

**Self-Esteem and Psychopathic Traits among Undergraduate Students:
A Structural Equation Modelling Approach**

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This present study aimed to assess the role of self-esteem in the development of psychopathy among undergraduate students (N= 600). Structural Equation Modelling (SEM) techniques were used to analyze the model. On the measurement level, all fit indices were examined and on a structural level, relationships between latent variables were assessed. To explore the model, five latent variables including three factors of psychopathic traits: egocentricity, callous and antisocial traits, and two factors of self-esteem: positive self-esteem and negative self-esteem were identified. The result indicated the promising role of negative self-esteem in the development of psychopathy. Results also revealed that positive self-esteem was negatively related to both antisocial traits and egocentricity. Furthermore, negative self-esteem was found as positively related to antisocial traits of psychopathy suggesting that those students who were high on negative self-esteem were involved in antisocial acts. Overall results indicated that positive self-esteem buffer against antisocial and egocentric traits of psychopathy and found as a safeguard against developing psychopathic traits while negative self-esteem is the promising element in the development of psychopathic traits among students.

Keywords: antisocial traits; callous, egocentricity; negative self-esteem; Positive self-esteem;

Psychopathy is described as a collection of interpersonal, affective, and behavioral characteristics that include manipulation, lack of empathy, and deceiving others. Psychopaths show a lack of emotional attachment, a lack of regrets, artificial charm, deceitfulness, and are inclined to violate social and moral values (Hare, 1999; Hare & Neumann, 2005; Sellbom 2011; Shagufta, 2018; Shagufta, Sahibzada & Boduszek, 2019, Shagufta, 2020). Psychopaths

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show a high level of egocentricity and callousness (Glenn, Koleva, Lyer, Graham, & Ditto, 2010, Shagufta, 2018) as well as antisocial and impulsive behavior.

Research suggests that most of the crimes, specifically violent crimes, are committed by a small group of adolescents between early childhood and adulthood (Fergusson, Horwood, & Nagin, 2000, Stattin, Kerr, & Bergmain, 2010). Recent research also shows that adolescents with high levels of psychopathic traits are at high risk of antisocial and criminal behavior (Van Zalk, & Van Zalk, 2015; Shagufta 2020a, Shagufta, 2020b).

Initially, psychopathy was studied as primary and secondary psychopathy. Primary psychopathy is characterized by superficial charm, grandiosity, feelings of boredom, manipulateness, callousness, and lack of guilt. Primary psychopathy has been found positively associated with narcissism and Machiavellianism, and negatively correlated with empathy and fear. Secondary psychopathy is underpinned by behavioral problems such as impulsivity, carelessness, violent criminal behavior, and inability to establish long-term relations. Later on, researchers found that psychopathy is comprised of three factors: egocentricity, callousness, and antisocial trait (Brinkley, 2008; Sellbom, 2011; Shagufta, 2018) rather than two factors. The research found that the antisocial trait of psychopathy was linked to egocentric characteristics among incarcerated adolescents (Scholte, Stoutjesdijk, Van Oudheusden, Lodewijks, & Van der Ploeg, 2010; Shagufta, 2018).

Mokros et al., (2011) found that the callous factor of psychopathy was linked to sexually sadistic disorders. Furthermore, researchers found that antisocial traits of psychopathy were related to impulsive, recidivistic, and violent criminal behavior (Brinkley et al., 2008; Shagufta, 2018, Shagufta, 2020).

Role of Self-esteem in the Development of Psychopathy

The concept of self-esteem is well established in all areas of psychological research and considerable research suggests that positive self-esteem is a characteristic of personality that buffer against negative mental health problems (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). Studies also indicate that lower levels of self-esteem played a significant role in the development of psychological problems (Lyubomirsky, Tkach, & Dimatteo, 2006).

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Researchers have acknowledged several factors that are related to psychopathy. One contributory factor that has been known to have an impact on psychopathy is self-esteem. Pastwa-Wojciechowska, KaŹmierczak, & BłaŹek (2012) conducted a study to assess self-esteem as an important element of psychopathic personality and characterize psychopaths as having high self-esteem. In their study, they used the notion of self-esteem as unidimensional, while recently it is suggested that self-esteem can be best conceptualized by two factors: positive self-esteem and negative self-esteem (Boduszek, Hyland, Dzingra, & Mallett, 2013). Therefore, the purpose of the current study was to understand the role of self-esteem by assessing positive and negative dimension in the development of psychopathy.

Onyedibe, (2011) hypothesized a link between self-esteem and psychopathic behavior in prison inmates (N= 302) drawn from Enugu Prisons. The study included both awaiting trial and convicted prisoners with ages ranged between 16 and 65 years. A cross-sectional design was adopted in the study. Rosenberg's (1965) self-esteem scale was used to measure self-esteem and the Psychoticism Scale of the Eysenck Personality Question (EPQ) was used to investigate psychopathic behavior. The results of the study suggested a negative relationship between low self-esteem and psychopathic behavior.

Falkenbech, Howe, and Falki (2013) found an association between self-esteem and psychopathy among inmates. They found that participants who scored high on factor 1 of psychopathy exhibited high self-esteem and low aggression. On the other hand, individuals with high scores on factor 2 of psychopathy showed lower self-esteem and higher aggression.

Previously, self-esteem was used to examine its association with psychopathy. Trzesniewski, Donnellan, Moffitt, Robins, Poulton, & Caspi, (2006) suggested that low self-esteem is the cause of many behavioral problems. Most of the students who were found with low self-esteem were suspended from their schools due to their involvement in violent activities such as bullying, pushing, and hitting other students (Fekkes, Pijpers, & Verloove-Vanhorick, 2005). It is also suggested that low self-esteem influences the mental health of individuals and lead them towards antisocial behavior that ultimately damages society (Donnellan, Trzesniewski, Robbins, Moffitt & Caspi 2005; Sola-Carmona, López-Liria, Padilla-Góngora, Daza, Aguilar-Parra, & Salido-Campos, 2016; Trzesniewski et al., 2006).

A previous study suggested that people with psychopathic personality traits have high self-esteem (Paulhus & Williams 2002; Zeigler-Hill, 2006). There has been plenty of research on self-esteem by using the high and low

concept of psychopathy; however, to date, no study has been conducted to understand the role of positive and negative self-esteem in the development of psychopathy.

A study conducted by McKay, Boduszek, and Harvey (2014) suggested that self-esteem can be best conceptualized by assessing positive and negative rather than high and low. Therefore, the main purpose of the study was to identify the factors: positive self-esteem and negative self-esteem concerning psychopathy among the student population. Positive self-esteem referred to valuing and respecting one's self. Positive self-esteem is associated with happiness, love with life, satisfaction, good mental health, and hopefulness (Corrigan, Watson, & Barr, 2006). Negative or low self-esteem is characterized by the feeling of worthlessness, uselessness, and lack of confidence. People with low self-esteem believe that they are incompetent, awkward, and have a fragile sense of self (Butler, Hokanson, & Flynn, 1994; Leary, Tambor, Terdal & Downs, 1995).

Considering the review from the literature presented above, it was hypothesized that positive self-esteem would harm egocentricity, callous and antisocial traits. It was also hypothesized that negative self-esteem would play a significant positive role in the development of antisocial factors of psychopathy.

Method

Participants

The sample included a total of 600 undergraduate students enrolled in different colleges and universities of Khyber Pakhtunkhwa (KPK). Half of them were male (n= 300) and half of them female students (n= 300) aged between 18 and 25 years. Students suffering or previously suffered from any mental or physical disability were excluded from the students.

Research Instruments

Levenson's Self Report Psychopathy Scale

Levenson's Self Report Psychopathy (LSRPS), devised by Levenson, Kiehl, and Fitzpatrick, (1995) is short and easily administered among students. Of the 26 total items, only 19 items were selected for the study as previously used by Brinkley, (2008), Sellbom, (2011), Shagufta, (2018). LSRPS is a self-report scale in which participants answer the statements on five points Likert scale range from 1= strongly disagree, 2 = disagree, 3= sometimes, 4= agree and 5= strongly agree. High scores on the scale indicated psychopathic traits (Levenson et al., 1995; Brinkley et al., 2001; Brinkley et

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al., 2008, Sellbom 2011; Shagufta, 2018). Cronbach's alpha for the total scale was $a = 0.83$.

Rosenberg Self-Esteem Scale

Rosenberg's Self-esteem Scale (RSES) was developed by Rosenberg (1965). RSES is a frequently used scale to measure the high and negative evaluations of self. Initially, it was designed to assess the self-esteem of adolescents but now it has been implemented on a wide range of age groups. RSES scale is proposed to investigate the positive and negative views of self. The scale is underpinned by 10 items including five positives and five negative items. Five of the statements are reversed scored to avoid the response biases. Five points Likert Scale is used to assess the items ranged from strongly agree to strongly disagree. The reliability of the Rosenberg Self-esteem Scale is demonstrated high ($a = .91$).

Procedure

This research was approved by the Advanced Studies Review Board (ASRB) of the university. For data collection, different colleges and universities of Peshawar were visited. Permission was taken from relevant authorities of different colleges and universities. Data was collected through the purposive sampling technique. Initially, informed consent was taken from the students. Respondents were assured that the research data will be kept confidential and will be used only for the research purpose. They were further assured that nobody will have access to the data except the researcher. Respondents' participation was voluntary and they were permitted to quit at any point. A booklet including measures of the study along with a demographic sheet was given to the students. The selected participants were debriefed about the study.

Analysis

Structural Equation Modeling (SEM) techniques have been used to assess the model. Amos18 software has been used to analyse the data. SEM is a combination of factor analysis and multiple regression analysis. The historical assessment of SEM development was offered by Bentler (1986). SEM is most appropriate to assess the relationship between measured variables and latent constructs (Weston & Gore, 2006). In the present study, the model was analyzed both on measurement level and structural level. On the measurement level, all the factor loadings were assessed and on the structural level relationships have been found among latent variables. For this purpose, a model was specified with five latent variables including three traits of psychopathy: egocentricity, callousness, antisocial factor, and two factors of Rosenberg Self-esteem scale: positive self-esteem and negative self-esteem.

Results

Descriptive Statistics

Descriptive statistics (Table 1) show the Mean, Standard Deviation, and Cronbach's Alpha reliability (Cronbach, 1951) for subscales of LSRPS and RSES. The findings indicated that students exhibited a high level of egocentricity, moderate levels of callousness, and antisocial behavior. Results further demonstrated moderate levels of positive and negative self-esteem among undergraduate students. The reliabilities of the subscales of LSRPS and RSES have been assessed through the traditional measures of Cronbach Alpha. The results of the current study show that egocentricity ($\alpha = .86$) and antisocial factor ($\alpha = .79$) of psychopathy are highly reliable, however, the internal consistency for callous trait was acceptable ($\alpha = .63$). Results also demonstrated that RSES is highly reliable among students for both positive self-esteem ($\alpha = .70$) and negative negative-esteem ($\alpha = .72$).

Table 1

Mean Standard Deviation, Skewness, Kurtosis and Cronbach's Alpha for Egocentricity, Callous, Antisocial, Positive Self-Esteem, and Negative Self-Esteem

Variable	M	SD	Skewness	Kurtosis	Cronbach's Alpha
Egocentricity (EC)	27.17	6.28	0.13	0.60	.86
Callous (CA)	14.03	3.26	1.44	1.53	.63
Antisocial (AS)	13.60	3.45	0.09	-0.28	.79
Positive Self-Esteem (PSE)	13.86	5.45	1.23	1.92	.70
Negative Self-Esteem (NSE)	13.47	5.21	1.93	1.64	.72

Table 2

Correlation between Three Latent Factors of Levenson's Self-Report Psychopathy Scale (LSRPS)

Latent Factors	EC	CA	AS	PSE	NSE
Egocentricity (EC)	---				
Callous (CA)	.30**	---			
Antisocial (AS)	.22**	.26**	---		

Note: All correlations are significant at $p < .001$

Table 2 shows correlations among the three latent factors of LSRPS which indicated that the three subscales are moderately significantly correlated. The correlation between egocentricity and callous factor is $r = 0.30$ and between Callous factor and Antisocial factor is $r = 0.25$. However, the

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Correlation between Egocentricity and Antisocial factors ($r = 0.22$) is comparatively weak.

Table 3

Standardized and Unstandardized Regression Paths (with standard errors) for the Specified Measurement Model and Structural Model (N=600)

Item	B	β	SE
Measurement Level			
Factor 1 (Egocentricity)			
1. Success is based on survival of the fittest; I am not concerned about the losers	0.97	.58***	.06
2. For me, what's right is whatever I can get away with.	1.00	.61***	.06
3. In today's world, I feel justified in doing anything I can get away with to succeed.	1.00	.64***	.07
4. My main purpose in life is getting as many goodies as I can.	0.97	.57***	.06
5. Making a lot of money is my most important goal.	1.00	.66***	.05
6. I let others worry about higher values; my main concern is with the bottom line.	1.00	.63***	.06
7. People who are stupid enough to get ripped off usually deserve it.	1.00	.62***	.07
8. I tell other people what they want to hear so that they will do what I want them to do.	1.00	.68***	.06
9. I often admire a really clever scam.	0.95	.67***	.06
10. I enjoy manipulating other people's feeling.	1.00	.70***	.06
Factor 2 (Callous)			
1. I make a point of trying not to hurt others in pursuit of my goals	1.00	.91***	.04
2. I feel bad if my words or actions cause someone else to feel emotional pain.	0.99	.60***	.04
3. Even if I were trying very hard to sell something, I wouldn't lie about it	1.00	.73***	.04
4. Cheating is not justified because it is unfair to others.	1.00	.47***	.04
Factor 3 (Antisocial)			
1. I find myself in the same kind of trouble, time after time.	1.00	.70***	.06
2. I am often bored.	1.00	.70***	.05
3. I quickly lose interest in tasks I start.	0.98	.70***	.06
4. I have been in a lot of shouting matches with other people.	0.80	.65***	.06
5. When I get frustrated, I often "let off steam" by blowing my top	1.00	.66***	.03
Positive Self-Esteem			
1. On the whole, I am satisfied with myself.	0.92	.50***	.01
2. I feel that I have a number of good qualities	0.91	.82***	.03
3. I am able to do things as well as most other people.	0.93	.70***	.05

4. I feel that I'm a person of worth, at least on an equal plane with others.	0.98	.40***	.07
5. I take positive attitude toward myself	1.00	.91***	.01

Negative Self-esteem

1. At times, I think I am no good at all.	1.00	.85***	.06
2. I feel I do not have much to be proud of.	1.00	.87***	.07
3. I certainly feel useless at times.	1.00	.43***	.08
4. I wish I could have more respect for myself.	1.00	.88***	.07
5. All in all, I am inclined to feel that I am a failure.	1.00	.45***	.01

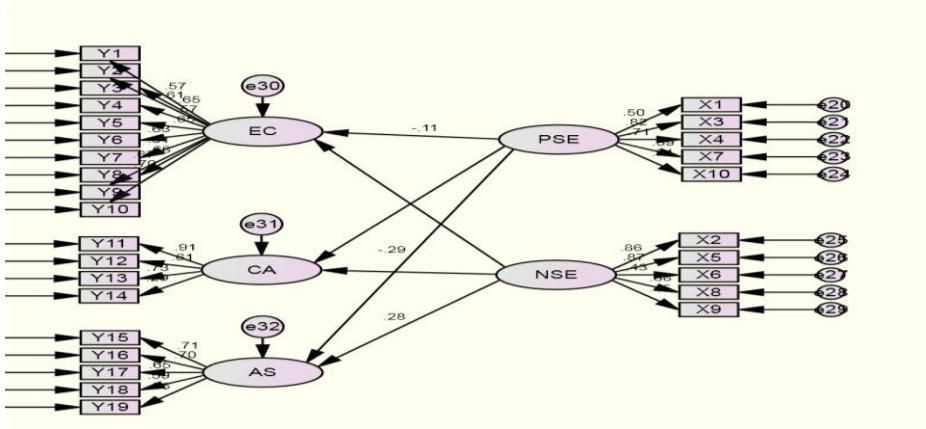
Structural Level

Positive Self-Esteem → Egocentric	-0.06	-.11*	.02
Negative Self-Esteem → Egocentric	-0.00	-.01	.03
Positive Self-Esteem → Callousness	.00	.00	.02
Negative Self-Esteem → Callousness	-.02	-.04	.02
Positive Self-Esteem → Antisocial Factor	-.19	-	.03
		.29***	
Negative Self-Esteem → Antisocial Factor	.21	.28***	.03

Note: $\chi^2(371) = 965.4, p < .001$; CFI = .91; TLI = .90; RMSEA = .05; RSMRS = .07

Table 3 indicates the standardized and unstandardized factor loading with standard error for both: measurement and structural level. According to Hair et al., (1998) CFA standardized factor loading should be .6 or higher because this shows that half of the variance in the observed variable is explained by the latent variable, however, .40 is acceptable. Present results are in line with Hair et al.'s (1998) suggestion. Results indicated that positive self-esteem and antisocial factor were significantly negatively correlated ($\beta = -.29, p < .01$) which revealed that those students who had positive self-esteem exhibited less antisocial traits of psychopathy. The structural level analysis also indicated that those students who were high on negative self-esteem were also showed more antisocial traits ($\beta = .28, p < .01$). Results also showed that positive self-esteem and egocentricity were related ($\beta = -.11, p < .01$) but this relation is negative which suggested that those students who had positive self-esteem were low on egocentric traits of psychopathy.

Figure1
Full SEM Model of Self-Esteem and LSRPS



Discussion

The study aimed to explore the role of self-esteem in the development of psychopathy. For this purpose, SEM model was specified including three factors of psychopathy (egocentricity, callous and antisocial) and two factors of the Rosenberg Self-Esteem scale (positive self-esteem and negative self-esteem) among the students' sample.

In the current study, the three factors of LSRPS showed good reliability (egocentricity = .86, callous = .63, and antisocial = .79) which is consistent with the previous study conducted by Brinkley et al., (2008): (*egocentricity* = .82, *callous* = .69, and *antisocial* = .63). Furthermore, Shagufta (2018) found high reliability for three factors of LSRPS: egocentricity (0.97), callous (0.93), and antisocial (0.96) higher than the reliability of the present study. The reason can be attributed to the sample differences because Shagufta (2018) used incarcerated adult offenders while the present study is conducted on a student sample.

The first hypothesis was to find a negative relationship between positive self-esteem and egocentric, callous, and antisocial factors of LSRPS. The results of the current study showed that those students who had more positive self-esteem exhibited less antisocial and egocentric traits of psychopathy which suggested that positive self-esteem can be proved as a safeguard against psychopathy. Present findings are consistent with previous studies conducted by (Fernandez, & Marshall, 2003) who found that people with distorted self-esteem were more egoistic (Paulhus, & John, 1998). However,

no relationship has been found between positive self-esteem and callous traits. Reasons can be attributed to the low reliability of the subscale among the student sample.

The second hypothesis of the study that “negative self-esteem would have a positive effect on the antisocial factor of psychopathy” is also supported by the results. Negative self-esteem had a positive effect on the antisocial factor of psychopathy which is consistent with the previous study of Weiss and Knight, (1980) who found that people reporting antisocial behavior also report negative self-esteem. The present results of the study are also consistent with the findings of Brown, (1993) who found that people with negative self-esteem engage in disruptive behaviors to enhance their self-concept. Furthermore, similar results were found by O’Moore and Kirkham, (2001) who stated that people with negative self-esteem are more likely to involve in behavioral problems. Similarly, Lane and Elliott (2001) found low self-esteem was linked to delinquent behavior in the sample of school students.

Donellan et al., (2005) found that people with low self-esteem are predisposed to antisocial behavior. The results of the current study are also in line with the findings of Garaigordobil, Durá, and Pérez, (2005) who found that adolescents with negative self-esteem are more likely involved in antisocial behaviors. Additionally, Trzesniewski et al., (2006) further reported that adolescents with negative self-esteem not only showed poor mental health but they were also high on criminal behaviors. Furthermore, Taylor, Davis-Kean, and Malanchuk, (2007) explained that students having low self-esteem showed more negative behaviors at school than the students with high self-esteem. Similar to the present study, Ostrowsky, (2010) found that people with negative self-esteem engaged in disruptive behaviors to overcome the feelings of inadequacy and inferiority. A previous study conducted by Onyedibe (2011) is also consistent with the present study which indicated that low self-esteem is a promising factor in the development of psychopathic behavior. Similarly, the results of the study are also in line with the research conducted by Falkenbech et al., (2012) who found that people with factor two features of psychopathy (antisocial) had low self-esteem.

The second hypothesis is also supported by Fong, Vogel, and Vogel (2008) who reported that people with low self-esteem had behavioral problems in school. Rosenberg, Schooler, and Schoenbach (1989) also found a relationship between negative self-esteem and antisocial behavior. They found that negative self-esteem nurtures delinquency and antisocial behavior. In the present study negative relationship between positive self-esteem and antisocial factor of psychopathy ($r = -.29$). There are very few studies that

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have been conducted to investigate the association between positive self-esteem and antisocial behavior; therefore, it contributes to the existing literature related to positive self-esteem concerning psychopathy specifically in Pakistan. Present findings are in line with the previous studies conducted by Baumeister et al., (1996) who stated that violence appears when positive self-esteem is threatened.

Conclusion

The research aims to investigate the role of self-esteem in the development of psychopathic traits among undergraduate students. The present study indicated that those students who were high on negative self-esteem were also high on antisocial traits of psychopathy. Results indicated the contributory role of negative self-esteem in the development of antisocial traits of psychopathy. Furthermore, present study found that students with positive self-esteem exhibited low-level antisocial and egocentric traits which indicated that positive self-esteem buffer against antisocial and egocentric traits of psychopathy. Overall results indicated that positive self-esteem is a safeguard against psychopathic traits while negative self-esteem is a promising element in the development of psychopathic traits among students. In the present study, no relationship has been found between callous traits of psychopathy and positive and negative self-esteem. Further study warranted to investigate this relationship.

Limitation and Suggestions

The present study has its limitation because there is no study without limitations. The self-report measure has been used in the present study which can estimate over and under responses of the subjects. Therefore, it can bias the results.

The present study suggested that positive self-esteem is a promising protective factor against the development of psychopathy. As parents, teachers, and friends play an important factor in the development of positive self-esteem, therefore, counseling centers at the community level should be available to guide parents to help their children improve their self-esteem. All schools, including both government and private sector, should hire psychologists who not only train teachers but also provide counseling to those students who are involved in antisocial behavior such as bullying, hurting, and disrespectful behavior. Psychologists should also examine self-esteem among students and specifically focus on those students who exhibit negative self-esteem. They should provide counseling to all those students who display negative self-esteem.

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