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Original Article

The Association of Family Communication Patterns and School Culture: Addiction Tendencies among High School Students in Yazd, Iran

Ameneh Marzban[1], PhD Candidate; Masoumeh Noori[2], MSc Student; Vahid Rahmanian[3], PhD; Nooshin Yoshany[4], PhD; Mohammad Sedighi[5], BSc; Mohammad Reza Razmi[6], MSc; Payam Emami[7*], MSc

[1]Department of Health in Disasters and Emergencies, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran
[2]Department of Health Education and Promotion, School of Health, Kermanshah University of Medical Sciences, Kermanshah, Iran
[3]Department of Public Health, Torbat Jam Faculty of Medical Sciences, Torbat Jam, Iran
[4]Department of Health Education and Promotion, Social Determinants of Health Research Center, School of Public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran
[5]Student Research Committee, Shahid Sadoughi University of Medical Sciences, Yazd, Iran
[6]Department of Educational Psychology, Shiraz University, Shiraz, Iran
[7]Department of Emergency Medical Sciences, School of Paramedical Sciences, Kurdistan University of Medical Sciences, Sanandaj, Iran

Corresponding author:* Payam Emami, MSc; Department of Emergency Medical Sciences, Faculty of Paramedical Sciences, Kurdistan University of Medical Sciences, Sanandaj, Iran. **Tel: +98 9188786115; **Email:** payamemami115@gmail.com

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Abstract

Background: Various factors, including family associations, school culture, personality traits, and lifestyle play a fundamental role in the development of drug addiction. This study aimed to investigate how the association of family communication patterns and school culture affect addiction tendencies among high school students in Yazd, Iran.
Methods: This cross-sectional study was conducted in January 2021. A total number of 420 people were selected using the random multi-stage sampling method. To collect data, addiction tendency scale, family communication pattern and school culture questionnaires were used. Data analysis was done using SPSS version 24, Pearson's correlation coefficient, descriptive statistics, T-Tests and ANOVA.
Results: The mean±SD for addiction tendency, family communication patterns and school culture was 40.24±7.65, 65.84±5.34, and 45.69±9.24, respectively. This study showed a statistically significant association between the mean score for addiction tendency and gender (P=0.01) and economic status (P=0.02). Among the two components of communication patterns, alignment orientation (R=-0.31, P<0.001) showed a negative association and conformity orientation (R=0.25, P=0.01) showed a significant positive association with addiction tendency. Additionally, all of the three components of school culture, namely, student relations (R=-0.23, P=0.02), student and teacher associations (R=-0.29, P<0.001), and training opportunities (R=-0.20, P=0.03) revealed a significant negative association with addiction tendencies.
Conclusion: According to the results of the study, it is recommended to implement family education programs in counseling centers, health centers and schools. These programs should emphasize the importance of creating a healthy communication pattern based on dialogue and active listening in the family. By promoting positive personality traits, young people can effectively combat their inclination towards drug use and decrease the chances of developing addiction.

Keywords: Family relations, School culture, Addiction, Students

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1. Introduction

Addiction refers to a condition where an individual experiences a lack of control over his/her actions due to psychological factors or the use of chemical substances. While it may not be classified as a disease itself, addiction is viewed as a disease due to its impact on the central nervous system. This disease disrupts the individual's ability to control their behavior, resulting in repetitive actions (1).

Drug addiction is a societal concern that gives rise to numerous social problems. It is responsible for causing various harms to both families and individuals (2). The widespread prevalence of addiction and increasing dependence on new substances poses significant risks to the spiritual, psychological, moral, and social well-being of individuals. This, in turn, poses a threat to families and society at large. It leads to detrimental behaviors such as the disruption of family roles, homelessness, begging, and engaging in deviant activities. In severe cases, particularly among women suffering from addiction, it can lead to sexual deviation and involvement in trafficking

(3). Therefore, addiction can be regarded as one of the foremost social issues in the world today, contributing to numerous social harms (2).

Adolescence is a highly dynamic period of development that coincides with numerous physiological changes (4). During this period, many teenagers experience high-risk behaviors such as drug use, which can cause irreversible damage (5). The role of adolescence in drug use is very important. The initiation of substance abuse typically occurs between the ages of 14 and 18, when a family-dependent child becomes an independent person. The reality is that since teenagers are not ready to accept or deal with life problems the same way as adults do, and some ordinary problems appear severe and serious for them, they are more vulnerable to possible problems and dangers (6). Other findings indicated that factors such as family associations, school culture, personality traits, lifestyle, social associations, attitudes, beliefs, feelings, attachments, emotions and behaviors formed during the development of a person are important in the formation of drug addiction (7).

Researchers identified family communication patterns as an important factor in the prevention of children's tendency toward drugs. Addictive behaviors in different forms are more prevalent among families, and various factors such as poor parental skills, structural issues and family associations, and family's social and economic culture may be involved in the formation of children's addiction (8). Family communication is the way through which verbal and non-verbal information is exchanged between family members. Family is a unique communication system that is beyond and different from friendly associations and its main value is the result of the network of associations created by its members. Family communication patterns can have important consequences for their personal and social life through shaping personalities (9).

Education institutions, as the primary hubs of learning, play an effective role in the prevention of drug abuse. Schools hold the power to shape the character of children and adolescents and prevent social damages such as addiction, especially when parents have failed in dealing with their children, schools have a heavier responsibility (10). It falls upon schools to bear a greater responsibility in such cases.

Presently, the prevalence of substance abuse among our youth and teenagers has reached alarming levels, with schools being directly impacted. About one percent of the nation's student population engages in drug use, which is a considerable figure. Protecting society from this menace is paramount, and addressing this issue necessitates actions such as treatment, harm reduction, social support, and effective management. Extensive research indicated that student addiction rates are higher in schools located in vulnerable areas, and boys are more susceptible to addiction. Furthermore, a significant proportion of high school students grapple with substance abuse (11).

To safeguard teenagers and young individuals from drug exposure, a society should focus on establishing strong family associations and a productive educational system. Consequently, it becomes crucial to give greater attention to the factors that contribute to addiction among this age group. In recent decades, numerous studies explored the social elements that play a role in addiction. The findings of such research can have a significant impact on strategies aimed at preventing and treating addiction. There are theories suggesting that patterns of family communication and the culture of the school environment are key factors in deterring or encouraging drug use among children (12). Building upon this, the objective of this study is to demonstrate the influence of family communication patterns and school culture on the inclination towards addiction among high school students in Yazd, Iran (13). The education system, as the largest institution in charge of molding young minds, possesses a vital role in preventing drug abuse. Schools have the potential to shape the character of children and adolescents and act as a protective shield against social harms like addiction, particularly in cases where parents have not been successful in guiding their children. Therefore, schools bear a significant responsibility (10).

Unfortunately, the widespread issue of substance abuse has impacted our youth and teenagers, infiltrating educational institutions as well (14). Disturbing statistics reveal that one percent of the country's students are involved in drug abuse, an alarmingly high number. It is imperative to shield this group from the perils of drug abuse, which necessitates a comprehensive approach encompassing treatment, harm reduction, social

support, and addressing root causes. Research demonstrated that addiction is more prevalent among students in vulnerable areas and among boys, with high school students being particularly vulnerable (11).

To ensure the protection of adolescents and young individuals from the influence of drugs, it is imperative for society to foster positive relationships within families and establish an effective educational system. Consequently, it becomes crucial to place greater emphasis on the factors that contribute to addiction in this specific age group. In recent decades, numerous studies meticulously explored the social aspects linked to addiction, offering insights that can significantly inform strategies for prevention and treatment (12, 13). Theories proposed that the patterns of communication within families and the culture prevalent within schools play pivotal roles in either deterring or predisposing children towards drug abuse (14). Surprisingly, there is a dearth of research exploring these associations specifically among Yazd students. Therefore, the present study aimed to investigate the correlation between family communication patterns, school culture, and the inclination towards addiction in high school students residing in Yazd, Iran.

2. Methods

This was a descriptive cross-sectional study conducted in January 2021. The target population consisted of all high school students in Yazd, Iran. A total of 420 students were considered for the sample size according to r=0.2 cited by Ostad Rahimi and Fathi (15) (power 80%, type I error (α) 5%, 95% confidence level, and c=0.2). Multi-stage cluster random sampling method was used; to ensure a more accurate comparison, the study included an equal number of boys (210 individuals) and girls (210 individuals).

The objective of this research was to collect data from a representative sample of high school students in Yazd, Iran. To do so, 8 schools were randomly selected from 37 high schools in Yazd, Iran. To maintain precision, the selection included 4 girls' schools and 4 boys' schools. Multistage cluster random selection was used to select 420 participants. Two out of the four education districts of Yazd city, Iran were randomly selected.

Then, from each selected district, two high schools for girls and two high schools for boys were randomly selected. After obtaining the necessary permissions, the participants were selected through a lottery system using the students' file numbers. The individuals were chosen from each school based on proportional representation, which was determined by drawing file numbers.

Subsequently, the selected students were contacted and their consent was obtained to participate in the study. Following this, the participants were administered online questionnaires in accordance with the prevailing conditions imposed by the COVID-19 pandemic.

The study included high school students from the age of 15 to 18 in Yazd, Iran. The criteria for inclusion were limited to these specific students. Those who were unwilling to participate or did not complete the questionnaire were excluded from the study. Demographic information was collected from the participants, including their age, gender, educational level, economic status, housing status, number of family members, and their parents' education.

To assess various factors, three questionnaires were used in this research:

1. **Adroom Addiction Tendency Questionnaire**, was previously validated and proven reliable for the Iranian society by experts (16). This questionnaire consisted of 16 questions and utilized a 5-point Likert scale, ranging from "very little" to "very much". Each question was assigned a score from 1 to 5, resulting in the score range of 16 to 80 for each individual. The Persian version of this questionnaire demonstrated validity with a Cronbach's alpha coefficient of 0.79, as reported by Rafiei (17). Additional validation was supported by a CVI score of 0.92 and a CVR score of 0.88. In the present study, the questionnaire exhibited a Cronbach's alpha coefficient of 0.89.

2. **Family Communication Model Questionnaire**, developed by Ritchie and Fitzpatrick (12). The tool includes 26 questions that assess two dimensions including communication and listening, and conformity. The questionnaire employs a 5-point Likert scale, where a score of 5 indicates complete similarity and a score of 1 indicates complete disparity. The first 15 questions

pertain to the dialogue and listening dimension, while the subsequent 11 questions address the conformity dimension. Each participant receives a score for both dimensions. A higher score represents a greater perception of dialogue orientation and harmony within their family (18). The scale demonstrates good reliability, with a reported Cronbach's alpha coefficient of 0.80 (15). The validity of the Marital Intimacy Questionnaire was confirmed with a CVI of 0.90 and CVR of 0.91 (15). In our study, the questionnaire yielded a Cronbach's alpha coefficient of 0.85.

3. **School Culture Questionnaire**, designed by Higgins-D'Alessandro and Sadh (19) to measure school culture. The questionnaire contained 25 questions and 4 dimensions. However, study of Nikdel Teymori and Jenaabadi (20) reduced it to 18 questions and 3 dimensions including student associations (4 questions), student-teacher associations (6 questions), and educational opportunities (8 questions). The questionnaire employs a 5-point Likert scale (ranging from "totally disagree" to "totally agree") for scoring. Nikdel Teymori and Jenaabadi (20) reported a Cronbach's alpha coefficient of 0.87 for the Persian version of this questionnaire, confirming its validity. The questionnaire's validity was further

Table 1: Demographic characteristics of the participants

Demographic		Frequency		Addiction Tendency	Family Communication Pattern	School Culture
		Number	Percent	M (SD)	M (SD)	M (SD)
Gender	Male	210	50	40.25 (7.12)	65.07 (5.32)	45.87 (9.08)
	Female	210	50	25.61 (7.08)	64.17 (5.69)	45.61 (9.15)
P				0.01	0.15	0.18
Age (year)	15	100	23.80	40.14 (7.64)	65.11 (5.37)	45.64 (9.14)
	16	95	22.61	41.36 (7.15)	65.29 (5.99)	45.07 (9.54)
	17	120	28.57	40.67 (7.98)	65.34 (5.68)	45.19 (9.07)
	18	105	25	40.94 (7.22)	65.74 (5.12)	45.54 (9.17)
P				0.20	0.25	0.19
Education Level	10th grade	150	35.71	41.41 (7.07)	63.28 (5.55)	45.57 (9.51)
	11th grade	214	50.95	4.027 (7.84)	63.37 (5.06)	45.99 (9.57)
	12th grade	56	13.33	41.37 (7.19)	64.21 (5.78)	45.14 (9.11)
P				0.19	0.18	0.21
Economic status	Good	79	18.80	35.37 (7.37)	65.35 (5.22)	45.64 (9.34)
	Moderate	261	62.14	40.19 (7.39)	65.25 (5.27)	45.55 (9.33)
	Weak	80	19.04	60.57 (7.16)	65.19 (5.64)	45.97 (9.25)
P				0.02	0.17	0.21
Father's education	Primary school	49	11.66	40.66 (7.27)	65.22 (5.06)	45.57 (9.54)
	Middle school	64	15.23	40.57 (7.49)	65.03 (5.47)	45.55 (9.55)
	High school	197	46.90	40.16 (7.05)	65.55 (5.66)	45.28 (9.17)
	University	110	26.19	40.33 (7.55)	65.12 (5.09)	45.22 (9.64)
P				0.22	0.24	0.20
Mother's education	Primary school	57	13.57	40.47 (7.33)	65.69 (5.21)	45.27 (9.32)
	Middle school	52	12.38	40.54 (7.16)	64.68 (5.36)	45.59 (9.15)
	High school	269	64.04	40.69 (7.69)	64.15 (5.18)	45.68 (9.44)
	University	42	10	40.38 (7.25)	64.02 (5.94)	45.39 (9.34)
P				0.17	0.16	0.18
Housing status	Owned	187	44.52	40.44 (7.84)	65.32 (5.64)	45.69 (9.64)
	Rented	193	45.95	39.99 (7.55)	65.08 (5.44)	45.21 (9.51)
	Living with relative	40	9.52	40.67 (7.69)	64.99 (5.52)	45.11 (9.36)
P				0.21	0.19	0.20
Number of family member	2	84	20	40.63 (7.11)	65.34 (5.22)	45.25 (9.57)
	3.5	210	50	40.97 (7.34)	65.65 (5.34)	45.11 (9.14)
	5.7	82	19.52	40.19 (7.06)	65.85 (5.15)	45.24 (9.21)
	>7	44	10.47	40.33 (7.62)	65.94 (5.75)	45.57 (9)
P				0.18	0.22	0.32

M: Mean, SD: Standard Deviation

supported by a CVI of 0.92 and CVR of 0.91 (20). In our study, the questionnaire yielded a Cronbach's alpha coefficient of 0.91.

Once the data was collected, it was entered into SPSS version 24 and analyzed using statistical methods such as Pearson's correlation coefficient, descriptive statistics, t-tests, and analysis of variance.

3. Results

The mean age of the students under study was 17.04±4.17. Totally, 210 (50%) were male, and 210 (50%) were female. There were 120 individuals (28.57%) who were 17 years old, and 214 individuals (50.95%) were enrolled in the 11th grade. Among the participants, 261 people (62.14%) had a household income sufficient to support them. In terms of parental education, 197 students (46.90%) had both parents who had completed high school, and 269 students (64.04%) were themselves high school students. A total of 193 individuals (45.95%) lived in rented accommodations. The number of family members for 210 students ranged from 3 to 5 people. The mean and standard deviation of the addiction tendency score in male and female students were 40.25±7.12, 25.61±7.08, respectively. This difference was statistically significant (P=0.01). The mean and standard deviation of the addiction tendency score in people with good, moderate and weak economic status were 35.37±7.37, 40.19±7.37 and 60.57±7.16, respectively. The results revealed a statistically significant association between the average addiction tendency score and income adequacy (P=0.02). Also, the results showed that there is no statistically significant relationship between the average score for family communication pattern and school culture with any of the demographic variables (Table 1).

In Table 2, the mean and standard deviation of the variables examined, as well as their components, are presented. The mean and standard deviation values for the addiction tendency score, family communication pattern, and school culture were 40.24±7.65, 65.84±5.34, and 45.69±9.24, respectively.

The correlation matrix of the variables examined is displayed in Table 3. Within the two aspects of family communication patterns, communication orientation shows a significant negative association, while conformity orientation demonstrates a significant positive association with addiction tendency. Additionally, all three components of school culture—student relationships, student-teacher relationships, and educational opportunities—exhibit a significant negative correlation with addiction tendencies.

4. Discussion

The findings indicated a statistically significant

Table 2: Mean and standard deviation of the studied variables

Variables	Mean (SD)
Tendency to addiction	40.24 (7.65)
Orientation of conversation	46.35 (5.35)
Alignment orientation	28.39 (4.14)
Total score of family communication pattern	65.84 (5.34)
Student relations	12.34 (3.39)
Student and teacher associations	18.29 (5.47)
Training opportunities	25.64 (5.64)
Total score of school culture	45.69 (9.24)

SD: Standard Deviation

Table 3: Correlation matrix of studied variables with addiction tendency

Variables	Components	Addiction tendency	
		R	P
Family Communication Pattern	Orientation of conversation	-0.31	<0.001
	Alignment orientation	0.25	0.01*
School Culture	Student relations	-0.23	0.02*
	Student and teacher associations	-0.29	<0.001
	Training opportunities	-0.20	0.03*

association between mean addiction tendency scores and gender. This finding was in agreement with the results of studies done by Steely and Ten Bensel (21), Kamenderi (22), and Ikoh and colleagues (23), which highlighted gender as a factor influencing risk and the use of drugs and tobacco. The likelihood of drug use is lower among women compared to men. Additionally, women tend to have more challenges responding to addiction treatment due to physiological factors. Consequently, the cost of treating addiction in women is higher than in men. Conversely, men who quit addiction receive strong support from their wives, which is not always the case for women (24). Typically, the initiation of addiction in women is often influenced by associations with friends and acquaintances. Drug use is usually suggested by a relative, and this trend is more prevalent among women. Many addicted women addicted husbands, and the prevalence of violence against women makes them more prone to drug use. Women also display a higher prevalence of mental disorders, with rates nearly twice as high as those in men (21). Historically, women primarily used drugs, particularly opium, often for medicinal purposes. There is a significant association between prostitution and addiction among women, as drug use is widespread among female sex workers. In some cases, drug use serves as the catalyst for engaging in prostitution. Numerous barriers hinder the provision of services for female addicts. Economic and social factors are among the main obstacles faced by women. Additionally, due to family dynamics, women are often less inclined to seek treatment and take advantage of available services to avoid potential stigmatization and protect the reputation of their families.

The results indicated a statistically significant correlation between the mean addiction tendency score and income adequacy. This finding was consistent with the studies conducted by Marzban (4) and Ostad Rahimi and Fathi (15). Generally, there exists a close association between addiction and poverty as they mutually reinforce each other. Poverty can lead individuals to seek solace in addiction or drugs due to its potential impact on psychological well-being. It can also contribute to increased crime rates and negatively affect living and working conditions.

Given the components of family communication patterns, communication orientation exhibited a significant negative association, while conformity orientation showed a significant positive association with addiction tendency. All the three components of school culture, including student associations, student-teacher associations, and educational opportunities, demonstrated a significant negative correlation with addiction tendencies. These findings were in agreement with studies conducted by Ostad Rahimi and Fathi (15), Abdollahi (25), Alai Khoraim and colleagues (26), Bakar (27), and Chaman and colleagues (28).

It is of utmost importance to identify the risk factors for substance abuse in teenagers and young individuals at various stages of life. These risk factors can arise within different domains, including the individual, peers, family, school, and society, as well as across different areas. Recognizing these risk factors is essential as they can significantly increase the likelihood of drug abuse. Given the influential role of the family in preventing drug use, families should prioritize spending quality time together, fostering effective communication patterns among family members, and demonstrating a willingness to openly discuss various issues. In doing so, children can spend their free time in a safe family environment rather than seeking refuge in dangerous peer groups. As social beings, individuals' childhood experiences within the family environment profoundly impact their socialization. Subsequently, school-associated factors become influential in shaping an individual's socialization. Therefore, it is vital for schools to establish strict controls, supervision, and standards. A smoking teacher sets a behavioral example that students may follow. Adolescents are highly influenced by their peers in the school environment, and it is an undeniable fact that the influence of peer groups on addiction prevalence surpasses that of parents. Therefore, it is crucial to acknowledge and address this influence to effectively combat substance abuse.

4.1. Limitations

One limitation of the present study was its exclusive focus on secondary school students, which restricts the ability to generalize the results to all teenagers. Therefore, it is advisable to investigate teenagers who have either dropped out of school or never attended school, in order to ensure that the findings have broader applicability. Additionally, it would be valuable to explore the

influence of family communication patterns and school culture factors on both addicted and successfully recovered teenagers. This exploration could provide further insights into the impact of these factors on increased substance consumption or relapse.

5. Conclusion

Based on the findings of this study, it is recommended to organize family education programs in counseling centers, health centers, schools, and other relevant institutions. These programs should be designed to educate families on how to establish a healthy communication model focused on open dialogue and active listening. By promoting dialogue-oriented relationships instead of blindly accepting and conforming to norms, positive personality traits in young individuals can be nurtured. This, in turn, enables them to resist drug use tendencies and prevents them from falling into the trap of addiction.

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Ethical Approval

This study was conducted in accordance with the Declaration of Helsinki, Ethical Guidelines for Clinical Research and the Personal Data Protection Act. This study received ethical approval from the Research Ethics Committee of Alun Shahid Sadoughi University of Medical sciences, Yazd, Iran with the code of IR.SSU.REC.1400.226. Before the measurements, informed consent was obtained from all participants

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Authors' Contribution

Ameneh Marzban: Analysis of data, drafting the work, and reviewing the manuscript critically for important intellectual content. Masoumeh Noori: Analysis of data and reviewing the manuscript critically for important intellectual content. Vahid Rahmanian: Analysis of data, drafting the work, and reviewing the manuscript critically for important intellectual content. Nooshin Yoshany: Analysis of data and reviewing the manuscript critically for important intellectual content. Mohammad Sedighi: Analysis of data, drafting the work, and reviewing the manuscript critically for important intellectual content. Mohammad Reza Razmi: Analysis of data, drafting the work, and reviewing the manuscript critically for important intellectual content. Payam Emami: Analysis of data, drafting the work, and reviewing the manuscript critically for important intellectual content. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such that the questions related to the accuracy or integrity of any part of the work.

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