

# Association of psychosocial factors with aggression among school going rural adolescents in Haryana

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## ABSTRACT

**Background:** Adolescents are being involved in aggressive activities nowadays. Sometimes, involvement in aggressive activities may be fatal for the victim as well as for the doer. It is a matter of great concern for all including parents, teachers, psychologists, social reformers, and others. A momentary expression of anger sometimes may spoil the future life of the adolescents. **Aim and Objectives:** To determine the prevalence of aggression and to identify the psychosocial risk factors associated with aggression among school-going adolescents. **Methodology:** The study recruited 480 school-going rural adolescents from eight government senior secondary schools in the rural block of Beri, district Jhajjar (Haryana). **Observations:** The mean age of the adolescents was  $14.11 \pm 1.12$  years; 49.4% of the adolescents were found to be aggressive. After applying binary logistic regression, there was a statistically significant relation between aggression and determinants like class, gender, occupation of the father. **Conclusion and Recommendations:** The study concluded that determinants like age, class of students, gender of the subject, occupation of father found a significant association with aggression. To solve this current situation, parents must give love, attention to their children and must act in an appropriate way in front of them and be role models.

**Keywords:** Adolescents, aggression, rural area, school, sex

## Introduction

Adolescence is considered the most important transition period of life, as adolescents face intense turmoil because of the cognitive, biological, and social changes taking place in this period. In the Indian scenario also, we see an alarming proportion of children in schools displaying aggressive behaviors like hitting, kicking, biting, scratching, being destructive, teasing, or being verbally abusive toward children and adults. Nowadays, it is a

common phenomenon to find adolescents being involved in aggressive activities frequently. It is a matter of great concern for all including parents, teachers, psychologists, social reformers, and others. Sometimes, involvement in aggressive activities may be fatal for the victim as well as for the doer. A momentary expression of anger sometimes may spoil the future life of the adolescents. An increasing number of incidents are increasing the concern all the more. Newspapers are full of such incidents involving adolescents in aggression. Sidhu TK<sup>[1]</sup> found that the prevalence of aggression was found to be 51.9% with higher scores in the urban population, males having more physical aggression and females having hostility—associated significantly with the age distribution, residency type, etc. A study from the rural area of West Bengal revealed that 66.5% of the

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children were physically aggressive and 56.8% were verbally aggressive.<sup>[2]</sup> Sadeghi S<sup>[3]</sup> showed that physical direct and indirect aggression was significantly more common in boys than in girls. Determinants of aggression are also called causes or sources of aggression. Like frustration, aggression may be the outcome of physical or biological and genetic factors, social, cultural, psychological, and economic factors.

Overall, the prevalence of aggression was high in adolescents, especially among males, late adolescents, and Hindus and whose mothers were less educated.<sup>[4]</sup> Kaur D<sup>[5]</sup> reported that a significant negative relationship was found between the aggression of the secondary school students and school environment which again validated that higher levels of school environment resulted in low aggressive behavior. There is a high prevalence of aggression among adolescents, and boys are more aggressive than girls. However, girls show high indirect aggression at the high-year level.<sup>[6]</sup> Around one-fifth (17.03%) of the adolescents suffered from psychosocial dysfunction and the males were more affected compared to the females.<sup>[7]</sup> There was a very significant difference in the aggression displayed by the boys and girls, where the boys were significantly higher in the display of direct aggression and there was no significant difference in verbal or indirect aggression in the boys and girls. The boys in the sample followed a pattern of direct, verbal, and indirect aggression, while the girls followed a pattern of verbal, direct, and indirect aggression.<sup>[8]</sup> Adolescents are having higher aggression than young adults. Children who were living without parents were also falling under high aggression than the children living with parents. Regarding parenting type, children who were having a single parent showed a high aggression level than those of dual-parent children.<sup>[9]</sup> There is a paucity of studies in India regarding aggressive behavior among adolescents, hence, the present study is planned with an objective to understand the prevalence and determinants of psychosocial factors of aggression among school-going adolescents in a rural block of Haryana.

## Methodology

The study was conducted in 18 government senior secondary schools in the rural block of Beri, district Jhajjar (Haryana). Block Beri is the field practice area attached to the Department of Community Medicine, Pt BD Sharma PGIMS, Rohtak. Taking the prevalence of aggression ( $P$ ) as 17.7%<sup>[6]</sup> and allowable error ( $L$ ) as 20% of  $P$  by using the formula  $4PQ/L^2$ , the sample size comes out as 465 but the study recruited 480 subjects. The school-going adolescents studying in classes 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> were selected and the duration of the study was 1 year (April 2019 to March 2020). The list of government secondary schools having students from classes 8<sup>th</sup> to 10<sup>th</sup> was obtained from the District Education Officer (DEO), Jhajjar (Haryana). From 18 government schools, eight schools were selected randomly. Out of the total government secondary schools, eight schools were selected randomly by lottery method for enrollment in the study. Further, 20 students from each class from each school were selected randomly.

Every school was visited within school timings with prior information to the school authorities. In the case of any student who was not willing to participate in the study, the next student was selected. In this way, a total of 480 study subjects were enrolled. The selected students were explained the study details in both Hindi and English. The school authorities were requested to provide a separate room for the interview of the selected students, which was done by the investigator himself. The Buss and Perry Aggression scale has four factors, namely, Physical Aggression, Verbal Aggression, Anger, and Hostility. The total score for aggression is the sum of the factor scores. The aggression scale was administered in both English and Hindi and the participants were explained all the questions in the language they could understand. The maximum score for aggression on the Buss and Perry Aggression scale was 145 and the minimum score was 29. Using the mean score as the cut-off, scores above the mean were considered as aggression and scores below the mean as non-aggressive. The confidentiality of the information was assured.<sup>[10]</sup> The children who had disabilities like learning disability, dyslexia, ADHD, autism, mental retardation, were slow learners, and who were reported by the teachers, were excluded from the study. The ethical permission was obtained from the Institutional Ethics Committee of Pt BD Sharma PGIMS Rohtak (Haryana).

## Observations

Table 1 shows the sociodemographic characteristics of the study participants. The study recruited 480 participants, nearly half (54%) were boys. The mean age of the study participants was  $14.11 \pm 1.12$  years. About the fathers' education of the participants, 54.4% of the fathers were middle school pass followed by 26.5% primary pass and 12.5% high school pass whereas 1.5% fathers were illiterate; 48.3% of the fathers were laborers by occupation followed by 21% in cultivation, 17.5% in the independent profession while 4.4% of the fathers were in service. Caste-wise, 42.9% belonged to the SC category followed by the lower caste (24%), prestige caste (16%), agriculturist (11.9%), dominant caste (3.1%), and artisan caste (2.1%) while socioeconomic status-wise, half of the study participants belonged to the upper-lower class (51.9%) followed by the lower socioeconomic class and upper-middle socioeconomic class constituting 47.1 and 1%, respectively. One-quarter of the subjects were indulged in substance abuse and a majority of the participants (73.1%) had no history of any substance abuse.

The Buss and Perry Aggression Questionnaire was used to know the type of aggression, the prevalence of aggression, and the maximum score for aggression ranged from 51 to 122 with a mean of  $78.83 \pm 9.98$ . Using the mean score as a cut-off value, 49.4% (237) of the total participants were found to be aggressive and 50.6% (243) subjects were non-aggressive. For physical aggression, the total score ranged from 11 to 36, with a mean of  $20.03 \pm 3.942$ . Using the mean score as a cut-off value, 37.1% (178) of the subjects out of the total were found

to be physically aggressive and the remaining 62.9% (302) of the subjects were not physically aggressive while for verbal aggression, the total score ranged from 7 to 32, with a mean of  $16.60 \pm 3.619$ . Using the mean score as a cut-off value, 232 subjects (48.3%) were verbally aggressive while the rest 248 subjects (51.7%) were not verbally aggressive.

The total score for anger ranged from 11 to 33, with a mean of  $18.49 \pm 4.394$ . Taking the mean score as a cut-off value, 230 participants (47.9%) were found to be angry and the remaining 250 (52.1%) were not whereas the total score for hostility ranged from 8 to 37, with a mean score of  $23.69 \pm 5.88$ . Using the mean score as the cut-off value, hostility was found among 230 study participants (47.9%) whereas the remaining 250 were non-hostile (52.1%) [Table 2].

**Table 1: Socio-Demographic profile of the study participants (n=480)**

	Characteristic	Frequency	Percentage
Gender	Male	259	54.0
	Female	221	46.0
Age	12-14 yrs	323	67.3
	14-16 yrs	142	29.6
	16-19 yrs	15	3.1
Father's Education	Illiterate	7	1.5
	Read and write	16	3.3
	Primary	127	26.5
	Middle	261	54.4
	High school	60	12.5
	Graduate and above	9	1.9
Father's Occupation	Labor	232	48.3
	Business	42	8.8
	Independent profession	84	17.5
	Cultivation	101	21.0
Caste	Services	21	4.4
	Schedule Caste	206	42.9
	Lower caste	115	24.0
	Artisan caste	10	2.1
	Agriculture	57	11.9
	Prestige caste	77	16.0
Socio economic status	Dominant caste	15	3.1
	Upper middle	5	1.0
	Upper lower	249	51.9
Substance abuse	Lower	226	47.1
	Users	129	26.9
	Non-users	351	73.1

**Table 2: Types of aggression among study participants (n=480)**

Variable	Yes	No
Aggressive	237 (49.4%)	243 (50.6%)
Verbally aggressive	232 (48.3%)	248 (51.7%)
Physically aggressive	178 (37.1%)	302 (62.9%)
Angry	230 (47.9%)	250 (52.1%)
Hostile	230 (47.9%)	250 (52.1%)

(\*Multiple responses) (Figures in parentheses indicate percentage)

Table 3 depicts the application of binary logistic regression on the sociodemographic determinants of aggression. After applying the binary logistic regression, it was observed that there is a statistically significant association between aggression and determinants such as class, gender, occupation of the father. The association between these variables and aggression was found to be statistically significant ( $P < 0.05$ ). The subjects belonging to class 10 were 53% less aggressive as compared to class 8 students (taking class 8 as the reference). As compared to males, females were 74% less aggressive (taking males as the reference). It was evident that the subjects whose fathers were having independent professions were six times more aggressive as compared to those subjects whose fathers were laborers. Also, the study subjects whose fathers were cultivators and were in the services were seven times more aggressive as compared to those subjects whose fathers were laborers (taking laborers as the reference).

## Discussion

Despite widespread education, improvement in socioeconomic conditions, fulfillment of basic needs, independence, and freedom of speech, aggression and violence among adolescents are on the rise in many countries around the globe. Therefore, psychosocial factors contributing to aggressive behavior in adolescents need to be identified and addressed with appropriate intervention so that the adolescent population can contribute to society.

In the present study, the mean age of the participants was  $14.11 \pm 1.11$  years, and more than half, i.e., 54% were males and 46% were females. Garg I recruited the adolescents whose age ranged from 13 to 19 years (mean  $15.11 \pm 0.93$  years)<sup>[11]</sup> and Lyngdoh included 51 boys and 49% girls in his study<sup>[12]</sup> while Kumari V<sup>[13]</sup> had taken an equal number of adolescents boys and girl. In the study, labor (48.3%) and farming (21%) were the most prevalent occupations pursued by the fathers of the participants. Sidhu TK<sup>[1]</sup> found farming (39.3%) and labor (32.2%) as the most prevalent occupation of the fathers of the study participants; 98.5% of the fathers of the study participants were literate. Dutt D<sup>[2]</sup> revealed a similar result, i.e., 97.4% of the fathers were literate.

In our study, the total score for aggression on the Buss and Perry Aggression Questionnaire (maximum score = 145), ranged from 51 to 122, with a mean of  $78.83 \pm 9.98$ ; 49.4% of the total participants were found to be aggressive. Sidhu TK<sup>[1]</sup> quoted the mean score  $83.81 \pm 18.11$ , ranging from 40 to 131 and the prevalence of aggression was 51.9% among the adolescents in Punjab.

The total score for physical aggression ranged from 11 to 36, with a mean of  $20.03 \pm 3.942$ ; 37.1% of the subjects out of the total were found to be physically aggressive. A study found the prevalence of physical aggression to be 47.91% with a mean score of  $24.05 \pm 6.89$ .<sup>[11]</sup> The total score for verbal aggression ranged from 7 to 32, with a mean of  $16.60 \pm 3.619$ ; 48.3% of the subjects were verbally aggressive. The findings of our study

**Table 3: Association between Socio-Demographic determinants and aggression among subjects**

	Variable	aOR (95% CI)	P
Class	8 <sup>th</sup> class	Reference	
	9 <sup>th</sup> class	1.041 (0.625-1.733)	0.878
	10 <sup>th</sup> class	0.472 (0.282-0.791)	0.004*
Gender	Male	Reference	
	Female	0.265 (0.173-0.405)	0.000*
Father's Education	Illiterate	Reference	
	Can Read and Write	0.000	0.999
	Primary	0.000	0.999
	Middle	0.000	0.999
	High School	0.000	0.999
	Graduate and above	0.000	0.999
Father's Occupation	Laborer	Reference	
	Business	2.305 (0.740-7.178)	0.150
	Independent Profession	6.520 (1.763-24.112)	0.005*
	Cultivation	7.792 (2.334-26.018)	0.001*
	Services	7.192 (2.208-23.421)	0.001*
Substance abuse	Abusers	Reference	
	Non-abusers	0.638 (0.390-1.045)	0.074

\*Significant

were like Sidhu TK's<sup>[1]</sup> who found 53.66% of the participants to be verbally aggressive with a mean of  $15.01 \pm 4.31$ .

The total score for anger on the Buss and Perry Aggression Questionnaire ranged from 11 to 33, with a mean of  $18.49 \pm 4.394$ ; 47.9% of the participants were found to be angry. The findings were similar to a study by Sidhu TK<sup>[1]</sup> (prevalence 54.38% with a mean score of  $19.53 \pm 5.86$ ). The total score for hostility ranged from 8 to 37, with a mean score of  $23.69 \pm 5.88$ . Hostility was found among 47.9% of the study participants in the study. Sidhu TK<sup>[1]</sup> agreed with the findings of the present study.

Table 3 shows the association between the class of students, sex of participants, occupation of father, socioeconomic status, and substance abuse with aggression by applying binary logistic regression and found that there is a statistically significant ( $P < 0.05$ ) relation between aggression and determinants such as class, gender, occupation of the father. Aggression was found nearly 0.3 times more in girls as compared to boys. This might be due to the fact that low sex ratio and gender discrimination, voices suppressed, and desires unfulfilled are more common reasons, and also girls are more sensitive. The subjects belonging to class 10 were 53% less aggressive as compared to class 8 students (taking class 8 as reference). As compared to the males, females were 74% less aggressive (taking males as reference). Kumari S<sup>[4]</sup> and Garg I<sup>[11]</sup> revealed almost similar observations. It was evident that the subjects whose fathers were having independent professions were six times more aggressive as compared to subjects whose fathers were laborers. Also, the study subjects whose fathers were cultivators and were in services were seven times more aggressive as compared to subjects whose fathers were laborers (taking laborers as reference).

Those participants whose fathers were laborers were physically most aggressive followed by those whose fathers had independent professions and those whose fathers were businessmen. A majority of the participants whose fathers were in service were verbally aggressive followed by those whose fathers were laborers. The study subjects whose fathers were cultivators were verbally least aggressive. All those participants whose fathers were in services were found to be angry and most of them were also hostile. Garg I<sup>[11]</sup> revealed the same findings among the adolescents, however, Jamal A<sup>[14]</sup> does not find any significant relation between the occupation of father and prevalence of aggression. The relationship between physical aggression and substance abuse among the participants was statistically significant ( $P < 0.05$ ). Sharma M<sup>[15]</sup> found substance abuse as a risk factor for aggressive behavior in adolescents.

Adolescence is a period of rapid change in physical, mental, and social behavior. In this modern era of the world, there is a chance of increasing physical or verbal aggression in this age group. It has been seen that boys are more aggressive than girls. Sometimes, these problems are overlooked in the family which leads to loneliness, substance abuse, loss of interest in academics, violence, frustration, or depression among the adolescents. Some of the factors like good family and peer relationships were the protective factors against aggression in adolescents. Also, long and stable friendships and good relationships with others were found less likely in aggressive adolescents. Those adolescents had low aggression who had a high attachment and interchanged friendships.<sup>[16]</sup>

## Conclusion and Recommendations

The study concluded that the association of aggression with determinants like the class of students, gender of subject, and occupation of the father was found to be significant. To solve this current problem, parents must give love, attention to their children and must act in an appropriate way in front of them and be their role models. Teachers also need to be trained to reduce their academic pressure and counsel them to handle their anxiety, frustration, or any pressure in life. The primary care physician must give lectures, seminars, and group discussions on aggression in the school. They also build a rapport, talking with them, listening to them, understanding their problems, and encouraging their positive conduct and behavior.

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## Conflicts of interest

There are no conflicts of interest.

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