

Self-Efficacy: As Moderator of the Relation between Family Factors and Adolescent Cigarette Smoking Behavior

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Abstract

In this study, the relationship between family factors (family cohesion and family adaptability) and cigarette smoking behaviour was investigated. The other objective of this research was exploring the moderating impact of self-efficacy on the link of family cohesion and family adaptability with cigarette smoking behaviour among Iranian youngsters in the city of Kerman. Following cluster sampling method, the data was collected from current cigarette smoking adolescents (n = 300) from 22 high schools across Kerman using self-administered questionnaires.

The Structural Equation Model was used to assess the relationship between family cohesion and family adaptability and cigarette smoking behaviour in adolescents. Also, the advanced multiple group system of Structural Equation Modelling analysis using AMOS was used to evaluate the moderating impact of self-efficacy. The findings indicated a significant negative link existed between family cohesion, family adaptability and cigarette smoking behaviour. The findings were also indicative of the existence of significant moderating function of self-efficacy regarding the effect of family adaptability and family cohesion on cigarette smoking behaviour amongst youngsters. The results contribute to the body of knowledge by introducing readers to the important roles of family environment and self-efficacy in preventing the adolescents from exhibiting cigarette smoking behaviour amongst youngsters.

Keywords: family adaptability, family cohesion, self-efficacy, adolescent health, cigarette smoking behaviour

1. Introduction

Cigarette smoking is a public health problem in the world (Reisi et al., 2014). Cigarette smoking, as a significant universal contributor to mortality from chronic disease, has so far been considered to cause many negative outcomes (Center for Prevention and Disease Control, 2006). It is worth mentioning that cigarette smoking initiates absolutely during teenage years (Johnston et al., 2013). Adolescence is one of the crucial developmental stages in human life and is a time of physical, emotional and social change (Mee, 2009). Smoking cigarettes, as one of the prevalent health problems during adolescence, can have a more considerable effect on the physical, emotional, spiritual and social well-being and development of an individual (Johnston et al., 2013).

The adults and adolescents have shown varying degrees of dependence on cigarette smoking over the past decade, and while the rate of cigarette smoking has steadily decreased among adults, the adolescents have experienced and shown a rising interest in smoking, causing the rate of adolescent smokers to sharply increase (Redonnet et al., 2012). According to Mee (2009), the number of adolescent smokers in the United States was estimated to be risen to five million by the year 2009. Steptoe and Wardle (2001) showed that 22.9% and 19.8% of Western and Eastern European students were smoking on a regular basis. In Canada, the average age of trying the first cigarette is 11 (Health Canada, 2003). In 2008, 27% of 13-year-old students in the Netherlands were occasionally attracted to cigarettes. By the age of 14 this percentage increased to 41% and then, by the age of 17, this amount increased further and reached 63% (Roken, 2008).

Cigarette smoking has been differently treated by religious edicts, and they have not thought of it as an illegal

action like alcoholism. According to Eftekhari et al. (2007), in the majority of the countries around the world, cigarettes smoking are not regarded as critical as narcotic drugs. Contrary to other addictive drugs, cigarette is within reach and easily accessible to all. Hence, the availability of cigarette and its smoking could result in drug use (Poorsal et al., 2011). Johnston et al. (2013) claim that those adolescents, who constantly smoke through their youth, are usually much more prone to addiction to narcotics like marijuana, other prohibited drugs, or alcohol. In short, adolescent cigarette smoking is regarded as a global and complex public health problem since all around the world there is not a single country in which adolescents do not smoke.

Among 1.2 billion smokers of the world, 800 million live in developing countries and cigarette smoking is rapidly spreading among adolescents (Karimy et al., 2012); for this reason, a developing country was chosen for this study. Between 2002 and 2030, it is estimated that cigarette induced death rates in developed countries will increase by 9%, while in developing countries this rate will be doubled (Nakhaee et al., 2011). According to the World Health Organization, in 2015, cigarettes will cause 50% more deaths than HIV/AIDS virus and, basically, 10% of deaths around the world will be connected to this behaviour (Nakhaee et al., 2011).

As one of the developing countries with almost 15 million adolescents, Iran owns one of the youngest populations of the world. A great number of studies showed an increasing trend of smoking among Iranian adolescence (Poorasl et al., 2011; Karimy et al., 2012; Reisi et al., 2014). Reisi et al. (2014) denote that about 71 percent of Iranian cigarette smoker are documented to have the initial smoking lapses through their teenage years. According to the outcomes of various studies, the average age of initiating smoking among 66.35 percent of the Iranian smokers was in the range of 14-19 years (Ramezankhani et al., 2010; Karimy et al., 2012).

Kerman, as one of the biggest provinces in Iran, was selected as the target location of the study. Previous findings have reported that the prevalence of cigarette use among adolescents in Kerman is 39.9% among male adolescents and 25.5% among female adolescents; in comparison to other types of narcotics, the reported statistical percentages are the highest (Nakhaee et al., 2011). It is also documented by Nakhaee et al. (2011) that Kermani young smokers have their first experience of smoking in the average age-range of 15.9 ± 4.5 , and 48.35 percent of the smokers are in the age-range of 14-19 years. The high rate of cigarette smoking among Kermani young persons inspired the researcher to investigate the cause of this behavior.

The literature shows that family environment is often considered to be the first place where an adolescent is exposed to smoking (Otten et al., 2007; Nazemi, 2011) and factors such as family cohesion and adaptability play a vital role in the outbreak of such a behavior. Moreover, scholars such as Hiemstra et al. (2011) revealed that the influence of self-efficacy being a cognitive factor on behavior is persistent, hence self-efficacy could have effect on the challenging behaviors like cigarette smoking.

Thus, the current research was an attempt to study family factors such as family cohesion and family adaptability in relation to cigarette smoking behavior. Additionally, this research looked at self-efficacy and its moderating effect on the correlation between family cohesion and family adaptability with cigarette smoking behavior. In spite of the above-mentioned literature, no study has so far been conducted to investigate the moderating influence of self-efficacy on the different processes of exhibiting cohesion in the family, flexibility, and cigarette smoking habit of youngsters, particularly the Iranian young persons. Hence, this study sought to fill the gap created by the lack of literature on the relationship between family factors (i.e. family cohesion and adaptability) and cigarette smoking behavior through taking into account the moderating impact of self-efficacy.

2. Literature Review

2.1 Family Cohesion, Adaptability and Cigarette Smoking Behavior

Adolescence is a difficult period. The context of family relations is very important because it affects a variety of adolescent issues (Marsiglia, 2007). Family functioning is comprised of a set of family and parent variables. These factors include parental adjustment, marital adjustment or conflict, parenting, family cohesion, family adaptability, and the degree of parenting stress. Researchers have observed that among these factors, family cohesion and family adaptability are significantly related to risk behaviors such as cigarette smoking among adolescents (Fang et al., 2009; Gau et al., 2009; Mckinney, 2009; Arpawong et al., 2010; Kalavana et al., 2011; Baheiraei et al., 2013; Kim et al., 2013). The influence of family cohesion and adaptability on adolescents' smoking behaviors is discussed below.

Although cohesion and adaptability have been defined differently in family research, most researchers generally agree that cohesion involves the emotional bonding between family members, whereas adaptability is the family's ability to change its power structure, role relationships and rules to respond to situational or developmental needs (Kim et al., 2013; Mckinney, 2009; Olson, Russell, & Sprenkle, 1984; Place, Hulsmeier, &

Soulsby, 2011). Families who have healthy levels of cohesion emotionally interact with one another and create a balancing context of allowing individual independence and demanding family togetherness (Olson et al., 1984). When a family balances and adjusts to an adolescent's need to spend time with friends, school, and work and also feel emotionally involved with the routine family life, one can agree that it has created a healthy cohesion and adaptability environment for the adolescent.

In cohesive family environments, even if the members are nearly and completely independent, they would feel included and emotionally attached to the family (Olson et al., 1984). Thus, cohesion is viewed by most researchers as the ability of the family to balance togetherness with separateness, and adaptability is the extent to which the family system is flexible and able to change (Olson et al., 1984). Adolescents' ratings of their parent's warmth and overprotection, their family's cohesion and adaptability as well as their parents' expectations will predict their ratings of their internalizing and externalizing behavior problems (Mckinney, 2009; Kim et al., 2013). According to Chassin and Handly (2006), determining how the parent-child relationship interacts with risk factors is important for understanding the development of adolescents' cigarette smoking and also substance use. Higher levels of parental support, family cohesion and adaptability reduce the risk of smoking among adolescents (Urberg, Goldstein, & Toro, 2005). The link between family cohesion and adaptability with cigarette smoking behavior among adolescents has been supported by previous studies that are considered below:

The questionnaire-based study of Gau et al. (2009) focuses on the effects of family cohesion and adaptability on cigarette smoking among 2,918 Taiwanese students. As the results showed, smokers perceived lower family cohesion and adaptability, less care from their fathers, and less overprotection from their mothers. Also, they were more likely to have smoking peers and family members. Also, Mckinney (2009) examined the relationship between family cohesion and adaptability on behavior problems (such as smoking and drinking) among adolescents in Southeastern State, United States. The sample of this study consisted of 710 participants who attended in schools. Correlational analyses indicated that parental warmth, family cohesion and adaptability are significant predictors of internalizing and externalizing behavior problems (such as smoking and drinking) in adolescents. Moreover, a quantitative study conducted by De Bourdeaudhuij (2007) examined the relationship between family characteristics, represented by family cohesion and adaptability and problem behaviors (smoking, alcohol use) among 429 adolescents in Belgium. According to the results, there were negative relationships between family cohesion and adaptability and problem behaviors such as cigarette smoking and drinking behavior among adolescents. Researcher declared that adolescents' behavior is the healthiest in families characterized with a high level of emotional bonding between family members together with stability and regularity in roles and rules. According to Fang et al. (2009), who investigated the association between family cohesion and adaptability and problem behavior, low family cohesion and adaptability were associated with problem behaviors. In this study, participants were 344 adolescents. Hierarchical Regression Analysis revealed significant two-way interactions of family cohesion and adaptability on problem behaviors among adolescent.

Also, Arpawong et al. (2010) examined the relationship of family cohesion and adaptability with smoking among 602 Chinese adolescents. The results of this study revealed that family cohesion and adaptability, parental monitoring were significantly associated with smoking among adolescents and low family cohesion, family adaptability and parental monitoring was associated with a higher level of smoking. Furthermore, Kalavana, Lazarou, & Christodoulou (2011), examined the association between family environment (cohesion, adaptability and conflict) and smoking and alcohol consumption. Participants were 799 adolescents (mean age 16.6) from randomly selected high schools in Cyprus. They completed self-report questionnaires measuring family environment (cohesion, adaptability and conflict), smoking behavior and alcohol consumption. The findings showed that family cohesion and adaptability was significantly related with most of the adolescents' problem behaviors such as smoking and alcohol consumption. Moreover, family cohesion and adaptability were negatively related to smoking behavior. In addition, Kim et al. (2013) examined the relationship between family cohesion and adaptability on problem behavior among 398 adolescents in Korea. Data were collected by self-administered questionnaire. As results, there were significant relationship between family cohesion and adaptability with problem behavior among adolescents and adolescents with high adaptability and high cohesion showed low problem behaviors.

In fact, the family is the setting that plays a significant role on their children's healthy or unhealthy behaviors and their functioning such as a good emotional bonds effect on children behaviors (Kim et al., 2013). For instance, children understand who is supposed to be dominant and strong and who provides supportive relationship. So, families that have good emotional bonds are better able to raise to challenges their well-being. All family relationships involve good cohesive, togetherness, parental supportiveness of adolescents and parent-adolescent communication reflect on the children behavior. If the adolescent perceive one or both parents

to be isolated from or distant from the other family members or from the other spouse, the adolescent's smoking is likely to be elevated. Adolescents, who have a strong parent-child bond, believe that their parents care about their lives, tend to adapt their parents' value and follow a healthy behavior (Arpawong et al., 2010).

As reviewing the literatures, family cohesion and adaptability has a significant influence on behavioral problems such as cigarette smoking, alcohol consumption and other substance use. But, to date, there is no study related to family cohesion and adaptability and cigarette smoking among Iranian adolescents, especially in Kerman. There is, therefore, a need for further research in this area.

2.2 Self-Efficacy and Cigarette Smoking Behavior

Self-efficacy refers to a person's beliefs in their ability to affect the outcome of a situation through their actions (Bandura, 1997). Self-efficacy includes both feeling confident in one's skills and feeling able to implement these skills as they are needed (Bandura, 1997). Researchers have demonstrated that the effect of self-efficacy on behavior is pervasive and is well known to influence problem behaviors (Diane et al., 2005; Fagan et al., 2003; Hiemstra et al., 2011; Von et al., 2005; Yan, Jacques-Tiura, & Chen, 2013). It is one of the important individual/cognitive factors that is linked to cigarette smoking behavior in the teenage years and also refers to adolescents' confidence in their ability to stay a nonsmoker and to refuse a cigarette (Hiemstra et al., 2011; Yan et al., 2013). Self-efficacy is identified as the single most significant predictor of initiation, frequency and quantity of cigarette smoking behavior (Kear, 2002, Dian et al., 2005). It is also introduced as an important factor in preventing smoking behavior among adolescents: i.e. higher level of self-efficacy results in lower rates of smoking and lower level of self-efficacy increases rates of smoking behavior (Kear, 2002; Yan et al., 2013). A number of findings have demonstrated that there is a direct negative relationship between self-efficacy and cigarette smoking: i.e. higher level of self-efficacy results in lower rates of smoking and lower level of self-efficacy yields higher rates of smoking behavior (Hiemstra et al., 2011; Yan et al., 2013).

Although self-efficacy has been found to be directly related to cigarette smoking among adolescents, no study has examined the moderating effects of self-efficacy in the relationship between family cohesion and adaptability and cigarette smoking behavior among adolescents. Even though a great deal has been learned about the prediction of adolescent smoking by the influence of a lot of factors, not enough attention has been paid to how these constructs may interact with moderator variables.

In order to fill the research gap, the present study examines the interaction between a moderating variable (self-efficacy) and family cohesion and adaptability influence on adolescent smoking behavior.

3. Methodology

3.1 Sample Procedure and Sample Profile

This study focuses on 15 to 18 year-old students in high schools in Kerman; Kerman is divided into two educational zones (Ministry of Education, 2012). Using cluster sampling technique would provide a chance for the researcher to collect data equally from each zone. Totally, there are 105 high schools in Kerman (with a total number of 24,310 students). Out of these schools 46 are located in zone one, and the remaining 59 high schools are located in zone two. In cluster sampling, normally 10 percent of the whole population in each cluster is randomly selected. In the present study, 20 percent of the total number of schools; that is, 10 schools from zone one and 12 schools from zone two, randomly selected for data collection. The reason was that the number of current adolescent smokers who volunteered to respond to the questionnaires was low.

In addition, to calculate the sample size, G*Power (Version 3.1) was used. The software is a well-established instrument used in determining the suitable sample size (Faul et al., 2007). In this study regression would be used as the data analysis method; therefore, having selected it as the statistical analysis method, and setting the values of effect size ($R^2 = .1$, medium to large), power (.95) and level of significance ($\alpha = .05$), the ideal sample size calculated by the software was $n = 270$. Predicting a respondent attrition rate of 10%, 30 additional samples were added to the calculated sample size by G*Power, which resulted in a sample size of 300.

Moreover, the sampling method used for the selection of respondents (current cigarette smokers) was random sampling. Considering the inclusion criteria, a total of 475 students from the selected schools of both educational zones were identified as the population of this study. Each member of this population was assigned a number. Subsequently, out of these smoking adolescents, the researcher randomly selected a sample of 300 using the Random Number Generator (www.random.org). The gender ratio of the respondents of the study was 65 percent male and 35 percent female.

The data collected by means of self-administered questionnaires and then analyzed by AMOS software (to run Structural Equation Modeling) for windows program version 20. The Amos software, which was applied in this

study, was a new method of analysis testing provided by (IBM).

3.2 Instrumentation

Family Cohesion and Family Adaptability: Family Adaptability and Cohesion Scale (FACES III), which is consisted of 20-items rated on a five-point Likert scale (1=almost never to 5=almost always), was used to measure family cohesion and adaptability. FACES III measures two major dimensions of Family: (i) family cohesion and (ii) family adaptability (10 items for each dimension). The reliability of FACES III in this study was .80 for family cohesion and .76 for family adaptability.

Self-Efficacy: For measuring the level of self-efficacy, the Twelve-item Smoking Self-Efficacy Questionnaire based on Etter et al. (2000) was used. This research tool has a 5-point Likert Scale of 1-5 from 'Not at all sure' to 'Absolutely sure'. The findings of the test of internal reliability of this survey questionnaire in the current research produced a coefficient value of 0.82 for α .

Cigarette Smoking Behavior: With the purpose of measuring the cigarette smoking behavior, a questionnaire adapted from the National High School questionnaire according to Prevention and Disease Control Centers (2006) was used. It was a questionnaire with five items, which was developed to rate the cigarette smoking behaviour using a Likert Scale on the scale of 7 points. In the present study, a reliability value of 0.77 was gained for the Cigarette Smoking Behavior Scale.

4. Results

4.1 Descriptive Statistics

Based on the collected data, the age of adolescents ranges from 15 to 18 years old with the mean of 16.5. A major portion of the respondents to questionnaire (53%) were between 17 and 18 years old, and the percentage of male and female participants were respectively 65% and 35%. In term of education, 26.7% of the whole subjects were in the third grade of high school. Also, the majority of participants received 0-130 thousand Tomans (around \$40) as their monthly allowance.

4.2 The Results of the Inferential/Structural Equation Modeling (SEM)

According to the gathered data plus the main hypothesis of the study, the validity of the instrument was calculated by means of the multivariable technique of Structural Equation Modelling. Before obtaining the results of SEM, it was essential to calculate the amount of convergent and construct validities to see if the research constructs individually fit the model.

Family Cohesion and Adaptability Individual CFA:

The results of the individual CFA showed that from the six assessed indicators for the model, five were agreed that the individual CFA model was in accordance with the data. The agreed indicators and their related value are as follow: Relative $\chi^2= 1.763$; GFI = .912, CFI= .980, IFI= .980, TLI = .977, RMSEA = .051. The $\chi^2(169)=297.989$, $p=.000$ was not agree which is mostly due to the large sample size (Hair et al., 2010) (Figure 1). Regarding the indicators of construct validity assessment, the standardized factor loading for items of both family cohesion and adaptability exceed the minimum requirement of (.5) ranging from .822 to .885. The results of average variance extracted indicator showed that the AVE value of family cohesion is .74 and the AVE value of family adaptability is .73 both of which exceeded the cut-off point of .5 and confirm the adequate AVE of construct. Moreover, the construct reliability for family cohesion is .97 and the AVE value of family adaptability is .96 that shows this construct has an acceptable reliability that exceeds the cut-off point of .7. Consequently, all three indicators of convergent validity confirm that reliable and valid items have been used to measure this construct, as shown in Table 1.

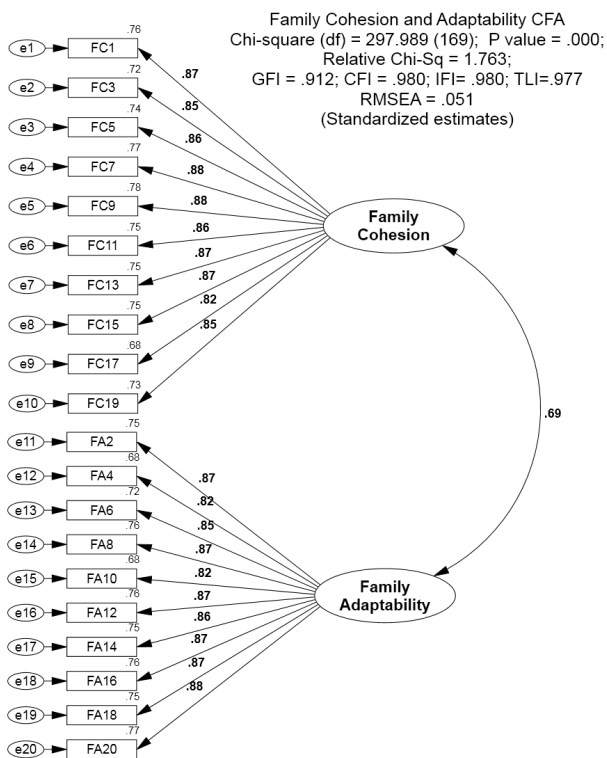


Figure 1. Family cohesion and adaptability CFA model

Table 1. The result of family cohesion and adaptability CFA

Variables	Items	Standardized loading	Factor	Average Variance Extracted (AVE)	Construct (CR)	Reliability
Family Cohesion	FC1	.874	.74	.74	.97	
	FC3	.848				
	FC5	.862				
	FC7	.878				
	FC9	.885				
	FC11	.863				
	FC13	.867				
	FC15	.867				
	FC17	.824				
	FC19	.853				
Family Adaptability	FA2	.867	.73	.73	.96	
	FA4	.825				
	FA6	.850				
	FA8	.871				
	FA10	.822				
	FA12	.874				
	FA14	.864				
	FA16	.871				
	FA18	.866				
	FA20	.877				

Self-Efficacy Individual CFA:

Evaluating the model fitness with the self-efficacy construct resulted in the support for the idea of fitness of the model with the data, which is consistent with the goodness of fit indexes in the following values as shown in Figure 2: GFI = .95, Relative Chi-Sq= 2.77, CFI = .97, IFI = .97. As a result, goodness of fit indexes were found to provide support for a good model fit. In addition, the following results from the assessment of convergent validity were gained: the standardized factor loading for this construct was in the range of .69-.85, and getting an adequate value, they go between the standard range and the maximum cut-off point of .5. In addition, the normal difference obtained was a satisfying value of .57, which went beyond the essential value of .5. Hence, the construct reliability was calculated and ended in the standard level of .91 for it, which was much more than the acceptable value of .7 as shown in Table 2. As a result, the valid and reliable measurement of the self-efficacy construct in this research could be verified.

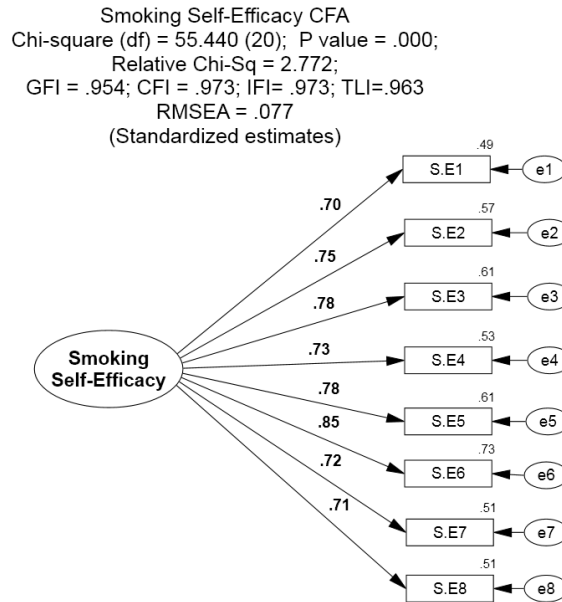


Figure 2. CFA model for self-efficacy

Table 2. The confirmatory factor analysis results for self-efficacy

Variable	Items	Standardized loading	Factor	Construct (CR)	Reliability	Average Variance Extracted (AVE)
Self. Efficacy	S.Efficacy(1)	.697	.91			.57
	S.Efficacy(2)	.752				
	S.Efficacy(3)	.780				
	S.Efficacy(4)	.726				
	S.Efficacy(5)	.779				
	S.Efficacy(6)	.853				
	S.Efficacy(7)	.717				
	S.Efficacy(8)	.711				

4.2.1 The Structural Equation Model

In order to find the answers to the research questions regarding the objectives of the research, the Direct Structural Equation Model was used. As shown in Figure 3, the hypothesized associations among the variables of the conceptual research framework were also examined. The result of assessing the level of model fit according to the GOF indices shows the model fit the data perfectly.

The assessment of hypothesized testing shows the results as bellow:

H_{A1}: There is a negative relationship between family cohesion and family adaptability with cigarette smoking

behavior.

Table 3 demonstrates the results of applying the aforementioned model showing a negative major link between family cohesion ($\beta = -.176$, C.R= -3.321, P= .000) and family adaptability ($\beta = -.144$, C.R= -2.900, P= .004) and cigarette smoking in this research. Thus, the hypotheses path relation between the family factors of cohesion and adaptability and cigarette smoking behavior was reinforced. So, it was concluded that the lower levels of family cohesion and family adaptability could raise the actual threat of smoking behaviour among youngsters.

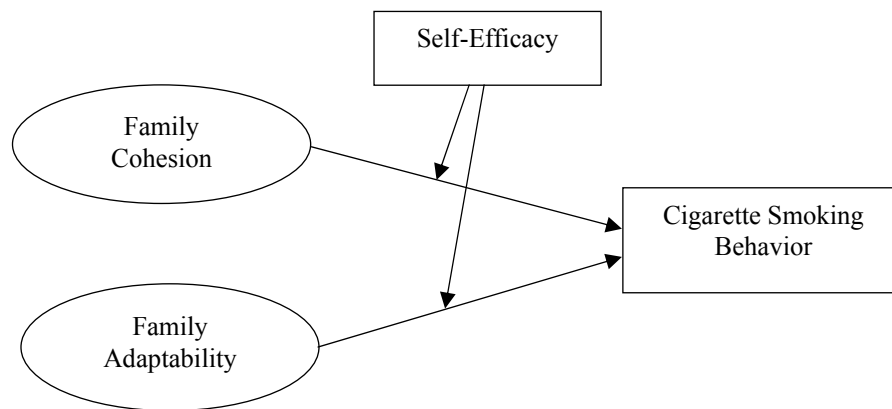


Figure 3. Research framework

Table 3. The result of path coefficients between variables

Items		S.E.	Estimate	Std. Regression	C.R.	P
Family cohesion	→ Adolescent Cigarette Smoking	.178	-.592	-.176	-3.321	.000
Family adaptability	→ Adolescent Cigarette Smoking	.164	-.477	-.144	-2.900	.004

4.3 Test of the Moderation

For evaluating the moderating effects of self-efficacy on the relationship among the variables, the innovative system of multi-group SEM analysis was used through a Software namely AMOS as a statistical analysis Software. According to Hair et al. (2010), the result showed that two invariant and variant models of groups were accordingly developed. Based on the variant-group model, various regression weights were expected for the participants in the study with both a low and high degrees of self-efficacy, while according to the invariant group model, the path relationship of interest was expected to be limited and the same amongst the participants with both low and high degrees of self-efficacy.

H_{A2}: Moderating impact of Self-efficacy on the correlations between family cohesion and adaptability and cigarette smoking

Therefore, based on the obtained findings, self-efficacy was found to act as a moderator of the path relation between family cohesion and adaptability, and cigarette smoking behavior, because a significant difference was documented in the correlations between the cigarette smoking, and the family cohesion and adaptability of the study participants with low self-efficacy (family cohesion: $\beta = -.125$, P= .025, C.R= -2.246; family adaptability: $\beta = -.116$, C.R= -2.154, P= .031). Regarding respondents with high self-efficacy, no significance was found (family cohesion: $\beta = -.203$, C.R= -1.930, P= .054; family adaptability: $\beta = -.174$, C.R= -1.777, P= .076). As a result, and based on the analysed data shown in Tables 4 and 5, the causal relationship between the cigarette smoking behavior, and the family cohesion and adaptability of the respondents under the influence of self-efficacy is maintained in this research.

Table 4. The results of regression weights for participants in low level of self-efficacy

Items		C.R.	Std. Regression	S.E.	Estimate	P
Family cohesion	→ Adolescent Cigarette Smoking	-2.246	-.125	.180	-.405	.025
Family adaptability	→ Adolescent Cigarette Smoking	-2.154	-.116	.172	-.372	.031

Table 5. The results of regression weights for participants in high level of self-efficacy

Items		C.R.	Std. Regression	S.E.	Estimate	P
Family cohesion	→ Cigarette Smoking Behavior	-1.930	-.203	.363	-.701	.054
Family adaptability	→ Cigarette Smoking Behavior	-1.777	-.174	.329	-.585	.076

5. Discussion

According to the findings of this study, a significant negative link between cigarette smoking, and the family cohesion and adaptability was documented among the teenage citizens of the city of Kerman in Iran. These results support the Circumplex Model (Olson, 1989), according to which, cohesion can be defined as the intensity of emotional closeness or togetherness, that family members experience in their relationships with one another and adaptability refers to the amount of flexibility that family members permit in regard to rules/roles (Olson, 1989). Theoretically, adolescents' ratings of their families' cohesion and adaptability as well as their parents' expectations help predict their ratings of their internalized behavioral problems.

Based on this model, both low and high levels of cohesion and adaptability are proposed to indicate problematic functioning, whereas moderate levels of adaptability and cohesion are proposed to indicate healthy, or balanced functioning (Olson, 1989). Thus, supportive, warm, flexible and cohesive relationship between adolescents and their family members seems to be inversely correlated with cigarette smoking levels. Therefore, an increase could be observed in the risk of smoking behavior among Kermani young persons, once family cohesion and family adaptability are both in lower levels.

Moreover, in this research, the moderating effect of self-efficacy between the cigarette smoking behavior of the respondents and their family cohesion and adaptability was approved. Theoretically, self-efficacy has been defined as "beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p. 2). The variable provides a very interesting explanation for situations in which an adolescent chooses not to smoke when (s)he is in a highly stressful situation and a high-risk environment. Based on this study, it can be concluded that a higher degree of self-efficacy predicts a lower probability of smoking habit even when the adolescent is in a highly stressful and risky environment. Hence, the self-efficacy scores of those Kermani adolescent respondents who smoked relatively more cigarettes were found to be much lower than those lighter smokers resulting in their lower levels of self-confidence and inability to avoid smoking.

6. Conclusions and Implications

Based on the results of this study, cigarette smoking can be directly affected by family factors, such as family cohesion and adaptability and self-efficacy have a moderating effect on these relations. Therefore, to prevent smoking behaviors among adolescents, it is necessary to provide programs which address these influencing factors.

The findings suggest that prevention and cessation intervention programs should focus on improving self-efficacy to guarantee their success in decreasing smoking behaviours among youths and empower adolescents to resist smoking. It is recommended that self-efficacy should be considered as one of the major components of all prevention programs. Also, based on the results of this study, it is recommended that families should be included in smoking prevention programs. Further trainings of parenting skills should be introduced in to such programs. These skills and new knowledge will help parents to efficiently control their adolescent's behaviour, become a good role model, establish a concrete set of rules about smoking and improve the communication and cohesion between family members. As children get older and reach puberty, appropriate supervision and committed parental involvement can be essentially important in preventing smoking during adolescence.

In addition to the role of family, schools play a significant role in reducing problem behaviors such as cigarette smoking among adolescents. So, it is recommended that the school prevention programs emphasize on adolescents' social and academic skills, including good decision-making skills, coping skills, self-control and refusal skills to resist smoking. Having acquired these skills, adolescents may further develop and adapt proper methods by themselves in specific risk situation. In addition, to prevent cigarette smoking behavior, families should be involved in schools' training programs. The involvement of parents and other family members (siblings) in prevention programs can increase family awareness of smoking, improve the control mechanisms at home and even encourage other family members to quit smoking,

In addition to the role of family and schools, policy makers can be effective in preventing cigarette smoking behavior among adolescents as well. Public education is one of the most effective methods of reducing cigarette smoking behavior. Prevention is always better than cure. So, the researcher proposes that proper policies are needed to provide a powerful supplement for the existing efforts to decrease cigarette smoking behavior among adolescent. Smoking prevalence in communities with integrated prevention programs is proved to be significantly lower than communities without. Finally, it is recommended that policy makers use social media (such as TV, internet, billboards, etc.), public education materials, training programs and information booklets to hold anti-smoking campaigns and reduce smoking among adolescents. They can also increase public awareness through health programs and pass laws to ban and limit cigarette smoking through, for example, banning public smoking and making cigarette not easily accessible. It should be noted that one of the common characteristics of adolescents is their rebellious nature. Therefore, education can play a more effective role in reducing the rates of smoking rather than obligation and forced laws (e.g. imposed smoking bans and forced quitting).

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