Investigating the Factors Related to Substance Use in the Iranian High School Students Using the Positive Youth Development Model

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Abstract

Background: Drug abuse is a general health problem that threatens all groups in human societies. While youths are vulnerable to drug interests, the amplification of their powers along with creating all protective factors in their living environment is helpful in confronting this problem. This study has been performed with the aim of determining the factors related to the tendency towards drug abuse based on positive youth development model among high school students of Isfahan.

Objective: This study has been performed with the aim of determining the factors related to the tendency towards drug abuse based on positive youth development model among high school students of Isfahan.

Methods: This sectional study has been performed with the participation of 252 male and female high school second graders in Isfahan. The sampling method was a multi-stage cluster. The data-gathering tool was a researcher-made questionnaire in three parts whose validity and reliability were confirmed. The gathered data were analyzed by SPSS 18 software, Pearson correlation tests, and Regression analysis.

Results: The mean and the standard deviation of the age of the participants were 15.82 ± 0.66. Among the structures of the model of positive youth development, those of social competence, emotional competence, social norms, and self-efficacy were predicted 30.8% of changing the tendency towards drug abuse, and the structure of the attitude toward drugs could predict 35% of behavior changes ($R^2 = 0.308$, $P < 0.001$).

Conclusions: The findings of this research shed light on the issue that the structures of social competence, emotional competence, prosocial norms, and self-efficacy along with attitude could be effective in decreasing the youths' tendency to drug abuse, which must be considered in the intervention programs with regard to the importance of the issue in the adolescents' lives.

Keywords: Adolescent Health, Iran, Students, Substance-Related Disorders

1. Background

Youth is the period in which people seek identity, and are sometimes involved in hazardous behaviors (1) whose disorders are related to dangerous diseases like HIV, suicide, and death from over-use of drugs (2).

In recent years, drug abuse has increased all over the world and all countries have suffered high costs to compensate for its damages (3).

Drug abuse in adolescents comes along with the increase in death and injury danger via interpersonal aggression, road accidents, increase in hazardous sexual behaviors, undesired pregnancy, getting diseases like AIDS, and education problems (4). This hazardous behavior among adolescents is considered as the biggest threat to their lives (5).

There are different cures for various drugs, but the best method is prevention. Researches have proved that for prevention, diminishing hazardous behaviors cannot solely help adolescents pass youth hazardous period; rather, it is necessary to promote protective factors like supportive relations with family and school that help the adolescents' development (4). According to the existing documents, a considerable relationship exists between strengths or protective factors in the adolescents' life and the decrease in the involvement in hazardous behaviors (6). In order to identify these factors, there is a need for an exploitation of a recognized framework which is the model of positive youth development (PYD) (6).

PYD causes growth in the adolescents' skills and competencies. Activities of this program are not only focused on negative behaviors, but their attention is also mostly on positive behaviors (7). In this regard, Saewyc et al. showed

that in the case of existing protective factors in the adolescents' life, factors like existing protective relationship with family, tendency towards behaviors like the use of alcohol and drug abuse are seen less (4).

Schwartz et al. also stated that participation in the plan of PYD has a negative relationship with drug use and that the participation in this plan is a preventive process (8).

2. Objectives

Nowadays, a few studies have investigated the factors related to drug abuse in the adolescents using theoretical bases that rely on the adolescents' strengths with a positive approach. Because of the importance of this issue in the adolescents' life, and since no study is performed in Iran in this regard, this preventive interference study is performed with the goal of determining effective factors in drug abuse based on the model of PYD among Iranian students.

3. Materials and Methods

3.1. Participants

This is a sectional study performed in Isfahan in 2015. The studied society was second grade male and female students of high school. The method was multi-stage clustering from 5 districts of the department of education in Isfahan in a way that two schools (one males' and one females') were randomly selected in each district leading to 10 schools totally (5 male schools and 5 female schools). Then, one second grade class was randomly selected from each school, and totally 252 people participated in this study. The criterion of entering the study was the tendency to participate in study; and the ages were between 15 and 18, and the criterion for leaving was dissatisfaction.

The study was performed after the confirmation of the university's morality committee in cooperation with the schools; and the study group was briefed about the privacy of the information and the aim of study, so the people who wanted to participate entered this study.

3.2. Data Collection Materials

Data collection tools included a researcher-made questionnaire that was regulated based on the model of positive youth development in 4 sections: the first section included 24 questions about personal and family information of students; the second section included 18 questions about the attitude towards drugs; the third section had 93 questions about 15 structures of positive development model including relationships in the family, teachers (7 questions), resilience (6 question), behavioral

competence (6 questions), cognitive competence (6 questions), emotional competence (6 questions), social competence (7 questions), moral competence (6 questions), self-determinism (5 questions), spirituality (11 questions), self-efficacy (6 questions), positive and transparent identity (7 questions), belief in the future (7 questions), recognition for positive behavior (4 questions), opportunities for prosocial involvement (5 questions), and training social norms (4 questions). All questions of this section were scored based on Likert 5-grade scale from 1 (completely opposing) to 5 (completely agreeing). The fourth section included 5 questions about the evaluation of the tendency toward using cigarettes, alcohol, hookah and drugs including 3 questions of situation, 1 question of behavioral intention in the 2 coming years, and 1 question about the students' behavior in the last month. In order to measure the validity of the prepared tools, the questionnaire was investigated by 8 psychology and health faculties and they remarked on the necessity of the items (index of content validity ratio) and, also, about the simplicity, clearance, and the relevance of the questionnaire (CVI content validity index), and the values obtained for CVR and CVI were 0.90 and 0.88, respectively.

In order to measure the stability of the questionnaire, it was accomplished by 35 similar people of the target group (that had conditions completely similar to the students in the study). Then, Cronbach's alpha test was performed in order to measure the internal consistency, and all the values obtained in all structures were in the range between 0.6 and 0.9 and were acceptable.

3.3. Statistical Analysis

Finally, the collected information was entered into the SPSS software (version 18) and was analyzed using the descriptive ANOVA. Pearson correlational test was used to study the correlation between PYD model structures and the tendency towards drug abuse in students, and the linear regression analysis was used in order to determine the anticipation of the tendency towards drug abuse among students.

4. Results

Among 252 students who participated, 120 (47.6%) were female and 132 (52.4%) were male with the average age of 15.82 ± 0.66.

Table 1 shows the demographic variables of the students who participated in terms of tendency towards drug abuse. The majority of the students' fathers (33.5%) and mothers (44%) had a high school diploma. Most students' fathers were self-employed (60.8%) and most mothers were

unemployed. There was no significant relationship between the students' demographic variables and their tendency towards drug abuse.

Table 1. Demographic Variables of Participants in Terms of Tendency to Drug Abuse

Variable	Number	Percentage	P Value
Gender			0.20
Female	120	47.6	
Male	132	52.4	
Birth rank			0.91
First	115	46	
Second	79	31.6	
Third	38	15.2	
Fourth or higher	18	7.2	
Father's occupation			0.17
Official staff	63	25.2	
Laborer	35	14	
Self employed	152	60.8	
Mother's occupation			0.27
No job	218	86.9	
Official staff	43	13.1	
Father's education			0.61
Illiterate	10	3.9	
Beneath diploma	84	33.5	
Diploma	84	33.5	
Academic	73	29.	
Mother's education			0.83
Illiterate	12	4.8	
Beneath diploma	72	28.8	
Diploma	110	44	
Academic	56	22.4	
No	236	97.5	
Economic status of the family			0.89
Well	53	21.1	
Moderate	182	72.5	
Weak	16	6.4	

Table 2 shows two personal and family variables in the students participating in terms of tendency towards drug abuse. Independent T-test shows that there is a significant relationship between the parents' separation and the tendency towards drug abuse (P = 0.001). Moreover, independent T-test shows that there is a significant statistical relationship between having drug-using friends (P = 0.003)

and life in a drug-using family (P = 0.005), and the tendency towards drug abuse. Correlation test showed a significant relationship (P < 0.001) between the students' interest in school and their tendency towards drug abuse, and independent T-test shows that there is a significant relationship between scores obtained in school and the tendency towards drug abuse (P = 0.005).

Table 2. Personal and Family Variables of Participants in Terms of Tendency to Drug Abuse

Variable	Number	Percentage	P Value
Parents divorce			
Yes	6	2.5	0.001
No	236	97.5	
Having drug-using friends			
Yes	39	15.9	0.003
No	206	84.1	
Having drug-using family			
Yes	26	10.5	0.005
No	221	89.5	
Being bored in school			
Never	24	9.5	0.001
Rarely	62	24.6	
Sometimes	114	45.2	
Often	38	15.1	
Always	14	5.6	
Scores obtained in school			0.01
10 - 15	45	17.9	
15 - 20	206	82.1	

Independent T-test shows that there is a significant relationship between smoking cigarettes or hookah and alcoholic drinks, and the tendency towards drug abuse (P < 0.001).

The results of the students' self-reports about the record of using tobacco products, alcohol, and drugs shows that 13.9% of them had the history of hookah-using; 3.2% hookah and cigarette using; 3.2,% cigarette, hookah and alcohol; 2.4% hookah and alcoholic drinks; 1.6% cigarette using; 1.2% alcoholic drinks; and 1.2% other drugs. In order to study the correlation between PYD model structures and the tendency towards drug abuse in students, Pearson correlation test was used and the results can be seen in Table 3.

According to the findings of Table 3, there is a significant relationship between attitude, bonding, emotional competence, cognitive competence, behavioral compe-

Table 3. Correlation Coefficient of PYD Model Structures and the Tendency Toward Drug Abuse

Variable	Correlation Coefficient	Significant Coefficient
Attitude	r = 0.42	P < 0.001
Spirituality	r = 0.28	P < 0.001
Emotional competence	r = 0.23	P < 0.001
Bonding	r = 0.22	P < 0.001
Self-efficacy	r = 0.22	P = 0.001
Social norms	r = 0.21	P < 0.001
Social involvement	r = 0.20	P = 0.02
Moral competence	r = 0.18	P = 0.005
Behavioral competence	r = 0.18	P = 0.004
Cognitive competence	r = 0.13	P = 0.04
Identity	r = 0.13	P = 0.04

tence, moral competence, self-efficacy, spirituality, identity, social involvement, and social norms and the tendency towards drug abuse.

The highest correlation coefficient of the model structures by the tendency towards drug abuse is related to spirituality (r = 0.289), emotional competence (r = 0.235), bonding with parents and teachers (r = 0.229), social norms (r = 0.216), social involvement (r = 0.200), and attitude to drug, as a structure that is added to model having the correlation coefficient 0.422, showed a significant relationship with tendency towards drug abuse.

Linear regression analysis was used in order to determine the anticipants of tendency towards drug abuse among students (Table 4). According to the findings of this table, 5 structures of attitude towards drugs, social competence, emotional competence, self-efficacy, and social norms were able to predict 30.8% of the changes related to tendency towards drug abuse between adolescents participating in the study.

Among the predictive structures, attitude towards drugs can explain 35% of the changes related to tendency towards behavior (P < 0.001).

5. Discussion

Drug abuse in adolescents has many demolishing influences and this study investigated the factors related to the adolescents' tendency towards drug abuse based on the model of positive youth development. The results showed that attitude towards drugs, social com-

petence, emotional competence, self-efficacy, and social norms were the anticipants of tendency towards drug abuse in adolescents and that attitude is a more important anticipant for tendency towards drug abuse in adolescents. Morrison et al. showed that attitude is the most important anticipant of intention to use marijuana in young women (9). Laflin et al. showed that attitude is an important anticipant for drug abuse (10). Therefore, changing adolescent attitude towards drug abuse can be a proper solution in this field and it is, also, necessary to consider the emotional field in specific educational programs of preventing hazardous behaviors.

Ferreira et al. have shown the potential importance of emotional and social competence in adopting drug abuse behavior in adolescents (11). Promotion of emotional and social competence like flexibility in communications and feeling expression and also the skill of having interpersonal connection play an important role as protective factors in preventing drug abuse.

The obtained results showed that self-efficacy was another anticipant of tendency towards drug abuse. Bandura believes that self-efficacy is the most important requirement of chaining behavior and the most important anticipant of behavior (12). To accomplish behavior successfully, self-efficacy is an important requirement. Therefore, the use of self-efficacy promotion methods in adolescents and improving their understanding of their abilities with the help of parents and teachers are effective in this area.

Our study showed that another anticipant is social norms, and Laflin et al. showed norms have anticipant effects on drug abuse (10).

Our study showed that there is a significant relationship between attitude, bonding, emotional Competence, cognitive Competence, behavioral competence, moral competence, self-efficacy, spirituality, identity, social involvement, and social norms, and the tendency towards drug abuse. The study carried out by Barkin et al. also showed that there is a significant relationship between the attitude of the adolescents towards drugs and their tendency to use them (13). Our research showed the direct influence of emotional competence in decreasing the tendency. Greeley et al. showed that the use of alcohol and drugs in adolescents is considered as a method for decreasing negative pressures and emotions (14). Therefore, promoting adolescents' ability to confront negative emotions serves as a protective factor.

Our investigation showed the significant relationship of spirituality and tendency towards drug use in this age group. Bahr et al. showed that adolescents who tend towards spirituality have no drug abuse (15). O'Donnell et al. also showed that a combination of social involvement structures, bonding with school and family, and norms are

Table 4. Indicators of Linear Regression Analysis Based on the Variables of PYD Model

Prediction Variables	B	Standard Beta	Standard Error	Significance	Total R^2
Attitude	0.078	0.349	0.013	P < 0.001	
Social competence	0.122	0.268	0.030	P = 0.001	
Emotional competence	0.100	0.187	0.034	P < 0.001	0.308
Self-efficacy	0.076	0.176	0.028	P = 0.001	
Social norms	0.116	0.174	0.042	P = 0.001	

prohibitive for drug use ([16]).

Sheck et al. also showed that bonding, behavioral competence, moral competence, cognitive competence, emotional competence, self-efficacy, spirituality, identity, social involvement, and social norms have negative influences on the intention of drug abuse ([17]).

The results of the study showed that there was a significant relationship between the tendency towards drug abuse and bonding with family and school. Schwarts et al. also proved that positive relationship with family and peers had preventing effects on the involvement in hazardous behaviors ([8]). The results confirm the hypothesis that there is a significant relationship between PYD and tendency to hazardous behaviors among adolescents; and the promotion of emotional competence, cognitive competence, behavioral competence, moral competence, self-efficacy, spirituality, identity, social involvement and social norms, and bonding to family and school are effective strategies for decreasing the intention of drug use in adolescents.

This study did not show a significant relationship between gender and tendency to drug use. Bahr et al. showed that the effect of hazardous factors on creating tendency to drug use is similar for girls and boys ([15]). In the present investigation, no significant relationship was observed between economic status and tendency to drug abuse; but O'connor et al. showed a better social-economic status and some sexual differences were stronger anticipants in boys than in girls ([18]).

Occupation of parents had no significant relationship with tendency to drugs. Mesic et al. also confirm this issue. In addition, a significant relationship exists between the history of drug use by family and the history of drug use by the student in that family. Mesic at al. also confirm this relationship ([19]). Between being bored in school and tendency towards using drugs, there is a significant relationship, and Ljubotina et al. also showed that non-compliance with school is among predictive factors of drug abuse ([20]).

Alcohol use of 6.8% and drug use of 1.2% were observed in the participating students (without considering cigarette and hookah use). Musial et al. stated that alcohol use in 13 to 16-year-old students was 76% and drug abuse was 15% ([21]). Since growth and maturity of students is not completed in youth, and drug abuse, especially alcohol use, in this group has side effects on growth and maturity, despite the slower process of Iranian youth students in drug abuse, the amplification of protective factors in their life and early interventions are necessary for prevention.

A total of 97.5% of the students participating in the research were living with their parents (both) while in Tebes et al. 21.2% of the students were living with their parents ([22]); also, the results showed that parents' separation had a significant relationship with their children's tendency to drug abuse. The condition of living with parents (both) in addition to having more supervision of family over adolescent behavior can make the families familiar with child training skills creating a protective and supportive environment in family, and can prevent adolescent involvement in hazardous behaviors. Research has proved that relationship with family has an important role in holding adolescents far from drug abuse especially alcohol ([23]). The mentioned issues show that the interventions related to prevention from adolescent tendency to drugs are more effective when family is one of the main factors of intervention.

The findings state that the model of positive youth development is an appropriate pattern in preventing hazardous behaviors including drug abuse and amplification of predictive factors, the related factors are effective in decreasing the adolescents' tendency to drug use, and it is necessary to perform, design and implement intervention accordingly in future researches to investigate its effectiveness. In this study, there were two limitations; first, the volume of the sample was relatively small, which makes the generalization of the findings difficult, and it is necessary to consider larger sample volumes in subsequent studies. Second, the study was limited to students residing in cities. In order to have a complete image of the issue, we suggest that students residing in the suburbs and rural areas be considered in the future studies, too.

5.1. Conclusion

With regard to the results, it seems that changing the attitude towards drug abuse and promotion of social competence, emotional competence, self-efficacy, and social norms of the structures of positive youth development model in students can significantly be effective in decreasing their tendency towards using drugs. In order to promote these capabilities systematically, it is necessary to introduce the positive youth development model as a framework to schools. Whereas the strengthening of youths' positive points is not merely done by schools and it requires the participation of all sections. In order to create a common language in preventive interferences, the aforementioned model should be given to those providing services to youths in the society, too. Moreover, endangered youths (the presence of a drug addict in the family, separation of parents, etc.) should be identified and special interferences should be considered for them.

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Footnotes

Authors' Contribution: Seyed Saeed Mazloomy Mahmoodabad conceived and designed the study. Zoya Khajedehi acquired the data. Hossein Fallahzadeh performed the analysis and the interpretation of data. Zoya Khajedehi drafted the manuscript. Seyed Saeed Mazloomy Mahmoodabad revised it critically for important intellectual content. Hossein Fallahzadeh performed the statistical analysis. Hassan Zareei Mahmoodabadi, Seyed Saeed Mazloomy Mahmoodabad and Hossein Fallahzadeh performed administrative, technical, and material support. Seyed Saeed Mazloomy Mahmoodabad and Hassan Zareei Mahmoodabadi supervised the study.

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