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Impact of Social Comparison on Anti-social behavior among Young Adults: Mediation by Malicious Envy

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ABSTRACT

The present study was aimed to investigate relationship between social comparison and anti-social behavior among young adults. This study also aimed at explaining the mediating role of envy between social comparison and anti-social behavior among young adults. Data was collected on social comparison Scale (Allan and Gilbert, 1995), **Sub type of anti-social behavior scale (Burt and Donnellan, 2009)**, Benign and Malicious Envy Scale (BeMaS) by (Lange and Crusius, 2015) and translated into Urdu language by (Shakeel et al., 2023). A total of 450 university students between the ages of 18 and 30 from Rawalpindi and Islamabad made up the sample; their mean age was 22.45 years, and their standard deviation was 3.16 years. Confirmatory factor analysis was used to evaluate the structural validity of the instruments, and Chronbach's Alpha was used to determine reliability. The reliability and structural validity indices of all three scales were good. The Pearson correlational analysis revealed that when adults involve in upward social comparison it will increase feeling of malicious envy and anti-social behavior. In order to perform the mediation analysis, process macro was used. The latent variable social comparison appears to have a significant positive indirect effect on Anti-social behaviors through malicious envy. It is concluded that social comparison predicts anti-social behaviors by effecting the malicious envy. It is recommended that anti-social behaviors may be reduced directly by addressing nature and purpose of social comparison and indirectly by identifying and mitigating feelings of malicious envy.

Keywords: Social Comparison, Anti-Social Behavior, Envy, Malicious Envy, Young Adults.



Introduction

Antisocial behaviour is an important psychological and social issue, characterized by actions that go against society and potentially cause harm to others (Mash & Wolfe, 2016). From direct displays of fury and defiance to indirect actions like manipulation, deception, and exclusion, this type of behaviour can take a multitude of varieties (Clare, 2006). Adolescence and early adulthood are the usual periods in which antisocial tendencies first manifest, and they are closely associated with later criminality, poor social relationships, and academic failure (Hemphill et al., 2007; Burt & Donnellan, 2009). While early biological and environmental origins of antisociality have been thoroughly researched, there is more that has to be understood about the emotional and motivational processes underlying its expression, e.g., envy, perceived unfairness, and social comparison.

Based on the theory of social comparison (Festinger, 1954), individuals evaluate themselves in comparison with others to understand themselves better. Comparison has the power to inspire individuals, but it also carries the threat of psychological pain when individuals consider themselves below others. Comparing oneself with others who are more successful—a process referred to as upward social comparison—may provoke feelings of failure, resentment, or inferiority, particularly when others' success is felt to be undeserved or unfair (Dijkstra et al., 2008; Tandon et al., 2024). The formation of maladaptive feelings like jealousy, anger, and even depression is associated with repeated upward comparison, based on empirical studies (Appel et al., 2016; Fardouly et al., 2015).

Social comparison is also becoming even more prevalent during the modern digital era due to social media, where pre-screened content often showcases unlikely relationships, achievements, and existences. Especially among youth, such perceived disparities strengthen both jealousy and dissatisfaction (Tandon et al., 2024). Chronic psychological distress may result in antisocial behavior, where individuals attempt to "level" the social playing field by sabotaging, being aggressive, or both (Feather & Sherman, 2002; Gul et al., 2023; Smith et al., 2009).

Antisocial behavior is often a reaction to contextual and comparative social evaluations, as contemporary paradigms increasingly accept. In this context, social comparison and perceived unfairness are two especially salient psychosocial processes. People, as per Festinger's theory of social comparison that was first introduced in 1954, compare and judge their own achievement and worth relative to others. Such comparisons can have the potential to motivate individuals to improve or, conversely, to render them resentful and defensive, especially if upward comparisons—i.e., comparisons with someone who fares better—are perceived as threatening or unwarranted. Individuals are likely to experience more psychological distress in such situations, and this has also been scientifically associated with antisocial effects such as retribution, hostility, and relational violence (Smith, Powell, Combs, & Schurtz, 2009; Appel, Gerlach, & Crusius, 2016).

The complicated emotion of envy can take two different forms: benign and malignant. Unlike benign envy, which can motivate personal growth and self-enhancement, evil envy is



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characterized by hostility, ill will, and the need to diminish the superiority enjoyed by the one who is envied (Lange & Crusius, 2015; Crusius & Lange, 2014). Most notably, toxic jealousy has been linked with antisocial behavior, gossiping, sabotage, and even *schadenfreude*, which is the pleasure at another's misfortune (Van de Ven, Zeelenberg, & Pieters, 2009; Sultan & Malik, 2025). These findings closely mirror subtypes of antisocial behavior, suggesting that evil envy may be an influential emotional connection between social comparison and antisocial behavior. Like social comparison, antisocial behavior is also heavily driven by perceived injustice. Perceived injustice, rooted in equity theory (Adams, 1965), arises when individuals perceive that institutions, authorities, or peers are being unfair to them. It has also been shown that intense emotional responses such as anger, frustration, and hopelessness are elicited by this perspective and may precipitate antisocial behavior, particularly in sensitive young adults and teenagers concerning social status and justice (Abbink & Herrmann, 2011; Fischer & Smith, 2006). Perceived injustice is likely to harden into a worldview that justifies antisocial revenge as a compensatory strategy when it is consistent or backed by external messages, including economic inequality, institutional discrimination, or partialism (Aboh, Ogwokhademhe, & Edigbonya, 2014; Clare, 2006). Here, antisocial behavior turns not only into an individual characteristic but also a socially learned reaction to structural injustice.

But no one-way or deterministic link exists between perceived injustice, social comparison, and antisocial behavior. How these experiences produce behavioral outcomes depends strongly on emotional and motivational mediators. Though self-betterment drive may reduce the relationship between comparison/injustice and antisocial behavior, malevolent envy often exacerbates it. On the basis of self-determination theory, the concept of self-improvement reflects individuals' intrinsic motivation to grow, change, and enhance personal competence (Schunk & Usher, 2012). Unlike resentment or sabotage, theories predict that individuals high in personal growth initiative tend to react to upward comparison with hard work (Robitschek et al., 2012; Lange, Weidman, & Crusius, 2018). Thus, a self-improvement orientation can serve to redirect the emotional energy associated with injustice and envy into more positive channels.

These ideas are theoretically rich even though there are not many empirical investigations that have examined them simultaneously in an integrated manner, particularly in collectivist cultures where behavior is strongly shaped by social status, reputation, and interdependence in relationships. Social stratification, mental competition, and increasing internet exposure have increased perceptions of disparity and comparison throughout South Asia and Pakistan in particular (Fatima & Malik, 2015; Tandon, Tripathi, & Singh, 2024). Social media and social networks expose youth on a daily basis to unrealistic portrayals of success and affluence, generating perceptions of jealousy and disillusionment. Meanwhile, perceptions of systemic injustice are amplified by economic and educational inequalities, especially for students and individuals in their early working years. The absence of validated models to research these interrelationships in Urdu-speaking groups constrains theoretical generalizability as well as the development of culturally adapted interventions.

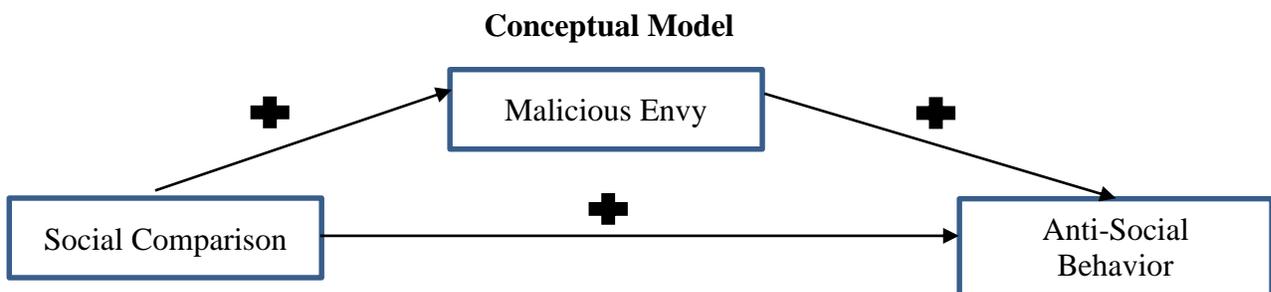
To fill these deficiencies, the present research investigates the effect of social comparison on antisocial behavior, and through which mechanisms, namely malicious envy, in a sample of



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Pakistani university students. Arising from this theoretical and empirical background, the present research suggests a mediation model where social comparison and malicious envy, the latter inhibiting, eventually giving rise to antisocial behavior. Previous research has proven that upward social comparisons—particularly when accompanied by experiences of unfairness—have the potential to enhance negative emotional responses like envy and resentment (Appel, Gerlach, & Crusius, 2016; Crusius & Lange, 2014). When jealousy manifests in a negative way, it tends to be motivated by a wish to hurt other individuals and not by a desire for self-improvement (Lange & Crusius, 2015; Van de Ven, Zeelenberg, & Pieters, 2009). This negative type of envy diverts energy away from positive change and stifles the motivation to improve oneself.

The current study adds to the body of knowledge in psychology in a number of ways. Initially, it integrates socio-cognitive (social comparison) and affective (envy) elements into one explanatory framework. Secondly, it examines these terms in a social context where antisocial behavior is increasingly prevalent but poorly understood. Thirdly, it highlights some of the emotional control processes, that can exacerbate or deter antisocial responses. Through unveiling the psychological mechanisms through which social comparison affect behavior, this research provides new insights into the etiology of antisocial behavior. It further informs intervention programs to encourage prosocial alternatives and resilience in regions where inequality is felt. To this end, it underscores the necessity of conducting culturally informed psychological research that bridges global theory and local realities.



Method

Research Design

The current research utilized a cross-sectional survey study design. An elaborative consent form specifying an introductory note about the broader objectives of the present study was designed to be presented in the beginning of the questionnaire booklet. The consent form also educates the respondents about their ethical rights as participants in social survey. It further addresses the ethical considerations related to informed consent and confidentiality which are essentially to be shared with the respondents. At the end, researcher's contact details were also given for any query or concern to be shared by the respondents.



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Sample

The study sample comprised $N = 450$ young people from various universities and institutions in Rawalpindi, Islamabad, and Malakand ($n = 260$ females and 190 males). Individuals in the study were between the ages of 18 and 30 ($M \pm SD = 23.7 \pm 3.16$ Years). The study employed the convenient purposeful sampling strategy. The inclusion criteria were that the participant is 18 to 30 years old and knows the Urdu language. The participant were omitted following the exclusion criteria with any reading or writing difficulty, disability, or chronic disease.

Instrument

The Benign and Malicious Envy Scale (BeMaS).

The **Benign and Malicious Envy Scale (BeMaS)** measures dispositional envy, distinguishing between **benign envy**, which motivates self-improvement, and **malicious envy**, which involves negative emotions or a desire to harm others. It assesses personality differences in how individuals react to superior comparison standards. Developed by Lange and Crusius (2015) and translated into Urdu language by Shakeel et al (2023). The scale includes two subscales which includes benign envy scale consist of 5 items (items 1, 3, 4, 7, 9) that assesses an individual's tendency to react positively to envious experiences. Malicious envy consist of 5 items (items 2, 5, 6, 8, 10) which evaluates an individual's tendency to react negatively to envious experiences. Participants answer all the items on a 5-point scale (1 = strongly disagree, 5 = strongly agree). In the present study only malicious envy scale is used.

Social Comparison Scale.

The construct of social comparison is measured by social comparison scale developed by Allan and Gilbert (1995) to measure self-perceptions of social rank and relative social standing. This scale uses a semantic differential methodology and consists of 11 bipolar constructs. Participants are required to make a global comparison of themselves in relation to other people and to rate themselves along a ten-point scale. High score on the scale indicate higher level of feeling of superiority (downward social comparison) whereas low score indicate higher level of feeling of inferiority (upward social comparison). The Cronbach alpha for the total scale is .91 for student population (Allan & Gilbert, 1995).

Sub Type of Anti-Social Behavior Scale.

The anti-social behavior is measured through Sub type of anti-social behavior scale which is a comprehensive assessment tool designed to measure an individual's anti-social behavior in social contexts. Developed by Alexandra Burt & Brent Donnellan, (2009). The inventory includes various subscales which includes physical aggression (10 items) that assesses an individual's tendency to express aggression in a way in which individual harm physically the questions include (Hit back when hit by others. Hit others when provoked). Social aggression (11 items) which assesses indirect forms of aggression, including gossiping, exclusion, or damaging relationships. Rule breaking (11 items) that captures behaviors that involve violating societal or institutional



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rules, such as lying, cheating, or disobeying authority. All items were answered along a 5-point Likert scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often and 5 = always). Alpha reliabilities of these subscales are .84, .83 and .78 respectively (Alexandra Burt & Brent Donnellan, 2009).

Procedure

Permission was obtained from students' institutional heads or principals after taking ethical factors into account, and students gave their informed consent. A number of statements that provided a clear explanation of the current study's goals made up the informed consent. Additionally, the confidentiality of the material was assured. All of the information will only be utilized for study. Ultimately, the questionnaires were given to students in lecture halls during their free time, either before or after sessions, following obtaining their informed consent.

Results

Analysis was followed by a review of the data's suitability before outcomes. The normalcy assumption was upheld by skewness and kurtosis values between +2 and -2, with the exception of **rule-breaking**, which had a **kurtosis value of 3.31**—an expected deviation in a student population. Means and standard deviations were computed, and **Cronbach's alpha values** confirmed that all scales demonstrated **satisfactory internal consistency** for the study sample. (Table 1).

Table 1

Descriptive Statistics and Alpha Coefficients of the Study Variables (N=450).

Scales	K	α	M	SD	Skew	Kurt
Social Comparison	11	.88	69.16	15.49	-.29	-.11
Malicious Envy	5	.70	10.25	3.97	.52	-.28
Anti-Social Behavior	32	.90	55.12	16.02	1.13	1.20
Physical Aggression	10	.78	19.68	6.37	.78	.37
Social Aggression	11	.76	19.93	5.96	1.03	1.37
Rule Breaking	11	.84	15.50	5.96	1.99	3.84

Table 2



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Correlation between study variables

SNo	Variables	1	2	3	4	5	6
1	Social Comparison	-					
2	Malicious Envy	-.12**	-				
3	Anti-Social Behavior	-.06	.33**	-			
4	Physical Aggression	-.01	.23**	.86**	-		
5	Social Aggression	-.09*	.30**	.91**	.72**	-	
6	Rule Breaking	-.06	.35**	.84**	.54**	.68**	-

A Pearson correlation analysis was performed on all the variables in the study. Table 2 shows that the majority of the bivariate correlations between the research variables were small to moderate but in the predicted direction. Social comparison appeared to significantly negatively related with malicious envy ($r = -.12, p < .01$) and social aggression ($r = -.09, p < .05$) while not significantly related with anti-social behavior and its two sub scales. As presented in Table 2, results also showed that malicious envy significantly positively correlated with anti-social behavior and its all dimensions ranging from $r = .23$ to $r = .35, p < .01$). Furthermore, it appears that all three of the positive aspects of antisocial behavior had a significant positive correlation with one another ($r = .54$ to $r = .72, p < .01$) and with the overall antisocial behavior score ($r = .86, .91, \text{ and } .84, p < .01$), respectively.



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Table 3

Mediation Analysis of Malicious Envy for Social Comparison and Anti-Social Behavior (N=450)

Predictors	Physical Aggression	Social Aggression	Rule Breaking	Anti-Social Behavior
	β	β	β	β
Gender	.00	-.06	-.18**	-.08
Age	-.05	-.01	-.06	-.05
Education Level	-.12*	-.05	-.03	-.08
Family System	-.02	.00	.01	-.00
Marital Status	-.03	-.03	-.00	-.02
Residential Area	-.01	-.00	.04	.01
Social Desirability	-.00	-.07	-.08*	-.05
Social Comparison	.01	-.06	-.03	-.03
Malicious Envy	.22**	.27**	.30**	.30**
R ²	.08	.10	.18	.14
F	3.90**	5.37**	9.94**	7.42**
ΔR ²	.05	.07	.09	.09
ΔF	2.27*	3.49*	4.58**	4.52**

Note. CI= Confidence Interval, LL=Lower Limit, UL=Upper Limit. *p<.05, **p<.01.

Multiple linear regression analysis was conducted using process macro to test the direct and indirect effect of the focal predictor and the mediator on the anti-social behavior and its dimensions. Table 3 illustrates the results of mediation analysis explaining the mediating effect of malicious envy for the relationship of social comparison and anti-social behavior and its subscales. The effect of age, gender, birth order, siblings, marital status, residential area, education level, family system and social desirability were controlled.

Table 4



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Indirect (mediating) Effects

	Indirect Paths	β	95% CI	
			LL	UL
Social Comparison Behavior	→Malicious envy → Anti-Social	-.04	-.07	-.01
Social Comparison Aggression	→Malicious envy → Physical	-.03	-.05	-.00
Social Comparison Aggression	→Malicious envy → Social	-.03	-.06	-.00
Social Comparison	→Malicious envy → Rule Breaking	-.03	-.07	-.00

Table 4 shows the indirect effect of social comparison on anti-social behavior through malicious envy. Results shows a significant indirect effect of social comparison on anti-social behavior and its subscale (physical aggression, social aggression and rule breaking) through malicious envy which explain that malicious envy play a significant role as a mediator.

Table 5

Means, Standard Deviation, and t-values of Gender wise Differences on Study Variables (N=450)

Variables	Male (n=190)		Female (n=260)		T	P	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Social Comparison	69.20	15.58	69.14	15.46	.04	.96	-	2.97	-
Malicious Envy	11.12	3.74	9.63	4.03	4.00	.00	.76	2.23	.38
Anti-Social Behavior	58.30	17.70	52.80	14.27	3.64	.00	2.54	8.46	.34
Physical Aggression	20.15	6.02	19.34	6.61	1.34	.18	-.38	2.01	-
Social Aggression	20.79	6.61	19.31	5.38	2.62	.00	.37	2.60	.24
Rule Breaking	17.31	6.92	14.15	4.57	5.82	.00	2.09	4.23	.53

Note. CI= Confidence Interval, LL=Lower Limit, UL=Upper Limit

Table 5 represents mean differences across gender on study variables. Result indicated significant difference across gender i.e., male, and female participants on study variables such as, malicious envy, anti-social behavior, social aggression and rule breaking. Result shows that males are more involve in malicious envy as compared to females. Further it is also seen that male score high on anti-social behavior, social aggression and rule breaking as compared to females.

Discussion

The purpose of the present study was threefold. At first, it aimed to find out the relation between social comparison, malicious envy and anti-social behavior. Second, to assess the direct effect of social comparison on anti-social behavior. And finally, the third objective was to test the mediating role of malicious envy between social comparison and anti-social



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behavior and its subscales.

The data's suitability for inferential testing was demonstrated by the preliminary analysis. The data's properties indicated that the results derived from the study's data were stable and reliable. The correlation analysis indicates a substantial inverse link of social comparison with malicious envy and social aggression. Which means that when a person does downward social comparison so it decreases the malicious envy. People compare themselves to others in order to evaluate themselves which leads to feeling of inferiority when we are involved in upward social comparison which leads to harmful envy and social aggression. The current findings are consistent with the prior research evidence indicating significant positive relationship of upward social comparison with malicious envy (Smith et al., 2009) and social aggression (Franklin & Chekaluk, 2011).

Results revealed a significant positive correlation of malicious envy with anti-social behavior and its subscale. Results also finds significant positive association between malicious envy and schadenfreude and its sub-scales. It is because when people are involved in upward social comparison in which people compare themselves with superior others leading to feeling of inferiority which in turns initiates malicious envy feelings. Now in order to express this feeling people used different ways like schadenfreude which is feeling joy in misfortune of others, or anti-social behavior (like aggression, harming others properties etc.).

One of the main objectives of the present study was to explore the impact of social comparison and malicious envy on anti-social behavior. The researcher investigated the predictive role of these variables by employing multiple regression analysis. The results indicated that social comparison did not significantly predict anti-social behavior. Interestingly, some contradicting literature supports these findings, demonstrating that there was no predictive association, even though this hypothesis was developed based on existing literature (Freethey, 2006; Leach & Spears, 2008).

These results suggest that while social comparison and anti-social behavior may be related in certain ways, their relationship is complex and not directly causal. Research indicates that social comparison can lead to feelings of inferiority and perceived injustice, which may contribute to emotions like anger and resentment, but these do not always manifest as antisocial actions (Smith, 2008). Instead, social comparison may evoke a range of emotional responses, including envy and jealousy, which could indirectly lead to antisocial behavior.

A key contribution of this study is its demonstration of the mediating role of malicious envy in the link between social comparison and anti-social behaviors, including physical aggression, social aggression, and rule-breaking. The results indicate that social comparison indirectly influences anti-social behavior and its subscales through malicious envy. Social comparison is a fundamental aspect of human cognition, and individuals frequently engage in such comparisons, often unconsciously (Corcoran et al., 2011; Lange & Crusius, 2015).

Upward social comparison, wherein an individual perceives others as superior in abilities, achievements, or possessions, can evoke feelings of inferiority, potentially leading to malicious envy. Envy that arises from upward social comparison tends to subside when the perceived gap between oneself and others narrows. This can be achieved either by striving for self-improvement to reach the other person's level or by attempting to bring the other person down to one's own position (Smith & Kim, 2007).

Another study found that when students compare their living standards and material possessions with those of financially better-off peers, they often experience feelings of jealousy. This jealousy and frustration can, in turn, lead to the manifestation of aggressive



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behavior in various forms (Fatima & Malik, 2015).

The result of mean differences via independent t-test for sample-based on gender indicated significant differences in study variables. The current study revealed that male students were more involved in malicious envy, anti-social behavior, social aggression and rule breaking as compared to female students. Often exhibit higher levels of malicious envy, characterized by feelings of resentment and a desire to harm someone who is perceived as superior (DePriore. Et al, 2012). Males are more likely to engage in overt forms of antisocial behavior, such as physical aggression, property damage, rule breaking, and delinquency. **Females** May exhibit more covert forms of antisocial behavior, including lying, stealing, and substance abuse (Naughton, M, 2003).

Conclusion and Suggestions

It is determined that the connection of social comparison with anti-social behavior among young adults is not straightforward; rather, factors such as malicious envy mediate this relationship. This highlights the importance of understanding how emotions stemming from social comparisons influence individuals' reactions to others achievement or status. It is recommended that future studies explore this relationship further, incorporating other personal and social factors, such as self-perception, emotional regulation, and patterns of communication with peers, to provide a more comprehensive understanding

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