

Aggression and its Associated Factors among the Teenagers of Selected Schools in Kathmandu

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Abstract

Introduction: The teenage years mark a critical period for growth and development, yet aggression has emerged as a significant concern among adolescents today. Addressing teenage aggression through clinical or public intervention necessitates a thorough understanding of its associated risk factors.

Objectives: To assess the level of aggression and associated risk factors among teenagers in selected schools in Kathmandu and to find out the association between the aggression and selected variables.

Methodology: A descriptive cross-sectional study was conducted, involving a total of 97 participants selected through systemic random sampling. Data collection was carried out using a self-administered questionnaire, specifically the Buss and Perry Aggression Questionnaire (with a reliability coefficient of $r=0.78$), which assessed respondents' reactions to various events. Statistical analysis was performed using SPSS version 16, employing descriptive statistics such as frequency, percentage, mean, and standard deviation. Additionally, inferential statistics, including the Chi-square test and logistic Regression, were utilized to explore associations among variables.

Findings: The study revealed that more than half (51.5%) of the respondents exhibited moderate levels of aggression, while 48.5% showed no signs of aggression. Notably, none of the respondents displayed a higher level of aggression. Although the study did not demonstrate significant associations with the selected variables, when assessing the risk factors, certain trends emerged. The likelihood of displaying aggressive behavior was higher among males (OR=0.082, CI=0.360-1.788), students in class 9-10 (OR=0.797, CI=0.356-1.782), individuals practicing Hinduism (OR=0.700, CI=0.242-2.022), those residing in nuclear families (OR=0.566, CI=0.239-1.788), respondents with only one sibling (OR=0.639, CI=0.283-1.442), those with family incomes ranging from 36551 to 97451 (OR=0.982, CI=0.436-2.213), regular users of social media (OR=0.758, CI=0.329-1.749), and those interested in online games (OR=0.539, CI=0.240-1.211).

Conclusion: The study underscores a notable prevalence of moderate aggression among teenagers in Kathmandu, Nepal, without any instances of high aggression observed. Identified risk factors include gender, grade level, and family structure. Further research is necessary to fully grasp these associations and develop targeted interventions to address teenage aggression effectively. Additionally, awareness campaigns focusing on responsible social media usage and online gaming habits could aid in mitigating aggression among adolescents.

Keywords: Associated Factors, Buss and Perry Aggression Questionnaire, Teenage Aggression

1. Introduction

1.1 Background of the study

During adolescence, a pivotal phase of growth and development between childhood and adulthood, teenagers undergo significant physical, emotional, and social changes. This transitional period, typically spanning from ages 13 to 19, is crucial for acquiring essential knowledge, skills, and emotional management abilities necessary for navigating adulthood [1]. Globally, approximately 1.2 billion teenagers exist, with Nepal alone housing around 6 million, constituting 24% of its total population [2]. Aggression, characterized by overt or covert harmful social interactions, is a prevalent concern among adolescents. Triggers for aggression vary from frustration due to unmet goals to feelings of disrespect [3]. It can manifest as direct physical or verbal harm or indirect harm aimed at damaging social relations [4]. Hostile aggression occurs when harm is intended out of anger, while instrumental aggression is a means to achieve non-injurious goals, such as gaining social approval or financial gain [5]. Emotional aggression, often impulsive, inflicts harm for its own sake, while relational aggression targets interpersonal relationships and social status [6].

In modern society, there has been a significant rise in aggression and violence among youth, particularly boys. Psychological challenges stemming from physical and psychological changes during adolescence, coupled with strained relationships with authority figures and peers, academic pressure, curiosity about sexual practices, and substance abuse, contribute to this trend [7].

Research findings from various studies highlight the prevalence and severity of aggression among teenagers, along with associated risk factors. Factors such as male sex, older age, unfavorable school environments, engagement in sports, exposure to violent media, personal history of abuse, family birth order, urban residence, and dropping classes have been identified as potential risk factors [8].

For instance, a study conducted in Mexico revealed higher rates of aggression among secondary school students compared to other countries. Additionally, research among adolescents globally has shown a substantial percentage reporting psychosocial problems, indicating the need for comprehensive support and intervention strategies [9].

In light of these findings, understanding the complexities of aggression among teenagers in Kathmandu is imperative for developing targeted interventions to address this issue effectively.

1.2 Rationale of the study

Over the years and across various social and cultural contexts, empirical studies have delved into the specificities of aggression among teenagers [10].

The adolescent stage is universally acknowledged as pivotal for development and warrants careful examination. Properly modifying adolescent behavior and channeling their energy can positively contribute to society [11].

In contemporary times, rapid industrialization and urbanization have led to a scenario where many parents are employed and live in nuclear families, resulting in limited time available for parental supervision. Consequently, psychosocial, emotional, behavioral, and psychiatric issues among teenagers are on the rise [12].

Considering the escalating incidences of violence among teenagers and the lack of attention given to this issue, alongside the need to identify associated risk factors for aggressive behavior, this study is crucial. The psychological well-being of teenagers is a collective responsibility shared by parents, teachers, health workers, and policymakers [13].

A cross-sectional study conducted in Nepal among 6,529 participants highlighted concerning trends:

45.24% reported facing physical attacks, 39.25% were involved in physical fights, and 11.65% were victims of sexual violence. Factors such as participant age, parental supervision, feeling unsafe at school, and number of close friends were associated with physical attacks. Bullying, corporal punishment in school, school grades, and corporal punishments were linked to physical fights and instances of sexual violence [14].

Despite the alarming prevalence of violence, there's a lack of research in specific areas such as schools in Kathmandu. Therefore, this study aims to investigate "Aggression and its associated factors among the teenagers of selected schools in Kathmandu".

1.3 Objectives of the study

General Objective: To assess the level of aggression and its associated factors among teenagers of selected schools in Kathmandu.

Specific Objectives:

To assess the level of aggression among teenagers of selected school in Kathmandu.

To identify the associated risk factors of aggression among teenagers of selected schools in Kathmandu.

To find the association between the aggression and selected variables.

1.4 Research question

What is the level of aggression and associated risk factors among the teenagers of selected schools in Kathmandu?

1.5 Theoretical framework

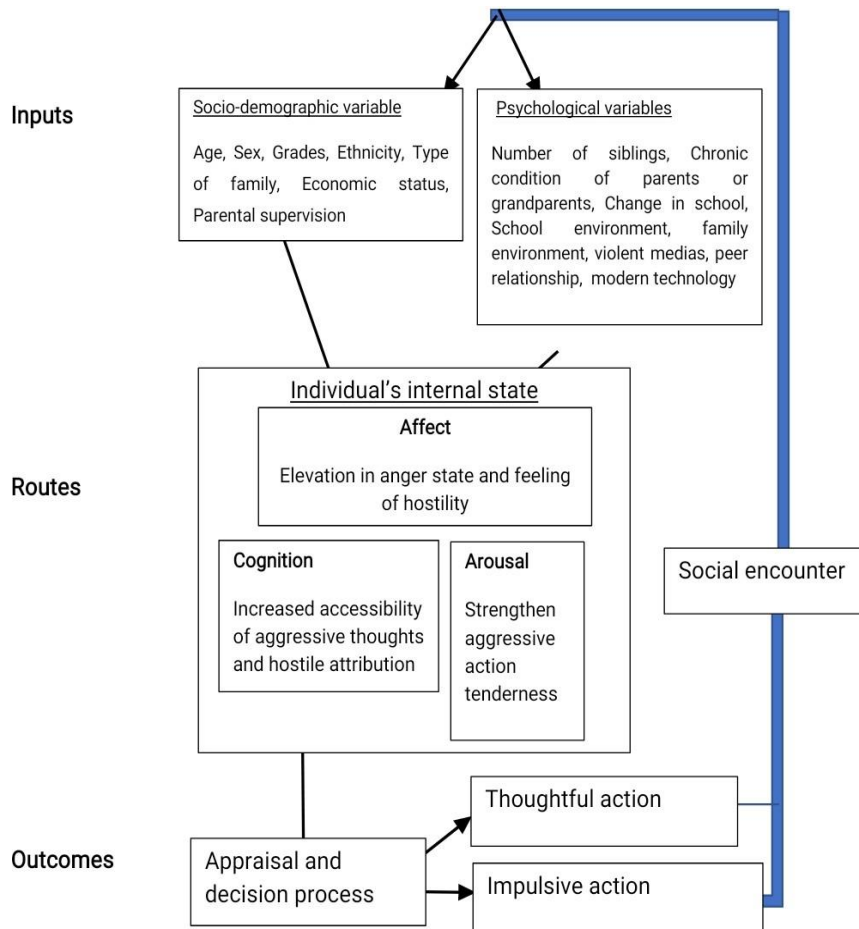


Figure 1: Theoretical framework of aggression according to General Aggression Model (GAM)

The theoretical framework of this study draws upon the General Aggression Model (GAM), conceptualized by Anderson and Bushman in 2002. GAM provides a comprehensive and integrative framework for understanding human aggression, comprising inputs, routes, and outcomes. Proximate processes within GAM elucidate how individual and situational factors influence cognitions, emotions, and arousal, thereby impacting appraisal and decision-making processes, which subsequently influence behavioral outcomes, whether aggressive or non-aggressive.

In this study, various independent variables are considered as stimuli, serving as inputs that influence the individual's internal state, including affect, cognition, and arousal, along the route. The outcome involves the individual's appraisal and decision-making processes. Individuals exhibiting sound appraisal and decision-making abilities are likely to engage in thoughtful actions, whereas those lacking such abilities may resort to impulsive actions, as illustrated in Figure 1

2. Research Methodology

2.1 Research design: A descriptive cross-sectional research design was used.

2.2 Research Setting: The research study was conducted in two private schools established in 2053 B.S. Both schools are situated in Koteshwor and Baneshwor of Kathmandu, Nepal. Each school has a total of 510 students from playgroup to class 10, with 171 students enrolled in the lower secondary and secondary levels in each school.

2.3 Population: Teenagers studying in lower secondary and secondary level i.e. students of grades 7-10.

2.4 Sampling technique: Probability, Systematic sampling technique was used.

2.5 Sample size: Sample size is calculated by using the formula
Sample size is calculated by using the formula

Sample size (n) $n = \frac{4pq}{d^2}$

Where, p = prevalence of aggression 67.2 % [15]

q = 1-p

d = allowable error is 10%

Sample size (n) = $4 \times 0.672 \times 0.328 / 0.01$

= 88.1664

Now, adding 10% to the calculated sample size to reduce various biases, the actual sample size becomes **97**.

2.6 Inclusion Criteria: Both male and female students studying in the lower secondary and secondary level and who are willing to participate were included in the study.

2.7 Exclusion criteria: Students who were absent during the data collection period.

2.8 Instrumentation: The research instrument is divided into two parts:

Part I: Semi-structured questionnaire to collect information related to socio-demographic variables.

Part II: Buss and Perry Aggression Questionnaire (BPAQ)

Buss and Perry Aggression Questionnaire (BPAQ) also known as the Aggression Questionnaire (AQ) is a self-administered questionnaire used to measure aggression in individuals. It is a 29-item self-administered instrument which is based on 5-point Likert scale. Choices vary from extremely uncharacteristic (1) to extremely characteristic (5). The BPAQ includes four subscales:

Physical Aggression (items 1-9)

Verbal Aggression (items 10-14)

Anger (items 15-21)

Hostility (items 22-29.)

Possible scores are to be obtained from a scale range of 9 to 145.

Level of aggression:

- No aggression: 29-78
- Moderate aggression: 79-120
- High aggression: 121-145

2.9 Ethical Considerations:

Formal permission was obtained from the Institutional Review Committee (IRC) of Scheer Memorial Adventist Hospital.

Permission was sought from the principals of the participating schools.

Informed written consent was obtained from the guardians of the participants prior to data collection.

Strict confidentiality and anonymity were maintained throughout the research process.

Participants were assured of voluntary participation, with the option to withdraw at any time without consequences.

Following the completion of the study, the principals of the schools were informed specifically about the number of students exhibiting moderate aggression.

This information was shared to facilitate further intervention strategies aimed at addressing moderate aggression among the students and promoting a safer school environment

2.10 Data collection procedure

The purpose of the study was clearly explained to the participants, and informed consent was obtained from participants and their guardians.

Self-administered questionnaires were distributed to participants at an appropriate time after obtaining consent.

Data collection and analysis were carried out between the period of 7th September to 28th September 2021

2.11 Data analysis procedure

Upon completion of data collection, the questionnaire was checked for completeness and handled with care.

The data were stored securely, organized, and coded for further analysis.

Data entry was conducted on the same day of collection to minimize errors.

Sequential coding was applied for accurate data entry.

Data were entered into MS Excel

The coded data were analyzed using SPSS version 16.

Descriptive statistics (frequency, percentage, mean, standard deviation) were used to summarize demographic variables.

Inferential statistics (chi-square test) were employed to investigate the relationship between aggression prevalence and selected variables.

Logistic regression analysis was conducted to examine predictive relationships between identified risk factors and aggressive behavior

Results were tabulated, analyzed, and categorized to align with research objectives

3. Findings

Table 1: Respondents’ Socio-demographic Information

n=97

Variables	Frequency	Percentage
Age(in completed years)		
13-14	53	54.6
15-16	44	45.4
Mean ± SD=14.3 ± 1.07 ; Minimum:13, Maximum:16		
Gender		
Female	44	45.4
Male	53	54.6
Religion		
Buddhism	6	6.2
Christianity	8	8.2
Hinduism	80	82.5
Muslim	3	3.1
Family type		
Nuclear	66	68.0
Joint	31	32.0
Number of siblings		
1	57	58.8
2	32	33.0
More than 2	8	8.2

Table 1 depicts that more than half (54.6%) of the respondents were between the age group of 13-14 years, while 45.4% were between the age group of 15-16 years. In terms of gender, more than half (54.6%) were male whereas 45.4% were female. Furthermore, the majority of respondents (82.5%) identified as Hindu, followed by Christian (8.2%), Buddhist (6.2%), and Muslim (3.1%) respectively. Regarding family structure, more than two third (68.0%) lived in a nuclear family. In terms of the number of siblings, nearly three fifth (58.8%) of them had only one sibling.

Table 2: Respondents’ Home Related Information

n=97

Variables	Frequency	Percentage
Home environment		
Peaceful	51	52.6%
Sometimes disputes occur	44	45.4%
Regular fight	2	2.1%
Perceived parental monitoring		
Adequate	92	94.8%
Inadequate	5	5.2%

Table 2 outlines that half of the participants (52.6%) described their homes as peaceful, while 45.4% reported occasional disputes. Only a small percentage (2.1%) experienced regular fights at home. The majority (94.8%) felt adequately monitored by their parents, while a minority (5.2%) perceived otherwise.

Table 3: Respondents’ School-Related Information
n=97

Variables	Frequency	Percentage
Grade		
7	17	17.5
8	25	25.8
9	24	24.7
10	31	32.0
Perceived School environment		
Excellent	56	57.7
Fine	38	39.2
Bad	3	3.1
Relationship with friends		
Good	78	80.4
Bad	19	19.6
Change in school: (n=89)		
1	54	60.6
2	31	34.8
More than 2	4	4.49

Table 3 depicts that more than half (57.7%) of respondents perceived the school environment as excellent and majority (80.4%) of them reported good relationships with friends. Additionally, more than half (60.6%) of them had changed schools at least once.

Figure 2: Respondents’ Level of Aggression
n=97

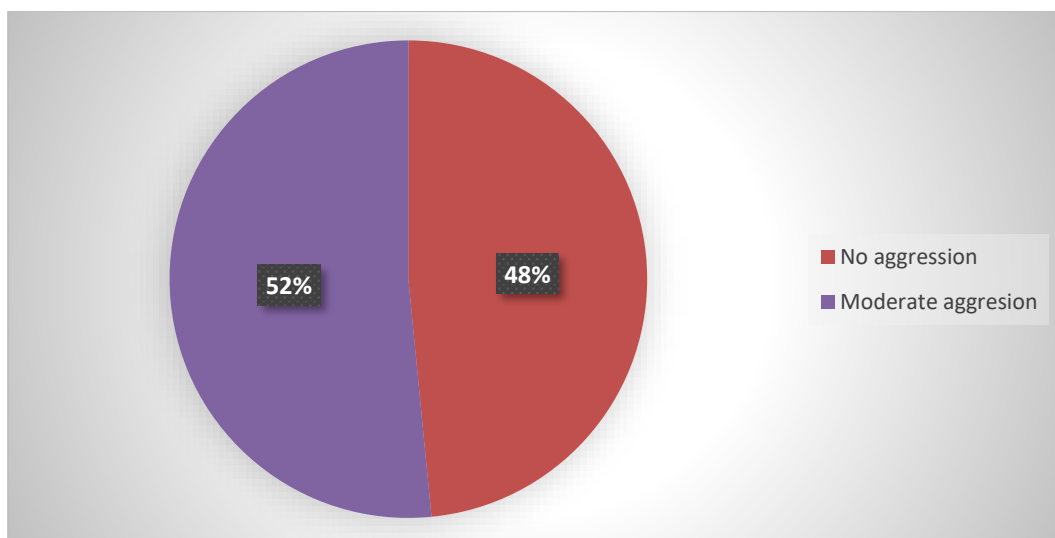


Figure 2 illustrates that more than half (52.0%) of them exhibited moderate aggression, while 48.0% showed no aggression. Notably, no respondents demonstrated a higher level of aggression.

Table 4. Association between Level of Aggression and Selected Variables

Variables	No aggression	Moderate aggression	Total	χ^2 value	<i>p</i> value	Odd Ratio (95% CI)
Age						
13-14	28(28.86%)	25(25.77%)	53(54.63%)	0.896	0.344	1.474 (0.659-3.293)
15-16	19(19.56%)	25(25.77%)	44(45.33%)			
Gender						
Female	20(20.61%)	24(24.74%)	44(45.35%)	0.290	0.590	0.082 (0.360-1.788)
Male	27(27.84%)	26(26.80%)	53(54.64%)			
Class						
7-8	19(19.59%)	23(23.71%)	42(43.30%)	0.307	0.580	0.797 (0.356-1.782)
9-10	28(28.86%)	27(27.84%)	55(56.7%)			
Religion						
Hinduism	40(41.21%)	40(41.21%)	80(82.42%)	0.437	0.509	0.700 (0.242-2.022)
Others	7(7.22%)	10(10.31%)	17(17.53%)			
Family type						
Nuclear	29(29.89%)	37(38.14%)	66(68.03%)	1.685	0.194	0.566 (0.239-1.788)
Joint	18(18.56%)	13(13.40%)	31(31.96%)			
Number of siblings						
1	25(25.77%)	32(32.99%)	57(58.76%)	1.168	0.280	0.639 (0.283-1.442)
More than 1	22(22.68%)	18(18.56%)	40(41.24%)			
Family income						
36551-97451	28(28.86%)	30(30.93%)	58(59.79%)	0.002	0.966	0.982 (0.436-2.213)
4850-36550	19(19.56%)	20(20.61%)	39(40.17%)			
Perceived School Environment						
Excellent				0.127	0.722	1.158 (0.517-2.595)
Fine	28(28.86%)	28(28.86%)	56(54.72%)			
	19(19.56%)	22(22.68%)	41(42.24%)			
Relationship with friends						
Good	38(39.17%)	40(41.24%)	78(80.41%)	0.011	0.916	1.056 (0.387-2.881)
Bad	9(9.28%)	10(10.30%)	19(19.58%)			
Change in school						
Less than 2	27(27.84%)	35(36.08%)	62(33.92%)	1.655	0.198	0.579 (0.251-1.336)
More than 2 times	20(20.61%)	15(15.46%)	35(36.07%)			
Home environment						
Peaceful	25(25.77%)	26(26.80%)	51(52.57%)	0.014	0.907	1.049 (0.472-2.329)
Disputes occurs	22(22.68%)	24(24.74%)	46(47.42%)			
Perceived parent monitoring						
Yes	46(47.42%)	46(47.42%)	92(94.84%)	1.709	0.191	4 (0.431-
No	1(1.03%)	4(4.12)	5(5.15%)			

No						37.166)
Use of social media						
Daily Rarely	29(29.89%) 18(18.56%)	34(35.05%) 16(16.49%)	63(64.94%) 34(35.05%)	0.422	0.516	0.758 (0.329-1.749)
Interest in online games						
Yes No	22(22.68%) 25(25.77%)	31(31.96%) 19(19.56%)	53(54.64%) 44(45.33%)	2.256	0.133	0.539 (0.240-1.211)

χ^2 Pearson's Chi Square test, *p value, Level of significance at < 0.05, OR: odds ratio, CI: confidence interval

Table 4 presents that no significant association was found between aggression and selected variables. However, certain trends were observed: aggression tended to be higher among respondents aged 13-14 (25.77%), male participants (26.80%), those in classes 9-10 (27.84%), followers of Hinduism (41.21%), from nuclear families (38.14%), with only one sibling (32.99%), with higher family income (30.93%), perceiving an excellent school environment (28.86%), having good relationships with friends (41.24%), changing schools less than twice (36.08%), experiencing a peaceful home environment (26.80%), perceiving adequate parental monitoring (47.42%), using social media daily (35.05%), and showing interest in online games (31.96%).

Furthermore, the logistic regression analysis revealed that the risk of displaying aggressive behavior was higher among males (OR=0.082, CI=0.360-1.788), respondents in classes 9-10 (OR=0.797, CI=0.356-1.782), Hindus (OR=0.700, CI=0.242-2.022), those in nuclear families (OR=0.566, CI=0.239-1.788), respondents with only one sibling (OR=0.639, CI=0.283-1.442), with family incomes between 36551-97451 (OR=0.982, CI=0.436-2.213), those perceiving an excellent school environment (OR=1.158, CI=0.517-2.595), daily users of social media (OR=0.758, CI=0.329-1.749), and those interested in online games (OR=0.539, CI=0.240-1.211).

4. Conclusion

The study titled "Aggression and its Associated Factors among Teenagers of Selected Schools in Kathmandu" employed a descriptive cross-sectional design to investigate the prevalence of aggression and its correlates among teenagers. Through systematic random sampling, data were collected from a total of 97 participants using a self-administered questionnaire, namely the Buss and Perry Aggression Questionnaire, renowned for its reliability (r=0.78). Subsequently, the collected data were analyzed using descriptive statistics such as frequency, percentage, mean, and standard deviation, along with inferential statistics including the chi-square test. Additionally, logistic regression analysis was conducted to identify specific risk factors associated with a higher likelihood of displaying aggressive behavior.

The findings of the study reveal a notable prevalence of moderate aggression among Kathmandu's teenagers, with no instances of higher aggression observed. While the analysis did not yield statistically significant associations between aggression and selected variables, certain trends were discernible. Aggression tended to be more prevalent among younger respondents, males, those in higher grades, followers of Hinduism, and individuals from nuclear families with fewer siblings. Moreover, logistic regression analysis identified specific risk factors associated with a higher likelihood of displaying aggressive behavior, including male gender, higher school grades, Hindu religion, nuclear family

structure, having only one sibling, specific family income ranges, perception of an excellent school environment, daily social media use, and interest in online games.

These findings underscore the multifaceted nature of teenage aggression and emphasize the importance of holistic interventions targeting various aspects of adolescents' lives. By addressing factors such as family dynamics, school environments, peer relationships, and media consumption habits, tailored interventions can be developed to mitigate aggression and promote positive behavioral outcomes among teenagers in Kathmandu. However, further research is warranted to deepen our understanding of these dynamics and refine intervention strategies for more effective outcomes.

Recommendations:

Longitudinal studies could be adopted to track the development of aggression among teenagers over time. This approach would provide insights into the trajectory of aggression and help identify critical periods for intervention.

Expand the study to include a more diverse sample of teenagers from various schools and socioeconomic backgrounds in Kathmandu. This would enhance the generalizability of findings and capture the heterogeneity of adolescent experiences.

Supplement quantitative data with qualitative research methods, such as interviews or focus groups, to gain deeper insights into the underlying factors contributing to teenage aggression.

Collaborate with schools to implement evidence-based intervention programs aimed at promoting positive social-emotional skills and conflict resolution strategies among students. These interventions could be integrated into the school curriculum or delivered through extracurricular activities.

Limitations:

The study was conducted with a relatively small sample size of 97 participants from specific schools in Kathmandu, Nepal. Therefore, the findings may not be generalizable to the broader population of teenagers in Kathmandu or other regions.

The data collection relied on self-administered questionnaires, which are subject to response bias and social desirability bias. Participants may have underreported or misreported their levels of aggression or other variables due to social stigma or personal biases.

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