



Measurement of Aggression Level Amongst School-Going Adolescents in Rawalpindi

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Abstract

To measure the level of aggression amongst school-going adolescents at various private schools in Lalazar, Rawalpindi. A cross-sectional study was conducted in eight private schools in Lalazar, Rawalpindi from January 2019 till October 2019 recruiting 400 students aged 10-19 years through convenience sampling technique. Data was collected through face-to-face interview using a validated tool called BPAQ, and analyzed using SPSS 21. Out of 400 students 236(59%) were males and 164(41%) females, with mean age of 14.59 + 2.36 years. Overall, 62.87% of respondents had aggression with a mean value of 90.4525+17.034, which falls under high level of aggression. The mean value for physical aggression was 26.9525 + 6.17, for verbal aggression was 15.420 + 3.62, for anger was 23.707+ 5.405, and for hostility was 24.3725 + 5.346. The means were higher for females in all domains except hostility. No statistically significant gender-based difference was found in aggression levels. ($p < 0.05$). Majority of school-going adolescents in the study showed increased levels of aggression in all its sub-dimensions, that include verbal, physical, hostility and anger. The means were predominantly higher in females.

Keywords: Adolescent, Aggression, Convenience, Cross-Sectional

1. Introduction

Aggression is known as hostile, injurious or destructive behavior especially when caused by frustration. (Babore et al, 2017). It may occur either in the form of vengeance or without incitement. There are four major sub-dimensions of aggression: Physical, verbal, hostility and anger. The first two factors represent a bodily or oral element; anger, which infers psychological triggers for aggression, is the emotive element and hostility represents the perceptive element (Canham, 2018; Runions et, 2018). Aggression in any species ensures an individual's instincts of survival and this depends upon the specific social and environmental atmosphere provided to them. (Barnett, 2017). Adolescence is defined as the transitional phase of growth and development between childhood and adulthood. (Sawyer et al, 2018). The World Health Organization (WHO) defines an adolescent as any person between the age of 10 and 19 years. (Henry & Powell, 2018). This is a time period with various hormonal changes in an individual which lead to certain behavioral alterations that favour aggression. It is the phase during which youngsters have multiple things running in their mind and are energetic to accomplish them. Their energy needs to be directed or expressed positively. Many a times, this expression is not direct, and comes out in the form of aggression.

Young adolescents' resort to aggression either to get their way or as a defense mechanism. (Sidhu et al, 2019). It is imperative to look for shielding factors during initial advancements as once it develops it becomes unwavering and an integral component of the individual's character. (Cabello et al, 2017).

Increasing prevalence of aggression has been reported among youth, being 35.0% in South Asian countries in 2016 (Allen et al, 2018; Khurshid et al, 2020). 49.6% in Pakistan (Khurshid et al, 2020; Cerna-Turoff, 2021). 17.7% in India (Bhilwar & Kapoor, 2016). WHO statistics of secondary school students involved in physical fighting oscillated from 44.0% in the USA to 76.0% in Jerusalem, Israel. (Elmasry et al, 2016). According to the World Health Organization (2010) aggressive behaviors cause the death of 1.6 million people worldwide.

The main purpose of this study was to assess the level of aggression among adolescent students in schools of Rawalpindi in order to create awareness regarding aggression in the study population. All students were given a general counselling session on aggression and different coping mechanisms after data collection.

1.1. Significance of Study

No study of this nature has been conducted on adolescents in this area of Rawalpindi, it will fill the identified knowledge gap and its findings will pave path for future similar research and help in designing strategies for identifying aggressive behaviour of students and its associated factors.

1.2. Objectives

1. To assess the level of aggression in the study population.
2. To compare aggression level among male and female students.

2. Literature Review

Aggression in adolescents is an important multifaceted phenomenon which is due to the combined effect and influence of an individual's personality, tendency in family or a pressure of the environmental or societal factors. Instead of letting it damage others, it should be tried to channel this energy of adolescent into some creative aspects and make a practical use of it. Aggression in adolescents may be triggered due to any cause and various triggers have been identified, e.g., unfulfilled ambitions, dreams or goals leading to frustration. During the process of evolutionary changes, aggression was used as a mechanism in order to assert, defend resources or life, secure territory, show power, authority over, or fight for females. It also seems to serve as a stress relief technique used

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by various individuals. Predatory or defensive behavior between members of different species may not be considered aggression in the same sense. That type of behaviour is mainly due to the interplay of genetics and environment. Adaptation into a new environment may lead to an enhancement in genetic flexibility. Another term biological aggression is explained to be an internal energy which is released as a result of various stimuli in the external environment. It can be labelled as evolution through natural selection and is a component of genetics. It involves fluctuations in hormones that lead to the desired behaviour. A negative stimulus can excite frustration. Psychological approaches portray the expression of aggression to be a destructive instinct. It is a result of observed learning of society and depends on the diversified situations in the external environment.

3. Methodology

A cross sectional study was carried out from January 2019 till October 2019 among 400 school-going adolescents (male and female students, Grade 6 to 12, ages 10-19 years) selected through convenience sampling from eight private schools in Lalazar Rawalpindi.

Sample size was calculated using WHO sample size calculator taking 52% prevalence from a previous study in this region (Sidhu et al, 2019). The sample size came out to be 384 which was rounded off to 400 to cater for non-responses. A pre-validated tool 'The **Buss-Perry Aggression Questionnaire**' (BPAQ) was used (Cronbach's Alpha=0.829) Informed consent was taken from the study population, school authorities and parents of children prior to filling the questionnaire and confidentiality was maintained. Permission was sought from the Ethical Review Committee of Foundation University. Data analysis was done by SPSS 21. Data was mainly presented as frequencies & percentages. It was filled by the interviewing doctors through face-to-face interviews after explaining tool to the students in Urdu language on a normal class day. The participants were requested to rate each point in the questionnaire using a 5-point scale Likert scale. A counselling session on ill effects of aggression & its coping strategies was carried out after data collection.

3.1. Questionnaire-Scale

BPAQ was designed by Arnold Buss and Mark Perry, professors from the University of Texas at Austin in 1992 (Elmasry et al, 2016).and includes 29 points that measure physical, verbal aggression, anger, and hostility, the four major sub-dimensions of aggression. The scale consists of five-interval Likert-type responses (strongly disagree, disagree, undecided, agree, and strongly agree). It has four subgroups that measure physical aggression, feelings of hostility, angry behaviors, and verbal aggression. The scale consists of a total of 29 items: nine items measuring the tendency to physically harm others, eight items measuring hostility, which indicated the cognitive aspect of aggression, seven items measuring anger that causes aggression, and five items measuring verbal aggression toward others. The scale includes 9 and 16 ranked items which are reverse scored. The lowest score that can be obtained from the scale is 29, while the highest score is 145.

Interpretation of scores:

Overall score (range, 29-145, midpoint 87)

Physical aggression scale (range 9-45, midpoint 27)

Verbal aggression scale (range 5-25, midpoint 15)

Anger aggression scale (range 7-35, midpoint 21)

Hostility aggression scale (range 8-40, midpoint 24)

4. Results

A total of 400 students took part in this study, including 236 (59%) male and 164(41%) female students. Around 85 (21.25%) were in 10-12 years age bracket, 182 (45.5%) in 13-15 years, 133(33.25 %) 16-19 years bracket with a mean age of 15 + 2.36 years. Out of all, 54.75% were school going, 45.25% were college going. About 277(69.25%) belonged to nuclear family and 123 (30.75%) came from a joint family setup.

Among females, 96(59%) had high levels of physical aggression, 100(61%) had high verbal aggression, 119 (73%) had high anger levels, 95(58%) had high hostility levels.

Among males' high levels of physical aggression were present in 126 (53%), high verbal in 148 (63%), high anger in 176 (75%), high hostility in 146(62%) students respectively.

No statistically significant gender-based difference was found in aggression levels. (at $p < 0.05$ CI 95%). The t-test was applied and mean value for physical aggression came to be 26.9525 + 6.17, for verbal aggression 15.420 + 3.62, for anger 23.707+ 5.405, and for hostility 24.3725 + 5.346. Overall mean of aggression was 90.4525 +17.034 which falls in high level.

Table 1 : Gender- Wise Levels of Aggression In Respondents (N=400)(Independent SAMPLE T-TEST)

	Gender of respondent	N	Mean + Std. Deviation	High level (%)	P value
PHYSICAL AGGRESSION	Male	236(59%)	26.8178 + 6.13	126(53%)	0.602
	Female	164(41%)	27.1463 + 6.25	96(59%)	
VERBAL AGGRESSION	Male	236	15.4153 + 3.75	148(63%)	0.975

	Female	164	15.4268 + 3.43	100(61%)	
ANGER	Male	236	23.6144 + 5.44	176(75%)	0.680
	Female	164	23.8415 + 5.35	119(73%)	
HOSTILITY	Male	236	24.4492 + 5.48	146(62%)	0.731
	Female	164	24.2622 + 5.15	95(58%)	

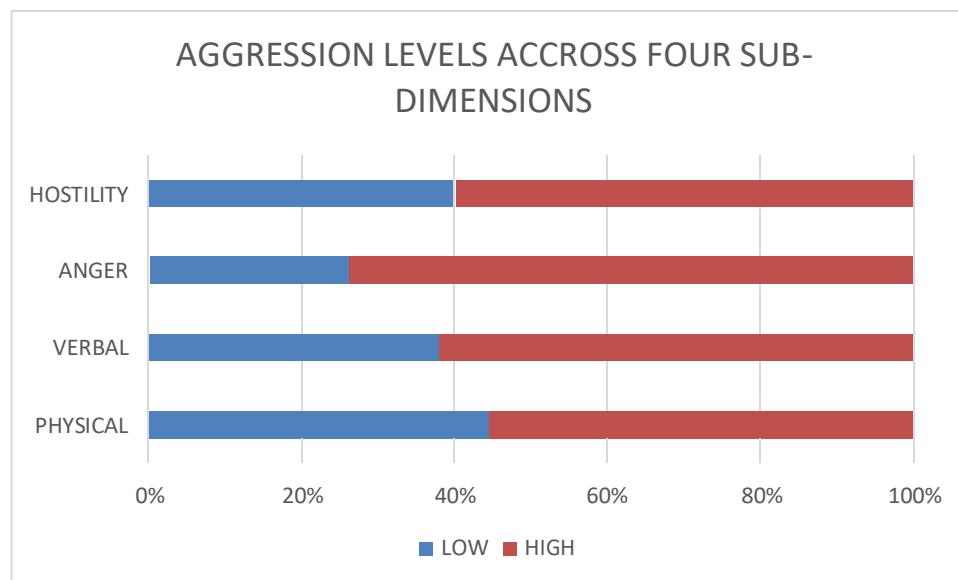


Figure 1: Aggression Levels of Respondents Across Four Sub-Dimensions

5. Discussion

The study has highlighted the high prevalence of all four dimensions of aggression (physical, verbal, anger, hostility), in the adolescent students. Taking mean score as the cutoff value, the overall scores for the component dimensions of aggression in our study were calculated as mean (physical aggression) PA = 26.952 + 6.178 (55.5%), mean (verbal aggression) VA = 15.42 + 3.625 (62%) mean anger = 23.707 + 5.405 (73.75%), mean hostility = 24.372 + 5.346 (60.25%). In a study from India (Bhilwar & Kapoor, 2016; Sidhu et al, 2019). The scores were found to be lower (mean physical aggression = 24.05 ± 6.89 (47.91%), mean verbal aggression = 15.01 ± 4.31 (53.66%), mean anger = 19.53 ± 5.86 (54.38%), and mean hostility = 25.15 ± 6.64 (54.67%). The reason might be our sample only consisted of private schools in urban population while they included rural too.

The means for physical, verbal and anger aggression in our study were higher in females (27.146 + 6.25), (15.426 + 3.43) (23.841 + 5.35), than males (26.817 + 6.13), (15.415 + 3.75), (23.614 + 5.44), respectively. However, they were not statistically significant. In another study done in Islamabad, Pakistan (Bukhari et al, 2017). means were higher in females for verbal aggression (20.72 + 3.020), and hostility (21.80 + 5.031), and they were significant at $p < 0.0001$. In our study 96 (59%) females showed higher levels of physical aggression as compared to males 126 (53%). A similar study done in Spain showed males exhibited higher levels of physical aggression (25.7%) as compared to females (15%). In a Nigerian study also, aggression levels came out to be higher in males (26.7%) than females (15%). (Morsünbül, 2015; Gülbahçe & Gülbahçe, 2019).

The total frequency of aggression in our sample came out to be 62.87%. Similarly in an Indian study done by Adesh, it came out to be 51.9% with higher scores in urban population, males having more of physical aggression and females having hostility (Sharma & Marimuthu, 2014)., in contrast to our study population where lower levels of aggression were found in males across the three sub-dimensions of physical aggression, verbal aggression, and anger while hostility levels were higher. It gives a picture of a more aggressive and frustrated female population in our study, or misusing the women empowerment concept.

In a Lebanese study males displayed greater mean physical aggression scores compared to females (7.03 vs. 6.36; $p = 0.043$), while females had higher mean anger scores compared to males (8.45 vs. 7.53; $p = 0.009$). (Fekih-Romdhane et al, 2023). This depicts that in most of the Asian countries male adolescents seem to be more physically and verbally aggressive.

The hostility levels in our study sample were higher in first order sibling (68%, $p < 0.05$) like a similar study in Iran, where it was highest too (47% linked to their choice of role model in life. In our study higher number of respondents having physical aggression and anger (114/400) was linked to their choice of a political figure as a role model, and 105/400 Tv/film celebrity ($p < 0.02$) ($p = 0.017$). TV/film celebrity. video game players have higher

physical aggression levels (67%), and when role model is a TV/film celebrity (67%) or a political figure. (54%) or who have illiterate mothers (51%) respectively.

The findings endorse that children both in developed and developing countries face similar pubertal issues. Maturity improves an individual's overall skills and increases their sensibility and experiences of life, which positively affects the aggressive behavior. At peak age of puberty subjects are highly unstable due to hormonal changes and various dissatisfactions that lead to complexes in lives of adolescents, resulting in aggressiveness. (Bailen et al, 2019).

According to our study 152 (68.5%) respondents living in nuclear family type, had high levels of physical aggression as compared to 70 (31.5%) living in a joint family. Similar results were obtained in a research conducted in Karachi. (Yildirim & Çoban, 2018). and in USA by Paula Fomby. (Fomby et al, 2016). In a nuclear family system, the overall burden of grooming the children and running the house comes on the parents especially the mother. In an attempt to perform all the tasks sometimes the children's grooming is neglected, hence creating a negative behavior in them making them aggressive. (Le et al, 2023; Alam & Halder, 2018). Moreover, in the presence of other family members in a joint setup, children learn to control their emotions in a better way and give space and respect to others.

Our study also shows a great impact of video gaming and social media on hostility levels as those who play video games & use social media are more hostile (214/54%) than those who have other hobbies like sports (9.0%). which is in line with study done in Croatia ($p < 0.03$) (Velki, 2022).

This depicts an overall similar picture of aggression in adolescents globally face more parenting practices that promote the struggle and fight behavior in them making them more physically and verbally aggressive.

5.1. Limitations

- As this research was conducted on young students, there was difficulty during data collection in explaining the tool. The tool was self-administered by researchers & explained to school going students in easy language and face to face interviewing was done to fill data.
- There was difficulty in obtaining consent from school administrators/ principals. They entertained only after strict confidentiality was promised

6. Recommendations

6.1. Healthcare recommendations:

- Health education about aggression should be done by conducting campaigns in schools, colleges, universities, hospitals etc.
- Focus group discussions should be arranged by doctors for the community.
- Intervention strategies should be devised to increase usage of counselling sessions as measures to decrease aggression in students.

6.2. Future research recommendations:

Further research is recommended in other schools and colleges and to be extended to other cities of Pakistan to get a clear idea of the prevalence of aggression in adolescents.

7. Conclusion

Based on the findings of the study it was concluded that majority of school-going adolescents showed increased levels of aggression in all its sub-dimensions, that include verbal, physical, hostility and anger, with aggression level being more in females.

7.1. Conflict Of Interest

"Author declares no conflict of interest".

7.2. Disclosure

The study was not a part of any thesis or dissertation, a pilot project or an ongoing study project.

7.3. Funding

No company or institution has financially contributed to the study. All the expense was borne by the principal investigator.

7.4. Participants' Consent

The consent of the study participants (adolescents), and the head of institutions was taken prior to data collection.

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