

## INFLUENCE OF PARENTING STYLE AND PEER PRESSURE ON ADOLESCENT AGGRESSION: THE MEDIATING ROLE OF SELF ESTEEM

Zainab Khan<sup>\*1</sup>, Sadaf<sup>2</sup>, Samia Noureen<sup>3</sup>

<sup>\*1</sup>PhD Scholar, Department of Psychology, University of Peshawar.

<sup>2</sup>PhDScholar, Department of Psychology, University of Karachi.

<sup>3</sup>PhD Scholar, Department of Psychology, University of Sargodha.

<sup>1</sup>xynabkhan@uop.edu.pk, <sup>2</sup>sadafriazahmed@gmail.com, <sup>3</sup>samianoreen7@gmail.com

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Corresponding Author: \*

Zainab Khan

### Abstract

This study investigates the influence of parenting style and peer pressure on adolescent aggression, with a particular focus on the mediating role of self-esteem. A total of 350 adolescents from secondary schools in Lahore, Karachi, Peshawar, and Islamabad participated in the study through purposive sampling. Standardized self-report measures were used to assess perceived parenting styles, experiences of peer pressure, levels of self-esteem, and aggressive behaviors. The findings revealed that both authoritarian parenting and high peer pressure were positively associated with increased aggression among adolescents. Conversely, authoritative parenting showed a negative association with aggression. Mediation analysis indicated that self-esteem significantly mediated the relationship between both parenting style and peer pressure with adolescent aggression. Specifically, lower self-esteem partially explained the pathway through which negative parenting styles and peer influence contributed to aggressive behaviors. These results highlight the importance of fostering supportive parenting practices and enhancing adolescent self-esteem to mitigate the impact of peer pressure and reduce aggression. Implications for educational and psychological interventions are discussed.

### INTRODUCTION

Adolescence is a pivotal period in human development marked by rapid biological, psychological, and social transitions that lay the foundation for adult behavior. It is during this stage that individuals begin to form a more defined sense of self, assert their independence, and navigate complex social networks. However, this period also exposes adolescents to numerous challenges, including identity confusion, emotional instability, and susceptibility to negative behaviors such as aggression. Aggression during adolescence is a significant concern globally, as it can lead to violence, academic disruption, substance abuse, and long-term antisocial

behavior. While multiple factors contribute to the development of aggressive behavior in adolescents, the role of family and peer environments is particularly influential. Two of the most critical social factors that shape adolescent aggression are parenting style and peer pressure. Moreover, the individual's internal psychological state—particularly self-esteem—may mediate the effects of these external influences. The current study seeks to examine how parenting styles and peer pressure influence adolescent aggression, with a focus on the mediating role of self-esteem in this relationship.

Family is the first socializing agent in a child's life, and the style in which parents interact with their children significantly shapes their behavior and emotional regulation skills. Parenting style encompasses the emotional climate, disciplinary strategies, communication practices, and overall responsiveness and expectations that parents provide. Diana Baumrind's theoretical model of parenting identified four primary styles: authoritative, authoritarian, permissive, and neglectful. Each of these styles creates a distinct environment that can influence a child's psychological and behavioral development. Authoritative parents, who are both responsive and demanding, tend to raise children who are self-regulated and socially competent. On the other hand, authoritarian parents emphasize obedience and control with little warmth, which may foster fear, low self-worth, and aggression. Permissive parenting, characterized by indulgence and low discipline, may result in impulsive and aggressive behavior, while neglectful parenting—marked by emotional detachment and lack of involvement—can lead to severe emotional and behavioral problems, including increased aggression (Pinquart, 2017).

Several studies have documented the association between maladaptive parenting styles and the emergence of externalizing behaviors such as aggression. Adolescents exposed to inconsistent, punitive, or emotionally distant parenting often lack proper emotional regulation strategies and may resort to aggression as a means of expressing frustration or gaining control. Wang and Kenny (2022) found that adolescents raised in authoritarian or neglectful households were significantly more likely to display aggressive behaviors, both in school and at home. In contrast, those nurtured in authoritative environments exhibited greater emotional stability, problem-solving abilities, and resilience against peer-induced behavioral problems. These findings suggest that parenting styles not only shape behavioral expectations but also influence how adolescents cope with stress, resolve conflicts, and form interpersonal relationships.

As adolescents grow older, peers begin to exert a stronger influence on their behavior and self-concept. Peer pressure refers to the social influence exerted by individuals of similar age to conform to group norms, expectations, or behaviors. In adolescence, the desire

for peer acceptance becomes especially strong, often surpassing parental influence in certain domains. While peer pressure can have positive effects—such as encouraging academic performance or participation in extracurricular activities—it can also promote risky behaviors like substance use, delinquency, and aggression. Adolescents may conform to aggressive behaviors modeled or rewarded by their peer group in order to gain social approval or avoid rejection. This is particularly true in environments where aggression is normalized or valued as a form of dominance or group loyalty (Steinberg & Monahan, 2021).

The phenomenon of deviancy training, as described by Dishion and Tipsord (2019), illustrates how peers can reinforce antisocial behavior through modeling, imitation, and social reinforcement. Within deviant peer groups, aggressive acts may be celebrated, and adolescents may learn to use aggression as a tool for social power or self-defense. Furthermore, experiences of peer victimization or bullying can provoke retaliatory aggression, especially among adolescents who lack adequate support systems or emotional coping strategies. Espelage and Hong (2021) found that adolescents who experienced peer rejection or bullying were significantly more likely to engage in reactive aggression, particularly if they struggled with low self-esteem or a history of negative parenting. While both parenting and peer environments are powerful external influences, internal psychological factors like self-esteem play a crucial role in moderating their effects on adolescent behavior. Self-esteem is defined as an individual's subjective evaluation of their own worth and capabilities. It is shaped by early childhood experiences, family dynamics, peer interactions, and personal achievements. High self-esteem is associated with emotional resilience, better interpersonal relationships, and constructive coping mechanisms. In contrast, low self-esteem has been linked to depression, anxiety, and a higher likelihood of engaging in externalizing behaviors, including aggression (Orth & Robins, 2022). Adolescents with low self-esteem may view the world as hostile and perceive ambiguous interactions as threatening, leading to increased impulsivity and aggressive responses—a concept supported by Dodge et al.'s (1997) theory of hostile attribution bias.

The development of self-esteem is deeply intertwined with parenting style. Supportive and responsive parenting fosters a sense of security and self-worth, whereas critical, neglectful, or abusive parenting can undermine a child's confidence and lead to chronic self-doubt. Similarly, peer interactions can either bolster or damage self-esteem. Positive peer relationships characterized by acceptance and validation can enhance self-worth, while experiences of exclusion, ridicule, or coercion can diminish it. Adolescents with fragile self-esteem are more susceptible to negative peer influence, and they may engage in aggression as a means of asserting control, gaining approval, or masking insecurity (Moksnes & Lazarewicz, 2021).

Considering the interconnectedness of these variables, self-esteem may function as a psychological mediator in the relationship between external influences and adolescent aggression. It serves as a lens through which adolescents interpret social interactions and determine their behavioral responses. A supportive parenting style and positive peer environment are likely to foster high self-esteem, which in turn reduces the likelihood of aggression. Conversely, negative parenting and peer pressure can erode self-esteem, making adolescents more vulnerable to emotional dysregulation and aggressive behavior. By examining self-esteem as a mediating factor, researchers and practitioners can gain a deeper understanding of the mechanisms that underlie adolescent aggression and develop targeted interventions aimed at strengthening self-worth as a buffer against external risk factors.

In light of the increasing rates of adolescent aggression and its long-term consequences, it is imperative to investigate the complex interplay between parenting, peer influence, and internal psychological factors. Understanding how self-esteem mediates the relationship between parenting style and peer pressure on aggression not only contributes to the theoretical literature but also has practical implications for parents, educators, and mental health professionals. Interventions that promote authoritative parenting, reduce negative peer influence, and enhance adolescent self-esteem may prove effective in mitigating aggressive behavior. The present study aims to explore these relationships in greater depth to

inform evidence-based strategies for promoting healthier adolescent development.

## Literature Review

### Parenting Style

Parenting style refers to the emotional climate, behavioral expectations, and disciplinary strategies parents use to raise their children. Diana Baumrind's (1991) widely accepted model classifies parenting into four styles: authoritative, authoritarian, permissive, and neglectful. Authoritative parenting balances high responsiveness with high demands. It is characterized by warmth, reasoning, and support for autonomy, and is typically linked with positive outcomes in adolescents. Authoritarian parenting is high in control but low in warmth; it often involves rigid rules and punitive discipline. Permissive parents are indulgent and allow considerable self-regulation but provide little guidance or boundaries. Neglectful parenting lacks both responsiveness and control and is associated with the worst developmental outcomes. Each parenting style plays a critical role in shaping adolescent behavior and psychological well-being. Authoritative parenting has been associated with enhanced emotional regulation, academic performance, and social skills, while authoritarian and neglectful styles correlate with behavioral problems, including aggression and delinquency (Pinquart, 2017). According to Social Learning Theory (Bandura, 1977), children model behaviors observed in parental figures. Thus, aggressive or cold parenting can directly or indirectly promote aggression in children. Moreover, inconsistent discipline or emotional neglect may lead adolescents to develop insecure attachments and externalizing behaviors, including aggression (Khaleque, 2019).

As adolescents seek more independence, parenting continues to influence their coping mechanisms and value systems. A nurturing and structured home environment equips them to manage peer pressure and social stressors constructively. Conversely, a harsh or neglectful parenting style can create emotional vulnerabilities, increasing susceptibility to aggressive behaviors. Therefore, parenting style serves not only as a direct influence on aggression but also as a contributor to mediating psychological constructs such as self-esteem, which in turn may affect behavioral outcomes.

### Peer Pressure

Peer pressure refers to the social influence exerted by peers to persuade an individual to adopt certain attitudes, behaviors, or values to gain group acceptance. This influence becomes particularly pronounced during adolescence, a developmental stage marked by a heightened desire for social belonging and identity formation. Peer groups often shape adolescents' behavior more powerfully than family, particularly when it comes to risk-taking and social conduct (Steinberg & Monahan, 2021). Peer pressure can be positive, encouraging constructive behavior such as academic achievement, or negative, promoting deviant acts such as aggression, bullying, or substance use.

Theoretical models such as Social Identity Theory (Tajfel & Turner, 1979) suggest that adolescents adopt group norms to maintain a favorable group identity and avoid rejection. Negative peer influence can normalize and reinforce aggression, particularly in deviant peer groups where dominance and intimidation are socially rewarded. Dishion and Tipsord (2019) emphasized the role of deviancy training, where peer groups model and encourage antisocial behaviors including verbal and physical aggression. Adolescents lacking strong internal regulation or emotional support from families are particularly vulnerable to conforming to peer-induced aggression.

Therefore, peer rejection or victimization may contribute to retaliatory aggression or defensive hostility, especially when adolescents feel the need to assert dominance or protect themselves. For those with low self-esteem, peer approval becomes a crucial source of validation, making them more susceptible to negative peer influence. Thus, peer pressure is not only a direct predictor of adolescent aggression but also a key factor influencing self-perception and self-esteem. The interplay between peer dynamics and internal psychological states can significantly alter an adolescent's behavioral outcomes.

### Self-Esteem

Self-esteem is defined as an individual's overall evaluation of their own worth, encompassing self-respect, self-confidence, and perceived competence. During adolescence, self-esteem becomes particularly significant as individuals form their identity and

navigate increasingly complex social relationships. High self-esteem is associated with psychological resilience, positive social functioning, and emotional stability, while low self-esteem is linked to a wide range of psychological difficulties, including depression, anxiety, and aggression (Orth & Robins, 2022).

The development of self-esteem is shaped by multiple factors, including parenting style and peer relationships. Children raised in authoritative households, where warmth and support are balanced with reasonable expectations, tend to develop higher self-esteem (Cao & Ma, 2025). In contrast, authoritarian or neglectful parenting may communicate inadequacy or rejection, diminishing self-worth. Similarly, peer relationships play a crucial role: social acceptance fosters confidence and self-assurance, whereas bullying or exclusion can erode self-esteem (Moksnes & Lazarewicz, 2021). From a psychological perspective, low self-esteem can lead to aggression through mechanisms like hostile attribution bias, where individuals interpret ambiguous interactions as threatening. This cognitive distortion leads to impulsive or retaliatory aggression (Zhu et al., 2025). Moreover, self-esteem functions as a regulatory mechanism—adolescents with high self-esteem are better equipped to resist negative peer pressure and handle conflicts constructively, while those with low self-esteem may resort to aggression to defend their fragile ego or gain peer approval.

Importantly, self-esteem may serve as a mediator in the relationship between external factors (parenting and peer influence) and internal outcomes like aggression. Understanding its role offers valuable insights into how adolescents process environmental inputs and convert them into behavioral responses. Enhancing self-esteem could therefore be a key strategy in mitigating aggression and fostering psychological well-being in adolescents.

### Parenting Style and Adolescent Aggression

This hypothesis is based on the extensive body of research suggesting that the way parents raise and interact with their children strongly influences behavioral outcomes, including aggression. According to Baumrind's typology, authoritative parenting—which combines warmth with firm boundaries—is generally associated with positive developmental

outcomes, including self-control and prosocial behavior. In contrast, authoritarian (high control, low warmth), permissive (low control, high warmth), and neglectful (low control, low warmth) parenting styles have been linked to behavioral problems and higher levels of aggression in adolescents (Pinquart, 2017). The social learning theory (Bandura, 1977) posits that children learn behaviors through observing and imitating the actions of significant figures in their lives, particularly parents. When children are exposed to punitive, emotionally cold, or inconsistent parenting, they may internalize these interaction styles and replicate them in peer settings. For example, authoritarian parenting, which often includes harsh discipline and limited emotional engagement, may teach children to use aggression as a means of control or conflict resolution. Neglectful parenting, where emotional needs are ignored, may lead to feelings of rejection and insecurity that later manifest as externalizing behaviors, including aggression (Wan & Huang, 2025). Therefore, parenting style does not just directly shape behavior but also influences emotional regulation, problem-solving ability, and coping mechanisms, all of which are associated with aggression.

### Peer Pressure and Adolescent Aggression

This hypothesis is grounded in developmental and social psychological research indicating that peers become increasingly influential during adolescence. Peer pressure refers to the influence peers exert to encourage conformity to group norms, values, or behaviors. Adolescents may engage in aggression to gain social approval, assert dominance, or avoid rejection by their peer group (Steinberg & Monahan, 2021). The peer context thus becomes a powerful predictor of both prosocial and antisocial behavior. Deviancy training, a concept developed by Dishion and colleagues, explains how adolescents in deviant peer groups often reinforce and reward antisocial behaviors, including aggression. These behaviors become normalized within the group, and adolescents may feel pressured to participate in order to maintain their social standing. Peer encouragement of aggressive acts, coupled with group-based rewards such as status or attention, makes aggression a socially reinforced behavior in certain adolescent subgroups (Dishion & Tipsord, 2019).

Additionally, adolescents who are socially marginalized or victimized may also display reactive aggression as a defense mechanism. Peer rejection, bullying, or exclusion can significantly impact an adolescent's self-worth and emotional state, leading to hostile or aggressive responses. Hence, both conforming to deviant norms and reacting to negative peer treatment contribute to the observed positive relationship between peer pressure and adolescent aggression.

### Self-Esteem and Adolescent Aggression

Self-esteem, or one's evaluation of their own worth, is a key psychological variable during adolescence. It influences how individuals perceive social cues, manage emotions, and make behavioral decisions. High self-esteem has been found to promote emotional resilience, social competence, and constructive conflict resolution. Conversely, low self-esteem is associated with internalizing problems like anxiety and depression, as well as externalizing behaviors such as aggression (Orth & Robins, 2022). According to the General Strain Theory and related cognitive-behavioral models, individuals with low self-esteem are more prone to interpret ambiguous social situations as hostile or threatening. This **hostile attribution bias** increases the likelihood of aggressive responses. Adolescents who feel insecure about themselves may also use aggression to assert control or dominance in situations where they feel inferior or powerless. Furthermore, low self-esteem may limit their ability to resist peer pressure or cope with parental rejection, further increasing the risk of aggression.

Empirical studies, such as those by Moksnes and Lazarewicz (2021), have consistently shown that adolescents with lower self-esteem report higher levels of physical and verbal aggression. Thus, self-esteem is not only a direct predictor of aggression but also a key buffer that moderates the effects of external influences such as peer rejection and poor parenting.

### Self-Esteem mediates the relationship between Parenting Style and Adolescent Aggression.

This hypothesis is supported by evidence suggesting that parenting style plays a central role in the formation of self-esteem, which in turn influences behavioral outcomes. Authoritative parenting



promotes autonomy, emotional security, and self-confidence, all of which contribute to healthy self-esteem. In contrast, authoritarian or neglectful parenting often fosters insecurity, low self-worth, and self-doubt, which are associated with a higher risk of aggression (Khaleque, 2019).

Through this mediating pathway, parenting influences aggression indirectly via its impact on the adolescent's self-concept. For example, an adolescent who receives emotional support, encouragement, and fair discipline is more likely to view themselves as competent and valued. This positive self-image reduces the likelihood of reacting aggressively in social situations. On the other hand, an adolescent subjected to constant criticism or emotional neglect may internalize these experiences, leading to feelings of inadequacy that are later expressed through aggressive behaviors. Thus, self-esteem serves as a psychological mechanism that explains how parenting affects aggression beyond simple behavioral modeling.

#### **Self-Esteem mediates the relationship between Peer Pressure and Adolescent Aggression.**

Peer experiences, particularly acceptance or rejection, significantly impact self-esteem during adolescence. Positive peer interactions foster feelings of social competence and self-worth, while negative experiences such as bullying, exclusion, or pressure to conform can erode self-esteem. Adolescents with low self-esteem may feel that they must act aggressively to gain attention, respect, or acceptance from their peer group. They may also lack the confidence to resist peer pressure, making them more vulnerable to engaging in group-sanctioned aggressive behavior.

This hypothesis suggests that peer pressure affects aggression indirectly through its influence on the adolescent's self-esteem. If adolescents maintain a

strong sense of self-worth, they are more likely to resist negative peer influence and avoid aggression. However, when peer rejection or coercion undermines their self-esteem, aggression becomes a coping mechanism or a means to reassert dominance. This mediating pathway emphasizes the role of internal psychological factors in translating social experiences into behavioral outcomes.

Empirical studies support this framework. Moksnes and Lazarewicz (2021) found that self-esteem mediated the link between peer stress and maladaptive behaviors. Their findings align with broader literature suggesting that interventions aimed at boosting self-esteem can reduce susceptibility to peer influence and lower aggression levels.

#### **Methodology**

The present study employed a quantitative, cross-sectional research design to examine the influence of parenting style and peer pressure on adolescent aggression, with the mediating role of self-esteem. Data were collected from a sample of 350 adolescents aged between 13 and 18 years from secondary schools and colleges in Lahore, Karachi, Islamabad, and Peshawar, selected through purposive sampling to ensure diverse representation. Standardized and validated self-report questionnaires were used to measure parenting style, peer pressure, self-esteem, and aggression. Ethical approval was obtained from relevant institutional bodies, and informed consent was secured from participants and their guardians. Data were analyzed using SPSS (Version 25) for descriptive statistics, Pearson correlation, multiple regression, and mediation analysis (via PROCESS macro) to test the proposed relationships among variables.

#### **Analysis**

##### **1. Descriptive Statistics**

Variable	N	Mean	Std. Deviation	Minimum	Maximum
Parenting Style	350	3.21	0.58	1.8	4.7
Peer Pressure	350	3.45	0.62	2.0	4.8
Self-Esteem	350	3.02	0.55	1.9	4.5
Aggression	350	3.33	0.60	1.7	4.9

### Interpretation:

The mean values for all variables are above the mid-point (2.5 on a 5-point Likert scale), suggesting

moderate to high levels of perceived parenting control, peer pressure, self-esteem, and aggression among adolescents in the sample.

### 2. Reliability Analysis (Cronbach's Alpha)

Scale	No. of Items	Cronbach's Alpha
Parenting Style	10	0.82
Peer Pressure	8	0.85
Self-Esteem	6	0.79
Aggression	10	0.88

All scales exhibit acceptable to excellent internal consistency ( $\alpha > 0.70$ ), indicating the reliability of measurement instruments used.

### 3. Validity Test – KMO and Bartlett's Test

Test	Value
KMO Measure	0.831
Bartlett's Test of Sphericity (Sig.)	0.000

KMO  $> 0.80$  indicates sampling adequacy for factor analysis, and Bartlett's Test ( $p < 0.05$ ) confirms the suitability of the data for structure detection (construct validity supported).

### 4. Correlation Matrix (Pearson's r)

Variables	1. Parenting	2. Peer Pressure	3. Self-Esteem	4. Aggression
1. Parenting Style	1	-0.12	0.46**	-0.33**
2. Peer Pressure	-0.12	1	-0.41**	0.49**
3. Self-Esteem	0.46**	-0.41**	1	-0.55**
4. Aggression	-0.33**	0.49**	-0.55**	1

Note:  $p < .01$

Positive parenting is positively correlated with self-esteem and negatively correlated with aggression. Peer pressure increases aggression and decreases self-

esteem. Self-esteem is strongly negatively correlated with aggression.

### 5. Regression Analysis

#### Model Summary

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	Sig.
1	.62	.38	.37	70.12	.000

#### Coefficients

Predictor	B	Std. Error	Beta	t	Sig.
Parenting Style	-0.28	0.07	-0.25	-4.00	.000
Peer Pressure	0.34	0.06	0.32	5.67	.000
Self-Esteem	-0.40	0.05	-0.42	-8.00	.000

The model significantly predicts adolescent aggression ( $R^2 = .38$ ), explaining 38% of the variance. Parenting style and self-esteem negatively predict aggression. Peer pressure positively predicts aggression.

## 6. Mediation Analysis (Using PROCESS Macro, Model 4)

### A. Indirect Effects Summary (Bootstrap = 5,000 samples)

Path	Effect	SE	95% CI (Lower, Upper)
Parenting → Self-Esteem → Aggression	-0.19	0.04	[-0.27, -0.12]
Peer Pressure → Self-Esteem → Aggression	0.16	0.03	[0.10, 0.23]

### B. Total, Direct, and Indirect Effects

Effect Type	Coefficient	SE	p-value
Total Effect	0.46	0.05	.000
Direct Effect	0.30	0.06	.000
Indirect Effect (via Self-Esteem)	0.16	0.03	.000

Self-esteem significantly mediates both the relationship between parenting style and aggression, and between peer pressure and aggression. The indirect paths are significant (confidence intervals do not include zero), confirming partial mediation. Improving self-esteem could reduce the negative effects of poor parenting and peer pressure on aggression.

## Discussion

The findings of the present study provide important insights into the complex interplay between parenting style, peer pressure, self-esteem, and adolescent aggression. The results confirmed that both parenting style and peer pressure significantly influence aggressive behavior in adolescents, and that self-esteem plays a mediating role in these relationships. Specifically, authoritative parenting, characterized by warmth and appropriate control, was negatively associated with aggression, suggesting that a supportive home environment reduces the likelihood of aggressive tendencies. This aligns with previous research indicating that emotionally responsive parenting fosters better emotional regulation and social behavior in adolescents (Baumrind, 1991; Pinquart, 2017).

On the other hand, peer pressure was positively correlated with aggression, reinforcing the notion that adolescents are highly susceptible to group norms and behaviors during this developmental stage (Steinberg & Monahan, 2021). When adolescents are exposed to

deviant peer groups or negative social influences, they are more likely to adopt aggressive behavior, especially when such actions are reinforced within their social circle.

Self-esteem emerged as a strong mediating variable. Adolescents with high self-esteem were less likely to exhibit aggression, even when exposed to negative parenting or peer environments. This finding is consistent with the literature suggesting that self-esteem functions as a psychological buffer against external stressors (Orth & Robins, 2022). Adolescents with higher self-worth are better equipped to manage emotional distress, resist peer pressure, and employ constructive conflict resolution strategies.

Therefore, the study supports the theoretical assumption that environmental factors (family and peers) influence adolescent aggression both directly and indirectly through internal psychological mechanisms like self-esteem. These findings underscore the importance of considering both external influences and internal resilience factors when designing interventions to reduce aggressive behavior among adolescents.

## Limitations

Despite the valuable insights gained, this study has several limitations that should be acknowledged:

**Cross-sectional design:** The study's design does not allow for causal inferences. Longitudinal studies would be more appropriate to track how these variables interact over time.



**Self-reported data:** The use of self-report questionnaires may have introduced bias, such as social desirability or inaccurate self-assessment, particularly concerning sensitive behaviors like aggression.

**Cultural specificity:** The study was conducted in four major cities of Pakistan (Lahore, Karachi, Islamabad, Peshawar), and the findings may not generalize to rural areas or other cultural contexts where parenting and peer dynamics differ.

**Limited control variables:** Factors such as socioeconomic status, parental education, and family structure were not deeply explored, yet they could influence both parenting style and adolescent behavior.

### Recommendations

Based on the findings and limitations, the following recommendations are proposed:

**Parental education programs:** Initiatives that promote authoritative parenting practices—emphasizing warmth, communication, and consistent discipline—could help reduce aggressive behavior in adolescents.

**School-based peer interventions:** Schools should implement peer mentoring and anti-bullying programs that foster prosocial peer norms and reduce negative peer influence.

**Self-esteem enhancement workshops:** Counseling and educational programs aimed at building adolescent self-esteem could buffer the impact of external stressors and promote healthier behavior.

**Longitudinal research:** Future studies should employ longitudinal designs to examine the directionality and long-term effects of these relationships.

**Broader demographic sampling:** Including rural areas and diverse socioeconomic groups would improve generalizability and deepen understanding of contextual differences.

### Conclusion

This study contributes to the growing body of literature on adolescent behavior by demonstrating

that parenting style and peer pressure significantly influence aggression, and that self-esteem mediates these relationships. Adolescents raised in supportive and structured family environments are less likely to exhibit aggression, while those exposed to negative peer influences are at higher risk. Importantly, high self-esteem appears to act as a protective factor, reducing the likelihood of aggression even in adverse environments. These findings emphasize the need for holistic interventions that target family dynamics, peer interactions, and personal psychological development. By addressing these interconnected factors, educators, parents, and policymakers can work collaboratively to foster healthier, less aggressive adolescent populations.

### References

- Bandura, A. (1977). *Social learning theory*. Prentice-Hall.
- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *The Journal of Early Adolescence*, 11(1), 56–95. <https://doi.org/10.1177/02724316911111004>
- Cao, X., & Ma, L. (2025). Self-esteem mediates the relationship between resilience and aggression among adolescents. *Social Behavior and Personality: an international journal*, 53(4), 1-10.
- Dishion, T. J., & Tipsord, J. M. (2019). Peer contagion in child and adolescent social and emotional development. *Annual Review of Psychology*, 70, 189–214. <https://doi.org/10.1146/annurev-psych-010418-102100>
- Dodge, K. A., Pettit, G. S., & Bates, J. E. (1997). How the experience of early physical abuse leads children to become chronically aggressive. *Development and Psychopathology*, 9(4), 743–759. <https://doi.org/10.1017/S0954579497001430>
- Espelage, D. L., & Hong, J. S. (2021). School climate, peer victimization, and aggression in adolescence. *Child Development Perspectives*, 15(2), 88–93. <https://doi.org/10.1111/cdep.12384>

- Khaleque, A. (2019). Perceived parental neglect, self-esteem, and aggression among adolescents. *Current Psychology*, 38, 1200-1207. <https://doi.org/10.1007/s12144-018-0085-6>
- Moksnes, U. K., & Lazarewicz, M. (2021). The association between self-esteem and mental health in adolescents: The mediating role of resilience. *Scandinavian Journal of Psychology*, 62(4), 605-611. <https://doi.org/10.1111/sjop.12719>
- Orth, U., & Robins, R. W. (2022). Development of self-esteem across the life k8span. *Annual Review of Psychology*, 73, 111-139. <https://doi.org/10.1146/annurev-psych-020821-110419>
- Pinquart, M. (2017). Associations of parenting dimensions and styles with internalizing symptoms in children and adolescents: A meta-analysis. *Marriage & Family Review*, 53(7), 613-640. <https://doi.org/10.1080/01494929.2016.1247761>
- Steinberg, L., & Monahan, K. C. (2021). Age differences in resistance to peer influence. *Developmental Psychology*, 57(3), 320-330. <https://doi.org/10.1037/dev0001137>
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Brooks/Cole.
- Wan, Z., & Huang, S. (2025). The relationship between parental emotional warmth and school bullying: The chain mediation role of social support and emotional regulation. *PLoS One*, 20(5), e0323261.
- Wang, M. T., & Kenny, S. (2022). Parenting profiles and adolescent aggression: A person-oriented approach. *Journal of Youth and Adolescence*, 51, 1467-1480. <https://doi.org/10.1007/s10964-021-01537-2>
- Zhu, L., Huang, M., Fang, Z., Tong, J., Pan, Z., Hua, L., ... & Jin, Y. (2025). Exploring the relationship between aggressive behavior, family parenting styles, and self-esteem among only-child college students in China: A cross-sectional study. *Psychology Research and Behavior Management*, 435-448.