

The Effect of Parenting Skills Training on Adolescent Aggression in Abadeh Tashk, Fars Province, 2018

Leila Bazrafkan¹, MD;
Rahmat-Allah Mohammadjani²,
MSc; Tayebeh Rakhshani³,
MD, PhD

¹Assistant Professor of Medical Education, School of Medicine, Clinical Education Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

²Master of Community Education, School of Public Health, Shiraz University of Medical Sciences, Shiraz, Iran

³Research Center for Health Sciences, Institute of Health, Department of Public Health, School of Health, Shiraz University of Medical Sciences, Shiraz, Iran

Correspondence:

Tayebeh Rakhshani, MD, PhD;
Research center for health sciences,
institute of health, Department of Public
Health, School of Health,
Shiraz University of Medical Sciences,
Shiraz, Iran

Tel: +98 71 37251001

Email: healthacademic2014@gmail.com

Received: 8 October 2018

Revised: 10 November 2018

Accepted: 14 December 2018

Abstract

Background: Given the importance of aggression in adolescents and the effects of parenting practices, the present study was conducted to investigate the effects of parenting skills intervention on adolescent aggression in Abadeh Tashk town, Fars province, in 2018.

Methods: This randomized clinical trial was carried out on 200 adolescents and their parents in Abadeh Tashk in 2018. The sampling was done through the cluster sampling method and the subjects were randomly divided into the experimental and control groups (100 in each group). The study outcomes were aggression and parenting styles measured by the control and education groups before and two months after the intervention. The data were analyzed using the SPSS20 software as well as the statistical tests such as paired t-test, independent t-test and chi-square test.

Results: The results showed that there was no significant difference between the experimental and control groups in terms of physical aggression ($P=0.98$), verbal aggression ($P=0.62$), anger ($P=0.40$), hostility ($P=0.15$), and the total aggression score ($P=0.38$) before the intervention. However, after the intervention, a significant difference was found between the two groups in terms of physical aggression, verbal aggression, anger, hostility, and overall aggression score ($P<0.05$).

Conclusion: The results of this study showed that parenting style intervention was effective in reducing physical and verbal aggression, anger, hostility, and overall aggression in students. It is suggested that long term interventions should be conducted aiming at parental control over the problems of students since childhood.

Please cite this article as: Bazrafkan L, Mohammadjani R, Rakhshani T. The Effect of Parenting Skills Training on Adolescent Aggression in Abadeh Tashk, Fars Province, 2018. *J Health Sci Surveillance Sys*. 2019;7(1):8-16.

Keywords: Education, Parenting styles, Aggression, Adolescents

Introduction

Adolescence is one of the most critical periods of life.¹ For this reason, all adolescence-related theories agree that this period is overwhelming and parent-adolescent relationships are likely to be more conflicting than parent-child relationships.² Adolescents are often involved in passionate emotional fluctuations along with excitement, conflicting emotions, physiological

stimuli, and stressful emotions.³ This critical period plays an important role in shaping one's personality, and no other development period will probably confuse parents, teachers, and clinicians this much.⁴ In the meantime, anger-related problems such as aggression and hostility are important reasons for referring children and adolescents to psychologists and counseling centers.⁵ About one-third to one-half of those referred to psychiatric and psychological centers have aggressive

and antisocial behaviors.⁶ Aggressive behavior is defined as the intention to annoy or harm somebody who does not want to be harmed.⁷ Aggression is one of the major problems in adolescence that can be manifested in contempt, verbal threats and yelling, interpersonal competition, and exclusion and isolation of others.⁸ It is the most important risk factor in psychopathology and is a symptom of several disorders among children and adolescents.⁹ Aggression seems to be the most common and unpleasant human deviant behaviors.¹⁰ In social psychology, the term aggression is defined as any behavior that is intended to harm a person who does not want to be harmed.¹¹

Aggression may be triggered by a combination of different biological, psychological, and internal conditions such as age and sex, and external conditions such as cultural, social, or environmental factors.¹² Studies have shown that aggression is an important indicator of antisocial personality disorder and causes future physical problems.^{13, 14} The prevalence of verbal abuse as well as humiliation and physical violence among students and adolescents is becoming increasingly worrying.¹⁵ A study carried out in the US found that 2% of boys and 7% of girls in secondary schools had aggressive behavior.¹⁶ Also in a study conducted on primary school students in 5 cities of Tehran province, it was found that 14.2% of the primary school children were aggressive and hyperactive, and the prevalence of aggression was higher in Karaj and Qarchak.¹⁷ Other studies carried out in the country reported the prevalence of aggression among adolescents and young adults to be 30-50%.¹⁸ Hence, identifying the factors contributing to violence and aggression can be effective and useful in providing appropriate and practical solutions to prevent the problem and thus promote community safety.¹⁹

As the first social center, family has various dimensions, one of which affecting the development of children, especially their mental development, is parenting style in the family framework. Parenting practices are effective in developing the children's personality and adapting to different social situations.²⁰ Desirable relationships between parents and children have a great impact on children's mental health. Parent-child relationship is an important issue that has attracted the attention of education experts for many years. In Islamic literature, parenting is a complex activity involving behaviors, teachings, interactions, and practices that both separately and along with one another affect one's spiritual and emotional growth in personal and social dimensions. From the Islamic point of view, parents are responsible for child rearing in childhood and it is considered as one of children's rights.²¹

Parenting practices are combinations of parental behaviors that occur in a wide range of situations

and create a lasting parenting atmosphere. Parenting practices can be defined as a set of behaviors that represent parent-child interactions in a wide range of situations. Baumrind (1991), who conducted remarkable longitudinal studies observing parental interactions with their children, considered parenting practices to include diverse and normal behaviors.²² Baumrind found that different parenting styles differed in two dimensions. The first dimension was demandingness and control, and the second was acceptance and responsiveness. The diverse combination of the two dimensions (demandingness/control and acceptance/responsiveness) created four parenting styles, on which her research was focused: Authoritative, Authoritarian, and Permissive. The fourth parenting style, namely Uninvolved, was studied by other researchers.²³ The authoritative style is characterized by acceptance and close relationships, compatible control methods, and giving appropriate independence. In the authoritarian style, there is low acceptance and close relationships, high rigid control, and low child independence. Parents with a permissive style show affection and receptive behavior, are not demanding, and have little control over their children's behavior. These parents allow their children to make their own decisions at any age, even if they are still unable to do so. Baumrind found that the most favorable evolutionary outcomes that resulted in different adaptations through children's growth and development were related to the authoritative parenting style.²⁴

Hence, due to the importance of parenting styles in the control of aggression, the present study aimed to investigate the effects of parenting skills training on aggression in Abadeh Tashk, Fars province.

Materials and Methods

Study Design and Participants

This randomized clinical trial was carried out in 2018 in Abadeh Tashk city. The statistical population comprised all secondary schools in Abadeh Tashk city and the samples were the eighth grade students of the city who met the inclusion criteria as follows: being grade-eight students, not smoking or drinking alcohol (students), not having a specific mental illness (students and parents) and willingness to participate in the study (students and parents). The exclusion criteria were unwillingness to participate at any stage of the study, absence for more than two sessions of educational classes, and submission of incomplete questionnaires. The study was approved by the Ethics Committee of Shiraz University of Medical Sciences.

Sample Size and Sampling Method

According to Sajadi et al.'s study²⁵ and considering

the following formula at 95% confidence level and 80% test power, the sample size was calculated 100 for each group with a drop-out rate of 10%.

$$n = \frac{\left(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta} \right)^2 (\delta_1^2 + \delta_2^2)}{(\mu_1 - \mu_2)^2}$$

The multistage sampling was used in this study, through which 2 schools (Imam Ali boys' school and Hajar girls' school) were randomly selected from among 4 girls' and boys' secondary schools (with a total number of 210 grade-eight students). Using purposive sampling, we selected the subjects and randomly divided them into the experimental and control groups.

Intervention

Experimental Group: First, the Baumrind Parenting Style Inventory and Buss and Perry's Aggression Questionnaire were completed by the study participants. The educational intervention was then carried out to reinforce authoritative parenting style, reduce authoritarian and permissive styles (because the results of previous studies showed that adolescents of these parents showed more aggressive behavior than those of the parents with an authoritative parenting style), and control and reduce aggression. The educational intervention consisted of eight 50-to-60-minute sessions held weekly for two months. To prepare the educational content, we used Baumrind's parenting styles and various studies (Table 1).

Control Group

The control group received no intervention.

Outcomes

Adolescent Aggression

The questionnaire is a self-report tool consisting

of 29 statements and four subscales, namely physical aggression, verbal aggression, anger, and hostility. The subjects scored each statement using a 4-point scale: always=4, sometimes=3, rarely=2, and never=1. Higher scores in this questionnaire indicated more aggression. Statements 9 and 16 were scored reversely. The total score for aggression was obtained by summing the scores of the subscales.

Scoring Key

Physical aggression consisted of 9 statements: 2-5-8-11-13-16-22-25-29.

Verbal aggression consisted of 5 statements: 4-6-14-21-27.

Anger consisted of 7 statements: 1-9-12- 18-19-23-28.

Hostility consisted of 8 statements: 3-7-10-15-17-20-24-26.

The Aggression Questionnaire had acceptable validity and reliability. In their study aiming to evaluate the reliability and validity of Buss and Perry's Aggression Questionnaire, Samani et al. (2008) examined 429 subjects aged 18 to 22 years and obtained the Cronbach's Alpha of 0.78 for the whole questionnaire.²⁶ The questionnaire was completed by the experimental and control groups before and 2 months after the intervention.

Parenting Styles

The 30-item parenting style inventory (Baumrind's), the initial draft of which has 30 items, was designed by Diana Baumrind (1973). This questionnaire measures parenting styles in terms of three factors. Sentences 28, 24, 21, 19, 17, 14, 13, 10, 6, and 1 address permissive style, sentences 29, 2,

Table 1: The educational intervention was planned as follows

Session	minutes	Gold
1	60	Giving a speech, the researcher introduced himself, provided the rules for attending the educational sessions, stated the research objective, announced the topic of each session, and familiarized them with the principles discussed in each session.
2	50	Under the supervision of the researcher, a psychologist lectured on making proper relationships with adolescents and being present in their lives.
3	60	Under the supervision of the researcher and through a lecture and group discussion, a psychologist determined the rules and limitations and talked about monitoring adolescents' behaviors.
4	60	Under the supervision of the researcher and through a lecture and Q&A, a psychologist explained how adolescents interacted with one another and got influenced by friends.
5	50	Under the supervision of the researcher, a trained health worker lectured on aggression, reasons for aggression, inhibition of aggressive behaviors, etiology, and how to deal with aggressive adolescents.
6	50	This session was hold by a psychologist under the supervision of the researcher, and parenting practices, different parenting styles, importance of parenting skills in preventing aggression, my healthy adolescent, intelligent and effective parenting skills, and adolescents' modeling of their parents were discussed.
7	60	Lecturing on the role of parents as the most important model and that of family meetings in adolescent aggression, a trained health worker held this session under the supervision of the researcher.
8	60	Focusing on promotion of authoritative parenting and reducing authoritarian and permissive parenting styles, this session was held by a trained health worker and a psychologist through a lecture as well as Q&A and group discussion, under the supervision of the researcher.

3, 7, 9, 12, 16, 1, 25, and 26 deal with authoritarian style, and sentences 4, 5, 8, 11, 15, 20, 22, 23, 27, and 30 are related to authoritative parenting style. Next to each statement, there are 5 columns (strongly agree, somewhat agree, somewhat disagree, disagree, strongly disagree) with the score range of 0 to 4. Each parenting style's score is obtained by summing up the scores of the related questions and dividing it into the number of the questions. The validity and reliability of the questionnaire was confirmed by Burray (1991) who used a differential method and found that the authoritarian style had a negative relationship with permissive and rational authoritative styles, and there was no significant relationship between the permissive and rational authoritative styles. Burray (1991) also used the test-retest method to calculate the reliability

and obtained the following results: 0.81, 0.86 and 0.78 for permissive, authoritarian, and authoritative styles, respectively. He also calculated the internal consistency using the Cronbach's alpha formula, and obtained 0.75, 0.85, and 0.82 for permissive, authoritarian, and rational authoritative styles, respectively (27). The questionnaire was completed by the parents of the subjects in the experimental and control groups before and 2 months after the intervention.

Data Analysis

The data were analyzed using the SPSS20 software. To do so, the normality of the data was first assessed by the Smirnov Kolmogorov test. Frequency, mean

Table 2: Comparison of the frequency distribution of primary variables of the study participants in the two groups

Variable	Control group (%)	Experimental group (%)	P value
Child age	14.76±0.49	14.65±0.55	0.28
Parental age	37.58±1.97	38.13±4.94	0.31
Child gender	Female	50 (50)	1.00
	Male	50 (50)	
Parental gender	Female	100 (100)	0.31
	Male	0 (0)	
Mother's education	Illiterate/elementary	37 (37)	0.40
	High school/ diploma	49 (49)	
	Academic	14 (14)	
Father's education	Illiterate/elementary	16 (16)	0.82
	High school/ diploma	57 (57)	
	Academic	27 (27)	
Mother's job	Employee	9 (9)	0.17
	Housewife	91 (91)	
Father's job	Employee	11 (11)	0.21
	Worker	81 (81)	
	Businessman	8 (8)	
Economic status	Poor	31 (31)	0.05
	Moderate	44 (44)	
	Good	25 (25)	
Child number in family	First child	29 (29)	0.68
	Second child	61 (61)	
	Third child	10 (10)	
Number of children	One	1 (1)	0.18
	Two	13 (13)	
	Three	56 (56)	
	Four	30 (30)	
Father-child relationship	Normal	14 (14)	0.78
	Good	53 (53)	
	Very good	31 (31)	
	Excellent	1 (1)	
Mother-child relationship	Normal	12 (12)	0.54
	Good	55 (55)	
	Very good	30 (30)	
	Excellent	4 (4)	
Other family member's relationship with child	Normal	9 (9)	0.28
	Good	48 (48)	
	Very good	42 (42)	
	Excellent	1 (1)	
Tobacco use in family	No	93 (93)	1.00
	Father	7 (7)	

* Chi-square test, ** Independent t-test

and standard deviation indices were used to describe the data, and paired t-test, independent t-test and chi-square test were also used for data analysis. The significance level was considered 0.05 for all the tests.

Results

The demographic and background information of the children and their parents is shown in Table 2. The Chi-square test showed no significant differences between the experimental and control groups in terms of the child's gender, parental gender, mother's education, father's education, mother's job, father's job, economic status, number of children, child number in the family, mother-child relationship, father-child relationship, other family members' relationship with the child, and parental addiction ($P>0.05$). The T-test showed that there was no significant difference between the two groups regarding the child's age and parental age ($P>0.05$).

The results of the independent t-test showed that before the intervention, there was no significant difference between the experimental and control groups in terms of physical aggression ($P=0.98$), verbal aggression ($P=0.62$), anger ($P=0.40$), and hostility ($P=0.40$) and the overall aggression score ($P=0.38$), but after the intervention, the two groups were significantly different in terms of physical

aggression, verbal aggression, anger, and hostility and the overall aggression score ($P<0.05$) (Table 3).

The results of the paired t-test showed that before and after the intervention in the experimental group, there was a significant difference between physical aggression, verbal aggression, anger and hostility and the overall aggression scores ($P<0.05$) (Table 4).

The paired t-test results showed that before and after the intervention in the control group, there was no significant difference between physical aggression, verbal aggression, anger and hostility and the overall aggression score ($P>0.05$) (Table 5).

The results of the independent t-test showed no significant difference between the experimental and control groups in terms of the permissive parenting style ($P=0.18$), authoritative parenting style ($P=0.77$), and authoritarian parenting style ($P=0.88$) and the total parenting style score ($P=0.63$) before the intervention, but a significant difference was found between the two groups in terms of permissive, authoritative, and authoritarian parenting styles and the total parenting style score after the intervention ($P<0.05$) (Table 6).

Discussion

The present study aimed to investigate the effects of

Table 3: Comparison of aggression and total aggression score in the experimental and control groups before and two months after the intervention

Group	Pre-intervention		P value*	Post intervention		*P value
	Experimental	Control		Experimental	Control	
Aggression	mean±SD	mean±SD		mean±SD	mean±SD	
Physical aggression	21.98±3.29	21.97±4.13	0.98	12.63±2.40	21.26±6.18	0.001
Verbal aggression	11.48±2.32	11.66±2.91	0.62	7.77±1.60	11.46±2.91	0.001
Anger	17.03±2.59	16.64±3.83	0.40	10.75±1.60	16.8±3.87	0.001
Hostility	20.02±3.87	19.03±5.80	0.15	11.99±2.12	19.4±5.79	0.001
Overall Aggression score	71.00±11.27	69.30±16.08	0.38	43.14±6.13	68.99±18.49	0.001

* Independent t-test

Table 4: Comparison of aggression and total aggression score before and two months after the intervention in the experimental group

	Experimental group		P value*
	Pre-intervention	Post-intervention	
Physical aggression	21.98±3.29	12.63±2.40	0.001
Verbal aggression	11.84±2.32	7.77±1.60	0.001
Anger	17.03±2.59	10.75±1.60	0.001
Hostility	20.02±3.87	11.99±2.12	0.001
Overall aggression score	71.00±11.27	43.14±6.13	0.001

Table 5: Comparison of aggression and total aggression score before and two months after intervention in control group

	Control group		P value*
	Pre-intervention	Post-intervention	
Physical aggression	21.97±4.13	21.26±6.18	0.35
Verbal aggression	11.64±2.91	11.46±2.91	0.97
Anger	16.64±3.83	16.87±3.87	0.78
Hostility	19.30±5.80	19.04±5.79	0.32
Overall aggression score	69.30±16.08	68.99±18.49	0.54

Table 6: Comparison of parenting styles and the total score before and two months after intervention in the two groups

Group	Pre-intervention		P value*	Post-intervention		P value*
	Experimental	Control		Experimental	Control	
	mean±SD	mean±SD		mean±SD	mean±SD	
Permissive	16.09±4.00	15.22±5.12	0.18	21.09±4.84	15.69±4.69	0.001
Authoritarian	23.96±2.86	24.07±2.56	0.77	12.12±2.77	23.88±2.42	0.001
Authoritative	20.86±4.41	20.95±4.67	0.88	34.20±2.18	20.88±4.67	0.001
Total score	60.91±8.22	60.24±11.38	0.63	67.41±6.05	60.52±10.30	0.001

parenting skills training on adolescent aggression in Abadeh Tashk city, Fars province, in 2018. In this study, parenting intervention resulted in a lower mean aggression score in the experimental group compared to the control group. This finding is consistent with the results of the studies by Muratori et al. (2018) aiming at teaching parenting styles to control adolescent aggressive behaviors in Italy.²⁸ Bhusiri et al. (2018) on the effect of parenting skills training on anger control,²⁹ Cabello et al. (2018) aiming at parental education and aggression control in Spain,³⁰ Moudgil et al. (2017) on parenting style and adolescents' self-confidence as predictors of aggression,³¹ and Sukhodolsky et al. (2016) on educational interventions in parenting practices to control anger and aggression in adolescents in New Haven.³²

The finding is also consistent with the results of some Iranian studies such as the ones carried out by Molaie et al. (2017) aiming at promoting parental education using a cognitive-behavioral approach to control aggression,³³ and Taherzadeh et al. (2017) on the effects of enhancing parenting practices education on aggression and self-efficacy of adolescent female high school students in Nasimshahr city.³⁴

To explain this finding, it could be said that families play a key role in the quality of their children's behavior. Considering that children spend most of their time at home, especially during childhood, if parents do not take care of their behavior in dealing with each other and with their children, or if they try to dictate everything aggressively to manage their affairs, children will imitate the parents' behaviors as the first model in their lives. Such children will get prone to future aggression, as if aggression becomes part of their thinking and they suppose they must act aggressively to deal with their daily affairs, or they will fail. Thus, educating parents on the functions and activities appropriate to the age and developmental stage of their children plays an important role in enhancing parental knowledge and information about the children's developmental norms. Therefore, it is suggested that mothers working in health centers should be provided with proper parenting style classes and courses in short terms to promote and make optimal use of the principles and techniques and get familiar with proper parenting practices.

The results of the present study showed that before the intervention, the mean score of physical aggression

in the experimental group was 21.3±98.29, while it was 12.2±63.40 after the educational intervention, showing a significant decline. In other words, parenting style-focused interventions could lead to decreased adolescent physical aggression. This is consistent with the results of the study by Mirzamani et al. (2016) on the effects of teaching parenting techniques on aggression and self-efficacy of first-grade adolescent girls³⁵ and the study by Zeinali et al. (2016) aiming at investigating the efficacy of parenting skills in reducing adolescent aggression.³⁶ They showed that teaching parenting practices could lead to a decrease in adolescents' physical aggression.

It was indicated in the present study that before the educational intervention, the mean score of verbal aggression in the experimental group was 11.84±2.32, but after the intervention, it was 7.1±77.60 which was significantly reduced. In other words, parenting style interventions could reduce adolescent verbal aggression, and this is consistent with the results of the study by Bahari et al. (2017) which aimed to investigate the effect of parenting style education on reducing verbal aggression in students.³⁷ Bahari found that a one-month educational intervention led to a decrease in verbal aggression of the students.³⁷

The results of the present study showed that before the intervention, the mean score of anger in the experimental group was 17.3±2.59, but after the intervention, it was 10.1±75.60, which was significantly reduced. In other words, parenting style interventions could reduce the adolescents' anger, and this is consistent with the results of the study by Barry et al. (2004) on parenting style education and reduced adolescent aggression in Texas.³⁷ In his study, Barry found that teaching parenting practices could lead to reduced adolescent anger and hostility.³⁸

The present study showed that in the experimental group, the mean hostility score was 20.02±3.87 before the intervention, while it was 11.2±99.12 after the intervention, showing a significant decline. This implies that parenting style interventions can reduce hostility by adolescents, and this is consistent with the results of the study by Murray et al. (2019) on the effect of parenting educational intervention and reduced hostility and aggression in Brazilian adolescents,³⁹ and the study by Spoth et al. (2000) on parenting educational intervention to reduce hostility in adolescents.⁴⁰ The researcher stated that an 8-week

intervention could reduce adolescent hostility and aggression.

The results of the present study showed that before the intervention, the mean score of aggression in the experimental group was 71.11 ± 00.27 , but it was 43.6 ± 14.13 after the intervention, indicating a significant decrease. In other words, parenting-focused interventions could reduce aggression in adolescents, and this is consistent with the results of the study by Maleki et al. (2011) aiming at investigating an educational intervention for anger management in students.⁴¹ It is also consistent with the results of the studies by Ghorban et al. (2011), Dortaj et al. (2010), and Bradbury et al. (2009) on educational intervention to control aggression in students,⁴² educational intervention to control aggression in students,⁴³ and control of anger in adolescents,⁴⁴ respectively. Anger management training is an organized psychological intervention designed to develop anger management skills and reduce the vulnerability of normal individuals or a specific group of clinical staff. It is best suited for individuals with inadequate anger management skills who are affected or susceptible to some physical and mental disorders as a result of repeated arousal and inappropriate expression of anger.

The parenting intervention in this study resulted in a decrease in authoritarian and permissive parenting styles and an increase in authoritative parenting style in the experimental group compared to the control group. This is in line with the results of the studies by Alipour et al (2018), Fletcher et al (2011), Fujiwara et al. (2011), and Sanders et al. (2014) on the effectiveness of educational skills on parenting practices,⁴⁵ the effects of educational interventions on parenting practices,⁴⁶ the effects of educational intervention on parenting styles,⁴⁷ and the positive role of educational interventions on parenting styles,⁴⁸ respectively. In their studies, the researchers found that teaching parents could reduce authoritarian parenting style and increase authoritative one, which can explain the findings of the present study.

In this regard, it can be said that increasing the parents' knowledge and skills through this educational program could help the parents to understand the nature of adolescent behavioral problems and find appropriate ways to behave toward them, learn how to control the adolescents' challenging behaviors, have a more positive attitude toward their developmental process, and eventually, have less stress and worry about the adolescents' conditions. Reduced stress and worry is undoubtedly effective in enhancing authoritative parenting style and reducing authoritarian and permissive practices. Providing a description of adolescents' needs to parents and familiarizing them with the effects of affection, along with teaching them positive and negative reinforcement can enhance the

parental awareness of effective parenting styles.

Weaknesses

Difficult coordination of the training sessions and short-term follow-up of the implemented educational program were the weaknesses of the present research.

Conclusion

In the present study, a parenting style educational intervention resulted in reduced physical aggression, verbal aggression, anger and hostility, and overall aggression in students. Therefore, it is suggested that long term interventions should be implemented aiming at parental control over the students' problems since early childhood.

Acknowledgement

This article was extracted from a master thesis at the School of Health, Shiraz University of Medical Sciences. The author appreciates the Vice-chancellor for Research at Shiraz University of Medical Sciences, as well as the staff working in the schools of Abadeh Tashk and all the people involved in the implementation of this project.

Conflict of Interest: None declared.

References

- 1 ZinatMotlagh F, Ataee M, Jalilian F, MirzaeiAlavijeh M, Aghaei A, KarimzadehShirazi K. Predicting Aggression among Male Adolescents: an Application of the Theory of Planned Behavior. *Health Promot Perspect.* 2013; 3 (2): 269-75.
- 2 Hoaa Kazemi M, Shahabi Nezhad Z. Comparison of the Amount of Time Spent on Computer Games and Aggressive Behavior in Male Middle School Students of Tehran. *J Educ Community Health.* 2016;3 (3):24-29
- 3 Naseria A, Babakhanib N. The effect of life skills training on physical and verbal aggression male delinquent adolescents marginalized in Karaj. *Social and Behavioral Sciences.* 2014; 116: 4875 - 4879.
- 4 Haggerty K P., McGlynn-Wright A., Klima T. Promising parenting programs for reducing adolescent problem behaviors. *J Child Serv.* 2013; 8 (4): 1-17.
- 5 Sigmarisdottir M, Degarmo D S, Forgatch M S, Gudmundsdottir E V. Treatment effectiveness of PMTO for children's behavior problems in Icelandic: Assessing parenting practices in a randomized controlled trial. *Scandinavian Journal of Psychology* 2013; 54: 468 - 476.
- 6 Dehghanpour S, Barmas H, Kiamanesh A. Effect of selffocused parenting on aggressive and stubborn behaviors in six year-old children in Yazd. *European Journal of Experimental Biology* 2013; 3 (2):306 -309.
- 7 Taghdisi M.H, Estebarsari F, Dastoorpour M, Jamshidi E, Jamalzadeh F, Latifi M. The impact of educational

- intervention based on empowerment model in preventing violence against women. *Iran Red Crescent Med J.* 2014; 16 (7): e14432.
- 8 Roberto A.J, Meyer G, Boster F, Roberto, H. Adolescents' decisions about verbal and physical aggression (an application of the theory of reasoned action). *Human Communication Research.* 2003; 29 (1): 135-47.
 - 9 Uludaq O. The Influence of aggression on students' achievement: Evidence from higher education. *Procedia - Social and Behavioral Sciences.* 2013; 89: 954 - 958.
 - 10 Chen X, Wu H, Chen H, Wang L, Cen G. Parenting practices and aggressive behavior in Chinese children. *Parenting: Science and Practice.* 2001; 1 (3):159-184.
 - 11 Shahraki Sanavi F, Navidian A, Rakhshani F, Ansari-Moghaddam A. The effect of education on base the theory of planned behavior toward normal delivery in pregnant women with intention elective cesarean. *Journal of medical hormozgan.* 2012; 17 (6): 531-39.
 - 12 Gremigni P, Damasio B, Borsa J C. Development and validation of a questionnaire to evaluate overt aggression and reactions to peer aggression. *Psychology: Research and Review.* 2013; 26 (2): 311-318.
 - 13 Hsieh I J, Chen YY. Determinants of aggressive behavior: Interactive effects of emotional regulation and inhibitory control. *PLoS ONE* 2017; 12 (4): e0175651.
 - 14 Kummabutr J, Phuphaibul R, Suwonnaroop N, Villarruel A M, Nityasuddhi D. The effect of a parent training program, in conjunction with a life skills training program for school-age children, on children's life skills, and parents' child-rearing skills and perceptions of support for child life skills development. *Pacific Rim International Journal of Nursing Research.* 2013; 17 (1):3-7.
 - 15 Fetting A, Ostrosky M M. Collaborating with parents in reducing children's challenging behaviors: Linking functional assessment to intervention. *Child Development Research.* 2011; 1-10.
 - 16 Burdick C L. Merits, limitations, and modifications of applying Bandura's social learning theory to understanding African American children's exposure to violence. *American International Journal of Social Science.* 2014; 3 (5):183-190.
 - 17 Nejati V. Prevalence of behavioral problems in elementary school students in Tehran province. *Scientific Journal of the Medical Council of the Islamic Republic of Iran.* 2012; 30 (2): 162-168.
 - 18 Yari alghar Z. Study of efficacy of theory of planned behaviour in anger management among male student in primary school-zahedan (Dissertation). *Zahedan Journal of Research in Medical Sciences.* 2011.
 - 19 Blanton RE, Levitt JG, Peterson JR, Fadale D, Sporty ML, Lee M, To D, Mormino EC, Thompson PM, McCracken JT, Toga AW. Gender differences in the left inferior frontal gyrus in normal children. *NeuroImage.* 2004; 22 (2): 626-636.
 - 20 Sayad shirazi M. The relationship between parents' educational styles and youths' formation of religious identity type. Unpublished master's Thesis in counseling. Allameh University; 2004.
 - 21 Alizadeh H, Yari M. The study of parenting styles in families of youths with behavior disorder and families without behavior disorder. *Pajohesh dar Heyte e Kodakan e Estesnai* 2006; 20 (2): 697-704.
 - 22 Bigham H. The relationship between obsessive-compulsive disorder and parenting styles of authority rational democratic and despotic. [Thesis]. Tehran Psychiatry Institute; 2000.
 - 23 Bronte-tinkew J, Moore K A, Carrano J. The father-child relationship parenting styles and adolescent risk behaviors in intact families. *J Famil Issues;* 2006: 27 (6): 850-881.
 - 24 Berg-Nielsen T, Vikan A, Dahl A. Parenting related to child and parental psychopathology: a descriptive review of the literature. *Clin Child Psychol Psychiatry* 2002; 7 (4): 529-552.
 - 25 Sajadi, M, Sarabian S, Sharifi D, P. A Comparison of Adolescent Aggression Based on Parenting Practices and Parent-Child Attachment Styles. *Iranian Journal of Medical Sciences Organization.* 2013:31 (4) ; 298-306.
 - 26 Samani S. Study of Reliability and Validity of the Buss and Perry's Aggression Questionnaire. *IJPCP.* 2008; 13 (4) :359-365.
 - 27 Ahangarezabi A, Sharifidramadi P, Farajzadeh R. The Relationship between parenting style and adolescents aggression in Shabestar City. *Researches of cognitive and behavioral science journal.* 2011; 1:1-8.
 - 28 Muratori P, Levantini V, Manfredi A, Ruglioni L, Lambruschi F. Parent Training Interventions for Children and Adolescents with Aggressive Behavioral Problems. *Parenting: Empirical Advances and Intervention Resources.* 2018; 22 (1): 101-105.
 - 29 Bhusiri P, Phuphaibul R, Suwonnaroop N, Viwatwongkasem C. Effects of Parenting Skills Training Program for Aggressive Behavior Reduction among School-aged Children: A Quasi-Experimental Study. *Pacific Rim International Journal of Nursing Research.* 2018; 22 (4):332-46.
 - 30 Cabello R, Gutiérrez-Cobo MJ, Fernández-Berrocal P. Parental education and aggressive behavior in children: a moderated-mediation model for inhibitory control and gender. *Frontiers in psychology.* 2017; 8:1181.
 - 31 Moudgil R, Moudgil N. Parenting styles and self-esteem as predictors of aggression. *Indian Journal of Health & Wellbeing.* 2017;8 (2): 26-32.
 - 32 Sukhodolsky DG, Smith SD, McCauley SA, Ibrahim K, Piasecka JB. Behavioral interventions for anger, irritability, and aggression in children and adolescents. *Journal of child and adolescent psychopharmacology.* 2016;26 (1):58-64.
 - 33 Molaie M, Shirazi Chaleshtari GH, Omidian M. The Effectiveness of Parent Training Using Cognitive-Behavioral Approach on Reducing Aggression among Secondary School Students. *The 5th National*

- Conference on Sustainable Development in Educational Sciences and Psychology, Social and Cultural Studies, Tehran, Center for Achieving Sustainable Development, Education Center, Mehr Arvand; 2017. https://www.civilica.com/Paper-EPSCONF05-EPSCONF05_169.html
- 34 Taherzadeh, Sh. Effectiveness of Teaching Parenting Practices on Aggression and Self-efficacy of First-grade High School Girls in Nasimshahr. *Quarterly Journal of New Ideas in Psychology*. 2017;1 (3): 75-86.
 - 35 Mirzamani, Seyed Mahmoud and Shahin Taherzadeh. The Effect of Teaching Parenting Techniques on Aggression and Self-Efficacy of First-Grade Adolescent Girls, Sixth Congress of the Iranian Psychological Association, Tehran, Iran Psychology Association, 2016, https://www.civilica.com/Paper-CIPSA06 -CIPSA06_106.html
 - 36 Zeinali S, Khanjani Z, Sohrabi F. Investigate the Efficacy of Parenting Skill in Reducing Adolescent Conduct Disorder and Aggression. *j.health*. 2016; 6 (5) :565-574
 - 37 Bahari A, Jalilian M, Sharifirad G, Bazani M. The impact of educational intervention on aggression level among high school students in Ilam-Iran. *International Journal of Pediatrics*. 2017;5 (1):4239-49.
 - 38 Barry TD, Lochman JE. Aggression in adolescents: Strategies for parents and educators. *Helping children at home and school II: Handouts for families and educators*. 2004:5-8.
 - 39 Murray J, Santos IS, Bertoldi AD, Murray L, Arteche A, Tovo-Rodrigues L, Cruz S, Anselmi L, Martins R, Altafim E, Soares TB. The effects of two early parenting interventions on child aggression and risk for violence in Brazil (The PIÁ Trial): protocol for a randomised controlled trial. *Trials*. 2019 ;20 (1):253.
 - 40 Spoth RL, Redmond C, Shin C. Reducing adolescents' aggressive and hostile behaviors: Randomized trial effects of a brief family intervention 4 years past baseline. *Archives of pediatrics & adolescent medicine*. 2000;154 (12):1248-57.
 - 41 Maleki S, Fallahi Khoshknab M, Rahgooi A, Rahgozar M. The effect of anger management training in groups on aggression of 12-15 years old male students. *IJN*. 2011; 24 (69) :26-35
 - 42 Ghorban Shirodi S, Khalatbari J, Todar SR, Moballeghi N, Salehi M. The Comparison of effectiveness of training methods of self-assertion and problem solving on adjustment and aggression of first year high school girls. *New Finding in Psychology* 2011; 5: 5-24.
 - 43 Dortaj F, Masaebi A, Asadzadeh H. The effect of anger management training on aggression and social adjustment of 12- 15 years old male students. *Journal of Applied Psychology* 2010; 3: 62-72.
 - 44 Bradbury KE, Clark I. Cognitive behavioral therapy for anger management: effectiveness in adult mental health services. *Behavioral and Cognitive Psychotherapy* 2009; 35: 201-208.
 - 45 Alipour F, Aliakbari Dehkordi M, Barghi Irani Z. The effectiveness of safe parenting skills training program on parenting practices of mothers of children with signs of internalizing and externalizing behavior problems Lahijan city. *JOEC*. 2018; 18 (2) :123-134
 - 46 Fletcher R, Freeman E, Matthey S. The impact of behavioural parent training on fathers' parenting: a meta-analysis of the Triple- P Positive Parenting Program. *Fathering: A journal of theory, research & practice about men as fathers*. 2011;9 (3): 220-229.
 - 47 Fujiwara T, Kato N, Sanders MR. Effectiveness of Group Positive Parenting Program (Triple P) in changing child behavior, parenting style, and parental adjustment: An intervention study in Japan. *Journal of Child and Family Studies*. 2011;20 (6):804-13.
 - 48 Sanders MR, Kirby JN, Tellegen CL, Day JJ. The Triple P-Positive Parenting Program: A systematic review and meta-analysis of a multi-level system of parenting support. *Clinical psychology review*. 2014;34 (4):337-57.