

Neuroticism and Psychosocial Stressors of Trauma in University Students: The Mediating Role of Self-Esteem and Self-Appraisal of Trauma

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The current study aimed to find out the mediating role of anxious self-esteem and self-appraisal of trauma in the relationship of neuroticism and psycho-social stressors of trauma in a sample of 213 (men = 31%, women = 68%) between the ages of 18 to 26 ($M = 20.78$, $SD = 2.46$). Participants were selected by using a purposive sampling strategy studying in private and government universities of Lahore, Pakistan. Neuroticism vs. Emotional Stability Scale (John et al., 1991), Anxious/ Withdrawn Self-esteem Scale for University Population (Zafar et al., 2012), Psychosocial Stressors of Trauma scale (PSST) (Rani et al., 2021), and Self-Appraisal Scale (Rani et al., 2021) were used to assess the neuroticism vs. emotional stability, anxious self-esteem, self-appraisal of trauma and psycho-social stressors of trauma in university students. Findings of correlation analysis depicted the interrelatedness of neuroticism, anxious self-esteem, self-appraisal of trauma, and psycho-social stressors. Mediation analysis suggested the serial mediating role of anxious self-esteem and self-appraisal of trauma in the association of neuroticism vs. emotional stability and PSST in university students. These findings might be used to overcome the adverse outcomes of trauma in University students.

Keywords. Neuroticism, self-esteem, self-appraisal, psycho-social stressors, university students

Young adults are the key part of the world's population and play a central role in the growth and development of their area or regain (Yıldırım et al., 2021). Whereas in 21-century developed countries are experiencing an increase in life span, but at the same time underdeveloped countries face a huge increase in numbers of young adults due to the high rate of short life span (Jamal, 2020). These

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young adults are facing various problems that can be psychological, emotional, and social, specifically young adults who enter universities or colleges are vulnerable to mental health problems (Saraiya et al., 2021). As university life places great pressure and students become prone to stress such as students in universities and colleges are facing bullying, performance pressure (Logan & Burns, 2021) emotional abuse, neglect from family (Dolz-del-Castellar & Oliver, 2021), unfaithful partner in a romantic relationship, and gender identity crisis may also one of the issues cause depression and other mental health issues (Krause et al., 2021). This situation increases challenges such as economic, cultural, relationships, and so on (Mall et al., 2018) but among those individuals who face any kind of trauma the situation gets shoddier.

Trauma is defined as an individual's subjective experience, a disturbing and distressing event (Isobel et al., 2019) that disrupts normal functioning and troubles the equilibrium of life (Hendrix, 2021). It has always had extreme and long-term effects on people who experience directly or indirectly adverse life events (Subbie-Saenz de Viteri et al., 2020). The main categories of traumatic or distressing events are man-made and nature-made traumatic events. Everyone must face traumatic or distressing events once in life, such as death, physical or sexual assault, or severe physical injuries of a closed one or own self (Fitzgerald, 2021). These traumatic events might have a disabling effect on mental health and impair the life functioning of those individuals (Raxmatillaeva, 2020).

Moreover, trauma always has a long-term negative impact on mental health and causes various psychiatric problems, substance abuse, and, later on, may cause neurobiological changes. So the ratio of distressing events is high in the general population (Dye, 2018). When we study university students, it is frequently read that psychological distress is expected in the university population compared to the general population (Tang et al., 2018). So university population is most vulnerable to developing psychological issues as a result of any traumatic event (Padmanabhanunni, 2020). A lot more work has been done on university and college students and psychological trauma, yet university students and trauma need attention in specific cultural conditions. Such as two cultures are not entirely similar, as reactions toward traumatic events vary according to cultural conditions (Hansford & Jobson, 2021).

Moreover, literature also identified that 43% of adults experience at least one adverse life event, such as emotional, physical, and sexual abuse (Neumark-Sztainer et al., 2020). The prevalence of trauma in university students is alarming as researchers reveal that one-third of

the population experience extreme traumatic events, and a quarter of them report extremely intense traumatic events (Dar & Deb, 2021). As a result, 34% of the population face stress, and 18% encounter symptoms of depression such as insomnia, low self-esteem, smoking, and internet use behaviors (Ramón-Arbués et al., 2020).

Traumatic events have a lifelong impact on life and disturb the equilibrium of life due to consistent stress. Current circumstances, including economic and health challenges, increase the risk of mental health issues (Villatoro et al., 2020), as various research studies highlight the relationship between trauma exposure and stressors related to aversive events (MacDonald, 2021). Psychological reactions resulting from aversive events can be bitterness, conflicting situation, symptoms of depression and anxiety, stress-related symptoms, or suicidal ideation (Polanco-Roman et al., 2021). There is ample work by Lazarus and Folkman (1986) that has been done on the impact of stress on human life, such as it influences the well-being, social functioning, and somatic health of individuals.

Numerous factors make a person vulnerable to mental health problems due to traumatic events. These factors might be a lack of familial support, overreacting to minor events, and joint psychological inflexibility (Meyer et al., 2019). Numbers of personality factors that have an evocative role in traumatic events, such as borderline personality type and neurotic traits, are commonly prone to mental health problems in response to traumatic events (Landi et al., 2021). Another critical factor is how a person defines an aversive event or the intensity of stress associated with a traumatic event. It also defines what meaning a traumatized person gives to that event, such as negative appraisal is strongly associated with the traumatic life events (Woud et al., 2019). Self-esteem is also one unique factor that plays a crucial role in making the situation worse or helping the person to get out of this vulnerable situation and help to maintain the mental health of an individual (Zhou et al., 2018). Identification of these adverse life events and associated high levels of stress with these events, young adults and specifically university students is demanding accurate and wide-ranging assessment is obligatory to provide intervention (Lewis et al., 2020).

While studying trauma, the personality types cannot be overlooked. A neurotic personality trait is strongly associated with psychological and social issues (Han et al., 2021). Neuroticism personality trait experiences negative effects such as anger, anxiety, self-consciousness, emotional instability, irritability, depression, and experiences negative emotions (Kalokerinos et al., 2020). A person with neurotic traits can easily catch into the web of depression, which

might affect psychological and social functioning. If this situation persists, it might cause severe psychosocial issues in young adults, such as mood fluctuations, anxiety problems, somatic symptoms, social withdrawal, and eating disorders (Widiger & Oltmanns, 2017).

Moreover, neuroticism, self-esteem, and psychological stressors interlink; it is difficult to understand who causes what? Such as depression cases, low self-esteem, or due to low self-esteem depression occur (Mu et al., 2019). However, neuroticism causes low self-esteem and signs and symptoms of depression or stress (Hufer-Thamm & Riemann, 2021). Various factors also control self-esteem, but neuroticism exacerbates the situation in the healing process after an aversive event (Shu et al., 2017).

Self-appraisal means how a person perceives self after traumatic events or what meaning an individual gives to themselves (Serra-Blasco et al., 2019). There is a strong association between self-appraisal and neuroticism, such as people with neurotic traits must have low self-esteem (Yao, 2020), and people with low self-esteem usually appraise themselves negatively (Salehinejad et al., 2020).

The role of self-esteem is essential in the lives of traumatized people, as self-esteem defines as self-evaluation, which is how a person credits him or herself. It is also about how people perceive themselves or own their personality characteristics (Rosenberg et al., 1995). Self-esteem is the essential ingredient of personality. Mruk (1995) was the first to introduce self-esteem factors named Competence and worthiness, and he phenomenological defined the construct of self-esteem. University students are the luckless part of the population who face multiple stressors and much pressure. Positive self-esteem plays a buffering role, and negative self-esteem makes the situation more complicated (Pandey et al., 2021). The appraisal theory of emotion processes define that the appraisal causes emotions and difference in emotions of every individual as how to give meanings to events (Moors, 2021).

The concept of anxious self-esteem is derived from a specific cultural context associated explicitly with our culture. When people face constant negative responses from others or experience traumatic events, they develop anxious self-esteem (Tang et al., 2020). People with anxious or withdrawn self-esteem started to believe in loneliness rather than interacting with people (Zafar et al., 2012). Self-esteem strongly correlates with other variables such as PTSD, depression, anxiety, and stress (Ma et al., 2019). Trauma and self have a close relationship; people who face abuse and violence experience lower self-esteem (Barnum et al., 2017). Anxious or withdrawn self-esteem

is a concept that emerges from a content of self-esteem in Pakistani university young adults. That kind of self-esteem might be explained as people are tense or uneasy with themselves or fed up with their life (Zafar et al., 2012). Psychological stressors are part of an individual's life, and people with healthy self-esteem can come out of stressful situations. Anxious self-esteem has a low ability to fight life challenges and quickly become the victim of mental health issues (Pandey et al., 2021). Moreover, self-esteem is closely linked with self-appraisal, as the level of self-esteem determines how a person gives meaning or sees self in a traumatic situation (Moors, 2021).

Trauma appraisal is derived from cognitive theories regarding how people interpret or give meaning to aversive events. There are various types of appraisal, and the common types are negative appraisal (Barlow et al., 2017); accepting or facing the consequences of the dysfunctional or negative appraisal can avoid stressful events (Woud et al., 2019). There are various appraisals, such as spiritual appraisal, associated with meanings about God or religion (Sremac, 2018), self-appraisal (Kao et al., 2020), and other appraisals. However, self-appraisal works as a coping mechanism after traumatic or stressful events in life (Alhurani et al., 2018).

Self-appraisal has an imperative role in the development of mental health; furthermore, positive self-appraisal helps people to reduce anxiety and stress and helps to overcome symptoms of anxiety and depression (Sokol et al., 2022). There is a strong association between self-appraisal and mental health (Bonaiuto et al., 2019). As a result, self-appraisal protects a person from mental health issues, depending on how a person appraises or gives meaning to aversive events. It is still vague whether mental health issues cause negative self-appraisal or a person develops mental health challenges (Santarelli et al., 2020). On another side of the mirror, people with neurotic traits negatively appraise themselves or God due to aversive life events. Moreover, those who have a lower level of neuroticism have a high level of positivity and openness (Lace et al., 2020).

Despite the above discussion, the university population faces significant challenges affecting their mental health; at the same time, the culture in which young adults live cannot be overlooked. Trauma in individual and collectivistic cultures has visibly different meanings. As in Asian culture, where people live in collectivistic cultural conditions but are influenced by western culture, young adults experience confusion and stress. Such as, one type of culture gives a robust support system, but another has independence but low social or familial support (Altun, 2020). To cope with a stressful situation is not the individual ability; it is also a cultural element as culture and

religion push the person to cope with the adverse situation as people can create cultural and religious meanings, and social support system active and start the person to push towards normal functioning (Afana et al., 2020). However, this process is not that easy; it is a brutal war from normality to abnormality, and in this process, various other personalities and self-characteristics play a prominent role (Wilde, 2020).

Considering the above discussion, the current study aimed to find the association between neuroticism, anxious self-esteem, self-appraisal, and psycho-social stressors of trauma in university students. Furthermore, this research aimed to determine the mediating role of anxious self-esteem and self-appraisal in the association of neuroticism and PSST in university students.

Hypothesis

It is hypothesized that anxious self-esteem and self-appraisal would mediate the relationship between neuroticism and psychosocial stressors of trauma

Method

Participants

For the purpose of the current study, participants were selected through the purposive sampling technique, and the age range of the participants was 18 to 26 ($M = 20.78$, $SD = 2.46$) young adults from different universities. Rest of demographic variables were gender (68% women & 31% men), Family system (Joint= 37% & Nuclear = 63%).

Exclusion criteria were focused those young adults who experience trauma in the last 5 years but exclude those young adults who have spent a duration of less than one year. For this Trauma Event Checklist was used to identify traumatized individuals.

Measures

Life Event Checklist (LEC; Weathers et al., 2013)

This checklist was developed at the National Center for Posttraumatic Stress Disorder (PTSD). There are numerous versions of LEC but in this study list 17 items Life Event Checklist was used and five-point self-report measure “5” mean *Happened* to me to “0” mean *Doesn't Apply* (Gray et al., 2004). Participants who rated events as “happened to me” were selected for further steps.

Anxious/Withdrawn Self-esteem (Zafar et al., 2012)

This scale is the subscale of the Self-esteem Scale (Zafar et al., 2012). The Anxious/Withdrawn Self-esteem (Internal Consistency = .79) sub-scale consist of 12 items. This was 4-point self-rating scale which was 0 mean “not at all” 1 “sometime” 2 mean “some extent” 3 is “most of the time” and 4 mean “most of the time”. The lowest score on this factor was 12 and highest score was 36.

Neuroticism vs. Emotional Stability (John et al., 1991)

Neuroticism vs. emotional stability as subscale of Big five Inventory is self-report measure and response are rated as 1 “Disagree strongly”, 2 “Disagree a little”, 3 “Neither agree nor disagree”, 4 “Agree a little”, and 5 “Agree Strong”. Neuroticism vs. emotional stability factor consist of 8 item (internal consistency = .35), and three items have reverse scoring. The lowest score on this factor was 8 and the highest score was 40.

Psychosocial Stressors of Trauma Scale (Rani et al., 2021)

This scale was developed to explore the PSST in young adults. This scale was consist of 45 items (Internal Consistency = .85), and responses were rated on 5-point rating-scale where 0 = *is not at all*, 1 = *very often*, 2 = *to some extent*, 3 = *very much*, and 4 = *always*. The most important aspect of trauma is culture as the term trauma is universal but it has strong cultural explanations are the unique part of this scale. The lowest score was 45 or below and highest score was 225.

Self-Appraisal (Rani et al., 2021)

This scale is the sub-scale of Trauma Appraisal Scale was developed to explore the cultural meanings that how people perceive or give meanings to their behavior or feeling and others as result traumatic event. This sub-scale was consisted of 8 items (consistency = .78). The responses were rated on 5 point rating scale where 0 = *is not at all*, 1 = *very often*, 2 = *to some extent*, 3 = *very much*, and 4 = *always*. The lowest score on self-appraisal scale was 8 or below and highest score was 32.

Procedure

After the Ethical Review Board of the University of Management and Technology approved, the data was collected from 322 participants, including both men and women (68% women & 31% men). First, informed consent was taken from participants and ensured the data's confidentiality. Participants completed all measures of

current study along with demographic performance in a single sitting. The order of the study instruments were: First demographic performance, Trauma Event Checklist, Psychosocial Stressors of Trauma scale, Trauma Appraisal Scale, Self-Esteem Scale for University Students, and Big Five Inventory. The data was collected in groups and individual forms. Students were instructed after demographic complete the Trauma Event Checklist and mark further measures keeping in mind that trauma is marked specifically as "happened to me". Participants completed all measures in 18 to 20 minutes.

Results

Pearson product-moment correlation was done to explore the relationship between study variables. Obtained findings and descriptive statistics are shown in Table 1.

Table 1

Summary of Correlations, Mean, Standard Deviations, and Cronbach Alpha (N = 213)

Variables	1	2	3	4
1. Neuroticism	-	.336***	.426***	.366***
2. Anxious Self-esteem	-	-	.483***	.407***
3. Psychosocial stressors of trauma	-	-	-	.677***
4. Self-Appraisal	-	-	-	-
<i>M</i>	25.00	9.50	70.01	12.39
<i>SD</i>	4.76	4.27	32.59	6.12

Note. *N* = Neuroticism; ASE = Anxious Self-Esteem; SA = Self-Appraisal; PSS = Psycho-Social Stressors.

*** $p < .001$.

Results testified in the Table 1 suggest that positive association were found between neuroticism, anxious self-esteem, PSST and self-appraisal. Furthermore, anxious self-esteem was also positively associated with PSST and self-appraisal, and PSST also significant positively associated with self-appraisal.

Mediation Analysis

In order to explore the serial mediation analysis of anxious self-esteem and self-appraisal of trauma in the association between

neuroticism and psycho-social stressors, Hayes (2018) bootstrapping approach was used. Figure 1 shows the significant total effect of neuroticism on psycho-social stressors ($\beta = .43, SE = .39, p < .001$). Furthermore, the direct effect of neuroticism on anxious self-esteem ($\beta = .34, SE = .06, p < .001$) and self-appraisal of trauma ($\beta = .25, SE = .08, p < .001$) were significant. Additionally, the direct effect of anxious self-esteem on self-appraisal of trauma ($\beta = .32, SE = .09, p < .001$) was also significant. In contrast, an examination of the direct effects of the mediating variables on psycho-social stressors exhibited that the direct effects of anxious self-esteem ($\beta = .21, SE = .36, p < .001$) and self-appraisal of trauma ($\beta = .53, SE = .25, p < .001$) were significant. Findings suggests that anxious self-esteem and self-appraisal of trauma partially mediates the association between neuroticism and psychosocial stressors as after controlling the mediating variables the direct effect of neuroticism on psychosocial stressors is reduced ($\beta = .16, SE = .27, p < .001$) but c' path is still significant.

Figure 1
Mediation analysis of anxious self-esteem and self-appraisal of trauma in the relationship of neuroticism and psycho-social stressors of trauma.

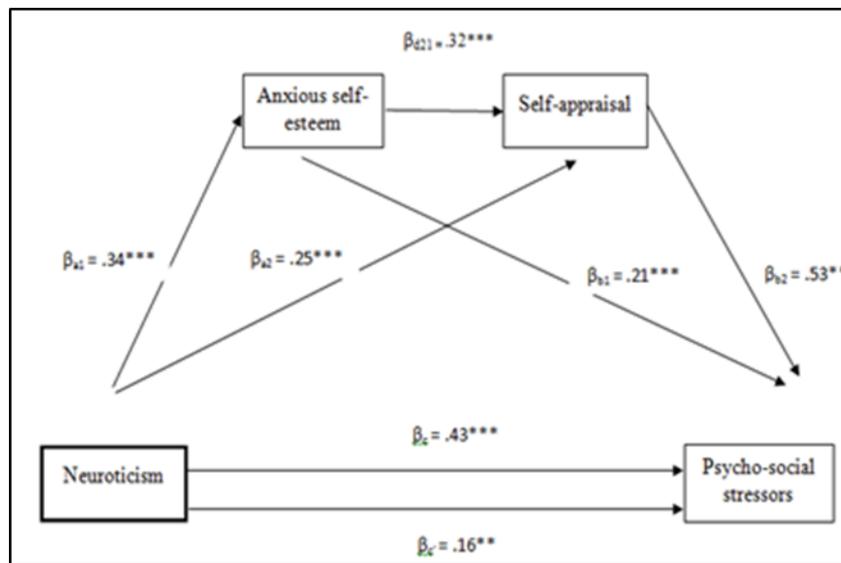


Table 2

Mediation Analysis of Neuroticism, Anxious Self-Esteem, Self-Appraisal of Trauma, and Psycho-Social Stressors (N=213)

	Consequent								
	M1 (ASE)			M2 (SA)			Y(PSS)		
Antecedent	β	SE	p	B	SE	p	β	SE	p
N(X)	.34	.06	.001***	.25	.08	.001***	.16	.21	.002**
ASE(M1)				.32	.09	.001***	.21	.36	.001***
SA(M2)							.53	.26	.001***
Constant	1.78	1.50	.001	-.21	2.01	.92	1.87	7.46	.81
	$R^2 = .12$			$R^2 = .23$			$R^2 = .53$		
	$F(1,211) = 27.60,$ $p = .001^{**}$			$F(2, 210) = 30.67,$ $p = .001^{***}$			$F(3, 209) = 78.83,$ $p = .001^{***}$		

Note. N = Neuroticism; ASE = Anxious Self-Esteem; SA = Self-Appraisal; PSS = Psycho-Social Stressors.

** $p < .01$; *** $p < .001$.

Indirect effects of neuroticism on psychosocial stressors via anxious self-esteem and self-appraisal of trauma were also explored. Findings depicted that the total indirect effect of neuroticism on psycho-social stressors via anxious self-esteem and self-appraisal of trauma is significant ($\beta = .27$; 95% CI [.18, .35]). Furthermore, when considering the mediating variables jointly and distinctly in association to the mediating indirect effects of neuroticism on psychosocial stressors, single mediation of anxious self-esteem ($\beta = .07$; 95 % CI [.03, .12]), single mediation of self-appraisal of trauma ($\beta = .13$; 95% CI [.06, .21]), and serial mediation of anxious self-esteem and self-appraisal of trauma ($\beta = .06$; 95% CI [.03, .09]) were found statistically significant.

Table 3
Indirect Effects of Neuroticism on Psycho-Social Stressors through Anxious Self-Esteem and Self-Appraisal of Trauma (N = 213)

Effects	Product of Coefficients		Bootstrapping 95% Confidence Interval	
	<i>B</i>	<i>SE</i>	LL	UL
Total Indirect Effects	.27	.04	.18	.35
N → ASE → PSS	.07	.02	.03	.12
N → SA → PSS	.14	.04	.07	.21
N → ASE → SA → PSS	.06	.02	.03	.09

Note. N = Neuroticism; ASE = Anxious Self-Esteem; SA = Self-Appraisal; PSS = Psycho-Social Stressors.

Discussion

The present study focuses on young adults as this stage of life is full of challenges, and when these young adults enter universities, their challenges double (Hamza et al., 2020). Moreover, aversive life events impact an individual's life, and one in three universities is experiencing at least one traumatic event in life (Padmanabhanunni, 2020). This study contributes to the existing literature on the cultural expression of PSST and studies the role of self-appraisal and anxious self-esteem, mediating the relationship between neuroticism and psychosocial stressors.

Karen Horney was a German Psychologist who introduced the theory of neuroticism as neurotic people reliving their pain to get pleasure, which develops during family relationships (Mahmoodi, 2021). Neuroticism is a personality trait; a neurotic person sees the world as unsafe and threatening (Horney, 2013). Self-esteem and self-pleasure are negatively associated with a neurotic self (Hufer-Thamm, & Riemann, 2021) which reveal that person with neurotic traits is unable to interpret life event positively. Also, they have a low capacity to fight a stressful situation and later develop chronic stress symptoms (Mineka et al., 2020).

Self-esteem is another associated factor with personality, as the type of self-esteem is determined by the type of personality trait (Mu et al., 2019). Specifically, anxious self-esteem (Zafar et al., 2012) is one of the factors which has a role of mediator between neuroticism and psychological stressor of trauma in this study. People with neurotic traits see the world as unsafe and prefer to stay alone, and the same happens with negative self-esteem, and this situation worsens when people face any trauma event (Sauer-Zavala et al., 2021). Everyone passes through hassles and distress in life, and informal communication with personal or family is helpful. However, how supportive communication is associated with appraisal of the

individual in this respect, Burleson and Goldsmith (1998) explain the appraisal theories of emotions. Self-appraisal, in this study, is defined as a person's interpreting or evaluating self under their beliefs with a traumatic situation (Leary & Terry, 2013). Psychosocial Stressors of trauma and neurotic personality trait have a strong association, as this study found that people with the neurotic trait are more prone to stressors due to traumatic events (Han et al., 2021). Current research set up that neurotic personality has a direct effect on psychological stressors and self-esteem, and self-appraisal mediates this relationship (Baldwin et al., 2021).

The outcomes of this study showed that anxious self-esteem and self-appraisal partially mediate the relationship between neurotic personality traits and PSST in young adults. A neurotic personality trait, anxious self-esteem, and self-appraisal related to trauma emerged as enhancing factors of PSST in young adults. There is also find out that neurotic personalities perceive others as threatening and unable to trust (Landi et al., 2021) and are more prone to psychosocial stressors as young adults are part of the population who bear a lot of psychological pressure and daily life and develop mental health issues (Widiger & Oltmanns, 2017). Moreover, self-esteem plays an essential role in personality development. However, young adults with anxious self-esteem (Zafar et al., 2012) exhibit the picture of kind neurotic personality traits which commonly link to PSST (Kalokerinos et al., 2020), and these stressors impair the functioning of university life of young adults (Polanco-Roman et al., 2021). When confronted with traumatic life events, the person with a neurotic personality trait experience displays symptoms of depression and anxiety, and anxious self-esteem is associated with this type of personality and strength. These findings are consistent with previous literature that a person who faces aversive events experiences psychosocial stressors.

Conclusion

Young adults with neurotic personality traits are more prone to mental health problems, and anxious self-esteem makes the situation unfortunate. Likewise, considering their behavior, feelings, or thoughts as a reason for traumatic events is self-appraisal if one is another mediating variable that disturbed mental health.

Limitations of the Study

However, current research is a unique addition to the existing body of literature. It has several implications for future research, but at the same time, this study has several limitations that leave

opportunities for future researchers. The first limitation of the participants for this study was only college and university students; another part of the population also needs attention in terms of trauma. Moreover, the data was collected with great difficulties, so it was difficult to maintain an equal proportion of men 31%, and women, 68%. It is also not overlooked that results are drawn from data with a certain socioeconomic level. The sample was drawn from the urbanized population; further studies can be replicated from the rural population or identify subcultural differences in the Pakistani population. Finally, the research design of this study was cross-sectional research studies. The measure used in this study was self-report form in future studies can be conducted with informant reported form of measures. Further studies can be conducted with a longitudinal research design.

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