



Relationship between Parenting Styles and Tendency to Addiction in Iran: A Systematic Review and Meta-Analysis

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(Received 19 Apr 2023; accepted 14 Jun 2023)

Abstract

Background: Various factors are involved in the initiation of drug abuse, such as genetic and social factors. Among the factors that can be mentioned in associated with the tendency to addiction in children is the role of family prediction. This study aimed to explore the relationship between parenting styles and addiction tendency in Iran.

Methods: We searched Persian database included Magiran, SID, IranDoc and Noormagz for articles from 2007- 2022 in Iran. Seven articles with 1734 subjects were ultimately included in the qualitative and quantitative syntheses. Five subscales (parenting method) were brought up for investigation of the relationship between parenting styles and addiction tendency. The pooled odds ratio (OR) and its 95% confidence interval (CI) were calculated for each associated factors using random-effects/fixed-effects models. Publication bias was assessed using funnel plot and the Eggers test and each effect size was calculated manually.

Results: Based on Cohen's interpretation criterion are as follow: the mean effect size of the relationship with the permissive style is 0.33 (average), the mean effect size of the relationship with authoritative style is 0.31 (average), the mean effect size of the relationship with the dependent style is 0.28 (average), the mean effect size of the relationship with the freedom-control is - 0.02 (small), the mean effect size of the relationship with the method based on affection-rejection is 0.33 (moderate).

Conclusion: Parenting styles have a significant relationship with addiction tendencies in Iran. Therefore, appropriate programs can be provided to strengthen and educate the correct and suitable parenting methods with their children as safe as possible in order to avoid risky behaviors and injuries such as addiction.

Keywords: Addiction; Meta-analysis; Parenting styles

Introduction

Addiction is dependence on drugs with a sort of physical, behavioral and psychological symptom in which a person continues to use drugs despite

having significant problems due to drug use and encounters in risky behaviors to meet his needs (1). The tendency to addiction is actually a mental



state or characteristic that is associated with psychological issues or emotional reactions such as depression, anxiety and stress (2). Drug use and its adverse effects are among the most important concerns and social issues in current societies. Substance abuse is one of the most important current debates in social and public health (3). There is a large amount of published research that demonstrates the negative effects of adolescent drug use on the well-being of individuals, communities, and families (4). If a person feels neglected by their parents, they may be at risk of use drugs (5).

Among the factors that can be mentioned in connection with the tendency to addiction in children is the preventive role of the family (6). Adolescents who have a strong emotional bond with their parents are less at risk for risky behaviors such as substance abuse (7). Parenting is a complex activity that includes special methods and behaviors that affect the child's development separately or in interaction with each other (8). Parents are sometimes faced with significant challenges in their parenting experiences (4). Parents, who are unstable in their communications with lack in confidence, usually have not agreement with each other on how to educate their children and so apply parenting patterns based on rejection, extreme support with indulgence or dominance, double discipline, weak moral standards, irrational perfectionism, anger and emotional instability and consequently stabilize neurotic behaviors in children and cause children to become more emotionally needy and in such conditions, fail to feel trust and security, considered the basis of healthy emotional development (9). There are four types of parenting styles (authoritarian, permissive, autocratic, and neglectful), that are defined below (10).

Parents with an authoritarian parenting style are people who listen to their children, communicate with them in a solution-oriented relationship, mutually share their ideas, and take advantage of their child's special abilities and interests and support them (11).

Parents with permissive parenting style are people who give a lot of love to their children but

avoid confrontation with their children and cannot resist their demands (12).

In authoritative parenting style, defined as the meeting point of low parental warmth and high parental control, the children are expected to follow the strict rules set by the parents and not exceed these rules (11).

Parents involved in neglectful parenting pattern, who are the least inclined to give feedback to their child, provide almost no emotional support or guidance for their children. Parents in this style have a weak relationship with their children, their interaction is very little, and the distance between parent and child is evident (12).

In the field of the influence of parent-child interaction methods, or parenting methods, many researches have been conducted in our country, Iran, and the vast majority of these studies confirmed the effectiveness of parenting methods on the tendency to addiction in adolescents. In this meta-analysis research, an attempt has been made to estimate the effect of each of the parenting methods on the tendency to addiction by integrating and combining the results of previous researches, so that the general and final results of this research can be accessed more easily.

The aim of this meta-analysis was to determine the relationship between parenting methods and the tendency to addiction in conducted studies inside of Iran.

Methods

According to the studies and researches, the statistics and reasons for the tendency to addiction as well as the type of substance consumed in different geographical regions, races and countries are different according to the level of access to the providing of substances and considering this fact that the results are not same, therefore in the present meta-analysis used only Persian studies. According to the purpose of the research, the meta-analysis method was used in this study. In meta-analysis, the basic principle is to calculate the effect size for individual studies and return them to a common (general) matrix, and then

combine them to achieve the average effect (13). Effect size indicates the amount or degree of the presence of a phenomenon in society. In the case of r index, effect sizes of 0.1, 0.3, and 0.5 are

considered small, medium, and large effects respectively (14, 15).

Fig. 1 shows the flowchart of how the reviewed articles were identified and selected.

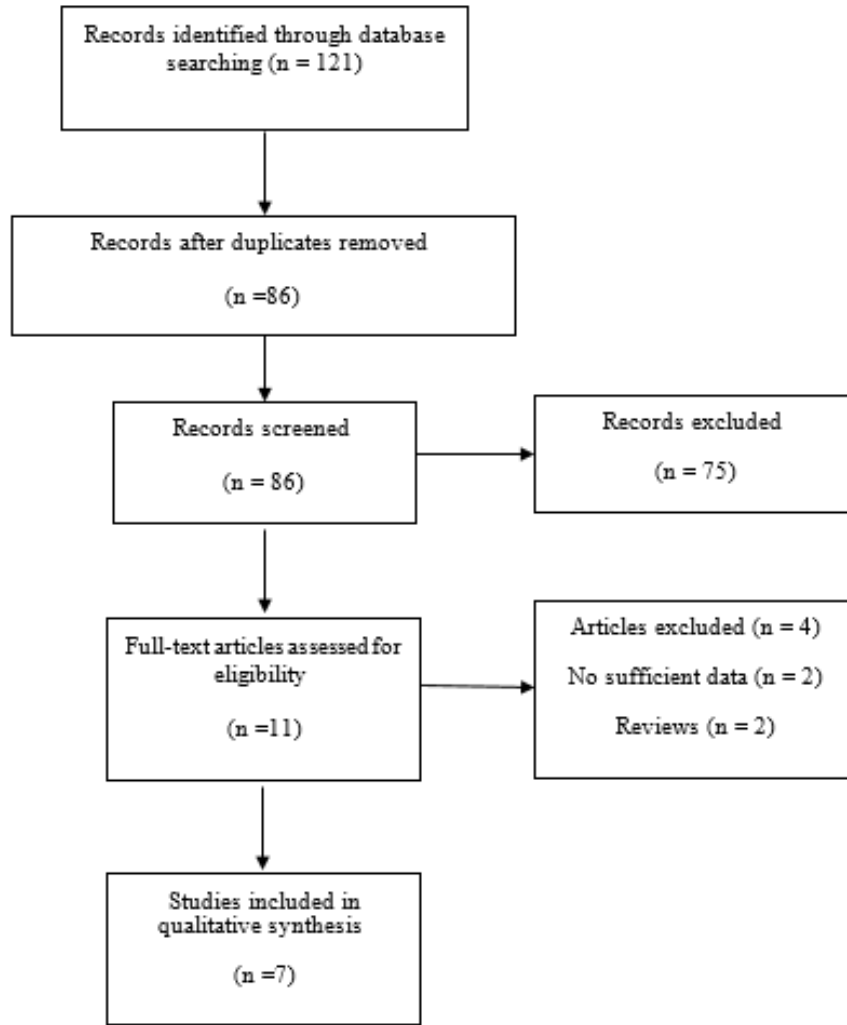


Fig. 1: PRISMA flow diagram of study selection. PRISMA; Preferred Reporting Items for Systematic Review and Meta-Analyses

The statistical population of this research includes all scientific-research articles that have been published throughout the Iran in the period of 2016 to Apr 2022 regarding the relationship between parenting methods and addiction tendencies in Iran. The sample size included the number of studies that had met the necessary conditions for entering the meta-analysis in terms of methodology and entry and excluding criteria.

In this research, those approved scientific articles that investigated the relationship between parenting methods and addiction tendencies in Iran and in terms of entry and excluding criteria and methodology (hypothesis formulation, research method, statistical population, sample size and sampling method, tools measurement, validity and reliability of measurement tools, statistical analysis method, correctness of statistical calcula-

tions and statistical reporting or significance level) met the necessary conditions, were selected for meta-analysis. The final number of articles that were selected was 7. The conditions for entering the research into the meta-analysis were: 1) the relationship between parenting methods and the tendency to addiction in Iran has been investigated. 2) The study was carried out in the form of a type of correlational research or a group comparison. 3) In the research results, the effect size or statistics related to the relationship between parenting methods and addiction tendency in Iran or their significance has been reported. The selected articles were Seyfi Gandomani et al, (16), Eilbeygi et al., (17), Khanabaei et al., (18), Jahanshahi, (19), Arjmand et al., (20), Raesi et al., (21) and Beigdeli et al., (22). In this meta-analysis, the statistics of various studies that met the criteria and methodological conditions for entering the meta-analysis were transformed into the *r* index using Hewitt and Kramer's meta-analysis steps, and then the calculated effect sizes were interpreted using Cohen effect size interpretation guide table for the index *r*. The effect size of each research was calculated manually (15).

Statistical analyzing

The stages of converting the statistics of different studies into the general index *r* (effect size) were done according to the meta-analysis stages of Hewitt and Kramer:

Step 1- Calculate the effect size (correlation studies) for each study

$$r = \frac{z}{\sqrt{n}}$$

Step 2- Converting the *r* (correlation studies) of each research into Z_r

Step 3 - Combining the effect size (Z_r) of the different studies in order to calculate the total effect size

$$\bar{Z}_r = \frac{\sum z_r}{N}$$

Step 4- Significance of combined studies

$$Z_r = \frac{\sum z}{\sqrt{N}}$$

Results

Table 1 shows summary of the selected studies for meta-analysis of the research conducted on the relationship between parenting styles and addiction tendencies in Iran.

The results of Table 2 show that the mean effect size of the relationship between neglectful parenting style and addiction tendency in the investigated researches is 0.33, which is statistically significant at the level of $P < 0.0001$, and based on Cohen's interpretation criterion, this value is evaluated as a medium effect size; this means, the relationship between neglectful parenting style and addiction tendency in Iran is moderate.

Based on the Table 3, the mean effect size of the relationship between authoritative parenting style and addiction tendency in the investigated researches is 0.31, which is statistically significant at the level of $P < 0.0001$, and based on Cohen's interpretation criterion, this value is evaluated as a medium effect size; this means, the relationship between authoritative parenting style and addiction tendency in Iran is moderate.

Based on the Table 4, the mean effect size of the relationship between freedom-control parenting style and addiction tendency in the investigated researches is 0.02, which is not statistically significant at the level of $P < 0.0001$, and based on Cohen's interpretation criterion, this value is evaluated as a small effect size; this means, the relationship between freedom-control parenting style and addiction tendency in Iran is small.

Table 1: Summary of the selected studies for meta-analysis of the research conducted on the relationship between parenting styles and addiction tendencies in Iran

<i>Ref</i>	<i>Participants</i>	<i>Sample (n)</i>	<i>Age (year)</i>	<i>Design</i>	<i>Tool</i>	<i>Main findings</i>	<i>Statistic</i>
Seyfi Gandomani et al, 2013 (16)	Male students of public high schools in Borujen	375	Not reported	Descriptive and correlational	The revised questionnaire of Shafer's parenting methods and the self-administered questionnaire of the tendency to use drugs	Authoritarian style leads to lower addiction tendency, permissive style leads to more addiction tendency.	R=0.19
Eilbeygi et al., 2016 (17)	Addicts referring to medical centers in Ardabil city	100	20 - 60	Descriptive and correlational	Baumrind's parenting methods questionnaire and the short form of substance abuse questionnaire	Authoritative and negative perfectionism styles have a positive correlation with substance use, authoritarian and trust styles have a negative correlation with substance use	R=0.12
Khanbabaei et al., 2017 (18)	Addicts referring to medical centers in Zanjan city	250	21 - 35	Descriptive and correlational	Questionnaires of child rearing methods made by Baumrind and Mohaghegh to investigate the state of substance use	Parenting styles, social support and personality traits have key effects on youth addiction	R=0.63
Jahanshahi, 2020 (19)	Adolescents aged 14 to 17 in Ashkhane city	331	14 - 17	Survey research	Esmaili's questionnaire of parenting styles and self-administered questionnaire of tendency to use drugs	The correlation between addiction tendency with forgiveness style is 0.74, permissive style is 0.55 and authoritative style is 0.79	R=0.55
Arjmand et al., 2021 (20)	Students of Bahonar University of Kerman and Payam Noor University of Rafsanjan	250	Not reported	Descriptive and correlational	Baumrind's questionnaires of parenting methods and tendency to addiction are made by researchers	Parenting styles (authoritative, permissive, and authoritarian) significantly affect the readiness for drug addiction indirectly through aggression and alexithymia.	R=0.01
Raeisi et al., 2018 (21)	Normal people and addicts refer to addiction treatment centers in Tehran	50	Not reported	Cross sectional	Questionnaire of parenting and family environment of Naghashian 1980	Control-freedom parenting style was not significantly different between the addicted and non-addicted groups, while the warm-cold parenting style showed a significant difference between the two groups.	R=0.01
Beigdeli et al., 2013 (8)	High-risk addicts and entrepreneurs of Tehran	378	25-55	Descriptive and correlational	Robinson et al.'s parenting styles and dimensions questionnaire, 2001, medical files and kits	Significant difference between in affection-rejection and control-freedom parenting styles between addicts and entrepreneurs. Entrepreneurial people were exposed to affection-rejection and control-freedom more than drug addicts.	R=0.04

Table 2: Meta-analysis of the relationship between the neglectful parenting style and addiction tendency in Iran

<i>Relationship between neglectful style and addiction</i>	<i>r to Z_r</i>	<i>Z_r to r</i>	<i>P-value</i>	<i>p to z</i>	<i>Z to p</i>
0.12	0.121	r=0.33	<0.05	0.0	P< 0.001
0.63	0.741		0.0005	3.719	
0.55	0.618		0.000	4.256	
-0.10	-0.100		0.066	-1.476	

Table 3: Meta-analysis of the relationship between the authoritative parenting style and addiction tendency in Iran

<i>Relationship between authoritative style and addiction</i>	<i>r to Z_r</i>	<i>Z_r to r</i>	<i>P-value</i>	<i>p to z</i>	<i>Z to p</i>
-0.19	-0.192		0.0005	3.719	
-0.18	-0.424	r=0.31	0.05	1.645	P< 0.001
-0.72	-0.245		0.0005	3.719	
-0.80	-0.354		0.000	4.265	
-0.17	-0.412		0.075	1.476	

Table 4: Meta-analysis of the relationship between the freedom-control parenting style and addiction tendency in Iran

<i>Relationship between freedom-control style and addiction</i>	<i>r to Z_r</i>	<i>Z_r to r</i>	<i>P-value</i>	<i>p to z</i>	<i>Z to p</i>
-0.01	-0.01	r=0.02	0.534	-0.075	P< 0.0001
-0.04	-0.04		0.01	-0.843	

The results of Table 5 show that the mean effect size of the relationship between authoritarian parenting style and addiction tendency in the investigated researches is 0.28, which is statistically significant at the level of $P<0.0001$, and based on

Cohen's interpretation criterion, this value is evaluated as a medium effect size; this means, the relationship between authoritarian parenting style and addiction tendency in Iran is moderate.

Table 5: Meta-analysis of the relationship between the authoritarian parenting style and addiction tendency in Iran

<i>Relationship between authoritarian style and addiction</i>	<i>r to Z_r</i>	<i>Z_r to r</i>	<i>P-value</i>	<i>p to z</i>	<i>Z to p</i>
0.19	0.192	r=0.28	0.05	1.645	P< 0.001
0.68	0.775		0.005	3.090	
0.28	0.288		0.003	3.090	

According to the Table 6 results, that the mean effect size of the relationship between affection-rejection parenting style and addiction tendency

in the investigated researches is 0.33, which is statistically significant at the level of $P<0.0001$, and based on Cohen's interpretation criterion,

this value is evaluated as a medium effect size; this means, the relationship between affection-

rejection parenting style and addiction tendency in Iran is moderate.

Table 6: Meta-analysis of the relationship between the affection-rejection parenting style and addiction tendency in Iran

<i>Relationship between affection-rejection style and addiction</i>	<i>r to Z_r</i>	<i>Z_r to r</i>	<i>P-value</i>	<i>p to z</i>	<i>Z to p</i>
0.44	0.472	r=0.33	0.001	3.090	P< 0.0001
0.22	0.224		0.000	4.265	

Discussion

According to the results of the current meta-analysis, the average effect size of the relationship between permissive parenting style and tendency to addiction in the investigated researches is 0.33, which is statistically significant, and based on Kuhn's interpretation criterion, this value is a mild effect size. Hence, the relationship between permissive parenting style and addiction tendency in Iran is moderate. Permissive parenting style is characterized by failure to set limits. Permissive parents are characterized by low demands and high responsiveness (22). Permissive parents set few rules and boundaries and are reluctant to enforce the rules. Permissive parents however tend to love, but they have not enough controlled. Such parents show unconditional love to their children, but have very few demands and do not use punishment. Children of these parents tend to have low self-control (23).

The obvious characteristic of permissive parenting is excessive affection and insufficient control. With this kind of parenting, parents have very few demands from their children and rarely set rules of conduct for their children's behavior, but they do not consider these very few rules to be mandatory in practice and do not demand their implementation from their children, because of the excessive affection towards their children, they do not like to impose on the child the difficulty of implementing their rules or the consequences of not applying the rules, so there is no

executive guarantee for the implementation of their wishes by the children; Therefore, the children of the negligent parents never learn to control their behavior and always expect to achieve goals without patience and effort. As a result, such children may be more inclined and involved in risky behaviors such as drug use (24).

As the results the current study shows, the average effect size of the relationship between authoritative parenting style and tendency to addiction in the investigated researches is -0.31, which is statistically significant, and based on Kuhn's interpretation criterion, this effect size value is also mild; That is, the relationship between authoritarian parenting style and addiction tendency in Iran is moderate. Authoritative parenting is characterized by high levels of parental affection and high behavioral and psychological control (23). This group of parents establishes a good relationship with their children and respects their opinions and viewpoints and follows up their children's behavior in a balanced and conscious manner and so they can control the children's tendency toward risky behaviors such as drug addiction. Authoritative style increases children's sense of independence (24). By longitudinally monitoring children from preschool to adolescence, children of authoritative parents are more mature, socially independent, active, and successful than children of non-authoritative parents (25). The children of authoritative parents have higher cognitive and social skills and have better

conditions in terms of mental health and exchanging opinions with others (26).

The warmth and related emotional characteristics of authoritative parenting pattern make their children more receptive to their parents' demands. Parents, who adopt an authoritarian parenting style monitor the limits they set for their children, but describe their children the reason for any rules or restrictions. They also expect their children to behave independently and appropriately associated with their age ranking. Therefore, the relatively significant negative relationship between authoritarian parenting style and its tendency to addiction could be expected.

The results of the current meta-analysis also showed that the average effect size of the relationship between authoritative parenting style and tendency to addiction in the investigated researches is 0.40, which is statistically significant, and based on Kuhn's interpretation criterion; this value is considered a large effect size. Therefore, the relationship between authoritative parenting style and addiction tendency is great in Iran.

Authoritative style involves very high control and low warmth and responsiveness (23). Children of parents with authoritative pattern feel lonely, powerless and worthless, and as a result, they look for approval, love and support from people other than the family and reach out to others in need, and this is where that the others, including inappropriate and wrong friends, present in their relationships and bring a person towards social deviations, including the tendency towards drugs (27).

In a review on 42 related studies on the relationship between parenting styles and drug use, researchers have found that the authoritative style is the most protective against substance use, whilst the neglectful style would increase the risk of drug use (24).

Children of authoritative parents usually have a low sense of worth and self-esteem and look to others for the affection withheld at home (28). They are greedy for love and affection because of the lack of affection they feel and are more vulnerable and submissive to anything that comes with outward affection than their peers. There-

fore, such children who grew up under authoritarian discipline, compared to the children of non-authoritarian families, continuously show unsafe and risky behaviors. These characteristics increase the possibility of addiction (29).

According to the results of this meta-analysis, the average effect size of the relationship between freedom-control-based parenting pattern and tendency to addiction in the investigated researches is 0.02, which is not statistically significant and based on Kuhn's interpretation criterion, this effect size value is evaluated as small; Therefore, the relationship between freedom-control-based parenting pattern and addiction tendency is small in Iran.

Although parents who apply a lot of control in their parenting seem to temporarily protect their children from social risks such as addiction, but the unpleasant children's feeling that comes from the feeling of being controlled and also disappearing the favorable feeling of parents' trust on their children to leave them free to do their favorite works within the framework of logical limitations, makes parental control have a negligible effect on protecting children from engaging in risky behaviors such as addiction; Therefore, although some researches consider the dimension of control as the most important dimension of parenting (23), but moderation and balance in these parenting dimensions (freedom-control) can play a more positive and effective role in the future of children and avoiding their tendency to addiction and other psychological issues, and also help children in choosing the right way and correct method of life. Taken together, the weak relationship of parenting style based on control-freedom and its dependence on drug addiction could be expected (30).

Our results also showed that the average effect size of the relationship between affection-rejection-based parenting pattern and tendency to addiction in the investigated researches is 0.33, which is statistically significant, and based on Kuhn's interpretation criterion, this effect size is evaluated as moderate; therefore, the relationship between affection-rejection-based parenting pattern and addiction tendency in Iran is average.

All people need to feel liked, loved, and accepted, as well as capable and valuable. Many studies have been conducted to determine the priority between parenting dimensions. Some researches expressed the effect of warmth (love) on child and their education more than other dimensions (25). Based on the investigations, most of the researches have confirmed the adherence to moderation in all aspects in all dimensions as well warm dimension. Overprotecting the child, creating emotional warmth and rejecting the child may each have its own effect. In this regard, rejection that is integrated with any dimension of parenting, harmful results should be expected. Emotional warmth or rejection by parents is directly related to addiction problems. The perception of rejection or excessive protection is related to drug dependence in people addicted to heroin. Hence, the most important issue is the style perceived by the child. Higher perception of rejection and neglect in the relationship by children is associated with the higher degree of deviance and tendency to risky actions such as drug addiction is (26).

Too much affection or care can be a serious risk factor for the tendency to become addicted because of those who want to become independent and adhere to logical rules and so avoid facing the natural consequences of not fulfilling the compassionate wishes of parents. Therefore, excessive affection, as well as rejection, can be a serious risk factor for tending to risky behaviors, including addiction.

Limitations

Conducting a meta-analysis on the research conducted just inside Iran and the necessity of caution in generalizing its results to the worldwide. Lack of performing meta-analysis on the relationship between the subscales of addiction readiness questionnaires and tendency to addiction with parenting patterns. Lack of examining the effect of demographic characteristics such as sex, age, education level and job of parents and socio-

economic class of the family on the results of this meta-analysis.

Conclusion

High-parental patterns are associated with the adherence to drug addiction in Iran. The most relationship with tendency to addiction was belong to permissive, affection-rejection and authoritative parenting styles respectively and the freedom-control style has no significant relation with addiction tendency. Additional high-quality research is necessary in order to determine the real impacts of parental styles and tendency to drug addiction.

Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Acknowledgements

This study was supported technically by Payam-e-Noor University (PNU) of Esfahan. The study was prepared from the master thesis of Hamid Fatemisough, supervising by Dr Azam Moradi. No funds were attributed.

Conflict of interest

The authors declare that there is no conflict of interest.

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