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Research Paper

Design and Validation of Youth High-risk Behaviors Short Scale



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ABSTRACT

Objective: This research aims to design and validation of youth high-risk behaviors short scale.

Methods: In this research, the descriptive-survey method was used. The statistical population was all students of Mashhad universities which 681 students were randomly selected from multi-stage cluster types. The tools used also included: youth high-risk behaviors short-scale developed by the researcher, as well as the Big Five-Inventory (2007) and Psychological Well-being Scale (1989).

Results: The results showed that 14-item high-risk behaviors scale has good psychometric properties and is the norm with Iranian society. The validity of the scale was good with the methods of construct validity (confirmatory factor analysis) and convergent and divergent validity ($p<0.01$). The results of confirmatory factor analysis also confirmed the seven-factor nature of the scale, and the obtained model had a good fit with the research data. The Cronbach's alpha coefficient of the whole scale was 0.82.

Conclusion: Therefore, researchers and health professionals can use this tool in their future studies due to its unique features.

1. Introduction

High-risk behaviors are a set of destructive and unhealthy behaviors that threaten physical, psychological, and social health. Also, the dangerous and harmful consequences of high-risk behaviors by creating physical and psychological problems lead to disruption in family relationships and create an insecure atmosphere in society and even increase the costs imposed on health; in other words, high-risk

behaviors lead to personal, family, social, and economic harm (Boyer, 2006). Some essential high-risk behaviors include alcohol use, drugs, smoking, self-harm, violence, unsafe sex, and dangerous driving (Chinchilla & Kosson, 2015). Risky behaviors have severe and sometimes irreparable consequences for individuals and society such as poisoning and mortality from alcohol consumption (Smith & Wessel, 2011), Increase in sexually transmitted diseases due

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to unsafe sex (Shokoohi, Banshi & Ali Akbari, 2012), or mortality due to road accidents (Yang et al., 2013). Various studies show an increasing prevalence of high-risk behaviors among adolescents and young people.

In this regard, Lan et al. (2017), in a meta-analysis review study reported that alcohol consumption, pre-sexual alcohol consumption and multiple sexual partners were 77%, 64% and 40%, respectively. In another study with a sample of Korean adults, the results showed a 15.1% prevalence of alcohol consumption (Hong, Noh & Kim, 2017). Inside the country, the results of Ahmadi and Hassani (2013) showed that 12% of women had used drugs at least once, and 3.5% of them had used alcohol. In a study with 800 male and female high school students in Qom, 56.25% of the sample reported one of the types of high-risk behaviors (Marzban et al., 2016). Also, the results of research with students in Rudan city showed a prevalence of 5.5% of substance use, 20% of nicotine use (such as cigarettes and hookah), and unsafe sex of 10.5% of boys and 2.9% of girls (Khojandi, Banshi, Sharifi & Mohseni, 2018). The results of a meta-analysis recently published by Bahadivand et al. (2021) also show the significant prevalence of high-risk behaviors in Iranian society. According to the results of this meta-analysis, the majority of drug abuse is 4%, alcohol consumption 9%, smoking 9% (hookah 20%), and extramarital affairs 20%.

Studies that have examined high-risk behaviors have explicitly focused on one area of high-risk behaviors. Therefore, explanations and interpretations of how high-risk behaviors occur are very sparse and brief. Therefore, in the literature of this research field, there is no coherent and comprehensive approach to the causes and factors of the formation and spread of high-risk behaviors. Variables that explain the formation of high-risk behaviors have more frequency and more emphasis in research. These include self-control (Astolfi et al., 2021), excitement (Curry et al., 2017), impulsivity (Costanza et al., 2020), anxiety, and depression (Soleimani et al., 2017). In addition, research results suggest that participation in a high-risk behavior increases involvement in other high-risk behaviors (Businelle et al., 2013).

Therefore, the extent and importance of the impact of high-risk behaviors in various psychological, physical, and social dimensions on the one hand, and its greater prevalence among adolescents and young people, on the other hand, has motivated many researchers and professionals. In this regard, various tools have been designed and built to measure high-risk

behaviors. Some of these tools are researcher-made questionnaires that have not undergone the process of validation and determination of psychometric properties. Some questionnaires and scales have been developed specifically to measure a range of high-risk behaviors among the agencies with psychometric properties.

Examples include Substance Abuse Attitude Survey (SAAS) (Chappel, Veach & Krug, 1985), HIV Hazardous Behavior Scale (HRBS) (Petry, 2001), Short Version of Adolescent Alcohol Probability Questionnaire (AEQ-AB) (Stein et al., 2007), and the Manchester Driving Behavior Questionnaire (MDBQ) (Oreyzi & Haghayegh, 2010) are some of these. Some high-risk behavioral tools also assess several areas of these behaviors, including short and long forms. The Reckless Behavior Questionnaire (RBQ) (Arnett, 1996) measures four areas of high-risk behaviors with 16 items. Dangerous Behavior Survey is an Iranian-made questionnaire that assesses a wide range of high-risk behaviors, including high-risk driving, alcohol and substance use, carrying a firearm, attempting or planning suicide, sexual intercourse, and physical aggression in adolescents and young adults with 32 items and is based on the high-risk behavior survey questionnaire of Brener et al. (2002) (Bakhshani, Lashgaripour & Hosseinpour, 2007). The Youth Risk Behavior Monitoring System Scale (2009; YRBSS) is a methodological and epidemiological surveillance system developed by the Centers for Disease Control and Prevention (CDC) to monitor youth risk behaviors. The 89-item tool focuses on risky behaviors that develop during adolescence and lead to death, disease, complications, and behavioral problems in adolescents and young adults (Baheiraei et al., 2012). The Persian version of the 89-item Youth Risk Behavior Monitoring System Scale (YRBSS), which measures the dimensions of self-mutilation, smoking, alcohol, and other dangerous drugs and sexual behaviors, has been validated in Iran on the sample of adolescents (Baheiraei et al., 2012). A checklist of high-risk adolescent behaviors made by Armstrong (2012) has 15 items that Tabar et al. (2016) validated this tool in Iran with 533 students in Tehran. This scale measures high-risk behaviors in adolescents and does not cover some common high-risk behaviors, such as dangerous driving. The Iranian Adolescent Risk-taking Scale (IARS) Zadeh Mohammadi et al. (2011) covers seven areas of high-risk behaviors with 38 items, and the high-risk behaviors questionnaire of Kamel-Abbasi and Sargolzaei (2006) measures nine areas of high-risk behaviors with 40 items.

In this regard, it was necessary to have a tool to measure high-risk behaviors validated in Iranian society. In addition to being short and covering several areas of the most common high-risk behaviors, it also has appropriate and reliable psychometric properties. Therefore, this study aims to design and validate youth high-risk behaviors short scale.

2. Materials and Methods

In According to the objectives and subject, a descriptive-survey method was used in the present study. The statistical population of this study was all students of Mashhad universities (In the year 2021), which were sampled from this population by multi-stage cluster sampling, in three stages: first two universities (Azad and Payam Noor), one faculty from each university (engineering, and psychology, respectively). Educational sciences), two educational groups from each faculty and four classes from each group in three levels (bachelor, master, and doctorate) were randomly selected. The sample size in the present study was 681 students according to the type of study. The implementation method was such that due to the ease of work and the spread of coronavirus, the question link was placed in the faculty channel after coordination with the relevant official. Once every three days, students were asked to answer questions patiently and carefully. Participants also responded to questions with informed consent.

Youth High-Risk Behaviors Short Scale (YHBSS-14): This scale is a research tool and has seven components consists of drug addiction, alcohol addiction, smoking addiction, violence addiction, self-harm addiction, dangerous sex addiction, and dangerous driving addiction. By reviewing the literature on high-risk behaviors and reviewing the tools made in this field, seven components and 14 questions (two parts each question) were extracted and designed. Finally, the components and questions to ensure face validity from two psychologists in Clinical psychology received approval. This scale has a five-point Likert scale that is scored from strongly agree= 0 to strongly agree= 4. The lowest score is zero, and the highest score is 56. The higher score indicates more risky behaviors.

Big Five Inventory (BFI-10): The short-form version of the Big Five was created by [Rammstedt and John \(2007\)](#) and had ten items so that each personality

factor is measured with two things. How to evaluate items from strongly disagree = 1 to strongly agree = 5 This tool was prepared with samples of American students (1627 people) and German students (833), and its reliability was assessed using the second test after 6-8 weeks in both cultures. The test-retest correlation varied between 0.68 and 0.84. After the second test, the mean stability coefficients were $r= 0.75$ (0.72 in the American sample and 0.78 in the German example). In Iran, this instrument was validated by [Ali Babaei, Mohseni, Abdollahi Moghadam, Parchami Khorram, and Ramezani](#) (under publication) and Cronbach's alpha value for the dimensions of extraversion, neuroticism, adaptation, conscientiousness, and openness, respectively, 0.71 , 0.74 , 0.81 , 0.75 and 0.82 were obtained. Convergent and divergent validity was reported, although, in this study, only questions related to neuroticism were asked.

[Ryff Psychological well-being Scale \(RSPWB-18\):](#) The Scale was designed by Ryff in 1989 and then revised (2002). The main form consists of 120 questions, and in subsequent studies, shorter documents of 84 questions and 18 questions have been prepared. In this study, an 18-item form was used. This scale is a kind of self-assessment tool answered in a six-point continuum from strongly agree to disagree strongly. This scale measures six dimensions of autonomy, positive communication with others, mastery of the environment, personal growth, purposefulness, and self-acceptance. [Ryff \(1989\)](#) reported the internal consistency coefficient of the subscales of this scale between 0.86 and 0.93 and the retest reliability coefficient of 0.81 to 0.86 ([Ryff, 1989](#)). Reported a Cronbach's alpha coefficient between 0.83 and 0.91. In Iran, the reliability coefficient obtained by retesting this scale is 0.82, and its subscales are between 0.70 - 0.78, which is statistically significant ([Khanjani, Shahidi, Fathabadi, Mazaheri & Shokri, 2014](#)).

Statistical Analysis

Descriptive indicators such as Mean and Standard Deviation were used to analyze the data. Statistical methods such as confirmatory Factor Analysis, Convergent Divergent Validity, and Cronbach's alpha were used to evaluate the validity and reliability. Analysis was performed with SPSS and AMOS software

3. Results

After deleting the lost data, the analysis was performed on 678 subjects (493 females and 185 males). The mean and standard deviation of the age of men was 26.33 and 4.62, and the mean and standard deviation of the age of women was 25.47 and 4.28. About the degree of the participants, 25.1% (176) were associate, 56.9% (386) bachelor, 11.7% (79) had a

master of science, and 5.3% (36) doctorate. Reliability and validity calculation methods validated the short scale of high-risk behaviors. The Short-Scale High-Risk Behaviors has 14 questions, both of which measure one dimension, including seven components. First, the correlation between the dimensions and the overall score of the scale was calculated, the results of which are presented in Table 1.

Table 1. Short-Scale Correlation Coefficient of High-Risk Behaviors

Variables	1	2	3	4	5	6	7	8
1. Tendency to substances	1							
2. Tendency to alcohol	0.31**	1						
3. Tendency to smoke	0.47**	0.41**	1					
4. Tendency to violence	0.11**	0.16**	0.21**	1				
5. Tendency to self-harm	0.18**	0.13**	0.23**	0.42**	1			
6. Tendency to dangerous sex	0.28**	0.29**	0.25**	0.17**	0.14**	1		
7. Tendency to dangerous drive	0.14**	0.20**	0.22**	0.26**	0.18**	0.27**	1	
8. The whole scale	0.62**	0.66**	0.68**	0.56**	0.54**	0.56**	0.57**	1

**P<0.01, *P<0.05

According to the basics of scores, dimensions should have a high correlation with the score of the whole scale because it is assumed that all of them together measure a single domain of behavior. Measurements should not be highly correlated because in such a case, it is assumed that they measure same things and are repetitive. As the results of Table 1, the correlation between dimensional scores and the overall scale score is moderate to high, and the relationship between the components is not significantly correlated. This result reveals features of correlation based on internal consistency. Confirmatory factor analysis was used to evaluate the scale's validity, the results of which are

presented below.

After determining the relationship between dimensions and the whole scale, including the tendency to substances 0.62, the propensity to alcohol 0.66, the tendency to smoking 0.68, the tendency to violence 0.56, the tendency to self-harm 0.54, the propensity to unsafe sex 0.56 and dangerous driving tendency 0.57; Through confirmatory factor analysis, the relationship of agents with questions and the relationship of agents with the main structure were investigated, the results of which are presented in Figures 1 and 2.

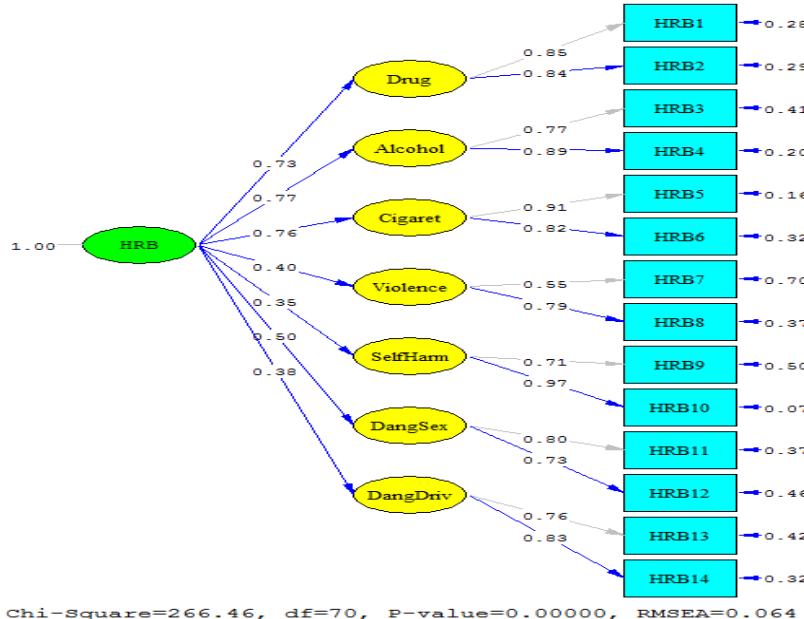


Figure 1. Results of factor analysis of the high-risk behaviors short scale in the standard mode

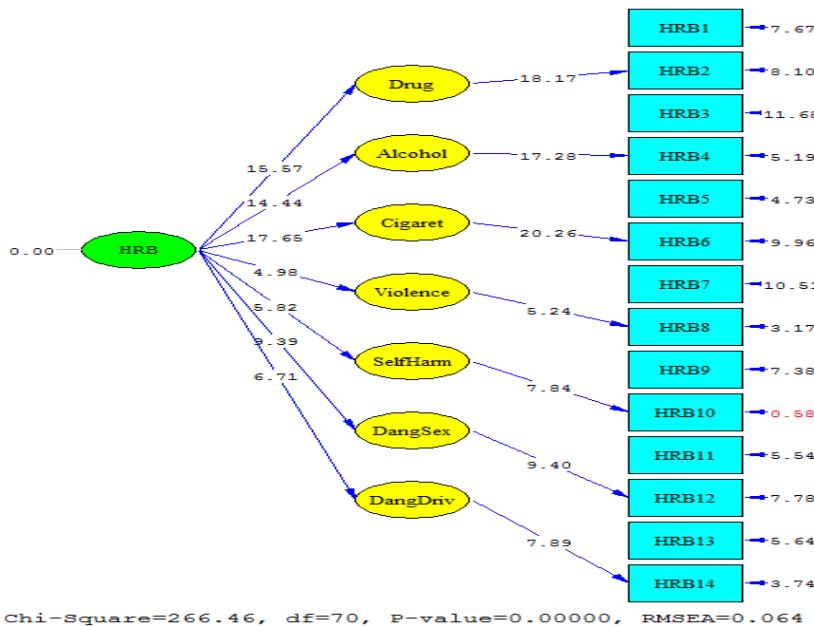


Figure 2. Results of factor analysis of the high-risk behaviors short scale in a significant mode

Results of confirmatory factor analysis confirm the fact that the short scale of High-Risk Behaviors is a factor and the obtained model fits well with the research data. Because as can be seen, all factors have a suitable factor load with the main structure. In addition, the value of the RMSEA index obtained

indicates the proper fit of the model. Because this index is lower than 0.08 and the p-value is significant at the level of 0.05, the fit of the model is confirmed. Other model fit indices were also calculated, which are presented in Table 2.

Table 2. goodness of fit index for factor analysis model of high-risk behaviors scale

x ² .df	GFI	CFI	IFI	RMSEA
3.80	0.95	0.96	0.96	0.064

According to the goodness of fit characteristics reported in Table 2, it can be seen that the values related to another fitness index also confirm the model fit (all indicators are above 0.9). To evaluate the convergent and divergent validity, the relationship

between the scores of the dimensions of the High-Risk Behaviors Scale and the scores of the Ryff Psychological Well-Being Scale and the neurotic personality trait of the Neo Scale was used, the results of which are presented in Table 3.

Table 3. Correlation coefficient of dimensions of the high-risk behaviors short scale with psychological well-being and neuroticism

Variables	Well-Being	neuroticism
Tendency to substances	-0.27 **	-0.25 **
Tendency to alcohol	-0.16 **	-0.33 **
Tendency to smoke	-0.32 **	-0.32 **
Tendency to violence	-0.21 **	-0.57 **
Tendency to self-harm	-0.37 **	-0.31 **
Tendency to have dangerous sex	-0.23 **	-0.29 **
Tendency to drive dangerously	-0.31 **	-0.28 **
The whole scale	-0.42 **	-0.38 **

**P<0.01, *P<0.05

The results of Table 3 showed that the correlation coefficient between the dimensions of the scale of high-risk behaviors with psychological well-being is

negative and significant, and with psychotic personality traits is positive and significant ($p < 0.05$). Given the relationship between the dimensions of

tendency to substance, tendency to alcohol, tendency to smoking, the Tendency to violence, the tendency to self-harm, the tendency to unsafe sex, the tendency to dangerous driving, and the total score of high-risk behaviors with psychological well-being were

negative and significant, indicating divergent validity of this scale. It needed to show the convergent validity of this scale. The internal consistency method (Cronbach's alpha) was used to calculate the reliability of the scale, the results of which are shown in Table 4.

Table 4. Reliability of the whole high-risk behaviors short scale and its dimensions by Cronbach's alpha

Dimensions	Number of items	Cronbach's alpha coefficients
Tendency to substances	2	0.82
Tendency to alcohol	2	0.80
Tendency to smoke	2	0.85
Tendency to violence	2	0.71
Tendency to self-harm	2	0.81
Tendency to have dangerous sex	2	0.72
Tendency to drive dangerously	2	0.77
The whole scale	14	0.82

The results of Table 4 showed that Cronbach's alpha coefficients for the whole scale and its dimensions are acceptable (above 0.7), which showed the present

scale has good reliability. The mean and standard deviation were calculated separately for each measurement and the real test, presented in Table 5.

Table 5. Mean, standard deviation, dimensions and whole of high-risk behaviors short scale

Indicators	Number	Mean	Standard Deviation
Tendency to substances	678	1.09	1.94
Tendency to alcohol	678	1.71	2.23
Tendency to smoke	678	1.54	2.15
Tendency to violence	678	3.58	2.12
Tendency to self-harm	678	1.67	2.09
Tendency to dangerous sex	678	1.68	2.05
Tendency to dangerous drive	678	3.57	2.42
The whole of scale	678	14.87	9.07

The analysis results showed that the 14-item scale of high-risk behaviors has good validity and reliability and can be used in domestic research. The comparison of coping strategies in men and women was also performed. Before performing the analysis of variance, homogeneity was checked by the Leven test, which showed that the uniformity of conflict was established ($P > 0.05$). First, the results of multivariate

tests were examined, and the value of F obtained in Wilkes's lambda statistic was 39.44 with a significance level of less than 0.05 ($P < 0.05$), so in the average dimensions of coping strategies between women and Men, there is a significant difference. The analysis of variance was performed, and the results are presented in Table 6.

Table 6. Analysis of variance test to significantly assess the difference between high-risk behaviors in men and women

Variable	group	Number	Mean	Standard Deviation	F	Df ₁ & Df ₂	P
Tendency to substances	Women	493	0.89	1.77	19.03	1 & 676	0.001
	Men	185	1.61	2.25			
Tendency to alcohol	Women	493	1.51	2.13	15.43	1 & 676	0.001
	Men	185	2.26	2.44			
Tendency to smoke	Women	493	1.40	2.02	7.74	1 & 676	0.006
	Men	185	1.92	2.44			
Tendency to violence	Women	493	2.57	2.07	0.12	1 & 676	0.725
	Men	185	2.03	2.24			
Tendency to self-harm	Women	493	2.08	2.09	1.01	1 & 676	0.918
	Men	185	1.66	2.12			
Tendency to dangerous sex	Women	493	1.30	1.54	64.34	1 & 676	0.001
	Men	185	3.16	2.19			
Tendency to dangerous drive	Women	493	3.38	2.45	11.51	1 & 676	0.001
	Men	185	4.06	2.29			
The whole of scale	Women	493	13.16	8.40	46.87	1 & 676	0.001
	Men	185	16.60	9.72			

Based on the data in Table 6, the results of analysis of variance show a significant difference between the components of tendency to substance, tendency to alcohol, tendency to smoking, tendency to unsafe sex, tendency to dangerous driving, and the total score of the scale of high-risk behaviors in men and women and the comparison of means shows that the standard of the mentioned components is significantly higher in men than women. The comparison results also showed that men's and women's mean components of tendency to violence and movement to self-harm were not significantly different ($P > 0.05$).

4. Discussion and Conclusion

In this regard, the present study was conducted to construct and validate a short scale of high-risk behaviors of young people with an Iranian sample. The scale reliability was calculated by Cronbach's alpha method. The results showed that the reliability of the whole scale and its dimensions are acceptable (above 0.7), and the present scale had good reliability.

The validity of the scale was determined by confirmatory factor analysis to evaluate the validity of the structure and the convergent and divergent methods to evaluate the validity of the criterion. According to the model fit results that were confirmed in all fit indexes, the confirmatory factor analysis results confirmed the seven-factor short scale of high-risk behaviors of young people. The results obtained from the study of convergent and divergent validity showed a positive and significant relationship between high-risk behaviors and neuroticism and a negative and meaningful relationship with psychological well-being. These results are consistent with the results of studies that showed a positive association between neuroticism and high-risk behaviors (Dahlen, Edwards, Tubre, Zyphur & Warren, 2012; Guo, Wei, Liao & Chu, 2016; Taubman - Ben-Ari & Yehiel, 2012) and the negative relationship between high-risk behaviors and psychological well-being (Evers, Castle, Prochaska & Prochaska, 2014; Peterson, 2012; Azimzadeh & Hayani, 2018; Shahbazian Khonigh & Hassani, 2018) is consistent. Also, the Results of gender differences in high-risk behaviors showed a significant difference between men and women in the tendency to high-risk behaviors of drugs, alcohol, smoking, unsafe sex, and dangerous driving so that men have a higher average. This finding is consistent with the results of studies that have examined gender differences in high-risk behaviors (Chou et al., 2006; Paaver, Eensoo, Kaasik, Vaht, Maestu & Harro, 2013; Croisant, Laz, Rahman & Berenson, 2013; Luht,

Eensoo, Tooding & Harro, 2018; Agardh, Cantor-Graae & Ostergren, 2012; Cail & LaBrie, 2010; Ramsoomar & Morojele, 2012; Afshari, Barzegari & Ismaili, 2017; Ali Tabar et al., 2016) but with the results of research that shows that women are more tendency to alcohol (Croisant et al., 2013); Higher violence in men (Afshari et al., 2017; Tabar et al., 2016) is the lack of significant differences in smoking (Ghahremani, Nazari, Changizi & Kaveh, 2019) and dangerous driving (Afshari et al., 2017) does not match.

The relationship between different dimensions of neuroticism, including mood instability, sensitivity to anxiety, impulsivity, and negative emotional experiences with high-risk behaviors, has been shown in various studies (Peters, Bowen & Balbuena, 2019; Dixon, Stevens & Viana, 2014; Zvolensky et al., 2007; Whelan, Watts, Orr, Althoff, Artiges & Garavan, 2014). The results of these studies indicate the coping functions of a variety of high-risk behaviors in the face of unpleasant experiences experienced in neurosis. Since there does not seem to be enough mental capacity to process and consciously experience internally disturbing experiences in psychopaths, so in the face of distressing experiences that result from the interaction of mood instability, sensitivity to anxiety, and negative emotional experiences, neurotic individuals are prone to impulsive reactions to relieve, albeit temporarily and superficially, these disturbing experiences. For example, Otto, Eastman, Lo, Hearon, Bickel, Zvolensky, and Doan (2016) and Taylor (2014) showed that disgust, anxiety sensitivity increase the need to escape or avoid negative emotional or physical experiences. In this regard, various studies have shown the coping functions of high-risk behaviors to reduce negative emotional experiences (Castellano, Platania, Varrasi, Pirrone & Di Nuovo, 2020; Conrod & Nikolaou, 2016). On the other hand, the critical point that turns a high-risk behavior into a habitual behavior is that when high-risk behaviors in the form of coping strategies lead to a reduction in negative emotions in stressful situations. In addition to tending to recur in subsequent stressful situations, they are gradually transferred to internal symptoms associated with stressful situations and are later aroused and persisted even without the presence of obvious external annoying conditions and only in the presence of internal symptoms.

In explaining the negative correlation between well-being and high-risk behaviors, well-being components will be discussed. In addition to harming people themselves, high-risk behaviors also cause harm and danger to others. As a result, it makes sense that people

with high-risk behaviors have minimal relationships with people who are also likely to have high-risk behaviors. Thus, these people are deprived of the psychological, communication, and social benefits of relationships with others, and the harms of exclusion and isolation are added to their other problems. In the same vein, the study of Cacioppo and Patrick (2008) also showed the relationship between high well-being and social acceptance. Low autonomy (another component of psychological well-being) has reduced the possibility of action and reaction based on genuine inner abilities and tendencies. It causes weakness in the face of momentary and unoriginal impulses that can lead to risky behaviors in behavioral dimensions. In this regard, Moffitt et al. (2011) showed the relationship between high well-being and self-control in their study. Another component of psychological well-being that seems more associated with high-risk behaviors is self-acceptance. For people who cannot accept their weaknesses and cannot see themselves in a coherent view as a creature of strengths and weaknesses, it is logical to either fight with their shortcomings and engage in high negative emotional experiences or try to deny their faults completely. Thus, they are more likely to use unhealthy methods such as alcohol or smoking to reduce negative and annoying emotions or to try to deny their weaknesses and present themselves as an intelligent being, using harmful practices such as violence and harm to others or dangerous driving (unhealthy emotion-oriented strategies). Having a purpose in life is another component of psychological well-being. Purposeful and committed people have a sense of responsibility and the ability to avoid situations and activities that interfere with wasting time or physical and mental damage on the way to achieving their goals. Conversely, people who engage in high-risk behaviors do not find enough time and motivation to set valuable and growing goals. People with high-risk behaviors may generally be aimless people in life.

Explaining gender differences in high-risk behaviors, it can be said that men, especially in adolescence and youth, are more important for acceptance in the peer group. Therefore, if the value and normative system of the peer group are related to high-risk behaviors such as smoking, alcohol, and Substance, it increases the likelihood of men engaging in high-risk behaviors. Also, in Iranian society, culturally, socially, and legally, women face more serious prohibitions and consequences if they engage in all kinds of high-risk behaviors than men, which can be an essential deterrent

to less tendency to high-risk behaviors of women. Other possible causes of less movement for women to engage in High-risk behaviors than men include differences between men and women in expressing emotions. In general, especially in traditional societies such as Iranian society, where there is a greater emphasis on gender harmony, emotional expression is considered a feminine characteristic. Women are less likely to use unhealthy emotion-oriented strategies by expressing their emotions in unpleasant situations, including high-risk behaviors such as dangerous driving and substance abuse. Another factor that makes men more prone to high-risk behaviors than women is the higher prevalence of some high-risk behaviors among men. Thus, they engage in other high-risk behaviors by performing one of those behaviors in a chain (Cavazos-Rehg et al., 2010; Businelle et al., 2013).

The present study had some limitations. The sample was among students only, the number of universities was limited, and the data were self-reported. Therefore, the piece did not represent the Iranian population. Consequently, it is suggested that future research be conducted with non-student samples and other age groups. Also, due to the comprehensiveness and shortness of the tool, in terms of application, the prevalence of tendency to high-risk behaviors can be measured to implement, if necessary, preventive and treatment policies and programs in small and large.

5. Ethical Considerations

Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed about the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them.

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Authors' contributions

All authors have participated in the design, implementation and writing of all sections of the present study.

Conflicts of interest

The authors declared no conflict of interest.

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