

Relationship between Family Functioning and Aggression in High School Students

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Received: 04/05/2017; Accepted: 09/11/2017

Abstract

Introduction: Aggression is a major trait that occurs in adolescence. Family is the first institution in which a person joins, therefore family functioning is a significant factors in the development of aggressive behaviors in adolescents.

Objective: The aim of this study was to determine the relationship between family functioning and aggression in students aged 14-18 years in Rasht.

Materials and Methods: The present research is a cross-sectional analytical study. The research population consisted of 500 students aged between 14 and 18 years, studying in the first to the third grade of high school in public and non-public schools in Districts 1 and 2 of Rasht, who were selected using random cluster sampling. Data were collected using demographic questionnaires, the Buss-Perry Aggression Questionnaire, Family Assessment Device (FAD) Scale, and analyzed by descriptive and inferential statistics including Kruskal Wallis, Mann Whitney, and Spearman correlation test.

Results: The results showed that there was a significant relationship between family functioning score and total aggression score ($P= 0.0001$). There was also a significant relationship between aggression and role, control of behavior, emotional response and emotional involvement ($P= 0.001$) as well as communication dimensions ($P= 0.05$). Also, there was a significant relationship between aggression and having a separate room ($P= 0.011$), father's education ($P= 0/007$), father's occupation ($p = 0.04$), and family income status ($p = 0.041$).

Conclusion: The findings of this research showed that children of families functioning appropriately are more likely to develop aggression than those in families functioning properly.

Keywords: Aggression, Family, Adolescent

Please cite this article as: Dabaghi S, Sheikholeslami F, Mitra Chehrzad M, Kazem Nezhad Leyli E; Relationship between family functioning and aggression in high school students. J Holist Nurs Midwifery. 2017;27(4):35-43

Introduction

Adolescence is one of the most sensitive and important age groups and adolescents are one of the most vulnerable social groups [1]. The adolescence stage is the fourth period of human development that begins at the age of 13 and continues to 18-20 years [2]. According to 2013 statistics, adolescents account for more than one fifth of the world's total population, and 84% of them live in developing societies. The 10-19 age group accounts for more than 20% of Iran's population. Adolescents aged 15-19 years old account for 17.8% of the Guilan's population [3]. Adolescence is one of the most critical periods of human life. In this period, emotional balance and non-emotional balance, especially the balance between emotion and intellect, understanding personal value, self-awareness, choosing real goals in life, emotional independence from family, maintaining psychological and emotional balance of oneself against environmental stressors, establishing healthy relationships with others, acquisition of social skills necessary for friendship, recognition of a healthy and effective life and the procedure adopted to attain them are among the most important needs of adolescents [4, 5].

In this period, the adolescents still do not have enough experience, on one hand, and on the other hand, the puberty crisis places him/her in a complex and vague situation, in which sometimes a sensitive and intense excitement arouses. As a result of this, pruritus, aggression, depression and anxiety can be seen in most adolescents. In addition, this period is associated with rapid physiological changes, achievement of abstract thinking, mood imbalance and instability, concerns about the future, attempts made to gain approval from others, especially peers, dreaming and imagination. All of these factors, in

addition to help in achieving normal growth in the adolescents, can also cause behavioral, cognitive, and emotional problems in them [6].

Aggression is a major adolescence-related problem. Aggressive behaviors include physical types, verbal types, combination of the both (physical +verbal), and social types (non-compliance with the rules) [7, 8]. Extending the aggression scope to social levels results in major social harm. According to previous studies, the incidence of aggression ranges from 8% to 20% among adolescents [9, 10]. The consequences of such behaviors for adolescents and young people include a negative image among peers and teachers, peer exclusion, academic failure, drug abuse and delinquency [4].

Biological and hereditary factors, environmental learning and cognitive processing on the one hand, and self-stimulating factors on the other, in other words, individual and biological factors (gender, age, personality type, and hormones), environmental factors (failure, aggressive patterns, etc.) and socioeconomic and family-related causes are the factors affecting the development of aggression [11]. Some factors such as family conflicts, marriage failure, and lack of close relations with parents, difficult regulation and inadequate supervision also increase the risk of behavioral problems and aggression in children and adolescents [7].

In fact, deviant behaviors including aggression develop when the individual-community connection becomes weak or disconnected. In the meantime, the family and society are two important factors in creating such a connection. The family institution is a major socialization factor in childhood, and it is clear that only a few adolescents may easily accept their

parents' perceptions, so the proper and incorrect supervision and functioning of the family and parents play an important role in the process of adolescents' socialization and their normal or abnormal growth. Parental relationships and family functioning are also related to adolescent behavioral development [12]. The results of the previous studies showed that there is a significant relationship between adolescent mental health status and general performance of the family in such a way that the weaker the general performance of the family is, the more mental disorders are observed in adolescents [13].

Family functioning includes problem solving, communication, roles, emotional response, emotional involvement and control of behavior. Problem solving is indicative of the family's ability to solve the problem and refers to the effective exchange of information in the family. Roles refer to the efficiency of practices used by the family to distribute and perform tasks. Emotional response refers to the strategies adopted by the family members to initiate proper emotional responses, whether positive or negative feelings. Emotional involvement also refers to the quality of interest, attention, and investment of family members towards each other. Finally, control of behavior refers to standards and behavioral freedoms in the family atmosphere [14]. The results of the Javedan's research have shown that family emotional atmosphere, life skills and self-review are associated with the incidence of aggression in adolescents in such a way that parents who have good interactions and relationships with their children are likely to have children who have appropriate and calm behavior and less likely resort to aggressive behaviors [15]. Many studies have emphasized the importance of the role of peer group in the development of aggressive behaviors; for example,

Schnurr & Lohman reported that the peer group had the most impact on aggressive behaviors [16]. Considering the foregoing, the present study aimed to determine the relationship between family functioning and aggression among students.

Materials and Methods

This research is an analytical cross-sectional study, the setting of which includes all secondary schools in the 1st and 2nd districts of Rasht city. The study population consists of 26956 students aged 14-18 years in Rasht in the academic year of 2014-2015. The sample size was estimated at 506 according to the findings of Amanian et al.'s study on the correlation between role play of family functioning fields and aggression in adolescents ($r = -0.176$) and power: 80% [17]. The samples were selected using random cluster sampling after receiving the approval of the Ethics Committee of Guilan University of Medical Sciences and presenting a letter of introduction to the educational centers of Rasht. In this method, first, the population was divided into 12 classes according to the educational areas of each district (1 and 2), the type of school (public and non-public), gender (girls and boys), and the grades (first, second and third). Subsequently, based on the population fraction, the population of 12 classes was calculated in such way that the number of female and male students of public and non-public schools in districts 1 and 2 was divided by the total number of students and multiplied by the estimated number of participants (506). Of these, the number of male and female students that should be selected from public and non-public schools in each district was estimated. In the next stage, the obtained number was divided by the average number of students of public and non-public schools in each district, and thus the number of classes was calculated. Finally, the number of

selected students of public and non-public schools in each district was divided by the number of classes. In the next stage, all classes were coded according to their grades, field of study, name and type of schools and Districts 1 and 2. A total of 42 classes were later selected based on random sampling method and the class was considered as a cluster.

The inclusion criteria included studying at one of the first to third grades of high school, absence of acute and chronic diseases, lack of specific medication, and the completion of the informed consent form by parents and students. The data collection was performed using a three-part instrument consisting of a demographic questionnaire (age, gender, grade, field of study, parental occupation, parental education, number of children, having separate room, family income), Buss and Perry aggression questionnaire, and family assessment devise (FAD) questionnaire. The Buss and Perry Aggression Questionnaire is a 29-item questionnaire with Likert-type scale. The questionnaire measures four aspects of aggression (physical, verbal, anger, hostility) and overall aggression rate. Question were answered on the 1 to 5 scale, (From extremely uncharacteristic to extremely characteristic).

The total score of the questionnaire was obtained by summing the total score of questions ranging from 29 to 145. A higher score is indicative of more aggression score. Also, the physical aggression score was obtained by summing the total score of questions ranging from 9 and 45. The verbal aggression score was obtained from the total score of questions and the range of verbal aggression is between 5 and 25. Anger score is calculated from the total score of questions and the range of anger score is between 7 and 35. The hostility score was obtained from the total score of

the questions and the range of the hostility score is between 8 and 40. The score for questions 24 and 29 was calculated inversely. The higher score on these scales means that physical, verbal, aggression; anger and hostility rates are higher. This questionnaire has been translated by Sanaei Zaker, its validity and reliability has been obtained by Samani (2007) and its scientific validity has been confirmed [18].

FAD questionnaire was used to measure family functioning dimension. This 60-items instrument evaluates family functioning dimensions (problem solving, relationships, roles, emotional response, emotional involvement, control of behavior) and general family performance. It contains 7 subscales of Four-point Likert scale from 1-4 (strongly agree to strongly disagree). Everyone over the age of 12 was able to answer questions. All answers of each subscale are summed up and divided by the number of items responded on that scale. If more than 40% of the items in each subscale are left unanswered, the scale is unreliable and the relevant dimension will be deleted. There is a cut-off point for each dimension. If the resulting number is smaller than the cut-off point, the family functioning is appropriate at that dimension, and if the resulting number is larger or equal to the cut-off point, then the family functioning is uncondusive in that dimension. This questionnaire is a self-report measurement instrument developed by Epstein, Ballin and Bishop in 1983 based on the McMaster Model. Its validity and reliability were confirmed by Yousefi in Iran [19]. The collected data were analyzed using descriptive and inferential statistics in SPSS ver. 21. In the descriptive statistics section (frequency, percentage, mean, standard deviation and median), and Kruskal Wallis test, Mann-Whitney test and Spearman correlation test

were used as inferential statistics to analyze the hypotheses.

Results

Out of 506 distributed questionnaires, six individuals did not respond to the main variables and were excluded from the study. So, 500 individuals participated in this study as the research sample. The results of the research show that 46.8% (234 individuals) were high school first year students, 51.6% (258) were girls, 95.3% (465 people) lived with parents and 48.2% (233 people) had an income between 300 and 800\$. None of them experienced any history of taking specific medication. Also, majority of them had a proper performance in the problem-solving dimension and poor performance in role,

control of behavior emotional response, emotional involvement, and communication dimensions. Also, 98% of families had inappropriate general performance (Table 1).

In the present study, the total aggression score was 89.87. Spearman correlation test was used to investigate the correlation between rating variables of family functioning, dimensions and aggression and the results showed that there was a significant relationship between role, control of behavior, emotional response, emotional involvement, communication and aggression. Also, there was a statistically significant relationship between aggression score and the general performance of the family ($p=0.0001$).

Table 1: Frequency distribution of subjects based on the mean score and family functioning status and its dimensions (500 people)

Dimensions		N (%)	Mean \pm SD	Median
Problem solving	Inappropriate	99 (19.8)	1.96 \pm 0.4	2
	Appropriate	401 (80.2)		
Role	Inappropriate	354 (70.8)	2.43 \pm 0.33	2.44
	Appropriate	146 (29.2)		
Control of behavior	Inappropriate	491 (98.2)	2.68 \pm 0.31	2.7
	Appropriate	9 (1.8)		
Emotional response	Inappropriate	421 (84.2)	2.48 \pm 0.3	2.5
	Appropriate	79 (15.8)		
Emotional involvement	Inappropriate	428 (85.6)	2.54 \pm 0.36	2.56
	Appropriate	72 (14.4)		
Communication	Inappropriate	386 (77.2)	2.38 \pm 0.32	2.38
	Appropriate	114 (22.8)		
Overall performance	Inappropriate	490 (98)	2.49 \pm 0.2	2.5
	Appropriate	10 (2)		

Table 2: Correlation between aggression score and family functioning based on each dimensions

Dimensions of family functioning	Spearman correlation coefficient	
	r	Sig.
Problem solving	-0.058	0.198
Role	0.303	0.0001
Control of behavior	0.292	0.0001
Emotional response	0.174	0.0001
Emotional involvement	0.249	0.0001
Communication	0.124	0.005
Overall performance	0.420	0.0001

Table 3: Correlation between aggression score and qualitative demographic variables of subjects

Variable	Aggression score					
	Number	Mean	SD	Media	Sig.	
Father's level of education	Illiterate	4	93.25	13.43	94.5	0.007**
	Under the diploma	84	85.98	18.77	84	
	Diploma	196	88.29	16.74	89.5	
	Associate and bachlour degrees	123	92.54	17.07	91	
	Above bachlour degree	85	94.15	17.53	95	
Father's job	Employee	245	22.2	83.16	92	0.04**
	Worker	17	81.41	19.82	82	
	Self-employed	207	87.83	18.13	88	
	Unemployed	4	91	20.22	93	
	Farmer	8	89.88	13.05	89.5	
	Retired	6	85	13.33	86.5	
Family income status	Under 150\$	43	88	18.46	84	0.041**
	150 to 300\$	148	86.92	19.68	86	
	300 to 800\$	233	92.03	16.08	92	
	More than 800\$	59	90.59	16.49	91	
Having a separate room	Yes	403	90.6	17.5	91	0.06*
	No	97	86.87	17.45	87	

* Mann-Whitney U test

** Kruskal–Wallis test

However, there was no statistically significant relationship between aggression and problem solving dimension (Table 2). Also, the results of Kruskal-Wallis test and Mann-Whitney on the relationship between aggression with demographic variables showed that there was a significant correlation between aggression with having a separate room ($p = 0.011$), father's education ($p = 0.007$), father's occupation ($p = 0.04$), and family income status ($p = 0.041$) (Table 3).

Discussion

The findings of this study indicate high levels of aggression among students. The results of studies on the rate of aggression among adolescents in Yasuj city showed a mean total score of 69.7 for aggression [4]. The mean score of aggression in adolescents was reported to be 80.18 in another study conducted in Delijan city [20]. The high prevalence of aggression in adolescents may be due to conflicts in choices, lack of fulfillment adolescent demands, and lack of adequate control of emotions [11].

As the findings of the present study indicate, there is a significant relationship between family functioning and aggression among students. In other words, the risk of aggressive behavior in adolescents is higher if the family functioning is poor. In this regard, Amanian showed in his study that there is a positive and significant relationship between family functioning and student's level of aggression [17]. In another study, Henneberger showed that there was a relationship between the incidence of aggression and delinquency with parental supervision [21]. Family role is one of the factors predicting the development of adolescent aggression. The family can play a significant role in reducing and preventing aggressive behaviors in adolescents by identifying emotional-social harms and nurturing

methods. Among these is positive relationship of couples, parenting methods, and parenting styles [11]. Aggression is one of the behavioral characteristics of adolescence, which is increased by various factors such as family. Basically, aggression is a public of severe arousal and excitement while faced with inappropriate environmental and emotional stimuli that is experienced by all adolescents in some way. In highly uncondusive family environments, these arousal public s are likely to be more severe and the risk of aggression is higher. The more family functioning is associated with problems (in control of behavior, role playing, communication dimensions, etc.), the less needs such as freedom, competence and communication, as well as psychological needs, are satisfied; therefore, parents with their family-based performance have an important role in satisfying the needs of their adolescents [22]. The results of the present study showed that there is a significant relationship between the incidence of aggression and father's level of education and occupation, family income status and having a separate room. In this regard, Sijtsema's research showed that there is a statistically significant relationship between aggression and socioeconomic status [23]. Jalilian also showed that there is a significant relationship between behavioral disorders in students with father's level of education and occupation [24]. Each family has its unique characteristics, if investigated; many behavioral problems can be improved during adolescence. The public s of excitement are likely to be more severe and the risk of aggressive consequences is higher in unsuitable family settings, such as inappropriate income status, lack of proper employment, and lack of parental education, etc. Considering that one of the factors, mood changes in adolescent girls, is associated with their menstruation, it is

suggested that this variable should be considered on adolescent girls in later studies. Considering that the two main variables of the research have been examined using the questionnaire, all the facts may not be reflected in the responses. This is considered to be the limitation of the present research.

Acknowledgments

This research was funded by the Social Determinants of Health Research Center (SDHRC) of Guilan University of Medical Sciences and approved by the Code 2930506211 of the Vice Chancellor of Research and Technology of Guilan University of Medical Sciences. Hereby, the authors appreciate the authorities of Education Department of Rasht city and Social Determinants of Health Research Center of Guilan University of Medical Sciences and all those who helped the researcher in this research.

Conflict of interest

No conflict of interest has been declared by the authors.

Author contributions

All authors have agreed on the final version and meet at least one of the following criteria [recommended by the ICMJE

(<http://www.icmje.org/recommendations/>):

-Substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;

-Drafting the article or revising it critically for important intellectual content

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