

## Knowledge and Practice of Junior and Senior High School Students Regarding Violent Behaviors in Isfahan Province

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**Date of Submission:** May 28, 2014

**Date of Acceptance:** Nov 15, 2014

**How to cite this article:** Omidi R, Heidari K, Ramezani A, Amini M, Kamrooz S, Farajzadegan Z, *et al.* Knowledge and Practice of Junior and Senior High School Students Regarding Violent Behaviors in Isfahan Province. *Int J Prev Med* 2014;Special issue 2:S126-32.

### ABSTRACT

**Background:** Considering the importance of anger, aggression, violence and other misbehaviours in schoolchildren education, the present study was conducted to evaluate the knowledge and practice of students in Isfahan province regarding violence, in order to figure out the required interventions for violence-reduction.

**Methods:** In a survey during 2008-2009, 5500 junior and senior high school students of Isfahan province were assessed in a multistage sampling process to determine their level of knowledge about various types of violent behaviors, causes of violence, its consequences, and preventive behaviors. Validity and reliability of the data collection tool (questionnaire) were assessed.

**Results:** The study revealed that the mean scores of violent behaviors knowledge, knowledge of violent behavior outcomes, and knowledge of violence preventive behaviors, were  $6.6 \pm 2.1$ ,  $5.5 \pm 1.9$ , and  $4.7 \pm 1.3$ , respectively. Sources of violent behaviors in 92% of urban students and 89% of rural students were personal reasons and family behaviors, and 85% of urban and 88% of rural students considered mass media and computer games blameworthy, and the differences were statistically significant in all cases ( $P < 0.0001$ ). In terms of practice, overall, 69.7% of girls and 84.2% of boys had violent behaviors. Physical and verbal violence were 31.3% and 40.7% in girls, and 66% and 52.8% in boys, respectively (intersexes  $P$  values were  $P < 0.001$  and  $P = 0.7$  respectively, and intra-sex  $P$  value was  $P < 0.0001$ ).

**Conclusions:** Results showed that girls and city dwellers were more aware of recognizing violent behaviors, outcomes, and causes, compared with boys and villagers, and in terms of general practice, violence was observed among boys more than girls. Further complementary studies in this area seem required.

**Keywords:** Knowledge, practice, student, violence

### INTRODUCTION

Like physical needs, emotional needs of children and adolescents are highly important, and not satisfying them can

lead to a variety of psychological phenomena, particularly violence and aggression.

There are several factors leading to violence in school-age children including psychological, biological, environmental, and circumstantial factors. Aggressive and anti-social behaviors initially appear inside the family, resulting from parents' punishment and coercive interactions, lack of discipline, and conflicts in educational approaches; hence, violent and aggressive behaviors extend to the school environment. This leads to students' disinterest in learning and ultimately their academic failure; teachers' attitude toward these children and lack of appropriate interaction with their peers, push these children toward membership in vandal groups. Usually, children cast away to the peer deviant groups, get reinforcements, leading them to continue their membership and deviant actions.

Today in most societies, especially in the west, students' violence has found a new meaning. Violence occurs in 9–54% of school-age children worldwide.<sup>[1]</sup> According to the American Center for Disease Control statistics, violence is the second leading cause of 10- to 24-year-old's death. In 1995, a quarter of American students carried guns into the school.<sup>[2]</sup> Based on another report, 30% of American students were involved in or victims of violence. In another statistics, 7% of 12- to 18-year-old children in America attempted violence, and it was higher in public and rural schools.<sup>[1]</sup>

In a study in Iran, prevalence of various aggressive behaviors, including physical and verbal aggressions as well as anger and enmity among students varied from 37.8% to 45.3%, which was very high, compared to students' physical and behavioral disorders.<sup>[3]</sup>

In another study on junior and senior students in Iran, 82.6% of junior and 87.9% of senior students had a history of brawl with others during the past year. In addition, 23.2% of junior and 20.6% of senior students had a history of carrying a weapon such as knife, chain, club, etc., in or out of the school environment.<sup>[4]</sup> In a study in Tehran in 2004, verbal violence of students against each other as well as violence of school teachers and officials toward students was significantly prevalent. Violence had more variety in boys schools compared with girls schools, and among boys, violence often took verbal and physical forms.<sup>[5]</sup>

In a study in Iran, 87.5% of students had video games at home, and for 72.1% video and computer games were part of their weekly entertainment programs; while only 41.5% of parents were aware of the contents of those games. In this study, higher socioeconomic levels of families were associated with more violent games, and students' aggression increased the longer they played these games. Poorer academic practice of students following these games was also observed. In this study, winning and high excitement were boys' reasons for playing aggressive computer games.<sup>[3]</sup> However, children are not equally affected by the television violence. Children exposed to violence at home and in the community are more exposed to harm by watching violent television programs.<sup>[1]</sup>

Violence affects all health aspects of student. Physical, mental, cognitive, and emotional growth disorders are among violence consequences. Violence leads to poor academic performance and symptoms of anxiety, depression, and reduced self-esteem in students. In children exposed to severe or chronic violence who are involved with posttraumatic stress disorder, concentration and attention disorder, autonomous body systems disorder (such as headache, abdominal pain, and insomnia), and crime simulation occur during their activity or play.<sup>[1]</sup>

At school and society levels, violence causes chaos and insecurity in students and their friends. Anti-malignity in childhood is followed by higher probabilities of crime in the second decade of life and academic dropout.<sup>[1]</sup> Overall, violence has many negative social, economic, and cultural consequences, and deprives student of growing and actualizing opportunities. Direct and indirect wasting of expenses are also among consequences of students' violence.

Given all the above, violence is a risky behavior for students, associated with not only vast physical impairments and mental consequences, but also negative impacts on students' mates, peers, parents and school officials, with more extended consequences for the family and society. Thus, preventive programs are essential, before aggressive, violent, and antisocial behaviors intensify. As the first step in any intervention is assessment of the status quo, the present study was designed to assess the levels of knowledge and practice of students regarding violence in Isfahan province, in order to figure out the required interventions for reducing

students' violent behaviors, and provide teachers and parents with necessary information on children and adolescents' violent behaviors, so they can contribute to resolving this problem. Hence, results of this study can be applicable by teachers and officials in interventional programs, and trigger other researches in this area, including assessing the effects of interventions on prevention of violent behaviors. It is expected that results of this study can provide appropriate interventional strategies, in order to enhance knowledge and improve practice of students in preventing violent behaviors.

## METHODS

This was a survey study conducted in Isfahan province during 2008–2009. The statistical population was students living in Isfahan province, and the target population comprised junior and senior high school students, out of whom 5500 were selected. The sample size was estimated with confidence coefficient of 95%,  $P = 13.6$ , and  $d = 0.36$ . Samples were selected using multistage random sampling technique.

In the first step, all the towns of the province were assumed as clusters, except for Kashan and Aran and Bidgel that were under the coverage of Kashan University of Medical Sciences. Next, junior and senior student populations of every town were calculated as categories; thus, sample share of each town was determined as a cluster. Then, urban to rural ratio of the selected sample was calculated in each cluster and number of samples was determined in each level of junior and senior high school, in urban and rural areas, for each initial cluster.

A list of schools in each zone of the towns was found, and a number of them were randomly-selected. Total number of samples in each town was divided into the number of selected schools in the rural or urban areas to find the number of samples in each school. Finally, using the list of students and table of random numbers, students were determined and questioned. The study was conducted during 2008–2009, and sampling was performed by the questioner with permission of education department, in junior and senior schools across the above-mentioned zones of Isfahan province.

Data were collected using a researcher-made questionnaire, which contained sections on

knowledge, practice, background questions, and influential factors, in addition to demographic and social variables. The final questionnaire included 34 items, including 5 items on knowledge, 16 on the practice, and 13 background questions, and for scoring, true-false, review list, Likert, and repeat action scales were used. Questions were prepared after reviewing the literature and interviews with experts. Afterward, content validity was confirmed by an expert panel comprising professionals in social medicine, psychology, public health, police force, statistics, and school health. After the content and face validity confirmation, the questionnaire was issued to 30 students and re-evaluated by the expert panel. For the reliability assessment, Cronbach's alpha coefficient was applied, which was calculated 80% for the whole questionnaire.

Experienced questioners were selected from school health experts in each town. For uniformity of data and to control the confounding variables, 50 questioners were coordinately trained in an 8-h workshop. After that, they attended the selected schools and explained the necessary items about completing the questionnaires to the selected samples. Self-administered questionnaires were completed by the students, and any ambiguity was resolved by the questioners.

After collecting the completed questionnaires by the questioners, they were delivered to the observers in the towns (22 observers in 20 towns) for quality control (count control, initial review regarding the students' answers). Two provincial observers monitored the questioning process in 10% of randomly-selected towns. After collection and quality control, observers in towns delivered the questionnaires to the program executers, and they were coded and delivered to computer department for data entry. For this step, Epi6 software was used; so the data were checked frequently by specific defined checks, the operator noted any contradiction during the data entry, and then the problems were resolved by the executers' assistance.

After the data entry was completed, they were analyzed by the SPSS version 15 software (SPSS Inc, Chicago, IL) using central tendency and dispersion, as well as Mann–Whitney, Kruskal–Wallis, Chi-square, ANOVA, *t*-test, and Spearman logistic regression tests.

## RESULTS

A total of 5500 junior and senior high school students were questioned, of whom, 2739 (49.8%) were female and 2761 (50.5%) were male; 11% (600) were from rural and the remaining 4900 from urban areas.

The students' mean age was  $14.5 \pm 1.7$  years, ranging from 11 to 20. The mean age difference between girls and boys was insignificant, but the mean age of students from urban areas was nearly 5 months higher than the ones from rural areas, which was considered significant ( $P < 0.0001$ ).

Status of parents' education level revealed that 52.7% of mothers and 46.6% of fathers of students had elementary and junior high school education, and in terms of occupation, 88.1% of mothers were housewives and 6.9% were civil servants. Among fathers, 58.4% were self-employed and 25.7% were civil servants.

Violent behaviors score ranged from 0 to 9, with mean score of  $6.6 \pm 2.1$  for all the samples. Comparison of the demographic variables showed that girls' knowledge of violence was significantly higher than that of boys.

In this area, knowledge slightly increases with increasing age, which is significant ( $P < 0.0001$  and correlation coefficient = 0.158). Data analysis showed that knowledge of violent behaviors in urban areas is much higher than in rural areas.

There were nine questions in this area, hence overall knowledge score ranged from 0 to 9, and mean score in this area was  $5.5 \pm 2$ . Given the knowledge question types, questions in this area were divided into two groups; two main causes of violent behaviors include: 1 - personal reasons and family behaviors, and 2 - programs in media, especially radio and television, satellite networks and computer programs. The causes of violence were asked of the students via the two mentioned questions; 92% of them mentioned the first and 85.3% the second.

However, the difference in knowledge of causes of violent behaviors between the students from urban and rural areas was insignificant ( $P = 0.07$ ). In this area, the difference between girls and boys was also insignificant, and age did not affect the students' knowledge as well.

Generally, consequences of violent behaviors can be divided into two groups: Social-physical consequences, including physical harm and dissatisfaction with being distant from people and

society, and mental consequences, including: Fear, anxiety, and depression.

The overall score of violence ranged from 0 to 8, with the mean of  $5.5 \pm 1.9$ . Knowledge of girls in this area was higher than boys (mean knowledge of girls was 5.763 and of boys 5.161, respectively). Mean knowledge of students from urban areas was significantly higher than that of rural areas ( $P < 0.0001$ ) (mean knowledge of students from urban and rural areas was 5.509 and 5.067, respectively).

It seems that age is also involved in knowledge in this area, since the knowledge score regarding the consequences of violent behaviors significantly increases with increasing age ( $P < 0.001$ ). Spearman test correlation coefficient was found 0.247, indicating poor to moderate, in line correlation.

There were six questions in this area, with scores ranging from 0 to 6, and mean score of  $4.7 \pm 1.3$ . The mean knowledge of girls in this area was higher than boys, as it was in the previous areas, and the difference was statistically significant ( $P < 0.0001$ ).

However, there was no difference in knowledge of preventive behaviors between the students from rural and urban areas.

Students' practice in relation to the violence attempt is described below.

Overall, the incidence of violent behaviors was 69.7% in girls and 84.2% in boys ( $P < 0.0001$ ). Tables 1 and 2 present the practices in different areas with distinction of gender and place of residence.

The mean age of students with distinction of using or not using physical and instrumental violence was 14.59 (confidence interval [CI] = 14.53–14.66, 95%) and 14.45 (CI = 13.39–14.52, 95%), respectively ( $P < 0.0001$ ).

Multivariate analysis using logistic regression model with adjustment for confounding variables showed that the level of violence expression in boys was 2.3 times more than girls (odds ratio [OR] = 2/3, CI 95% = 2.03–2.64) and the physical violence in boys was 4.2 times more than girls (OR = 4.27, CI 95% = 3.81–4.78). The physical violence increased by nearly 10% for every 1-year age increase (OR = 1.1, CI 95% = 1.04–1.16). The mean age of those with verbal violence was significantly higher than those without (14.47, CI 95% = 14.61–14.75 and 14.31, CI 95% = 14.23–

**Table 1:** Violence practice in different areas with distinction of gender

Violent practice area	Number (%)			
	Verbal violence	Physical violence and use of instruments	Psychological violence	Carrying instruments
Gender				
Female	1087 (40.8)	857 (31.3)	1321 (78.2)	75 (2.8)
Male	1398 (52.8)	1825 (66)	1457 (52.8)	455 (17.2)
<i>P</i>	<0.001	<0.001	<0.001	<0.001

**Table 2:** Violence practice in different areas with distinction of place of residence

Violent practice area	Number (%)		
	Verbal violence	Psychological violence	Carrying instruments
Place of residence			
City	2245 (47.5)	2446 (50.2)	482 (10.2)
Village	240 (40.7)	332 (55.3)	48 (8.2)
<i>P</i>	<0.002	<0.0001	<0.13

14.39 respectively,  $P < 0.0001$ ). Nevertheless, logistic regression analysis showed that verbal violence increases by nearly 12% for every 1-year age increase (OR = 1.12, CI 95% =1.06–1.18). This level of verbal violence in boys was 1.66 times that in girls (OR = 1.66, CI 95% =1.49–1.85), and in students from urban areas 1.21 times more than that of rural areas. However, in the multivariate analysis, academic year had no effect on the incidence of verbal violence.

In multivariate analysis with adjustment for effects of confounding variables, it was found that psychological violence in boys was 1.19 times that in girls (OR = 1.19, CI 95% =1.07–1.33). However, urban life had a protective role against psychological violence and sense of insecurity (OR = 0.81, CI 95% =0.69–0.97).

## DISCUSSION

The study results revealed that knowledge of violent behaviors was significantly higher in girls than in boys, knowledge as well as in students from urban areas compared with that of rural areas. High level of culture was the positive aspect of this knowledge and witnessing cases of violence was the negative aspect.

In this study, two sources had been proposed for violent behaviors of students: (a) Personal reasons

and family behaviors, and (b) behaviors acquired from the mass media and computer programs.

In the cities, causes of personal violence and family behaviors had higher frequency (92% in students from urban and 89% in that of rural areas), while in rural areas, compared to urban areas, media, satellites and computer programs were mentioned as the causes of violence (85% in students from urban and 88% in that of rural areas).

Visual reinforcers of violence in students, such as television and other media, violent video and computer games and internet, have important roles in providing children with aggressive and violent models more than ever before. The most important, ever-present source of visual violence for children is violence on television, which had a direct relationship with children’s violent behaviors in 3500 studies, with exception of 18 cases.

Although television violence does not have the same impact as real violence, most researchers believe that watching violence leads to incuriosity about the concept of violent behavior.<sup>[1]</sup>

In the area of knowledge of consequences of violence, girls were more knowledgeable than boys, showing that family plays an important and symbolic role in upbringing of children, since in our society girls spend more time with the family; thus, less witness social types of violence, and in the family, they learn how to avoid violence more than boys. Boys spend more time outdoors and witness higher levels of social violence.

Evaluation of this phenomenon is important for two reasons: (a) The highlighted and important role of family and family training; individual and group education by mass media can make this role more pronounced; (b) violence-reducing programs should be different for boys and girls schools.

Results showed that the overall violent practice in boys was much higher than in girls, and in

multivariate analysis, overall expression of violence in boys was 2.3 times more than girls. In this respect, many studies have proven that generally, because of genetic and physiological as well as cultural reasons, boys are more violent than girls.<sup>[6-10]</sup>

Furthermore, violent practice in relation to use of instruments and verbal violence was higher in urban areas compared with rural areas (use of violence instruments was 10.2% in towns and 8.2% in villages, and verbal violence was 47.5% in towns and 40.7% in villages). In other studies, regarding place of residence (urban or rural), the following factors have been stated: Higher usage of addictive and psycho-active substances in cities, more communications in the automated life, and insufficient parental attention due to occupational engagements in the cities, have led to more incidence of violence in cities.<sup>[11]</sup> In the same study, important factors in preventing violence in rural areas were parental support and education in schools.<sup>[11]</sup>

Other findings of the study showed that knowledge of junior and senior students in Isfahan about violent behaviors, causes, consequences, and types was moderate. Although parents' trainings in schools are regularly performed, it seems necessary to evaluate the efficacy of these programs in an extensive field study, especially in relation to the increasing growth of violence.

Difference in gender roles was highlighted in this study, and it seems that violence-reducing programs should be different for boys and girls schools.

According to other findings, the difference in practice of urban and rural dwellers in different areas (verbal violence, physical violence, etc.) emphasizes the need for different cultural planning.

Different studies have been conducted on violence and aggression in adolescents. Risk factors of violence derived from these studies are divided into six groups: 1 - personal factors, 2 - familial factors, 3 - school environmental factors, 4 - peer-related factors, 5 - social factors, 6 - circumstantial factors.<sup>[12]</sup> These factors are different for various cultural and regional conditions. To prevent violence in adolescents, recognizing these factors as well as making interventions to reduce them are highly necessary and essential.<sup>[12]</sup>

Enhancing the knowledge and self-esteem in students plays a key role in reducing these risk factors. Planning and providing lessons to control violence from school-age are the keys to successful management of violence.<sup>[13,14]</sup>

There are many programs regarding this subject in the developed countries, in which skills such as raising self-esteem and anger control are taught in schools.<sup>[15]</sup>

The present study revealed that verbal violence in boys was 1.66 times more than in girls, and in a similar study by Sadeghi *et al.* conducted in junior high schools of Tehran, it was shown that verbal violence among boys was more common than among girls.<sup>[16]</sup>

## CONCLUSIONS

Generally, this study provided a clearer interpretation of knowledge and practice of junior and senior high school students in Isfahan province, and revealed the particular importance of anger management and prevention of violent behaviors, which should be highly noticed.

Hence, given the previous studies and reports, empowerment of students in life and social skills appears to be an important point in violence control interventions.

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**Source of Support:** Nil, **Conflict of Interest:** None declared.