment dimensions and higher conflict, while control did not differ significantly. The pattern suggests that adolescents with SUD may experience comparatively less emotional connectedness, open communication, developmental support, shared engagement, and family organisation, alongside greater interpersonal conflict.

These findings are broadly consistent with literature identifying family relationships, parental monitoring, conflict, parental substance use, family structure, parenting practices, and sibling relationships as relevant contextual factors in adolescent substance use (Amato & Afifi, 2006; Biederman et al., 2000; Dishion et al., 2000; Dodge et al., 2009; Eitle et al., 2013; Jenkins et al., 2005; McHale et al.,

2012). The present study extends this literature by demonstrating differences across multiple dimensions of family environment within the same adolescent sample.

The findings also suggest potential relevance for family-focused prevention and intervention. Interventions may benefit from addressing broader family processes, including communication, cohesion, conflict management, constructive shared activities, organisation, and supportive involvement in adolescents' developmental goals. This is consistent with a systems-based understanding of family functioning as an interconnected process (Boss, 2002). However, such implications should be interpreted cautiously because the cross-sectional design does not permit causal conclusions.

Overall, the study highlights the importance of considering family functioning within the broader context of adolescent substance use. Longitudinal research with larger and more representative samples is needed to determine whether differences in family functioning precede substance use, emerge in response to it, or reflect reciprocal influences between adolescents and their family environments.

7. Limitations

The study has several limitations. First, the relatively small sample size of 40 participants per group may limit statistical power and generalisability. Second, purposive sampling and recruitment based on availability may have introduced selection bias. Third, the cross-sectional design does not permit conclusions about causal or temporal relationships between family dynamics and substance use disorder. Fourth, the groups differed significantly in gender, education, and income, with the SUD group comprising only males; these differences may have influenced family functioning and represent potential confounding factors. Finally, the findings may have limited generalisability beyond the clinical and community settings from which participants were recruited.

8. Future Directions

Future studies should include larger and more representative samples and use longitudinal designs to clarify the temporal relationship between family functioning and adolescent substance use. Groups should be better matched on gender, education, socioeconomic status, and other relevant demographic characteristics. Research including adolescents of different genders could further examine gender-related patterns in family functioning and substance use. Future studies may also evaluate family-based interventions targeting cohesion, communication, conflict, parental involvement, and other relevant aspects of family functioning.

9. Conclusion

The present study found significant differences in most dimensions of family functioning between adolescents with and without substance use disorder. Adolescents with SUD reported lower cohesion, expressiveness, independence, achievement orientation, intellectual-cultural orientation,

active-recreational orientation, moral-religious emphasis, and organisation, and higher family conflict. No significant difference was observed in family control.

Overall, adolescents with SUD appeared to experience less cohesive, expressive, and supportive family environments and greater conflict than adolescents without SUD. These findings highlight family functioning as an important contextual factor in understanding adolescent substance use. However, the cross-sectional design precludes causal conclusions. Larger, more representative, and longitudinal studies are needed to clarify the direction and nature of the relationship between family functioning and adolescent substance use.

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