

Original Article

A causal model on adolescents' high-risk behaviors based on religious beliefs and self-compassion mediated by emotion regulation and social support

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Abstract

High risk behaviors are behaviors that endanger the health and well-being of adolescents. The aim of this study was to investigate the mediating role of emotion regulation and social support in the relationship between religious beliefs and self-compassion with tendency to risky behaviors in adolescents. This research is a correlational study conducted in the form of path analysis. The population included all high school male students in Tehran, 220 of whom were selected using multistage cluster sampling. To collect data, Sirajzadeh (2007) Religious Attitudes Questionnaire, Tendency to High-Risk Behaviors of ZadehMohammadi et al. (2008), Perceived Social Support Questionnaire by Vaux et al. (1986), Self-compassion Questionnaire by Neff et al. (2003) and emotion regulation by Garnefski et. al (1999) were used. Finally, the data were analyzed using SPSS/Amos version 25. The results of Pearson correlation test showed that there is a significant correlation between religious beliefs and tendency to high-risk behaviors ($r=0.21$; $p= 0.01$). Also, the final model of the study showed that religious beliefs mediate social support ($\beta=-0.23$ and negative emotion regulation ($\beta=0.53$) to explain almost half of the variance of high-risk behaviors. The findings also showed that its fit indices were at the desired level (RMSEA= 0.07; GFI= 0.99; CFI= 0.99; NFI= 0.92). Based on the findings of the present study, it can be concluded that religious beliefs can be provided by providing social support and effective strategies to regulate the emotion of trauma versus the tendency to high-risk behaviors of adolescents.

Keywords

Religious beliefs
Risky behaviors
Social support
Compassion
Emotion regulation

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Introduction

Examining the prevalence and occurrence of emotional and behavioral problems throughout life indicates that adolescence is known as a time in life in which widespread physical, psychological and social changes lead to an increase in mental disorders with various manifestations (Tang, Tang, Ren & Wong, 2019; Rao, et al, 2019). Adolescence is one of the most critical periods of human life that plays a vital role in human destiny. One of the most important challenges facing adolescents is the tendency to risky behaviors. High-risk behaviors are those that endanger the health and well-being of adolescents. These behaviors have direct and indirect impacts on individual's health, family and society with negative consequences (Tsitsimpikou, et al, 2018). Smoking, high-risk sexual behaviors, alcohol and drug use are recognized as one of the fundamental public health concerns (Korpics, et al, 2020). Findings also

indicate that the tendency to high-risk behaviors such as marijuana and tobacco use is associated with previous vascular problems, impaired cognition, attention, mood, impulsivity, anxiety and poor academic performance (Grant, et al, 2019). As a result, paying attention to relevant and effective individual and social factors in high-risk behaviors has become one of the main challenges for individual and community-oriented researchers and clinicians (Grant, et al, 2019).

One of the basic structures that have been systematically reconsidered in recent decades with the advent of the positivist psychology approach is the concept of religiosity, known in the research literature as "religious beliefs" (Marashian & Esmaili, 2012). Most studies show that religious beliefs are recognized as one of the correlations of psychological health and well-being which can be used as a shock against high-risk behaviors such as suicide (Teismann, et al, 2017), addiction (Weinandy & Grubbs, 2021) and high-risk sexual behaviors

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(Garofalo et al, 2015). Some positivist psychological theories attribute the shocking role of golden beliefs to a healthy lifestyle, specific coping styles, and social support in religion (Compton & Hoffman, 2019).

Coping strategies in religion can be divided into two general categories (negative feelings of guilt or fear of God's punishment) and positive (prayer, support, hope and compassion), among which positive strategies as a factor related to well-being it is known as psychological (Park, et al, 2018). Compassion (self) as one of these positive strategies in recent years as a basis for pathology and treatment, has opened the eyes of new research perspectives (Wilson, et al, 2019). Self-compassion comes from the three scales of self-kindness (kindness and self-understanding instead of self-criticism in times of failure), human sharing (seeing one's experiences in common with other human beings as opposed to isolating them), and mindfulness is formed (keeping painful thoughts and feelings in a balanced consciousness instead of merging with them). Research reports have also confirmed the role of self-compassion shock in reducing high-risk behaviors (Dawson Rose et al, 2014) and abuse in adolescents with high-risk behaviors (Quinlan & Hadden, 2021).

In addition to factors related to mental status, the findings indicate that social support or its level of perception can moderate the harmful role of psychological factors in high-risk behaviors (Lai & Ma, 2016; Mohammadi, Tanha & Rahmani, 2015). In fact, some believe that part of the health role of religion is due to social support (Gülaçtı, 2010). Social support means that there are people in one's life that one can rely on in the ups and downs of life, share one's emotions and needs, and seek help from them when needed (Gülaçtı, 2010). Therefore, based on theoretical foundations and research findings, it can be said that one of the causes of people engaging in high-risk behaviors is the lack of understanding of social support by those around and important people in life-which is consistent with the findings of Sadri Demirci et al. (2019). Reports also indicate that social support is first received from parents and then this support is provided by other people such as friends and other important people in the community (Abdi Hamalabad, 2007).

Another fundamental structure of psychology that has been considered in the last few decades for the etiology of a wide range of emotional problems is emotion management, which is called "emotion regulation" (Gross, 2015). Findings indicate that emotional dysregulation is observed in more than half of Axis One disorders and all Axis Two disorders (Gross & Jazaieri, 2014). Emotion regulation is a range of biological, social, and behavioral processes by which individuals penetrate the emotions they have, how they have them, how they experience and express their emotions, and are automated or controlled, over a range of levels. Conscious to unconscious affect them (Gross, 2015). Reports indicate that inappropriate strategies in emotion regulation or difficulty in emotion regulation are associated with a wide range of disorders, including addiction tendency and predictability (Wilens et al, 2013). Some statements also

suggest that the tendency to take high-risk behaviors, such as substance abuse, is a failed attempt to regulate emotion (Kober, 2014). Studies also show that emotion regulation strategies have direct effects on high-risk behaviors, some of which can be moderated by social support (Mohammadi, Tanha & Rahmani, 2015). The findings also indicate that there is a correlation between high religiosity and low levels of risk-taking and emotion regulation can mediate between them (Holmes, et al, 2019).

In general, based on the mentioned theoretical and research principles, it was found that the increasing stresses of life in the contemporary world have led to a renewed attention to the role of religion in increasing mental health and reducing high-risk behaviors (Compton & Hoffman, 2019). It also seems that some specific beliefs in religion can affect a person's attitude towards issues and emotions, so it can be expected that religious beliefs are an effective factor in regulating emotions and risky behaviors (Vishkin, et al, 2019).

However, studies indicate that there are some research gaps in high-risk behaviors. For example, most research has been conducted in two variables (Teismann, et al, 2017; Garofalo, et al, 2015) or in non-adolescent communities. However, multiple factors of structures will have strong explanations for high-risk behaviors, and the range of emotional problems in the adolescent age range will increase significantly. Therefore, it is necessary to conduct research to identify variables related to adolescent high-risk behaviors. As a result of the present study, the causal model proposed for high-risk behaviors of adolescents based on religious burdens, self-compassion mediated by emotion regulation and social support has a good fit?

Method

Participants

The method of the present study is part of the correlational research which was done using path analysis according to the data collection method. The population includes all male adolescents who were studying in high school in Tehran in the academic year 2019-2020. The sample size also included 220 people who were randomly selected from Tehran (4 regions, north, south, east and west of Tehran) by stepwise cluster sampling. In the next stage, a secondary school (first and second) was randomly selected from the mentioned areas and one class was selected from each school. The minimum sample size required in modeling analyzes is between 100 and 200 cases which were selected as a sample to repair the drop in the subject of 220 students. Then, in order to collect data, standard questionnaires were used, which are examined in detail. Also, high school education, no acute mental and physical illness, conscious satisfaction and non-consumption of alcohol, drugs and other psychiatric drugs (personal report) as criteria for admission and violation of the above criteria and unwillingness to continue the study was considered as exclusion criteria.

In order to comply with ethical standards, participants are assured that their information will be confidential and there is no need to mention personal details and if they wish, they can be informed of the research results by writing a contact number or other communication methods.

Instrument

Iranian Adolescents Risk-Taking Scale (Zadeh Mohammadi, et al, 2009):

To assess risk, the Iranian Adolescents Risk Scale has been used (Zadeh Mohammadi, et al., 2009). The 38-item scale is used to assess adolescents' vulnerability to high-risk behaviors such as violence, smoking, drug use, alcohol use, sexual intercourse and behavior, and the opposite sex. Respondents agreed or disagreed with these statements on a scale of 5 options from strongly agree (5) to strongly disagree (1), the range of scores is from 38 to 190 and higher scores mean more risk. The validity of the Iranian Adolescents Risk Scale was assessed by internal consistency method with the help of Cronbach's alpha and its construct validity using heuristic factor analysis and principal component analysis method. KMO test was equal to 0.949 and was at a very desirable and satisfactory level and Bartlett sphericity test was statistically significant. Also, the validity of LARS and its subscales was at an appropriate level; Cronbach's alpha for the general scale was 0.938, smoking 0.931, drug use 0.906, alcohol consumption 0.907, sexual intercourse and behavior 0.856 and heterosexual orientation 0.809. Cronbach's alpha method was used to calculate the reliability, which had a reliability coefficient of 0.91 (Zadeh Mohammadi, et al, 2009). It should be noted that the reliability of this questionnaire in the present study using Cronbach's alpha was reported to be 0.75.

Sirajzadeh religious attitudes questionnaire (2000):

This questionnaire has been adapted to Shiite Islam based on the model of Glock and Stark (1956) by Sirajzadeh (2008). They express their agreement or disagreement in a range of 5 options from strongly agree (5) to strongly disagree (1). The validity indices of this test were reported to be 0.83 using Cronbach's alpha and its external validity was equal to 0.61 (Sirajzadeh, 2008). A high score in this study means higher religious attitudes. In Sharifi's study, the total reliability indices of this test by estimation method and Cronbach's alpha were estimated to be 0.75 and 0.78, respectively (Sharifi, 2007). The reliability of this questionnaire in the present study using Cronbach's alpha was reported to be 0.81.

Vaux et al social support appraisals (SS-A) scale (1986):

This questionnaire was developed by Wax et al. In 1986 and has 23 questions (Vaux, Phillips, Holly, Thomson,

Williams, Stewart, 1986). According to Koob, social support refers to the level of love, help, and attention of family members, friends, and others. The expressions of the research questionnaires in a four-point range are very agree, agree, disagree and very disagree and the range of scores is between 23 and 92. A high score in this questionnaire means a high perceived social support (Vaux et al, 1986). The reliability coefficient of this questionnaire was reported by Wax et al. 0.81 (Vaux et al., 1986). In Iran, Shahbakhsh (2007) calculated the internal reliability coefficient of this test in Allameh Tabatablaei undergraduate students as 0.66. It should be noted that the reliability of this questionnaire in the present study using Cronbach's alpha was reported to be 0.79.

Emotion Regulation Questionnaire:

This questionnaire is a self-report tool that was designed in 1999 by Garnefski, Kraaij and Spinhoven published in 2001. The questionnaire consists of 36 questions and measures cognitive emotion regulation strategies in response to life-threatening and stressful events in five options (Likert scale) on a nine-scale scale, with a score between one (never) to five (Always). In a preliminary study, the validation characteristics of this questionnaire were performed on a sample of the general population, 365 people (194 women and 171 men). Cronbach's alpha coefficients for subscales were calculated from 0.67 to 0.89. These coefficients, which were significant at the level ($P > 0.001$), confirm the internal consistency of the Cognitive Emotion Regulation Questionnaire (Garnefski, Kraaij & Spinhoven, 2001). Besharat (2016) reported the reliability of the retest for the subscales of this questionnaire twice with an interval of two to four weeks, 0.57 to 0.76 and examined its content validity based on the judgment of eight psychologists and agreement coefficients. Kendall reported for subscales from 0.81 to 0.92. The reliability of this questionnaire in the present study using Cronbach's alpha was reported to be 0.91.

Self-Compassion Questionnaire:

This was made by Neff et al. (2003). It includes 26 items and 6 components of self-compassion, self-judgment, human sharing, isolation, vigilance or extreme awareness and imitation in a 5-point Likert scale from strongly disagree=1 to strongly agree=5. In a research by Khosravi et al. (2013), the alpha coefficient for the overall score of the scale is 0.76. Also, Cronbach's alpha coefficients for the subscales of self-compassion, self-judgment, human sharing, isolation, vigilance, and extreme imitation were 0.81, 0.79, 0.84, 0.85, 0.80 and 0.83 respectively (Khosravi et al. 2013). It should be noted that the reliability of this questionnaire in the present study using Cronbach's alpha was reported to be 0.85.

Procedure

Finally, the collected data were analyzed using SPSS/Amos 25 software. Descriptive statistics including mean index and standard deviation were used for data analysis and also Kurtosis, Skewness, Kolmogorov-Smirnov and Mahalanobis indices were used to check the default normality (Univariate and multivariate data), Then, by modeling the structural Goodness of Fit Test, the fit of the conceptual model of the test was examined with the relevant indicators. Also, considering that a specific individual index can't be used to evaluate the goodness of the goodness of fit test in modeling structural equations, it is suggested that from the report of several indicators such as: Chi-square (CMIN), the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Normed Fit Index (NFI) and Goodness of fit index (GFI). Examining the optimal range of the above indices indicates that the value of the three indices CFI, NFI and GFI can be between 0 and 1.

However, values of 0.95 and above are assumed to be acceptable, indicating that the model was not rejected. In relation to RMSEA, an index less than 0.08 indicate a good fit and more than 0.10 has been reported as a poor fit.

Results

Demographic findings indicate that out of 220 participants, most of the participants were in the age range of 15 to 17 years, with a mean age of 15.39±1.50. A review of personal reports also showed that 76% (n=76) of individuals reported moderate to very good socioeconomic status. The relevant assumptions were also tested before performing the main analysis. The first assumption about the distance measurement scale in the variables was approved. The second assumption is related to the normal distribution of variables that were confirmed from a Univariate and multivariate perspective using the Kolmogorov–Smirnov test and the Mahalanobis distance strategy.

Table 1. Descriptive indicators related to research variables

Variable	Component	Mean	Standard deviation	Skewness	Kurtosis
High-risk behaviors	drug use	16.94	7.05	0.14	1.87
	Alcohol	12.91	5.98	0.38	2.34
	smoking	14.22	5.38	0.29	0.40
	Violence	12.35	5.79	0.40	0.64
	Sexual relations	11.45	5.13	0.73	0.08
	Tends to be the opposite sex	11.45	5.13	1.43	1.44
	High-risk driving	11.47	4.75	0.61	-0.35
Religious beliefs	Whole scale	91.51	30.48	0.07	-0.56
	Belief dimension	20.40	8.57	0.36	1.44
	Experiential dimension	15.97	7.61	0.63	-0.96
	Outcome dimension	12.13	6.93	0.76	0.77
	Ritual dimension	16.31	9.06	-1.04	1.37
Self-compassion	Whole scale	65.49	22.75	0.33	-0.07
	self-kindness	6.12	2.09	1.06	1.19
	self-judgment	4.37	2.12	1.41	1.01
	community humanity	3.31	1.71	-1.76	-1.65
	isolation	3.61	1.85	1.03	1.15
	mindfulness	4.93	2.25	0.86	0.63
Social support	over-identification	3.00	1.97	0.09	0.13
	Whole scale	25.37	10.29	0.73	0.78
	Family	18.65	8.10	0.96	0.39
	Friends	13.63	6.91	1.27	0.66
Emotion regulation	Others	12.21	5.43	1.01	0.39
	Whole scale	44.51	18.72	1.08	0.24
	Positive strategies	43.83	8.67	0.16	0.57
	Negative strategies	66.68	11.49	-0.37	-0.04

As can be seen in the table 1, most of the variables are in the range of 2- to 2+ in terms of Kurtosis and Skewness, which indicates the relative normality of the distribution (Meyers, Gamst & Guarino, 2016), however, the distribution is normal using It has been confirmed by Kolmogorov–Smirnov test.

Following the descriptive findings, it can be said that since the basis of the analysis of causal models is the correlation matrix, therefore, the correlation matrix of the variables is presented in Table 2, which allows a superficial inference from the research findings.

Table 2. Correlation Matrix providing a causal model on adolescents' high-risk behaviors based on religious beliefs and self-compassion mediated by emotion regulation and social support

variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	1																		
2	0.82*	1																	
3	-0.11	0.06	1																

Table 4. Estimation of path coefficients in the proposed model

Variable	β	P
Religious beliefs \rightarrow Self-compassion	0.23	0.001
Religious beliefs \rightarrow Negative strategies	0.15	0.001
Self-compassion \rightarrow Negative strategies	0.046	0.574
Religious beliefs \rightarrow Positive strategies	0.030	0.295
Self-compassion \rightarrow Positive strategies	0.050	0.416
Negative strategies \rightarrow Social support	0.159	0.077
Religious beliefs \rightarrow Social support	0.528	0.001
Self-compassion \rightarrow Social support	0.076	0.501
Positive strategies \rightarrow Social support	0.068	0.577
Religious beliefs \rightarrow High-risk behaviors	0.277	0.003
Self-compassion \rightarrow High-risk behaviors	0.050	0.768
Social support \rightarrow High-risk behaviors	0.200	0.042
Negative strategies \rightarrow High-risk behaviors	1.48	0.001
Positive strategies \rightarrow High-risk behaviors	0.216	0.210

As the level of significance of path-related coefficients shows, the path of compassion is not significant with positive and negative strategies, social support and high-risk behaviors. Also, the paths of religious beliefs to positive strategies, negative strategies to social support,

and the paths of positive strategies to social support and high-risk behaviors were not significant. Therefore, it was removed from the proposed model and the redefined open model was reviewed, the results of which are reported in the table below.

Table 5. Fitness indices for the redefined model

Variable fitting indices	χ^2	df	P	RMSEA	GFI	CFI	NFI
High-risk behaviors	2.380	1	0.123	0.07	0.99	0.99	0.920

Examination of quality-related indices of the redefined model showed that after removing the non-meaningful paths, in addition to confirming the softened fit index, adaptive fit and good fit, the Root Mean Square Error of Approximation (RMSEA) also decreased significantly.

As a result, all indicators indicate the approval of the modified model. Therefore, the significance level of the path-related coefficients is examined.

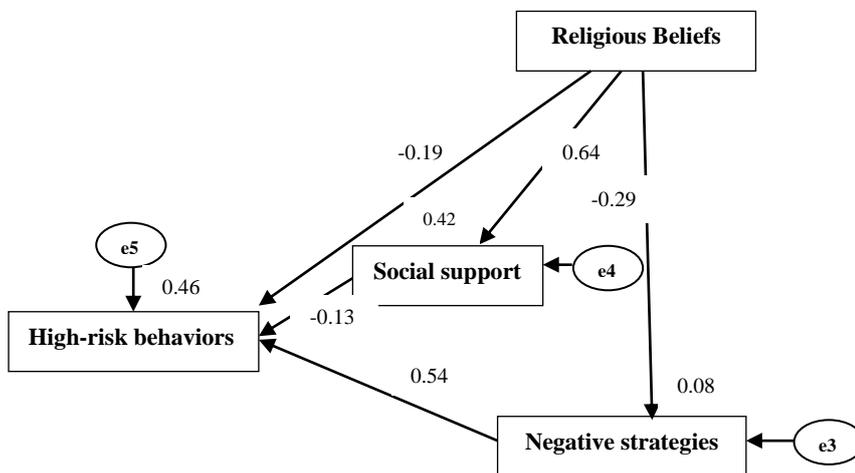


Figure 2. Modified model for high-risk behaviors with path coefficients

Discussion and conclusion

The aim of this study was to determine the causal relationships between high-risk behaviors of adolescents based on religious beliefs and mediated self-compassion, emotion regulation and social support. The results of the final analysis of the model showed that in general, religious beliefs, mediated by negative emotion regulation and social support, explain nearly half of the distribution of high-risk behaviors in adolescents. Based on the findings of the present study, it was found

that religious beliefs have a direct effect on high-risk behaviors. A review of the background of the studies shows that the present finding is in line with the research of Teismann et al. (2017), Weinandy and Grubbs (2021) and Garofalo et al. (2015). The explanation of this finding can be considered from various dimensions. First, it provides religious beliefs for a healthy lifestyle that are inconsistent with some high-risk behaviors such as alcohol consumption, sexual behaviors outside the box, and generally any behavior

that is harmful to others and one (Compton & Hoffman, 2019). It can be said that beliefs, and especially religious behaviors, can be a blow to high-risk behaviors in adolescents. It can also be said that having some specific coping strategies in religion such as prayer and trust can be an effective factor in increasing mental health and reducing the tendency to certain behaviors such as substance abuse and alcohol in order to regulate emotion (Kober, 2014). In addition to the above statement, it can be said that religion brings a framework of meaning to life (Compton & Hoffman, 2019) that frees the person from the deadlock of meaning in life. Lack of meaning in life, which is considered as one of the basic correlations for high-risk behaviors such as sex, addiction and aggression (Frankl, 2011).

The findings also showed that religious beliefs mediated by social support have an indirect effect on high-risk behaviors. That is, the detrimental consequences of low religious beliefs on high-risk behavior can be significantly mitigated by social support. A review of the background of research shows that the shock-absorbing role of social support against traumatic factors and high-risk behaviors has been confirmed in several studies that are consistent with the findings of the present study (Mohammadi, Tanha & Rahmani, 2015; Lai & Ma, 2016). For example, Banstola, Ogino and Inoue (2020) confirm the negative relationship between social support and high-risk behaviors and report the mediating role of social support between self-confidence and high-risk behaviors.

Lai and Ma (2016) also examine psychological well-being and high-risk behaviors and believe that social support can mediate between depression and helplessness with high-risk behaviors. The explanation for this finding can be attributed to the fact that one of the main achievements that religious beliefs provide for individuals is social support (Compton & Hoffman, 2019). In fact, the emphasis on religious precepts and beliefs on performing some religious rites in groups and with the participation of the family provides a network of social relations that can be considered as social capital in the tensions of daily life. That is, when faced with various psychological and social problems, they can enjoy the emotional, intellectual and financial support of those around them. Therefore, they experience less psychological damage and as a result are less prone to high-risk behaviors (such as drugs and alcohol) to moderate their negative emotions (Kober, 2014).

Overall, based on the findings of this study, it can be said that religious beliefs and practice of related rituals provide a platform for social support that can be a blow in the face of high-risk behaviors. Also, low levels of religious beliefs are associated with an increase in negative psychological and emotional problems, which will lead to inefficiencies in emotion regulation strategies and consequently increase risky behaviors.

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Contribution of authors

All authors of this study have been involved in the research and have read and approved the manuscript. In this way, in the research idea, the student (first person) expressed the idea and the supervisors and advisors approved it after discussion and interpretation. The first person has collaborated with the data collection professors and supervisors and consultants in the process of data analysis and interpretation, and all authors have contributed to the writing of the dissertation and have benefited the student from their point of view. This article is an excerpt from the doctoral dissertation of the first author

Conflict of interest

The authors have not reported any conflict of interest in connection with this article.

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