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SOCIAL INFORMATION PROCESSING IN PARENT-CHILD CONFLICT AND AGGRESSION AMONG ADOLESCENT: MEDIATING ROLE OF PEER REJECTION AND SELF CONCEPT

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Abstract
This study examined the connections between social information processing and teenage peer rejection, violence, parent-child conflict, and self-concept. Data were gathered from 200 teenagers (100 males and 100 females) in Rawalpindi and Islamabad schools and colleges between the ages of 13 and 19 using a cross-sectional design. Reactive-proactive aggressiveness, peer rejection, self-concept, and social information processing were all evaluated using standardized tests. Results indicated that social information processing in parent-child conflict was negatively correlated with self-concept and positively correlated with violence and peer rejection. While peer rejection and self-concept modulated the relationship between social information processing and aggression, it was a significant predictor of aggression. There were gender differences: women scored higher on self-concept, while men scored higher on social information processing, peer rejection, and violence. Additionally, institutional differences were discovered: students from private institutions displayed higher levels of hostility, whereas those from government institutions reported better levels of self concept. Age groups, income categories, and school/college levels did not show any discernible variations. The findings highlight how peer dynamics, parent-child conflict, and self-concept contribute to teenage aggressiveness, providing insightful information for educators, parents, and other stakeholders in education.

Keywords: *Social information processing in parent child conflict, peer rejection, selfconcept, proactive-reactive aggression.*

Introduction

Physical, hormonal, and social changes that occur during adolescence can lead to uncertainty and aggressive behavior. Adolescent aggression can be caused by a mix of external and internal variables, such as peer rejection, parental conflict, exposure to violence, and low self-esteem and immaturity (Merrell, 2003; Ejim, 2022).

The notion of social information processing explains how children perceive and react to social events. Adolescents who are aggressive frequently misinterpret social cues, concentrate on hostile signals, prioritize self-serving goals, and view aggressive behaviours favorably. These behaviors are influenced by exposure to violence, insecure attachments, and relationships with family and peers (Dodge & Crick, 2014; Lemerise & Arsenio, 2000).

Adolescent aggression and socio-emotional issues are associated with parent-child conflict, which involves mutually harmful behaviors. The chance of violent conduct, including child-to-parent violence, is increased by family characteristics such severe discipline, emotional rejection, or broken homes (Dishion& Patterson, 1998).

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Aggression can be reactive, impulsive, and brought on by perceived danger or annoyance, or it can be proactive, intentional, and goal-oriented (Wrangham, 2018; Kempes et al., 2005). Social functioning is influenced by one's self-concept, which is shaped by interactions with peers and family. Low self-concept is linked to increased violence and delinquency (Rosenberg, 2017; Marsh et al., 2001; Taylor et al., 2007).

Aggression, low self-esteem, and maladjustment are significantly predicted by peer rejection, including both overt and covert exclusion. According to Asher et al. (2001) and Lemerise& Arsenio (2000), rejected children are more likely to experience social information processing deficiencies, which might lead to behavioral issues in the future.

Adolescents with behavioral issues misinterpret social cues, prefer aggressive responses, and have few options for problem-solving, frequently as a result of family conflict or insecure attachments, according to the Social Information Processing (SIP) theory. Secure attachment fosters adaptive social and cognitive development, whereas parent-child conflict and inappropriate parenting perpetuate coercive cycles. By impairing social skills, self concept, and long-term adjustment, cognitive deficiencies such poor emotion perception, hostile attribution biases, and peer rejection further aggravate aggression. When taken as a whole, these frameworks imply that peer relationships, family dynamics, cognitive processing, and attachment styles interact to produce teenage aggressiveness. Together, these theories provide support for the framework by explaining the ways in which peer relationships, family dynamics, attachment styles, and cognitive processes all play a role in the emergence of teenage aggressiveness.

Literature Review

Significant physical, emotional, social, and cognitive changes occur throughout the crucial growth stage of adolescence. This stage is especially turbulent because teenagers experience a wide range of emotions, including anger and frustration, which are frequently intensified (John & Virginia, 1969; Frank, 1994; Steinberg, 2011; Greene, 2006; Smetana, 1988). Adolescence also brings about changes in interpersonal dynamics. Adolescents' perceptions of parental participation and emotional support are influenced by peer relationships, which take precedence over family contacts (Lempers, 1992; Kevin et al., 2006).

Physical, relational, proactive, and reactive aggression are all examples of aggression, which is defined as behavior intended to control or damage others (Marsee & Frick, 2007; Lynam et al., 2006; Dodge et al., 2006). Long-term emotional and psychological dysfunction associated with it (Marsee et al., 2011; Mushtaq & Kayani, 2013). Reactive aggression is a protective reaction to perceived dangers, whereas proactive aggression is goal-oriented. Adolescents' emotional regulation is influenced by parenting methods, especially those that are emotionally manipulative or psychologically dominating. According to studies (Scott, 2014; Little & Seay, 2014; Roberton et al., 2012) emotionally dysregulated children raised by domineering parents are more likely to exhibit relational and physical aggressiveness.

Strict parental control is common in collectivistic countries such as Pakistan, but severe emotional manipulation might intensify aggressive tendencies (Barber et al., 2002; Khan, 2006; Batool, 2013; Jabeen et al., 2013). The cognitive processes that underlie aggressive conduct are highlighted by the Social Information Processing (SIP) theory. According to Dodge (1986), Crick & Dodge (1994), and Dodge & Pettit (2003), aggressive children have deficiencies in their ability to perceive social cues, attribute hostile intent, choose hostile goals, generate aggressive reactions, expect positive consequences from aggressiveness, and engage in violent activities.

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According to several studies, higher levels of externalizing behaviors and delinquency are also predicted by peer rejection, especially when it is coupled with aggressiveness (Parker et al., 2006; Harter, 2006; Estevez & Emler, 2007; Cava et al., 2006; Musitu et al., 2007;Azua et al., 2006). These results highlight the significance of early detection and intervention in preventing long-term behavioral problems.

Rationale

Peer interactions, parenting styles, and social information processing (SIP) all have an impact on teenage aggression. While parental approval or rejection influences emotional regulation, self-concept, and social adjustment, SIP alters children's social objectives and reactions to conflict (Khaleque et al., 2012; Crick & Dodge, 2014). Proactive aggression is associated with dominance motive, while reactive aggression is associated with poor self-regulation. Aggressive youth frequently experience peer rejection, which reinforces hostile attributions and stable violent behaviors (Dodge &Lynam, 2006; Winstok, 2009). Adolescent aggressiveness is predicted by parenting style, parental attachment, and peer interactions, according to research conducted in Pakistan. Authoritative parenting lowers hazards, but authoritarian or permissive parenting increases them (Rizvi & Najam, 2015; Ali & Zubair, 2011; Yaseen et al., 2010). Research on the relationship between proactive and reactive aggressiveness, self-concept, and peer rejection in parent-child conflict is, however, limited. By investigating these linkages in Pakistani teenagers, this study seeks to close this gap.

Objective

1. To investigate the relationship between social information processing in parent-child conflict, aggression, self-concept and peer rejection among adolescents.
2. To examine the social information processing in parent-child conflict as a predictor of aggression among adolescents.
3. To study the Mediating role of self-concept and peer rejection between social information processing in parent-child conflict and aggression among adolescents.
4. To investigate the impact of demographic Variables(i.e. Age, education, family system, gender, and socio economic status) in relation to social information processing in parent child conflict, aggression, self-concept and peer rejection among adolescents.

Hypotheses

1. There is positive relationship between social information processing in parent-child conflict and aggression and peer rejection among adolescents.
2. Self-concept is negatively correlated with social information processing in parent-child conflict and aggression among adolescents.
3. Social information processing in parent child-conflict is positive predictor of aggression among adolescents.
4. Self-concept mediates the relationship between social information processing in parentchild conflict and aggression among adolescents.
5. Peer rejection mediates the relationship between social information processing in parent-child conflict and Aggression among Adolescents.
6. There is a difference between male and female on social information processing in parent child conflict, aggression, and self-concept and peer rejection among adolescents.

Method

Sample

Using a purposive sample of 200 Pakistani teenagers (100 boys and 100 girls) between the ages of 13 and 18 from schools and colleges in Rawalpindi and Islamabad, the current study used a correlational, cross-sectional research methodology. Participants had to

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be between the ages of 13 and 19 and free of mental or physical problems in order to be eligible.

Instruments

Social Information Processing in Parent-Child Conflict

The SIP-CPC Questionnaire (Calvete et al., 2015), which offers three imaginary conflict scenarios, was used to measure social information processing in parent-child conflict. On a scale of 0 to 4, adolescents evaluated nine items for each scenario. Hostile attributions, anger, aggressive response access, expectancies of positive rewards for aggression, and empathy/expectation of negative outcomes are the five SIP components that are evaluated by this assessment. Good internal consistency was shown by the scale (α =.85).

Proactive-Reactive Aggression Questionnaire (Fast Track) (Raine et al., 2006)

These items measure teacher's report of child's Proactive-Reactive aggressive behavior. It is 5-point Likert scale. It has two subscales and 21 items. Half Items indicate Reactive Aggressive Behavior and half items indicate Proactive Aggressive behavior. Alpha reliability of this scale is α= .86.

Social Peer Rejection Scale (Lev-Wiesel et al., 2006)

It has 21 items and 4 subscales: 1.Insult, 2.Ignore, 3.Acusation, 4.Physical attack and Bossiness. It is 5-Point Likert scale. These items measures that how child is being rejected by their peers. Alpha reliability of this scale is α= .85.

Robson Self Concept Questionnaire (Robson, 1989)

This questionnaire is about other people's opinions and views about oneself. It's an eight-point Likert scale. Some objects are scored as printed, while others are scored in the reverse direction. The 16'reversed' items (Qu 4, 5, 7, 8, 11, 13, 14, 17, 19, 20, 21, 22, 23, 25, 27, 28) contain a colon after the question number (e.g. 4:) indicating that the score is reversed (i.e. 0 = 7, 1 = 6, etc.). To acquire the final score, add up the figures collected in this manner. Cronbach's alpha is α= .96.

Procedure

Approaching participants in schools and colleges, getting their informed consent, and giving them 15 to 20 minutes to complete the English-language surveys were all part of the procedure. Anonymity and confidentiality were guaranteed, and participants were free to leave at any moment without facing repercussions. SPSS was used to code and analyze the completed responses.

Results

The study included 200 adolescents, divided equally by age group (13–16 = 100; 17–19 = 100) and gender (100 boys and 100 females). Both government and private institutions, as well as secondary and upper secondary levels, accounted for equal numbers. The majority of participants were middle-born children (n = 116, 58%) and members of nuclear families (n = 150, 75%). Mothers were unemployed (n=124, 62%), while the majority of fathers were employed.

Good internal consistency was demonstrated by the Social Information Processing questionnaire's (α =.95), Peer Rejection scale (α =.87), Self-Concept (α =.94), and ProactiveReactive Aggression (α =.87). The average scores were 42.05 (Pro-Re Aggression), 45.34 (Peer Rejection), 95.46 (Self-Concept), and 39.4 (SIP). Kurtosis and skewness scores were within the permissible range (-1 to +1), suggesting a normal distribution.

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Table 1

The Pearson correlation between Social Information Processing in Parent-child conflict, Peer rejection, Self-Concept and Proactive- Reactive Aggression scale Among Adolescents (N =200)

Sr .No	Variables	1	2	3	4
1	SIP	1	. 93**	-.82**	.88**
2	Peer Rejection	-	1	-.86**	.93**
3	Self-Concept	-	-	1	-.97**
4	Pro-Rea Aggression	-	-	-	1

Note: ***$p<.00$, **$p<.01$, *$p<.05$ SIP= Social information processing in parent child conflict, Pro-Rea Aggression =Proactive-Reactive Aggression.

Table 1 demonstrates that social information processing in parent-child conflict has a negative correlation with self-concept and a positive correlation with proactive-reactive aggressiveness and peer rejection. Peer rejection has a negative correlation with self-concept and a positive correlation with proactive-reactive aggression. Proactive-reactive aggressiveness has a negative correlation with self-concept.

Table 2

Regression Analysis for Mediation of Self-Concept between Social Information Processing in Parent-child conflict and Proactive- Reactive Aggression (N=200)

Predicators		Proactive-Reactive Aggression			
Model	R^2	β	p	t	95%BaCl
1.Constant		15.92	.000	2.12	[5.30,17.98]
SIP	.67	-1.54	.000	2.36	[-.12, -2.42]
2.Constant		60.26	.000	.95	[40.09, 70.13]
SIP	.96	.20	.000	1.92	[.14, 1.98]
Self-concept		-.27	.000	1.84	[-.19, -1.34]

For step 1: F= 402.84***, For step 2: F= 3076.66***,SIP= Social information processing in Parent-child conflict

Findings of this table demonstrates that proactive-reactive aggressiveness is significantly predicted by self-concept (b = -0.27, p =.000) and social information processing in parent-child conflict considerably predicts self-concept (b = -1.54, p =.000). Even after adjusting for self-concept, proactive-reactive aggressiveness is still predicted by social information processing (b = 0.20, p <.001), suggesting partial mediation. The mediational theory is supported by the findings. When combined, these factors account for 96% of the variation in proactive-reactive aggressiveness (R^2=.96).

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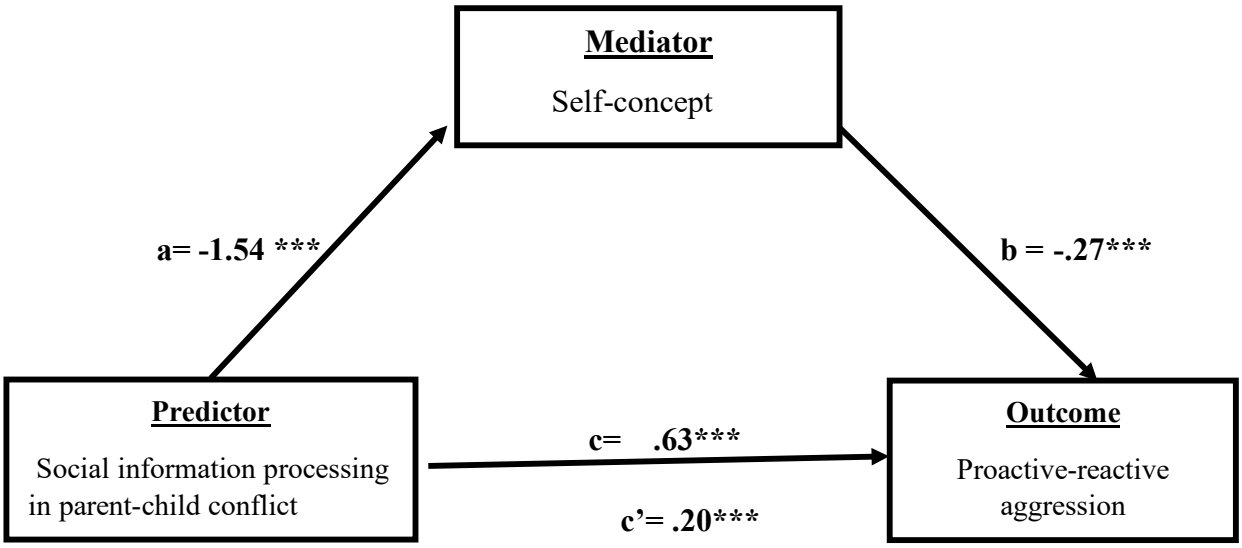
Figure 1



b=.42, 95%BcaCl [.38, .47]

Higher proactive-reactive aggressiveness (b =.63, p <.001) and weaker self-concept (b = –1.54, p <.001) were significantly predicted by social information processing in parent-child conflict. Self-concept was a negative predictor of proactive–reactive aggression after adjusting for SIP (b = –.27, p <.001). Similarly, SIP continued to be a significant positive predictor of proactive–reactive aggression even after adjusting for self-concept (b =.20, p <.001). Results show partial mediation, indicating that higher SIP in parent-child conflict decreases self-concept, which in turn contributes to higher proactive–reactive aggressiveness, since the total effect was greater than the direct effect.

Table 3

Regression Analysis for Mediation of Peer rejection between Social Information Processing in
Parent-child conflict and Proactive- Reactive Aggression (N=200)

Predicators		Proactive-Reactive Aggression			
Model	R^2	B	P	t	95%BaCl
1.Constant		3.75	.000	-4.75	[.72, 5.23]
SIP	.88	1.05	.000	3.98	[.23, 1.72]
2.Constant		14.81	.000	1.83	[4.62, 22.01]
SIP	.87	.07	.000	.98	[.05, 1.98]
Peer rejection		.53	.000	2.71	[.49, 1.72]

For step 1: F= 1455.68***For step 2: F= 664.14***,SIP= Social information processing in Parent-child conflict

The table indicates that peer rejection strongly predicts proactive-reactive aggressiveness (b = 0.53, p =.000) and social information processing in parent-child conflict

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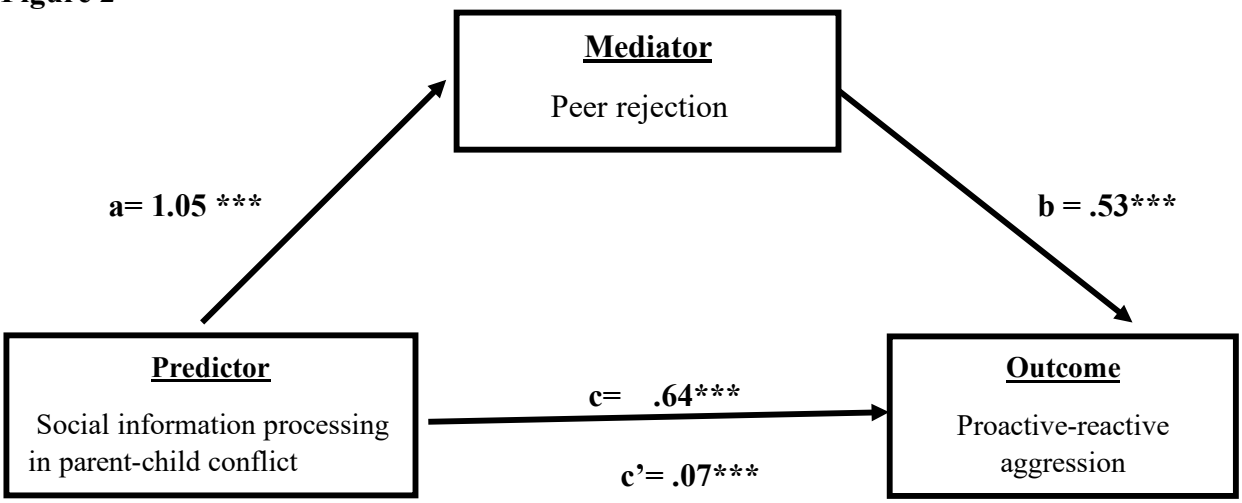
significantly predicts peer rejection (b = 1.05, p =.000). Even after adjusting for peer rejection, proactive-reactive aggressiveness is still predicted by social information processing (b = 0.07, p <.001), suggesting partial mediation. The mediational theory is supported by the findings. When combined, these factors account for 87% of the variation in proactive-reactive aggressiveness (R^2 =.87).

Figure 2



Indirect Effect *b*=.56, 95%BcaCl [.44, .69]

Higher levels of proactive-reactive aggressiveness (b =.64, p <.001) and peer rejection (b = 1.05, p <.001) were strongly predicted by social information processing in parent-child conflict. Peer rejection continued to be a significant positive predictor of proactive–reactive aggression after adjusting for SIP (b =.53, p <.001). Similarly, SIP remained to predict proactive-reactive aggressiveness even after adjusting for peer rejection (b =.07, p <.001). The results show partial mediation, indicating that higher SIP in parent-child conflict enhances peer rejection, which in turn contributes to higher proactive–reactive aggressiveness, as the total effect was greater than the direct effect.

Table 4

Mean , Standard Deviation and t-values Along Gender on Social Information Processing in Parent-child conflict, Peer rejection, Self-Concept and Proactive- Reactive Aggression among Adolescents (N=200)

	Male (n = 100)	Female (n = 100)			95% *CI*		
Variables	*M (SD)*	*M (SD)*	*t(198)*	*P*	*LL*	*UL*	Cohen's *d*
SIP	48.46(16.99)	30.03(3.87)	10.57	.000	14.99	21.86	1.49
PR	58.04(16.47)	32.65(3.07)	15.15	.000	22.08	28.69	2.14

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SC	79.35(30.74)	111.41(14 .87)	9.34	.000	-38.80	-25.31	1.32
PRA	49.10(11.35)	34.99(4.46)	11.56	.000	11.70	16.51	1.63

Note. CI =Confidence Interval; LL=Lower Limit; UL=Upper Limit, SIP= Social information processing in parent child conflict; PR=Peer-Rejection; SC=Self-Concept; PRA=Proactive-Reactive Aggression.

Significant gender differences across all study variables are displayed in above table. While females scored higher on self-concept (M = 111.41, SD = 14.87), males scored higher on social information processing in parent-child conflict (M = 48.46, SD = 16.99), peer rejection (M = 58.46, SD = 16.99), and proactive-reactive aggressiveness (M = 49.10, SD = 11.35). Every distinction was statistically significant: SIP, t(198) = 10.57, p =.000; peer rejection, t(198) = 15.15, p =.000; self-concept, t(198) = -9.34, p =.000; and proactive-reactive aggressiveness, t(198) = 11.56, p =.000.

Discussion

Adolescent aggression is a serious public health issue that can take the form of verbal, physical, or relational behavior, with gender disparities in its manifestation. Parenting style, peer interactions, self-concept, heredity, and media exposure can all have an impact on aggressive behavior, which has a detrimental effect on psychological health (Minaz&Jivani, 2020). The Proactive-Reactive Aggression Questionnaire (Raine et al., 2006), the Robson Self
Concept Questionnaire (Robson, 1989), the Peer Rejection Scale (Lev-Wiesel et al., 2006), and Social Information Processing in Parent-Child Conflict (Calvete et al., 2015) were used in the current study and all showed acceptable reliability and normality.

SIP theory, which explains how teenagers encode, interpret, and react to social cues, is supported by the first hypothesis, which states that social information processing in parent child conflict showed significant positive correlations with peer rejection and aggression (Garner & Lemerise, 2007; Ziv & Elizarov, 2019; Dodge, 2006). Teenagers' reactions and peer acceptability are influenced by social interaction skills such cooperation, assertiveness, and self-control, underscoring the connection between social skills and SIP (Mahoney & MacDonald, 2007; Anme et al., 2014; Tangney et al., 2018; Vagos& Pereira, 2010). Aggressive inclinations can be reinforced by negative reactions to peers, which can enhance peer rejection (Rah &Parke, 2008; Brendgen et al., 2004; Downey et al., 1998).

Self-concept had a negative correlation with both SIP and aggression, supporting the second hypothesis. According to social cognitive models, violent teenagers use social scripts to selectively encode hostile stimuli, produce aggressive reactions, and develop persistent aggressive behavior (Crick & Dodge, 1994; Godleski & Ostrov, 2010). Through social learning and reinforcement of negative behaviors, low self concept brought on by trauma or academic failure can incite aggressiveness (Bellmore & Cillessen, 2006; Ostrov, 2010; Taylor et al., 2007).

The third hypothesis was supported by SIP's positive prediction of teenage aggression, which is in line with research that links teenage aggression to exposure to family violence, harsh parenting, and parental psychological control (Boxer et al., 2009; Gallagher, 2004; Calvete et al., 2013; Rathert et al., 2011). Through social cognitive processes and observational learning, parenting style influences behavioural patterns (Bandura, 1973; Baumrind, 1991). The connection between SIP and aggressiveness was negatively mediated by self-concept (Table 5), supporting the fourth hypothesis and emphasizing the significance

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of self-concept impacted by academic and familial circumstances in modulating aggression (Rubin et al., 2006; Ojedokun et al., 2013).

Peer rejection positively mediated the relationship between SIP and aggression, parenting style influenced peer conflict and victimization, and peer interactions either improved or worsened adolescent mental health, supporting the fifth hypothesis (Asher &Coie, 2007; Hall & Bracken, 2014). According to gender differences, women scored higher on self-concept, whereas men scored higher on SIP, peer rejection, and violence (Hoeksema, 2012; Archer, 2004). The combined effects of SIP, self-concept, peer rejection, parenting, and social context on adolescent aggression were highlighted by the fact that adolescents from government institutes had higher self-concept and adolescents from private institutes showed higher aggression, but no significant differences were found across age, education, or income.

Conclusion

Significant correlations between the variables were identified by the investigation. In parent-child conflict, social information processing (SIP) had a detrimental impact on selfconcept but a favorable impact on peer rejection and violence. The association between SIP and aggression was found to be mediated by both self-concept and peer rejection, according to mediation analyses. This suggests that adolescents with low SIP are more likely to experience peer rejection or low self-concept, which in turn leads to an increase in aggressive behavior.

Males scored higher on SIP, peer rejection, and proactive-reactive aggression, while females scored higher on self-concept, according to gender differences. Adolescents from government and private institutions differed as well: government students scored better on selfconcept, whereas private institute students scored higher on aggression. Age, education level, and monthly income did not significantly affect SIP, peer rejection, or hostility.

Overall, the results highlight that adolescence is a crucial time characterized by parent child disputes, peer problems, and shifting self-perception, all of which can fuel violence. While schools and colleges can provide adolescents with mental health resources and counseling to encourage good coping mechanisms and social adjustment, parents and teachers play a crucial role in helping them manage aggression.

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