



## The Dark Triad in Action: How Attention-Seeking and Narcissism Fuel Anti-Social Behaviour through Fragile Self-Esteem

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### ABSTRACT

*This study explores the Dark Triad “in action” by examining how attention seeking and narcissism contribute to antisocial behavior among young adults in academic environments with the help of the Dark Triad theory. The model proposes that individuals who frequently engage in attention-seeking behaviors may possess deeper narcissistic tendencies, which ultimately translate into aggressive, manipulative, or socially disruptive behaviors. Fragile self-esteem is incorporated as a moderating variable to capture internal psychological vulnerabilities that may intensify these relationships. Data were collected from a sample of 400 students aged 18 to 24 enrolled in colleges and universities. The proposed conceptual model was tested using Smarts through Partial Least Squares Structural Equation Modeling (PLS-SEM). Overall, the study contributes to a deeper understanding of how Dark Triad traits manifest in real-life settings and offers practical implications for identifying and managing antisocial behaviors among university students.*



## Introduction

Early adulthood is a growing stage characterized by significant social, emotional, and psychological change. Individuals fight to build their characteristics, establish their individuality, and navigate complex social relationships all through this stage. (Mansour & Al Sagheer, 2024). A few adult exhibit pathologic behaviors that veer from standard developmental pathways, whereas most adolescents travel through these modifications without encountering extraordinary issues. Wadhwa (2023) said that due to the potential impact on both personal development and the well-

being of society as a whole, the concurrent presence of narcissistic personalities and antisocial behavior among adolescents has received increasing attention in psychological studies (Merino et al., 2024). A key developing stage, adult life is defined by dramatic alteration in social, emotional, and psychological life. Individuals begin to form strong identities, assert their independence, and negotiate more complex social interactions throughout this phase (Merino et al., 2024). Most adolescents experience these changes with minimal or no difficulty, but a small proportion may demonstrate maladaptive behaviors that deviate from normal development trajectories (Cech & Martin, 2023). These are attention-seeking behaviors, which are characterized by overestimated feelings of importance, sense of entitlement and need for praise at all times, and anti-social behaviors, which are actions contrary to what is socially accepted and against the rights of others (Shafique et al.).

These traits could contribute to an even more complicated clinical profile when they occur in combination with antisocial behaviors, generating concerns about the impact on individual development and society in general. These set of physical characteristics can result in aggressive, calculating, or rule-violating behavior in young adult, which are not only acts of rebellion but also expressions of original character styles (Shafique et al.). This thesis aims to study the part played by anti-social behavior in the expression, nutrition, and possible aggravation of attention-seeking in adult. Considerate the devices by which these kinds of behaviors interact, we are able to improved evaluate risk factors, control pathways of development, and leader early involvement (Mansour & Al Sagheer, 2024). A considerate of this meeting is not merely logically worthwhile but also of practical importance. In a world where there is rising alarm at youth violence, bullying, and delinquency, it is an urgent necessity to distinguish the psychological profiles that can lead adults into these habits (Paat, Yeager, Cruz, Cole, & Torres-Hostos, 2025). Further, as attention-seeking are more and more normalized or deserted in modern digital culture, long-term consequences of its convergence with anti-social behavior propensities demand strong scholarly scrutiny (King). Young Adults is a critical stage of growth characterized by serious physical and social changes. In this phase, adults usually struggle with identity growth, self-esteem problems, and peer acceptance. In Pakistani higher secondary schools and colleges, these problems are further intensified by social, cultural, and scientific pressure (Wadhwa, 2023). Recent research has identified an alarming increase in attention-seeking behavior among Pakistani youth, Qureshi, Gillani, Student, and Tahir (2025) noted that the widespread adoption of social media sites has created environment.

The co-occurrence of attention-seeking and anti-social traits is worrisome Howard and Duggan (2022) established a strong predictive link between narcissism and relational aggression in adult. Their study showed that greater attention-seeking was associated with more frequent manipulative and aggressive behaviors (Riaz, Abid, & Bano, 2021). When paired with anti-social behaviors behavior that transgress the norms of society and encroach on the rights of others the resultant patterns of behavior can be dangerous. Young adults with both attention-seeking and anti-social behaviors can manifest manipulation, aggression, or rule-breaking, not just as protest actions, but as action of deep-seated personality structure (Koelstra et al., 2011).

Recent research has thoroughly investigated the trait of narcissism (Orth, Krauss, & Back, 2024). Factorial structure of various measures of narcissism has disclosed several factors (Burger, Kanbach, & Kraus, 2024). Concurrently, prior findings have reliably indicated that narcissism is linked with positive traits, such as cheerfulness and charm, as well as negative behavioral outcomes, such as manipulative and exploitative behavior, arrogance, social rejection, conflicts, and lower life satisfaction (Burger et al., 2024; Orth et al., 2024). In further highlighting the significance of focusing on mental and physical health variables in the context of narcissism, prior

research has touched on the varied expressions of narcissism, from subclinical to clinical expressions (Orth et al., 2024). From the above discussions this study address the following two research questions.

**R.Q 1:** Does narcissistic mediator determine the interrelation between attention-seeking and anti-social behavior.

**R.Q 2:** Does self-esteem moderate between attention-seeking and narcissistic?

## **Literature Review**

Dynamic physical and social changes happen throughout young adult, a time of significant growth. During this period, individuals direct complex emotional countryside, establishing identities and relationships with others (Uktamovna, 2025). However, for some adults, maladaptive behavior—most significantly, antisocial behavior—characterizes this development path. These behaviors be made up of disrespect for expert witness figures, untruthfulness, and aggressiveness, among other behaviors that encroach upon social norms and other people civil rights (Likhar, Baghel, Patil, & Patil, 2022; Uktamovna, 2025). The complicated interplay between narcissistic traits and antisocial behaviors in adults has been elucidated by recent research. Once conceived as an over-the-top obsession with oneself, narcissistic has been redefined to encompass both grandiose and susceptible features. Blatant self-promotion and a need for approval are the features of grandiose narcissism. However, fragile self-esteem and reaction to perceived criticism are the traits of complex narcissistic (Likhar et al., 2022). Recent studies have floodlit the complex relationship between anti-social behavior and narcissistic traits in young adults. The conservative explanation of narcissistic as excess in oneself has been updated to include grandiose and sensitive features. Grandiose narcissism is characterized by open self-esteem and a need for admiration, while sensitive narcissism is defined by a poor self-image and reactivity to perceived criticism (Buecker et al., 2023; Likhar et al., 2022).

Adults' antisocial behavior has been examined based on the Dark Triad theory that includes narcissism, Machiavellianism, and psychopathy. Research proposes that traits associated with the Dark Triad, exactly narcissism, are found to prediction risky behaviors such as material use and crime. These findings underscore the need of developing a more nuanced understanding of how patterns of antisocial behavior are shaped by narcissistic physical appearance (Khan et al., 2025).

### **Attention-Seeking and anti-social behavior**

Behaviors directed towards getting others' approval or recognition are characteristics of attention-seeking is an independent variable behavior (Shafique et al.). Over-dramatic displays, being a disturbance, or constant visits to social media sites to attract attention are a few examples of these activities in adult. As per a study by (Shafique et al.), authoritarian and permissive parenting types have a positive correlation with attention-seeking behaviors among Pakistani children. This indicates that adolescent attentional demands are meaningfully influenced by home environments (O'Meara, Hodson, Jacobson, & Gruzd, 2024). Young adult is a defining period of development characterized by deep changes in peer relations, emotional regulation, and identity formation. Attention-seeking conduct becomes a central element of teenager social interaction at this stage. Attention-seeking behaviors are intentional acts meant to gain others' approval, validation, or sympathy. They may assume numerous diverse forms, including verbal hyperbole, emotional outbursts, and unruly activities (Shafique et al.).

The complex connection between attention-seeking and anti-social behavior has recently been unveiled through study. Exaggerating openly, seeking reassurance constantly, employing

provocative displays to attract attention, or dramatizing in an effort to dominate discussions (Asgher, Gohar, & Latif, 2022). As per research, adolescents with more levels of anti-social behavior tend to behave in manners that are attention-seeking, particularly when under threat from others or themselves. For instance, (Naz & Janjua, 2024) found that increased social media disclosure, maladaptive social media use, and stress caused by smartphones were linked to 'social media attention-seeking, specifically following social rejection. Based on this outcome can utilize attention-seeking behaviors as coping mechanisms in order to enhance their self-esteem and gain approval from others. Previous studies have established that adolescent individuals who have a higher level of anti-social behavior are more likely to engage in attention-seeking behaviors, particularly if they feel threatened by their self-concept or rejected by others. According to (Al-Busaidi, Dauletova, & Al-Wahaibi, 2023) attention-seeking and anti-social behavior on social media, especially following experiences with social rejection, was linked with increased levels of social media disclosure, problematic social media use, and smartphone stress. These findings suggest that might employ attention-seeking actions as coping mechanisms to restore their sense of self-esteem and gain approval from others (Naz & Janjua, 2024). Moreover, young adults who display greater levels of anti-social behavior are likely to behave in attention-seeking ways, mostly when they perceive that their image is exposed or they are disallowed by others. For instance, (Wang, Hawk, Wong, & Zhang, 2023) found that 'attention-seeking on social media, especially subsequent to exposure to social rejection, was correlated with increased levels of social media disclosure, problematic social media use, and smartphone-induced stress (Naz & Janjua, 2024; Wang et al., 2023).

**Hypothesis 1;** There excise a positive correlation between attention-seeking and anti-social behavior.

### **Attention-seeking and narcissistic**

Grandiosity, entitlement, and lack of empathy are all features of narcissism, which often arises during young adulthood, a period of central importance for identity formation. In Pakistani youth, Umar et al. (2023) identified a highly significant relationship between narcissism and behaviors like overuse of selfies, which suggests a link between narcissistic behavior and the desire for external validation. Moreover, (Khodaei & Yousefi, 2023) identified narcissism as a predictor of relational violence and inferred that it serves a mediating role between anti-social outcomes and attention-seeking behaviors.

Adolescence is a critical period of development characterized by dramatic changes in peer life, emotional regulation, and identity formation. Individuals navigate complex emotional landscapes during this phase, establishing identities and building relationships with others. Maladaptive behaviors antisocial behavior, in particular characterize this development for certain adolescents. Such behaviors consist of diverse actions that contradict social norms and other individuals' rights, e.g., disrespect toward authority, aggressiveness, and dishonesty (Pourali, Rezaei, Saed, & Atefinia).

The intricate dynamic between attention-seeking and narcissistic traits in adolescents has been explained in recent research. Once considered an overemphasis on self, narcissism has been redefined as having both grandiose and sensitive features (Riaz et al., 2021). Boastful self-esteem and praise-seeking are qualities of grandiose narcissism, whereas fragile self-esteem and hypersensitivity to perceived offenses are features of sensitive narcissism. Both features of narcissism were found to be associated in research with increased likelihood of bullying behavior (Schunck, von Duering, & Wilke, 2025). While vulnerable narcissism is correlated with victimization and cyber victimization, grandiose narcissism often co-occurs with perpetration.

Based on this duality, narcissistic adolescents can behave antisocially to assert their dominance or in response to what they believe are threats to their self-view (Leaff, 2026).

The concept of the Dark Triad of psychopathy, Machiavellianism, and narcissism has been employed in research to examine antisocial activities among adolescents (Wolff & Wetzel, 2023). As per studies, traits associated with the Dark Triad, notably narcissism, indicate risky behaviors such as drug use and delinquency. These findings demonstrate that there is a need to have a more nuanced understanding of how patterns of antisocial behavior are shaped by narcissistic characteristics (Leaff, 2026). Furthermore, the literature on the relationship between teenage attention-seeking and narcissism. In this review, attempts have been made to determine gaps in knowledge and propose areas for future studies by integrating theoretical principles with field-based findings. The acquired knowledge will inform the subsequent chapters and provide a foundation for the development of interventions intended to reduce attention-seeking behavior in narcissistic adolescents (Imran, Rehman, Khanum, & Shahzadi, 2024).

**Hypothesis 2;** There exists a positive correlation between attention-seeking and narcissistic.

### **Anti-social behavior and narcissistic**

Young adult with high narcissistic is more likely to participate in antisocial behavior such as defiance and aggressiveness. Irfan (2024) report that, in Pakistani school-aged adolescents, violence and impulsivity are strongly associated with dark triad personality, particularly with narcissism. These findings suggest the importance of addressing narcissistic traits to decrease antisocial behavior in this group. Adolescence is a vital phase of growth characterized by deep changes in peer interactions, emotional regulation, and identity formation. Those navigate challenging emotional countryside during this period, forming identities and attaching to others. But for some teens, maladaptive behaviors, especially antisocial behaviors, describe this growth path. These acts consist of a range of actions that violate societal norms and individual rights, including disobedience to authority, being aggressive, and dishonest (Kim, 2023). The intricate interplay between narcissistic traits and antisocial behaviors in adolescents has been explained by recent research. Once believed to be an overblown preoccupation with oneself, narcissism has been redefined to encompass both grandiose and vulnerable facets. Public showiness and need for admiration are indicators of grandiose narcissism, but poor self-esteem and hypersensitivity to criticism are features of sensitive narcissism. Both dimensions of narcissism have been correlated in research with increased likelihood for bullying behavior. While vulnerable narcissism is linked to victimization and cyberbullying, narcissistic grandiosity often co-occurs with perpetration. Based on this distinction, narcissistic adolescents might engage in antisocial conduct to prove dominance or in response to perceived threats to self-concept (Kim, 2023; Shafique et al.).

It has been proven through research that both dimensions of narcissism are predictive of a greater inclination towards bullying actions. Vulnerable narcissism is linked to victimization as well as cyberbullying, while grandiose narcissism is often connected with perpetration. This dualism suggests that those teens with narcissistic traits may engage in antisocial behaviors to assert their dominance or in response to perceived threats to their self-esteem (Mansour & Al Sagheer, 2024).

**Hypothesis 3;** There exists a positive relationship between narcissistic and anti-social behavior.

### **Narcissistic (Mediator)**

Narcissism as "excessive self-love or vanity; self-admiration, self-centeredness". Researchers have made a differentiation between two expressions or types of narcissism: grandiose and vulnerable (Jha, Sekhar, & Uppal, 2025). Grandiose narcissism (or overt or oblivious narcissism)

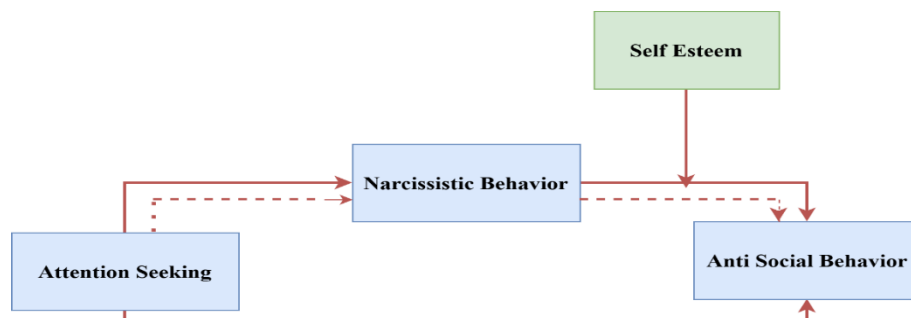
involves superiority, self-confidence, and mastery (Naz & Janjua, 2024). Vulnerable narcissism (also covert or hypersensitive narcissism) is defined by inadequacy, self-doubt, and diffidence. Both types of narcissism, though, do have self-absorption, an expectation of entitlement, and little empathy for others (Jha et al., 2025). The terms 'grandiose narcissism' and 'vulnerable narcissism' are used to refer to subclinical personality features, rather than personality disorders. The two traits exist along a continuum within the population at large, and individuals have varying degrees of being grandiosely or vulnerably narcissistic. Kohut's theory of the formation of the self, the "deficit model" of narcissism claims that pathological narcissism develops in childhood as a consequence of parental failure to understand their child. The usual fusion of the 'grandiose self' and 'idealized parental imago' fails to take place and grandiose omnipotence becomes a defense mechanism against fragmentation of the self. Narcissistic persons are susceptible to feelings of emptiness and depression upon inflection of narcissistic injury" (Khan et al., 2025) ,and react to imagined slight with narcissistic rage.

**Hypothesis 4;** self-esteem moderate the relationship between narcissistic anti-social behavior.

### **Self- Esteem (Moderator)**

Do people with comparatively high (or low) self-esteem at one point in the life cycle have comparatively high (or low) self-esteem at later points in the life cycle is. self-esteem more a matter of mood, fluctuating from situation to situation, or more like personality and intelligence, showing only very slow, gradual change over long intervals of time? Recent evidence favors the latter view. Two decade-long longitudinal studies (Khan et al., 2025) of young adults is a phase of susceptibility to risk behavior, owing to a multifaceted interaction of biological, psychological, and social factors, such as the sensitivity of the brain to feelings aroused by rewarding experiences, searching for identity and autonomy, unavailability of skills to regulate various emotions, and lastly, adolescents' openness to the model provided by their main caregiver (Buecker et al., 2023). They can be defined as risk factors, which are understood as personal characteristics and/or traits, conditions and/or environmental settings that raise the chances of developing risk behaviors. (UNICEF. Compartments de Riesgo2023). Self-esteem as a global assessment of oneself (Howard & Duggan, 2022) has long been regarded as an asset that guards one from different risk behaviors. It has been associated with less use of substances like alcohol, tobacco that mentioned in the Health Psychol. Educ. 2023 booklet and illegal drugs and to reduced risk of eating disorders (EA) (Rev. ABRA 2018), self-injurious behavior, suicide attempts (Likhari et al., 2022), sexual risky behaviors, problematic use of the media and antisocial activities like aggression, delinquency, bullying, cyberbullying and sexting. Also, there are reports of a mediating role of self-esteem, for instance, between authoritarian parenting and suicidal ideation depression (Imran et al., 2024).

**Hypothesis 5;** There is a positive association between self-esteem as a moderator attention-seeking and anti-social behavior.



**Figure 1: Research Model**

## **Methodology**

This study utilizes a quantitative, cross-sectional, correlational study design to investigate the associations between attention-seeking behavior (independent variable), narcissism (mediator), and adolescent behavior (dependent variable). This design allows the dimension of associations and mediation effects at one point in time/ and it gives insights into the changing aspects of these psychological constructs in the said inhabitants.

## **Population and Sampling**

The sample of this research young adults graduate and undergraduate students in colleges and universities, Pakistan. This age group 18 to 24 is more important for behavioral and psychological studies since adult is an important period of development when personality characteristics like narcissism and behavioral styles like anti-social behavior come into limelight. In order to make the sample representative of the larger adult population, a multistage stratified random sampling method was used. The sampling started with the stratification of Punjab into urban districts, then random sampling of an appropriate number of districts from both categories. In these districts, public and private colleges and universities were randomly sampled. Lastly, the students from the universities were selected randomly for inclusion in the study. This made it possible to have an even distribution across gender, socio-economic status, and types of institutions. The analysis was used to determine a sample size of about 400 students, which had sufficient statistical power for analysis. This approach increases the validity and generalizability of the research outcome by reducing sampling bias and capturing the representativeness of the adolescent learner population of Punjab.

## **Measures**

Validated scales were utilized to measure the study variables. *Attention-seeking* was assessed with the 32-item scale by (Shafique et al.). *Narcissism* was measured using the 13-item scale developed by (COCCHETTO). *Anti-social behavior* as evaluated with the 10-item scale by (Rubin, Rubin, Graham, Perse, & Seibold, 2010). *Self-esteem* was measured using the 10-item (Rosenberg, 1965) self-esteem scale. These instruments have been widely adopted and have demonstrated strong reliability in previous research.

## **Validity and Reliability**

Content Validity expert rulings from psychologists and instructors are used to ensure that the tools fully speech the concepts of attention. Factor inspection is used to verify the important construction of the scales within the Pakistani young adult's context. Internal Consistency Cronbach's alpha coefficients are designed for each scale, with values above 0.70 indicating satisfactory reliability Test-Retest Reliability A subset of members completes the tools twice, two weeks apart, to assess the constancy of response over time.

## **Data Collection Procedure**

Ethical approval for this study was obtained from the relevant Official Review Boards and the Punjab Education Department. Institutional consent was secured from the participating colleges and universities. Written informed consent was obtained from all participants and, where applicable, their guardians. The questionnaires were administered in classroom settings under the researcher's supervision to address any adjustments or clarification needs. All completed surveys were securely stored and anonymized to ensure confidentiality and data protection.

## **Data Analysis Techniques**

SPSS was used for the initial data screening and cleansing for a reason. SPSS has great advantages on data management problems and provides an environment for handling missing data, outlier detection, and testing assumptions (like normality and homoscedasticity in preliminary stages) (F. Hair Jr, Sarstedt, Hopkins, & G. Kuppelwieser, 2014; Waseel, Zhang, Zia, Mohsin, & Hussain, 2024). Moreover, SPSS was invaluable in performing basic prior analyses, for example tests for Common Method Variance (CMV) using Harman's single-factor test (Hair et al., 2021), descriptive statistics and bivariate correlations. This first groundwork is crucial because it tests the technical consistency of the dataset which will ensure that the causal modelling to follow is based on a sound test and that the results from the analysis will be valid (Hair et al., 2019). There were several theoretically and methodologically based reasons for selecting Smart PLS as the most appropriate tool for the primary analysis. Second, the research model assumes a moderated mediation (conditional process) model, indicating a complex constellation of relationships. Such complex models, especially with latent variable interactions, are most suited for PLS-SEM as it does not require estimation of distributional assumptions from data (Hair et al., 2021). Enabling the simultaneous testing of the mediation effect (mindfulness → self-efficacy → psychological wellbeing) and the moderation effect of job autonomy in a single, integrated framework renders a more holistic evaluation compared to piecemeal regression methods.

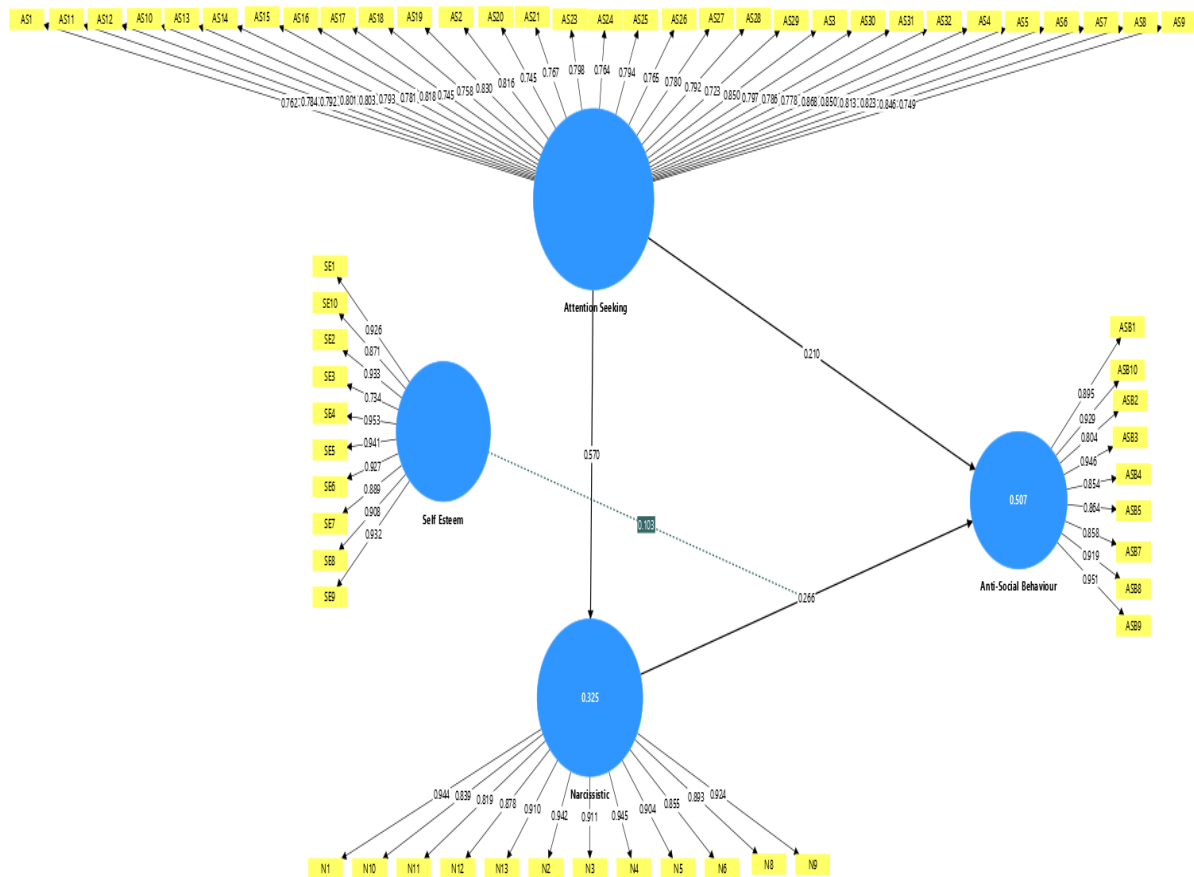
Second, considering the exploratory/predictive nature of this study with a sample size of N=400, the selection of PLS-SEM is very correct. Though sample size is high yet PLS-SEM has a well-deserved fame for its ability to reach high statistical power with small samples size in contexts like Pakistan where specific context PLS-SEM is robust alternative to covariance-based SEM (CB-SEM) techniques (Waseel, Zhang, Shehzad, Hussain Sarki, & Kamran, 2024). Both the theory confirmation and to predict and explain variance in the DV (i.e., psychological wellbeing) is part of the principal intention of PLS-SEM (Henseler, Ringle, & Sarstedt, 2015). Last, but certainly not least, PLS-SEM does not require the data to be multivariate normal, being thus a non-parametric technique (Hair et al., 2022). As data from Likert-scale questionnaires, like the one used in this study, frequently breach the necessary assumption of normality, PLS-SEM serves as a more appropriate and flexible analytical foundation. We evaluated the significance of the path coefficients, mediation (indirect) effects, and interaction terms using the bootstrapping procedure (with 5,000 subsamples, as recommended by Hair et al. (2022), which produces robust standard errors and confidence intervals without any dependence on distributional assumptions. And finally, the sequential use of SPSS and Smart PLS is a reasonably sound methodological approach. It combines the strengths of SPSS on data management with the more advanced, model building-oriented capabilities of PLS-SEM. The model difficulty, sample size, predictive countryside of the study and the non-normality of perceptual survey data all provide a clear rationale for the use of Smart PLS as the preferred method for discovering the proposed psychological instruments in the context of Pakistan.

## **Empirical Results and Measurement Model Assessment**

The measurement model was measured in terms of item loads, internal consistency reliability, and convergent validity, as shown in Table 2. First, the item loadings of the constructs were inspected to evaluate indicator reliability. All items loaded meaningfully on their respective constructs, with values ranging from 0.723 to 0.953. These standards exceed the usually acknowledged threshold of 0.70 (F. Hair Jr et al., 2014), indicative of that each item donates sufficiently to clearing up the latent construct it is intended to measure. The lowest load was observed for Attention Seeking item AS29 (0.723), which is still above the least not compulsory level, positive that no item needed to

be rejected from the model. High cargos, such as SE4 (0.953) and ASB9 (0.951), further suggest that these pointers are chiefly strong events of their respective hypothesis. Additionally, the internal reliability of the concepts was assessed using Cronbach’s Alpha (CA) and Composite Reliability (CR). Cronbach’s Alpha values were extremely high: 0.980 for Attention Seeking, 0.974 for Self-Esteem, 0.968 for Anti-Social Behavior, and 0.978 for Narcissism. These values far surpass the least not compulsory cut-off of 0.70, indicating outstanding reliability. Similarly, Composite Reliability values ranged from 0.972 to 0.981, all surpassing the not required threshold of 0.70 (Hair et al., 2021). These findings confirm that the items are reliable in measuring their own constructs and control robust internal reliability.

Third base, convergent validity was assessed through the Average Modification Extracted (AVE). All concepts achieved AVE standards above 0.50, the threshold not required by (Fornell & Larcker, 1981), which means that each idea explains more than half of the alteration in its pointers. Specifically, Attention Seeking reported an AVE of 0.629, while Self-Esteem (0.816), Anti-Social Behavior (0.796), and Narcissism (0.806) showed even higher AVE values, signifying strong convergent validity. These results indicate that the constructs sufficiently capture the alteration of their observed events and that they are theoretically well-represented by their own items. Taken together, the dimension model results provide strong indication of indicator reliability, internal constancy, and convergent validity. The high factor freights confirm that all items meaningfully contribute to their concepts; the Cronbach’s Alpha and CR values prove excellent reliability across all sizes; and the AVE values indicate that the constructs adequately capture the alteration of their indicators. Thus, the dimension model can be well thought-out reliable and valid, as long as a strong basis for testing the structural model in the following analysis.



**Figure 2. First instruction dimension model**

**Table 2. Measurement Result**

<b>Constructs</b>	<b>Items</b>	<b>Loadings</b>	<b>Ca</b>	<b>CR</b>	<b>AVE</b>
Attention Seeking	AS1	0.762	0.980	0.981	0.629
	AS2	0.816			
	AS3	0.850			
	AS4	0.868			
	AS5	0.850			
	AS6	0.813			
	AS7	0.823			
	AS8	0.846			
	AS9	0.749			
	AS10	0.801			
	AS11	0.784			
	AS12	0.792			
	AS13	0.803			
	AS14	0.793			
	AS15	0.781			
	AS16	0.818			
	AS17	0.745			
	AS18	0.758			
	AS19	0.830			
	AS20	0.745			
	AS21	0.767			
	AS23	0.798			
	AS24	0.764			
	AS25	0.794			
	AS26	0.765			
	AS27	0.780			
	AS28	0.792			
	AS29	0.723			
	AS30	0.797			
	AS31	0.786			
	AS32	0.778			
	Self Esteem	SE1			
SE2		0.933			
SE3		0.734			
SE4		0.953			
SE5		0.941			
SE6		0.927			
SE7		0.889			
SE8		0.908			
SE9		0.932			
SE10		0.871			
Anti-Social Behavior	ASB1	0.895	0.968	0.972	0.796
	ASB2	0.804			
	ASB3	0.946			
	ASB4	0.854			
	ASB5	0.864			

		ASB7	0.858			
		ASB8	0.919			
		ASB9	0.951			
		ASB10	0.929			
Narcissistic		N1	0.944	0.978	0.980	0.806
		N2	0.942			
		N3	0.911			
		N4	0.945			
		N5	0.904			
		N6	0.855			
		N8	0.893			
		N9	0.924			
		N10	0.839			
		N11	0.819			
		N12	0.878			
		N13	0.910			
		AS6	0.813			
		AS7	0.823			
		AS8	0.846			
		AS9	0.749			
		AS10	0.801			
		AS11	0.784			
		AS12	0.792			
		AS13	0.803			
		AS14	0.793			
		AS15	0.781			
		AS16	0.818			
		AS17	0.745			
		AS18	0.758			
		AS19	0.830			
		AS20	0.745			
		AS21	0.767			
		AS23	0.798			
		AS24	0.764			
		AS25	0.794			
		AS26	0.765			
		AS27	0.780			
		AS28	0.792			
		AS29	0.723			
		AS30	0.797			
		AS31	0.786			
		AS32	0.778			
Self Esteem	SE1	0.926	0.974	0.978	0.816	
	SE2	0.933				
	SE3	0.734				
	SE4	0.953				
	SE5	0.941				
	SE6	0.927				

SE7	0.889				
SE8	0.908				
SE9	0.932				
SE10	0.871				
Anti-Social Behavior	ASB1	0.895	0.968	0.972	0.796
	ASB2	0.804			
	ASB3	0.946			
	ASB4	0.854			
	ASB5	0.864			
	ASB7	0.858			
	ASB8	0.919			
	ASB9	0.951			
	ASB10	0.929			
Narcissistic	N1	0.944	0.978	0.980	0.806
	N2	0.942			
	N3	0.911			
	N4	0.945			
	N5	0.904			
	N6	0.855			
	N8	0.893			
	N9	0.924			
	N10	0.839			
	N11	0.819			
	N12	0.878			
	N13	0.910			

Discriminant validity was measured using the Fornell Larcker standard, as obtainable in Boxes 3. According to this criterion, the square root of the Average Variance Extracted (AVE) for each construct (reported on the diagonal) should be greater than its correlations with other constructs (Fornell & Larcker, 1981). This ensures that a construct shares more variance with its own indicators than with those of other constructs.

The results show that all constructs meet this requirement. For instance, the square root of the AVE for Anti-Social Behavior is 0.892, which is greater than its correlations with Attention Seeking (0.574), Narcissism (0.575), and Self-Esteem (0.607). Similarly, the square root of the AVE for Attention Seeking is 0.793, which exceeds its correlations with Anti-Social Behavior (0.583), Narcissism (0.570), and Self-Esteem (0.525). Narcissistic also proves discriminant validity, with a square root of AVE of 0.898, higher than its associations with Anti-Social Behavior (0.589), Attention Seeking (0.573), and Self-Esteem (0.504). Finally, Self-Esteem shows the strongest convergent validity with a square root of AVE of 0.903, well above its correlations with Anti-Social Behavior (0.623), Attention Seeking (0.533), and Narcissism (0.516). Inclusive, these findings confirm that each hypothesis is empirically distinct from the others, in that way supporting discriminant validity. In grouping with the high loadings, Cronbach's Alpha, Composite Reliability, and AVE reported earlier, the Fornell–Larcker analysis emphasizes that the dimension model demonstrates both convergent and discriminant validity, ensuring that the hypotheses are measured suitably and without important overlap.

**Table 3. Discriminant Validity**

	<b>Anti-Social Behavior</b>	<b>Attention Seeking</b>	<b>Narcissistic</b>	<b>Self Esteem</b>
<b>Anti-Social Behavior</b>	<b>0.892</b>	0.574	0.575	0.607
<b>Attention Seeking</b>	0.583	<b>0.793</b>	0.570	0.525
<b>Narcissistic</b>	0.589	0.573	<b>0.898</b>	0.504
<b>Self Esteem</b>	0.623	0.533	0.516	<b>0.903</b>

The descriptive power of the model was measured using effect size ( $f^2$ ) and coefficient of determination ( $R^2$ ). The  $f^2$  values indicate that Attention Seeking had a small result on Anti-Social Behavior (0.048) and a medium effect on Narcissistic (0.089), while Narcissistic exerted a large effect on Self-Esteem (0.175). Regarding  $R^2$ , Anti-Social Behavior completed a value of 0.507 (adjusted = 0.502), reflecting moderate explanatory power, while Narcissistic reported an  $R^2$  of 0.325 (adjusted = 0.323), indicating weak-to-moderate descriptive power. Overall, these results confirm that the model explains a meaningful quantity of variance in the endogenous concepts, with Narcissistic emerging as the stoutest predictor in the structural model as shown in Table 4.

**Table 4. Explanatory Power of Model**

	<b>Effect Size <math>F^2</math></b>				<b>Coefficient of Determination <math>R^2</math></b>	
	<b>Anti-Social Behavior</b>	<b>Attention Seeking</b>	<b>Narcissistic</b>	<b>Self Esteem</b>	<b>R-square</b>	<b>R-square adjusted</b>
<b>Anti-Social Behavior</b>					<b>Anti-Social Behavior</b> 0.507	0.502
<b>Attention Seeking</b>	0.048		0.482		<b>Narcissistic</b> 0.325	0.323
<b>Narcissistic</b>	0.089					
<b>Self Esteem</b>	0.175					

**Table 5. Hypothesis results**

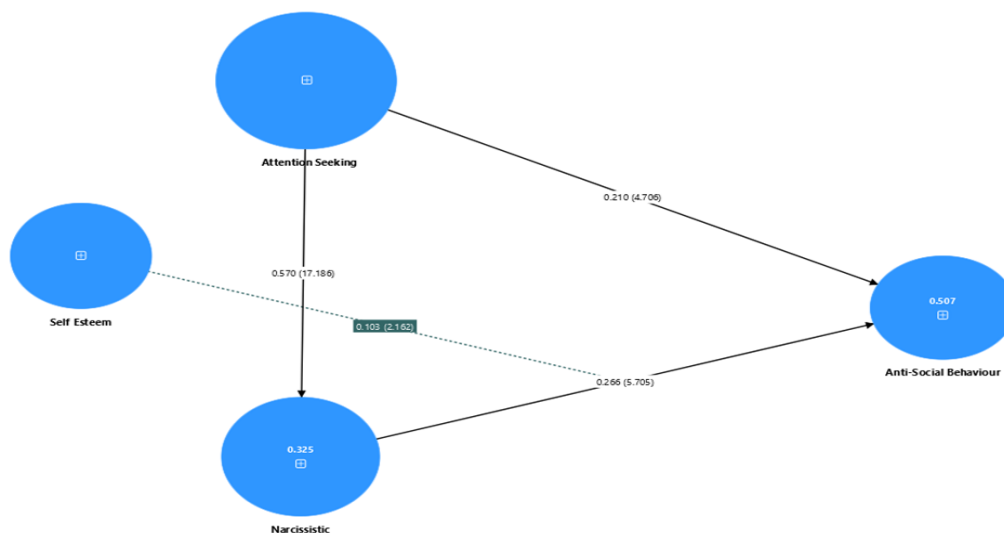
<b>Hypothesis</b>	<b>Statistical path</b>	<b>Path coefficient</b>	<b>STDEV</b>	<b>T statistics</b>	<b>P values</b>	<b>Conclusion</b>
<i>Direct effects</i>						
Hypothesis 1	AS -> N	0.570	0.033	17.186	0.000	Supported
Hypothesis 2	N -> ASB	0.266	0.047	5.705	0.000	Supported
Hypothesis 3	AS> ASB	0.210	0.045	4.706	0.000	Supported
<i>Mediating effects</i>						
Hypothesis 4	Indirect effect AS -> N -> ASB	0.152	0.031	4.963	0.000	Partial mediation Supported
<i>Moderating effects</i>						
Hypothesis 5	SE x N -> ASB	0.103	0.048	2.162	0.015	Supported

**Structure model assessment**

The mechanical model was assessed using PLS-SEM with 5,000-sample bootstrapping to assess the meaning of direct, mediating, and moderating effects. The results indicate strong experiential support for all proposed hypotheses.

**Direct Effects:** Attention Seeking (AS) was found to have a important positive impact on Narcissism (N) ( $\beta = 0.570$ ,  $t = 17.186$ ,  $p < 0.001$ ), supporting Hypothesis 1. This suggests that individuals showing higher attention-seeking tendencies are more likely to display narcissistic traits. Narcissism, in turn, meaningfully influenced Anti-Social Behavior (ASB) ( $\beta = 0.266$ ,  $t = 5.705$ ,  $p < 0.001$ ), confirming Hypothesis 2 and indicating that higher levels of narcissistic traits contribute to increased anti-social behaviors. As well, AS directly affected ASB ( $\beta = 0.210$ ,  $t = 4.706$ ,  $p < 0.001$ ), supporting Hypothesis 3, and importance that attention-seeking propensities can independently promote anti-social behavior, beyond their effect through narcissistic.

**Mediating Effects:** The mediating role of N in the relationship between AS and ASB was examined. The indirect effect was important ( $\beta = 0.152$ ,  $t = 4.963$ ,  $p < 0.001$ ), indicating partial mediation and supporting Hypothesis 4. This finding implies that while attention-seeking directly effects anti-social behavior, a portion of this effect operates indirectly through the development of narcissistic traits, reinforcing the theoretical link between personality traits and behavioral consequences.



**Figure 4: structural Model**

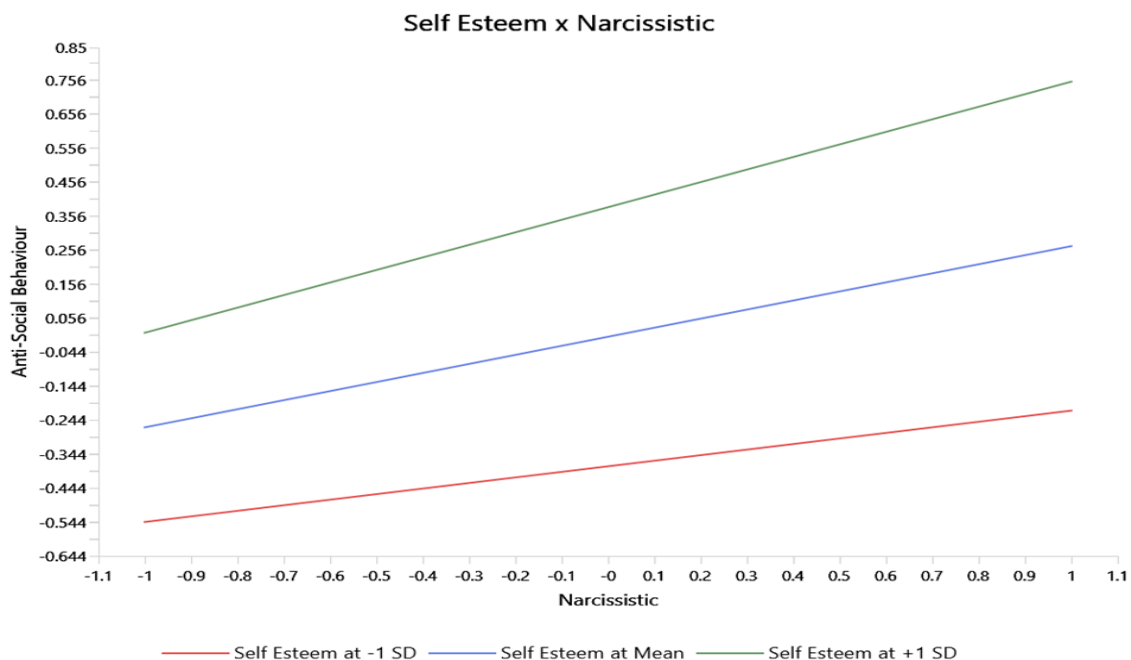
**Moderating Effects**

The interaction between Self-Esteem (SE) and N significantly affected ASB ( $\beta = 0.103$ ,  $t = 2.162$ ,  $p = 0.015$ ), supporting Hypothesis 5. This result proposes that the influence of narcissistic on anti-social behavior is depending on individuals’ levels of self-esteem, such that those with higher self-esteem may strengthen or mitigate the behavioral penalties of narcissistic traits. Collectively, these results reveal a multifaceted interplay among personality traits and behavioral outcomes. Attention-seeking drives anti-social behavior both directly and indirectly through narcissistic, while self-esteem moderates the strong point of the effect of narcissistic on anti-social behavior. The use of 5,000-sample bootstrapping confirms the robustness of these findings, ensuring that the observed relationships are statistically significant and not due to sampling variability. The findings

deliver strong empirical support for the projected conceptual model, demonstrating that personality traits such as attention-seeking and narcissistic, in interaction with self-esteem, play dangerous roles in predicting anti-social behavior. These understandings are valuable for developed targeted interfering aimed at reducing disagreeable behaviors and approving adaptive character development.

## Discussion

The study discovers how attention-seeking behavior belongings antisocial behavior with narcissistic traits acting as a mediator and self-esteem helping as a moderator. The results secondary the first hypothesis reveal an important positive relationship between attention-seeking and antisocial behavior, signifying that those who seek attention often engage in behaviors that encroach upon social models to gain acknowledgment (Christen et al., 2025; Wang et al., 2023). This aligns with psychological theories that frame attention-seeking as a motive for in advance social supremacy, which may obvious in disruptive acts.



**Figure 5: Interaction Graph**

Additional investigation confirms a positive relationship between attention-seeking and narcissistic, supporting the second hypothesis. This detection is consistent with narcissistic personality theory, indicating that attention-seeking tendencies may foster or get worse narcissistic traits, given the narcissist's inherent need for admiration and grandiosity. (Vanhoffelen, Schreurs, & Vandebosch, 2025) Fascinatingly, the third hypothesis proposes a negative relationship between narcissistic and antisocial behavior, which may suggest shades within narcissistic subtypes or situational factors that reduce this link. For example, certain forms of narcissistic might be less prone to overt antisocial behaviors, or other moderating effects may impact this connotation.

The moderating role of self-esteem is pivotal in this model. The fourth hypothesis suggests that self-esteem moderates the relationship between narcissistic and antisocial behavior, indicating that self-esteem could act as a caring or risk-enhancing factor in the expression of antisocial behaviors among narcissistic individuals.(Bogaerts, Garofalo, De Caluwé, & Janković, 2021)

The fifth hypothesis extends this by proposing that self-esteem moderates the direct effect of attention-seeking on antisocial behavior. This places of interest the difficulty of these interactions, suggesting that those with higher self-esteem may better regulate or inhibit antisocial tendencies despite narcissistic or attention-seeking traits, whereas those with lower self-esteem may be more vulnerable to engaging in antisocial conduct. The negative relationship between narcissistic and antisocial behavior challenges basic assumptions and invites review of narcissism's dimensionality.(Fan, Chu, Zhang, & Zhou, 2019) Additionally, the limitation role of self-esteem underscores the status of self-concept in behavioral rule, suggesting pathways for sympathetic how intrapersonal factors shape personality look and behavioral significances (Binti Amad, 2015).

### **Theoretical Implications**

This study joins in Kohut's Self Psychology with the Dark Triad theory to deepen understanding of personality changing aspects leading to antisocial behavior. Kohut's theory highlights the importance of self-cohesion and self-esteem, established through empathic reflecting and validation during early growth, in regulating maladaptive traits. Attention-seeking behavior is abstracted as a compensatory mechanism curtailing from deficits in self-cohesion, fostering narcissistic traits as psychological defenses. The moderating role of self-esteem empirically extends Kohut's model beyond clinical contexts into personality psychology by characteristic how self-esteem regulates the escalation of narcissistic vulnerabilities into antisocial behaviors. Moreover, the study refines the Dark Triad framework by framing narcissistic within a moderated mediation model, highlighting distinct pathways for grandiose and vulnerable narcissism subtypes in prediction antisocial outcomes. This enriches personality and social behavior theories by linking intrapersonal processes and self-concept with external behavior appearances.

### **Practical Implications:**

Practically, the findings underline the importance of early documentation of attention-seeking behaviors as a means to avert the progression into narcissistic and antisocial behaviors. Interventions aimed at pleasing to the eye self-esteem could serve as protective buffers that mitigate these maladaptive behavior designs. Psychological and educational programs can incorporate plans to foster healthier self-development and emotion regulation, directing risk factors aligned with the Dark Triad traits. Clinicians might focus on firming up self-cohesion, in line with Kohut's approach, to reduce compensatory attention-seeking and its antisocial costs. Mental health initiatives in schools and communities could tailor prevention and treatment strategies by measuring levels of narcissism and self-esteem to optimize outcomes. Furthermore, incorporating emotional regulation and self-awareness in educational curricula may help at-risk individuals develop resilience against these maladaptive personality courses.

### **Limitations and Future Research**

The cross-sectional design of this study limits the ability to draw causal inferences regarding the relationships among attention-seeking, narcissism, antisocial behavior, and self-esteem. The exclusive use of self-report measures may have introduced response biases, while the restricted demographic diversity constrains the generalizability of the findings. The analysis considered only narcissism as a mediator, thereby excluding other Dark Triad traits, and assessed self-esteem moderation solely in a linear manner, potentially neglecting nonlinear or contextual influences. Future research should utilize longitudinal designs to clarify causal relationships, adopt multi-method approaches to reduce bias, and recruit more diverse samples to improve external validity. Additionally, investigating other mediators such as Machiavellianism and psychopathy, as well as

examining nonlinear or interaction effects of self-esteem and other psychological resources, could provide a more comprehensive understanding of the underlying mechanisms.

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