

A Cross-Sectional Study of Aggression among School Adolescents in Karnataka, India

Sneha Kumari¹, Jugal Kishore², RK Mandal³

Abstract

Introduction: Adolescents are placed in critical stage of human development when they are stepping from childhood to adulthood. Worldwide, it is seen that aggression is one of the most common features in this group.

Aims and Objectives: (1) To identify aggression among school-going adolescents and (2) To assess different sociodemographic characteristics associated with aggression among these students

Methodology: A cross-sectional descriptive study was conducted in one of the private schools in Karnataka from 1st September to 1st December, 2015 (3 months). Study population comprised of high school children studying in classes VIII–X. A pre-tested, semi-structured, self-administered questionnaire was distributed to the study subjects. For assessing aggression, a modified version of direct and indirect aggression scale (DIAS) was used. School authority permitted the study. An information sheet and consent form was given to each student. The consent form was to be signed by a parent or guardian and returned to the school. Data was entered in MS-Excel. Data was analyzed by using frequency tables and significant association was established by chi-square test.

Results: A total of 187 students participated in the present study. A significant proportion of adolescents scored very high on aggression scale. Males were found to be more aggressive than females and as the age of school children advanced, aggression scores also increased. And these results were statistically significant ($p < 0.05$).

Conclusion: Overall, prevalence of aggression was high in adolescents, especially among males, late adolescents and Hindus and whose mothers were less educated. Understanding sex and age differences in the development of various types of aggressions during adolescence can guide the development of violence prevention programs. Such intervention programs should be started early in life to have the most impact on aggression during adolescence.

Keywords: Aggression, Adolescents, Students

Introduction

With globalization of the world, aggression has become an important feature of adolescents. Aggression is a behavior aimed at causing physical or psychological pain to any living being. Aggressive personality is at increased risk for

¹Senior Resident, ²Director Professor & Head, VMMC & Safdarjung Hospital, New Delhi.

³Principal, BGS World School, Karnataka.

Correspondence: Dr. Sneha Kumari, VMMC & Safdarjung Hospital, New Delhi.

E-mail Id: sneharanjan811@gmail.com

Orcid Id: <https://orcid.org/0000-0003-2876-8997>

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depression, anxiety, social withdrawal, low self-esteem and stress. As we know about 21% of Indian population are adolescents (about 243 million),¹ they are the future of the nation, forming a major demographic and economic force. They have specific needs which vary with gender, life circumstances and socioeconomic conditions. At this crucial stage of life, aggressive personality can lead to social avoidance and stress in life.

Aggression is considered as a behavior between members of the same species that is intended to cause humiliation, pain or harm. Ferguson and Beaver defined aggressive behavior as "Behavior which is intended to increase the social dominance of the organism relative to the dominance position of other organisms".² The aggressive personality results from the coloring of the individual's total personality by frequently unorganized aggressive impulses. Aggression may be of direct or indirect type. Direct aggression may be physical or verbal. Physical aggression includes hitting, punching, pushing, slapping, kicking, etc. On the other hand, verbal aggression means abuse, spreading of rumor, malign, etc. Any aggressive behavior that is carried out via another person is considered as indirect aggression. Many theories regarding aggression have been postulated. According to some scientists,^{3,4} this behavior is largely related to learning from social environment. Another hypothesis suggests association of this behavior with frustration which may occur after being prevented from reaching a goal.⁵

In daily life situations, it is observed that adolescents are deviating from commonly accepted social and constitutional norms, showing aggressive behavior in most of the situations. Since there is paucity of studies conducted in India to describe the trajectories of social aggression during adolescence for either males or females, there is little evidence to suggest specific differences in boys' and girls' developmental trajectories of social aggression during adolescence. Therefore, keeping these objectives in mind, we have conducted a cross-sectional study among school-going adolescents to identify aggression among school-going adolescents and to find out different sociodemographic characteristics associated with aggression among these students.

Materials and Methods

Study Area and Study Population

It was a school-based, cross-sectional descriptive study. This school was situated in the rural area of Karnataka. It was a private school from 1st to 10th class. Students from rural as well as urban area were coming to attend the school. Study population comprised of high school children studying in classes VIII–X.

Sample Size and Study Duration

This study was conducted from 1st September to 1st December, 2015 (3 months). A total of 187 students participated in the present study. Permission was sought from the principal of the school to recruit students for the study. The questionnaire was distributed to the students in their classrooms during a pre-arranged time. Each student who had returned a consent form was given a copy of the questionnaire for completion. Every effort was made to ensure that the students had privacy while completing the questionnaire.

Study Parameters and Study Tool

Data was collected regarding the sociodemographic variables like age, sex, religion, type of family, education of parents and working status of mothers of adolescents. A pre-designed, pre-tested, semi-structured, self-administered questionnaire was used for data collection. Apart from collecting sociodemographic information, a modified version of direct and indirect aggression scale (DIAS) was used for data collection. The DIAS questionnaire was developed by Björkqvist et al.⁶

Statistical Analysis

Data was entered in MS-Excel. Data was analyzed by using frequency tables and significant association was established by chi-square test taking p value < 0.05 .

Results

A total of 187 students participated in the present study.

Table 1. Beliefs Supporting Aggression of Study Participants (N=187)

S. No.	Statements	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
i	It makes you feel big and tough when you push someone around.	28 (15%)	52 (27.8%)	13 (6%)	52 (27.8%)	42 (22.5%)
ii	If you back down from a fight, everyone will think you are a coward	23 (12.3%)	24 (12.8%)	26 (13.9%)	65 (34.8%)	49 (26.2%)
iii	Sometimes you have only two choices-get punched or punch the other kid first	20 (10.7%)	40 (21.4%)	46 (24.6%)	35 (18.7%)	46 (24.6%)
iv	It's ok to hit someone if you just go crazy with anger	13 (6.9%)	35 (18.7%)	16 (8.6%)	74 (39.6%)	49 (26.2%)
v	A guy who doesn't fight back when other kids push him around will lose respect	22 (11.8%)	22 (11.8%)	15 (8%)	75 (40.1%)	53 (28.3%)
vi	A guy shows he really likes his friend if he gets in fights with other guys about him	40 (21.4%)	38 (20.3%)	21 (11.2%)	43 (23%)	45 (24%)

Table 1 reveals that nearly 43% students felt big and tough when they pushed someone around. Nearly 26% of students agreed that if they backed down from a fight then everyone would think that he/she was a coward. About 32% of students were in favor of having two choices only in a critical situation, i.e., get punched or punch the other kid first. About 25% of students agreed that it was ok to hit

someone if they were just crazy with anger. Nearly 23% of students understood that a guy who did not fight back when other kids pushed him around would lose respect. Nearly half (41%) of the students were of the opinion that a person virtually shows the liking about his friend if he gets in fights with other guys about him.

Table 2. Modified Direct and Indirect Aggression Scale (DIAS): For Each Question, Indicate How Many Times You Did It during Last 7 Days (N=187)

S. No.	Statements	0	1-3	4 and above
i.	I teased students to make them angry.	60 (32%)	90 (48.1%)	37 (19.8%)
ii	I got angry very easily with someone	30 (16%)	115 (61.5%)	42 (22.5%)
iii	I fought back when someone hit me first	65 (34.8%)	92 (49.1%)	48 (25.6%)
iv	I said things about other kids to make other students laugh	48 (25.7%)	91 (48.7%)	48 (25.7%)
v	I encouraged other students to fight	148 (79.1%)	26 (13.9%)	13 (7%)
vi	I pushed or shoved other students	124 (66.3%)	48 (25.7%)	25 (13.4%)
vii	I was angry most of the day	42 (22.5%)	120 (64.2%)	25 (13.4%)
viii	I got into a physical fight because I was angry	92 (49.2%)	103 (55.1%)	18 (9.6%)
ix	I slapped or kicked someone	116 (62%)	56 (30%)	15 (8%)
x	I called other students bad names	119 (63.6%)	53 (28.3%)	15 (8%)
xi	I threatened to hurt or to hit someone.	117 (62.6%)	51 (27.3%)	19 (10.2%)

We find from Table 2 that 68% of study subjects used to tease other students to make them angry of which 19.8% did it for more than four times in a week. Majority (84%) of them got angry easily with someone of which 11.6% subjects did it for more than six times. About 65% subjects fought back when hit first, of which 16.6% did it for more than six times. Among study subjects, 74.3% used to tell things about other kids to make other students

laugh. Most (79.1%) of them had not encouraged other students to fight. Nearly 34% of them pushed/shoved other students. Many (77.5%) of them got angry most of the day. Nearly 50% students got into a physical fight in anger and 38% of subjects slapped or kicked someone. Nearly 36% participants called other students by bad names and 37% students threatened to hurt or to hit someone.

Table 3. Association of Aggression Scale with Various Sociodemographic Parameters (N=187)

Variable	Number (%)	Aggression Scale			Chi-square, p value
		0 n (%)	1–3 n (%)	4 and above n (%)	
Sex					
Male	104 (55.6)	20 (19.2)	55 (52.9)	29 (27.9)	20.9, 0.00002*
Female	83 (44.4)	40 (48.2)	35 (42.2)	8 (9.6)	
Age group					
12–14	139 (74.3)	46 (33.1)	71 (51.1)	22 (15.8)	12.4, 0.002*
15–17	48 (25.7)	14 (29.2)	15 (31.3)	19 (39.6)	
Residence					
Rural	90 (48.1)	29 (32.2)	43 (47.8)	18 (20)	0.009, 0.995
Urban	97 (51.9)	31 (31.9)	47 (48.5)	19 (19.6)	
Type of family					
Nuclear	151 (80.7)	52 (34.4)	73 (48.3)	26 (17.2)	3.97, 0.137
Joint	36 (19.3)	8 (22.2)	17 (47.2)	11 (30.6)	
Religion					
Hindu	171 (91.4)	53 (31)	83 (48.5)	35 (20.5)	1.281, 0.527
Others	16 (8.6)	7 (43.8)	7 (43.8)	2 (12.5)	

*Statistically significant (p value<0.05)

Table 3 reveals that 55.6% were males and 44.4% were females. It was found that males were having more scores on aggression scale than girls and it was also statistically significant (p<0.05). It shows males were more aggressive than females. Most (74.3%) of them were in 12–14 years age group followed by 15–17 years (25.7%). Its association with age reflected that as the age advances, aggression also increases among study participants (p<0.05). Regarding the area of residence, 51.9% study subjects belonged to

urban area while 48.1% were of rural area. Though there was no significant associations between residence and aggression scale, majority belonged to nuclear families (80.7%) and were Hindus (91.4%). But the type of family and religion did not influence scores on aggression scale. But it was found that 30.6% participants from joint families were very aggressive as they scored more than four on aggression scale.

Table 4. Association of Aggression Scale with Education of Parents and Occupation of Mother (N=187)

Variable	Number (%)	Aggression Scale			Chi-square, p value
		0 n (%)	1–3 n (%)	4 and above n (%)	
Education of father					
Higher degree (more than matriculation)	111 (59.4)	33 (29.7)	59 (53.2)	19 (17.1)	4.84, 0.303
Up to high school pass (10 th)	60 (32.1)	19 (31.7)	26 (43.3)	15 (25)	
Illiterate	16 (8.6)	8 (50)	5 (31.3)	3 (18.8)	
Education of mother					
Higher degree (more than matriculation)	85 (45.5)	33 (38.8)	47 (55.3)	13 (7)	11.306, 0.023*
Up to high school pass (10 th)	82 (43.9)	15 (18.3)	41 (50)	26 (31.7)	
Illiterate	20 (10.7)	5 (25)	7 (35)	8 (40)	
Occupation of mother					
Working	55 (29.4)	20 (36.4)	26 (47.3)	9 (16.4)	4.84, 0.303
Non-working/housewives	132 (70.6)	40 (30.3)	64 (48.5)	28 (21.2)	

Table 4 reflects that most of the fathers (59.4%) were having higher degree, but only 29.7% students got 0 score on aggression scale. There was no statistically significant association. On the other hand, mother’s education was significantly associated with aggression. It means that as the mother’s education increases, aggression among children decreases. Maximum number of mothers (70.6%) who were non-working/housewives, higher scores of aggression were found in their children.

Discussion

Adolescence is the critical stage of anyone’s life and there are enormous changes in the psychological, physical and social domains of life. Aggression is a common phenomenon in this period of life, particularly in the later part. In the present study, beliefs supporting aggression among study participants revealed that nearly 43% of students felt big and tough when they pushed someone around. Nearly

26% of students agreed that if they backed down from a fight then everyone would think that he/she was a coward. About 32% of students were in favor of having two choices only in a critical situation, i.e., get punched or punch the other kid first. About 25% of students agreed that it was ok to hit someone if they just got crazy with anger. Nearly 23% of students understood that a guy who does not fight back when other kids push him around would lose respect. Nearly half (41%) of the students were of the opinion that a guy showed his liking for his friend if he got into fights with other guys about him. Therefore, it was found that nearly one-third of the adolescents were having beliefs supporting aggression. WHO estimate shows that up to 20% adolescents have one or more mental or behavioral problems.⁷ Studies conducted in different parts of the world show that prevalence of behavioral and emotional problems in adolescents range from 16.5% to 40.8% and in India it is in the range of 13.7% to 50%.⁸⁻¹⁰ As adolescents form one fifth of India's population, this means a sizable disease burden on the society.¹¹

By using modified direct and indirect aggression scale (DIAS), it was seen that 68% of study subjects used to tease other students to make them angry. Majority (84%) of them got angry easily with someone. About 65% of the subjects fought back when hit first. Among study subjects, 74.3% used to tell things about other kids to make other students laugh. Most (79.1%) of them had not encouraged other students to fight. Nearly 34% of them pushed/shoved other students. Many (77.5%) of them got angry most of the day. Nearly 50% of the students got into a physical fight in anger and 38% of subjects slapped or kicked someone. Nearly 36% participants called other students by bad names and 37% students threatened to hurt or to hit someone. This reveals that most of the adolescents scored higher on aggression scale. General aggression tends to begin at certain critical periods of life. Aggression may make its appearance in adolescence, the period when a young human being is struggling with many adjustment problems. Aggression as a potential outcome of psychosocio-cultural settings appears to be a very important aspect of personality. As aggressors always remain at high risk due to their risky life styles that may lead to development of behavioral problems, delinquency, substance or chemical dependence and other medical conditions such as cardiovascular problems, cancer, and brain damage.

It was found that 55.6% of males and 44.4% of females were showing aggressive tendencies. It was found that males were having more scores on aggression scale than girls and it was also statistically significant ($p < 0.05$). It shows males were more aggressive than females. Various studies also proved that there is a strong relation of testosterone with aggression,¹²⁻¹⁵ which may be the reason for more aggressive behavior among males. Results of a meta-analysis also revealed that males are more aggressive

than females. Concentration of testosterone most clearly correlated with aggressive responses involving provocation. A similar study conducted in Guwahati revealed that males were found to be significantly more physically aggressive than females ($p = 0.001$).¹⁶

The findings of the present study reflected that most (74.3%) of students were in 12–14 years age group followed by 15–17 years (25.7%). Its association with age reflected that as the age advanced, aggression also increased among study participants ($p < 0.05$). It was contradictory to the findings in West Bengal's study where physical aggression score was significantly higher in younger adolescents (15–17 years) than among 18–19 years ($p < 0.001$). It may be due to high expectation from family, academic performance, peer pressure and sudden biological changes in the body among late adolescents. As a result, they are unable to cope with the changed circumstances so, they experience sadness and depression. Depression often gives rise to aggressive behavior in them. Moyer (1976) identified eight types of aggression, of which irritable aggression indicates the relation of aggression with frustration, deprivation and stressful situation. According to frustration aggression hypothesis,¹⁷ the motivation for aggression increases when the ongoing behavior is interrupted or when an individual is prevented from reaching a goal leading to frustration. On the other hand, the peer effect on older adolescents is higher than the younger one. According to social learning theory of aggression by Bandura, human aggression is largely learnt by watching other people behave aggressively, either in person or in films.³

Majority of the aggressive adolescents belonged to nuclear families (80.7%) and were Hindus (91.4%). But it was found that 30.6% of the participants from joint families were very aggressive as they scored more than four on aggression scale. Though the present study did not find association of aggression with type of family and area of residence, it shows that there is widespread distribution of aggression irrespective of type of family and area of residence. Regarding educational status of parents, when most of the fathers (59.4%) were having higher degree, still only 29.7% students got 0 score on aggression scale. There was no statistically significant association. On the other hand, mother's education was significantly associated with aggression. It means that as the mother's education increases, aggression among children decreases. Educated mothers could guide the adolescents about the proper way to tackle changing life circumstances. It was found that when the maximum number of mothers (70.6%) was non-working/housewives their children got higher scores on aggression scale. It reflects that they engaged in their household duties so much that they could not have enough time to pay attention to these adolescents. Similar was the finding in West Bengal's study¹⁸ where there was no significant difference of physical aggression scores among

different religions, different castes, and types of the families as well as working status of mothers.

Conclusion

Overall, prevalence of aggression was high in adolescents especially among males, late adolescents and Hindu adolescents whose mothers were less educated. Modified direct and indirect aggression scale (DIAS) seems to be an effective tool for assessing aggression. Thus, understanding sex differences and age differences in the development of various types of aggression during adolescence can guide the development of violence-prevention programs. Such intervention programs targeting male late adolescents should be started earlier in life to have the most impact on aggression during adolescence and preventive strategy for older adolescents. In these initiatives, parents, especially mothers, play an important role to provide care and support to adolescents. Expanding the targeted behaviors and the audiences for prevention initiatives will help to make healthy adolescents in the present and responsible adult in the future.

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Conflict of Interest: None

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