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Predicting the Tendency to High-Risk Behaviors Based on Psychological Flexibility and Attachment Styles in Male and Female High School Students

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ABSTRACT: The aim of this study was to predict the tendency to high-risk behaviors based on psychological flexibility and attachment styles in male and female high school students. This research was applied in terms of purpose, and descriptive and correlational in terms of data collection. The statistical population of this study was all high school students in the academic year 2020-2021. Using cluster random sampling method, 300 people were selected as a sample. At the descriptive statistics level, the mean, standard deviation, minimum and maximum scores, and at the inferential statistics level, Pearson coefficient and multiple regression have been calculated. The results indicated that the flexibility and secure attachment had a negative and significant relationship with the tendency to high-risk behavior and the avoidant attachment. Moreover, it was indicated that ambivalent attachment had a positive and significant relationship with the tendency to high-risk behavior. Also flexibility ($p < 0.05$, $\beta = -0.17$), secure attachment style ($p < 0.05$, $\beta = -0.19$), avoidance attachment style ($p < 0.05$, $= 0.18$) β) and ambivalent attachment style ($p < 0.05$, $\beta = 0.13$) were significant predictors of the tendency to high-risk behavior.

Keywords: Flexibility, Attachment styles, Tendency to high-risk behavior, Secondary high school students.

Introduction

Adolescence is a period of physical, cognitive, socio-emotional and environmental changes that increase the ability to think, begin puberty and make changes in family, friends, school, community, and build expectations from peers, family and community together. This period is identified with features such as accepting family plans and responsibilities, trying to acquire new emotional and social plans, managing life tasks without being too dependent on others and creating a new orientation for the future as an independent adult (Kagitcibasi, 2013). From the perspective of developmental psychology, adolescence can be referred to as the period of reviewing psychological symptoms. Adolescence is a period of vulnerability that can be associated with high-risk behaviors. High-risk behaviors are potential behaviors that are destructive and people commit it intentionally or without knowing the undesirable and negative consequences (Rezaei Jamalui et al., 2020).

According to the 2016 census, about six million people in Iran were 14-19 years old, which was approximately equivalent to seven percent of the total population of the country. Due to the young population of Iran and the unpreparedness of adolescents in terms of tools needed to deal with the issues or characteristics of adolescence that in many cases contribute to dangerous and troublesome

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behaviors and tasks, the issue of social and mental health of adolescents as at-risk groups is one of the main priorities of the country (Alizadeh et al., 2020).

Various studies have been conducted on the causes of youth and adolescents' tendency to high-risk behaviors. But little research has looked at the underlying factors of childhood, such as attachment styles that stem from how the child relates to the first caregiver or the flexibility of the individual that is rooted in a flexible, adaptable, and authoritative parenting relationship. In this study, an attempt is made to examine strategies to deal with juvenile delinquency. This is why psychological factors have been considered as predictor variables.

Numerous factors can play a role in the development of high-risk behaviors in adolescents, one of which can be attachment styles (Chen et al., 2019). According to Bowlby theory, attachment is formed through nonverbal relationships between the infant and their primary caregiver. Attachment styles refer to certain internal models of attachment that determine the shape of individuals' behavioral responses apart from attachment imagery and reconnection with this imagery. These internal models provide a secure base for the individual that enables him/her to regulate his/her emotions in a relatively independent and practical way. Thus, these attachment styles are formed mainly based on the individual's experiences and through primary care by the parents.

People with anxiety-related insecure attachments have lower self-esteem and more passivity, are less able to manage stress, feel isolated, and do not seek help from others when needed. Children with this style of attachment rarely show signs of stress when their caregiver is absent and ignore their caregiver when the caregiver returns to the child (Suri et al., 2019). Insecure attachment style can play an important role in the development of high-risk sexual behaviors in adolescents (Kim & Miller, 2020). Insecure attachment style also leads to adolescents' engaging in high-risk behaviors related to drug use and alcohol consumption (Zakhour et al., 2020). According to research results, the most changes in high-risk behaviors are related to insecure attachment style (Javadi et al., 2016). A study has also shown that there is a relationship between attachment styles and high-risk behaviors in high school adolescents, and attachment styles have a predictive role in the occurrence of high-risk behaviors of students. Students with an avoidant insecure attachment style exhibit riskier behaviors during adolescence (Phillips et al., 2018).

According to the psychological flexibility model which underpins ACT, psychological and communication framework theory (RFT) increases an individual's ability to choose an action that is more appropriate among the various options. It prevents disturbing thoughts, feelings, memories, or desires from being performed or actually imposed on the individual, thereby reducing cognitive interference and emotion with negative events (Snow et al., 2016). Psychological flexibility with the ability to shift focus from one area of life to another and from one perspective to another, and ensuring that important elements of one's identity in these changes work in a harmonious way have beneficial effects on life (Kashdan & Rottenberg, 2010). Psychological flexibility is related to behaviors which are rooted in individual values. However, the lack of behaviors that are in line with individual values causes a person to feel empty and meaningless in his/her personal and social life or to feel his/her life

full of suffering (Snow et al., 2016). Psychological flexibility is considered as one of the main components of executive function. Executive function regulates behavioral outputs, which typically include inhibition and control of stimuli, working memory, psychological flexibility, planning, and organization (Fledderus et al., 2013). Psychological flexibility in relation to executive function also refers to the ability to choose a practical response from the available and appropriate options and to use creativity (Yeh et al., 2018). Flexible people are soft-spoken and are able to be flexible when wonderful situations arise (Leeming & Hayes, 2016). The concept of psychological flexibility has been proposed as a sign of mental health (Sandoz et al., 2015).

Rezaei Jamalui et al. (2020), in a study on the role of attachment styles in high-risk behaviors of male adolescents, showed that attachment styles play an important role in the tendency or prevention of adolescents' tendency to high-risk behaviors.

Sharma et al. (2019) have investigated the effect of protective factors on life stress and behavioral health among young people with high-risk behaviors. Findings of the study generally highlighted the role of protective factors in behavioral health outcomes among youth living in high-risk neighborhoods. In a longitudinal qualitative study on the role of emotion in political violence, Schumpe et al. (2020) concluded that sensation seeking mediated the relation between meaning in life and willingness to self-sacrifice and support for political violence.

Studying the contexts and predictors of high-risk behaviors in adolescents can significantly prevent their occurrence, and conducting research on such topics will pave the way for the work of counselors, psychologists, and those involved in education in this direction. Also, basic solutions to solve adolescents' problems will not be discovered except by studying their behaviors in the field. Therefore, according to the research conducted in this field, researchers in the present study sought to predict adolescent high-risk behaviors based on attachment styles and cognitive flexibility.

Material and Methods

The present study was applied in terms of purpose and descriptive-correlational in terms of data collection. In this study, four variables including secure attachment style, avoidant attachment style, ambivalent attachment style and psychological flexibility as predictor variables and the tendency to high-risk behavior variable as a criterion variable have been studied. The statistical population of the present study included all male and female high school students in Shiraz who were studying in the 2021 academic year. The method proposed by Schumacher and Lomax (2004) was used to estimate the sample size. Accordingly, to estimate the sample size in path analysis and structural equation modeling, the ratio of participants to the number of model parameters is estimated in which the ratio of sample size to model parameters is one to twenty. Consequently, considering the sample drop, 300 people were selected as the sample through stratified random sampling. In this study, at the descriptive statistics level, the indicators of mean, standard deviation, minimum and maximum scores were used and Kolmogorov-Smirnov test was used to test the normality of the data. At the inferential statistics level, Pearson correlation coefficient was used to test the relationship between variables and multiple

regression was used to predict the criterion variable. SPSS software version 23 was used to analyze the data. In this study, written consent was received from all subjects and they were assured that their answers will remain confidential with the researcher. The data collection tools were as follows:

Iranian Adolescent Risk Scale (IARS): The Iranian Adolescents Risk Scale, developed by Zadeh Mohammadi et al. (2011), consists of 31 items that are measured by marking on a Likert scale (strongly agree 5, strongly disagree 1). Accordingly, the score obtained from this questionnaire can be in a range from 31 to 155. The questionnaire includes 6 subscales including Dangerous Driving, Violence, Smoking, Drug Use, Alcohol Consumption and High-Risk Sexual Behavior. Zadeh Mohammadi et al. (2011) evaluated the reliability of this scale by internal consistency method using Cronbach's alpha and its construct validity by exploratory factor analysis and principal component analysis method. KMO test was equal to 0.949 and at a very desirable and satisfactory level. Additionally, Bartlett sphericity test was statistically significant. Also, the reliability of the whole scale and its subscales was at a desirable level, so that Cronbach's alpha for the overall scale was 0.938, smoking 0.931, drug use 0.906, alcohol consumption 0.907, and relationship and sexual behavior 0.856 has been reported 0.809. Its reliability in the present study was obtained 0.82, using Cronbach's alpha coefficient.

Psychological flexibility scale: Acceptance and action questionnaire (AAQ II) measures the experiential avoidance and psychological inflexibility (Wolgast, 2014). Higher scores indicate more psychological flexibility. In terms of psychometric specifications of the original version, Cronbach's alpha coefficient was 0.84 and retest reliability was 0.81 and 0.79, at intervals of 3 and 12 months, respectively. AAQ-II seems to measure a similar concept to AAQ-I but has better psychometric stability (Wolgast, 2014). The questions in this questionnaire are rated based on the amount of agreement on a 7-point Likert scale (never = 1 to always = 7). Based on this, each respondent can get a score between 10 and 70. The reliability of the scale in the present study was obtained .77, using Cronbach's alpha coefficient.

Attachment style: The Collins and Reed (1990) Attachment Style Questionnaire consists of 18 items that are measured by marking on a 5-point Likert scale for each item (from 1- not my feature at all to 5- it is quite my feature) (Tavakolizadeh et al., 2015). By factor analysis method, three 6-item subscales have been extracted. Collins and Reid (1990) have prepared their questionnaire materials based on the descriptions in the Hazen and Shaver Attachment Questionnaire about the three main attachment styles. Collins and Reed (1990) showed that the subscales of closeness (C), dependence (D), and anxiety (A) remained stable for two months or even eight months (Tavakolizadeh et al., 2015). In all these cases, Cronbach's alpha was equal to or greater than 0.80. In this scale, 6 questions are assigned to each of the attachment styles, and each respondent can get a score between 6 and 36 in each of the attachment styles. In the present study, the reliability of this tool has been reported to be 0.81 using Cronbach's alpha method.

Results

In Table 1, descriptive indices of mean, standard deviation, minimum and maximum scores of variables are reported.

Table 1. Minimum, maximum, mean and standard deviation of research variables and their dimensions

Variable	Min.	Max.	Mean	SD
Flexibility	11	70	34.12	13.41
Secure attachment	6	24	12.69	5.08
Avoidant attachment	6	23	13.39	5.13
Ambivalent attachment	6	23	13.52	3.80
Substance abuse	16	28	25.14	2.67
Dangerous driving	9	21	17.09	2.75
Alcohol consumption	8	20	16.03	2.84
Violence	5	17	12.40	3.01
Smoking	6	18	13.53	3.05
Relationship with opposite sex	7	19	13.21	3.05
Sexual relationship	6	14	10.37	2.07
High risk behaviors	61	137	107.78	16.67

According to the results of Table 1, the mean score of psychological flexibility is 34.12 and standard deviation is 13.41. In this table, the dimensions of other predictor variables, namely attachment styles, are also reported. The mean of secure attachment was 12.69 and the standard deviation was 5.08. For avoidance attachment, the mean was 13.39 and the standard deviation was 5.13. For ambivalent attachment, the mean was 13.52 and the standard deviation was 3.80. The mean of tendency to high-risk behavior (risk-taking) was 107.78 and its standard deviation was 16.67. The Kolmogorov-Smirnov test was used for the normality test, the results of which are presented in Table 2.

Table 2, Kolmogorov-Smirnov test results

Variable	K-S Test	*p*
Flexibility	.086	.12
Secure attachment	.12	.09
Avoidant attachment	.075	.12
Ambivalent attachment	.17	.08
Substance abuse	.15	.08
Dangerous driving	.13	.09
Alcohol consumption	.12	.09
Violence	.10	.09
Smoking	.10	.09
Relationship with opposite sex	.10	.09
Sexual relationship	.10	.09
High risk behaviors	.07	.12

According to Table 2, the results of Kolmogorov-Smirnov test show that the statistics for all variables were not significant ($p < 0.05$), therefore, the data of this study are normal for each of the variable and parametric tests can be used. Table 3 presents the correlation matrices of the research variables.

Table 3. Correlation matrix between research variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1.Flexibility	1											
2.Secure attachment	.45*	1										
3.Avoidant attachment	-.48*	-.59*	1									
4.Ambivalent attachment	-.35*	-.38*	.45*	1								
5.Substance abuse	-.34*	-.37*	.40*	.32*	1							
6.Dangerous driving	-.38*	-.45*	.42*	.33*	.69*	1						
7.Alcohol consumption	-.35*	-.39*	.36*	.31*	.60*	.68*	1					
8.Violence	-.41*	-.47*	.47*	.37*	.68*	.79*	.73*	1				
9.Smoking	-.39*	-.39*	.41*	.28*	.74*	.72*	.68*	.75*	1			
10.Relationship with opposite sex	-.39*	-.46*	.44*	.36*	.61*	.68*	.72*	.74*	.69*	1		
11.Sexual relationship	-.33*	-.33*	.34*	.21*	.56*	.62*	.67*	.72*	.63*	.64*	1	
12.High risk behaviors	-.44*	-.48*	.48*	.37*	.82*	.87*	.87*	.91*	.88*	.86*	.80*	1

* < .05

According to the results in Table 3, psychological flexibility and secure attachment style had a negative and significant relationship with all dimensions of high-risk behavior variables ($p < 0.05$). But avoidant attachment and ambivalent attachment had a positive and significant relationship with all variables of high-risk behavior ($p < 0.05$).

Psychological flexibility and secure attachment had the most inverse relationship with the violent dimension of the variable of risk. Also, the variables of avoidant attachment and ambivalent attachment had the most direct relationship with the violence dimension of the risk-taking variable.

Based on the main research problem, four hypotheses have been presented according to which the relationship between the four predictor variables and the criterion variable has been tested. The test value of Durbin–Watson statistic was 2.15, which is in the desired range. Also, the tolerance statistic for all predictor variables was higher than 0.83 and the variance inflation statistic for all predictor variables was lower than 1.20. According to the findings, the proposed model could explain about 68% of the variance of the criterion variable significantly. Details are provided in Table 4. Table 4 shows the non-standard coefficients, standard, critical value and significance level of predicting the tendency to high-risk behavior based on four predictor variables.

Table 4. Non-standard coefficients, standard, critical value and significance level of predicting tendency to high-risk behavior

Predictors	R^2	Durbin–Watson statistic	Tolerance	VIF	B	ß	S.E	P
Flexibility	.68	2.15	1.204	.830	-.027	-.17	.009	.001
Secure attachment			1.124	.890	-.077	-.19	.026	.001
Avoidant attachment			1.317	.759	.072	.17	.026	.001
Ambivalent attachment			1.015	.986	.073	.13	.030	.014

According to Table 4, all four research hypotheses are confirmed and all four research predictor variables were significant predictors of the criterion variable.

Discussion

Findings indicated that there is a negative and significant relationship between psychological flexibility and tendency to high-risk behavior in students. In other words, with decreasing psychological flexibility, the tendency to risky behaviors increases. These findings are in line with the results of research by Dutra and Sadeh (2018), Sutcliffe et al. (2019), Zarei et al. (2020), Zadehmohammadi and Ahmadabadi (2008). In their research, the researchers concluded that there is a significant negative relationship between psychological flexibility and high-risk behaviors such as aggression, substance abuse, high-risk driving, alcohol consumption and suicide. Psychological flexibility is an important component of executive function, which includes excellent cognitive and metacognitive functions. In the brain system, the executive function is responsible for regulating our behaviors, emotions, and thoughts in the face of the environment. Therefore, the poor functioning of the executive function system can be attributed to the weak executive functions of the brain. Weaknesses in executive functions have numerous consequences, including uncontrolled behaviors in the face of high-risk situations. Also, these people are often unable to solve the problem and choose the most appropriate solution in dealing with various problems.

Another part of the findings revealed that there is a significant relationship between secure attachment style and tendency to high-risk behavior in students. The results of this study are in line with the research of Chen et al. (2019), Zakhour et al. (2020), and Javadi et al. (2016). In secure attachments, a warm, safe, and intimate family environment prevents high-risk behaviors in children. According to John Bowlby, people who had sensitive and responsive parents as children have developed the power of self-confidence and self-worth in themselves, and it is this positive trust and dependence that fosters attachment in them. This secure attachment paves the way for the development of many psychological characteristics in people and reduces the risk of disorders such as high-risk behaviors. Therefore, it seems that the mother plays a major role in the mental health of individuals (Behroozi et al., 2013). Also, secure attachment style in people forms a positive self-concept and allows them to control themselves when dealing with stressful situations and not lose their cognitive and emotional control. Therefore, these people are able to overcome stressful situations and improve their mental health and are less prone to high-risk behaviors due to their belief in the ability to feel the power in themselves.

According to the findings, there is a significant relationship between avoidant attachment style and tendency to high-risk behavior in students. The results of this study are consistent with the results of research by Kim and Miller (2020), Schindler et al. (2005) and Ahrens et al. (2012). Although risk factors for high-risk behaviors may start with simple curiosity, their persistence is closely related to attachment styles. Separation from the source of security can lead to the rupture of people's relationship with the environment and their tendency to use drugs, alcohol, bad friends, etc. For example, adolescents use substance use as a way to deal with problems, negative emotions and stressful situations (Maunder & Hunter, 2009; Rezaei Jamalui et al., 2020). Also, avoidant attached individuals place a lot of emphasis on independence and self-sufficiency (something they were

deprived of as children) and therefore, tend to compensate for maladaptive strategies such as substance abuse, alcoholism and other high-risk behaviors.

Finally, the findings showed that there is a significant relationship between anxiety attachment style and tendency towards high-risk behavior in students. The results of this study are consistent with the results of the studies of Pooravari et al. (2015) and Phillips et al. (2018). The main characteristic of insecure people, namely doubt, conflict, enmity, confusion and despair, exposes people to stressful situations. In ambivalent individuals, the greatest deficiency, that is, lack of self-confidence and lack of trust to others, makes them anxious and helpless. It contributes to their humiliation and helplessness, prevents them from establishing healthy relationships, and exacerbates high-risk behaviors. In fact, these people tend to engage in risky behaviors in order to overcome their inner turmoil, which leads to their rejection by peers and friends who have a reasonable and restrained reaction, and ultimately lead to their delinquency.

This study, like other studies in the field, has some limitations that need to be considered in generalizing the findings. One of the biggest research limitations in the current situation is the existence of Covid 19 disease and the closure of schools, which has limited the possibility of conducting research in schools and direct communication with students. Accordingly, research and sampling of the statistical population was done virtually, which has some limitations such as lack of direct communication between the participant and the project manager, failure to resolve some ambiguities in the response and poor cooperation of participants. Lack of control over extranous variables such as gender, social status, economic status, culture of the perpetrators, as well as parents' education, may be difficult to generalize the findings. Also, in this study, the questionnaire was used to collect the data, and some participants may have refused to provide real answers.

According to the results of the study and the importance of the family in the formation of attachment styles and psychological flexibility in adolescents, it is suggested that these topics be taught in premarital classes. It is also suggested that in developing students' curricula, students be taught the causes of high-risk behaviors and ways to prevent them in order to prevent these behaviors from occurring. According to the research results and the importance of the role of peers in the tendency to high-risk behaviors, it is suggested that families be given the necessary training on adolescent communication in schools to prevent more serious problems. Interested researchers are suggested to examine the relationships between these variables in other groups in order to determine more precisely the attachment styles and psychological flexibility, using different tools and methods.

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