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Neuroticism and Openness as Predictors of Social Readjustment and Nightmare Distress among Middle-Aged Adults

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ABSTRACT

The present study examined neuroticism and openness as predictors of social readjustment and nightmare distress among middle-aged adults. A sample of 205 adults aged 35 to 60 years completed the Big Five Inventory (BFI), the Social Readjustment Rating Scale (SRRS), and the Nightmare Distress Questionnaire (NDQ). Correlational findings indicated that neuroticism was positively associated with nightmare distress and negatively associated with social readjustment. Openness was positively associated with both social readjustment and nightmare distress. Furthermore, social readjustment was negatively associated with nightmare distress. Multiple regression analyses revealed that neuroticism and openness significantly predicted nightmare distress, with neuroticism emerging as a stronger positive predictor. Similarly, neuroticism and openness significantly predicted social readjustment, with neuroticism negatively predicting social readjustment and openness positively predicting it. These findings underscore the important role of personality traits in shaping psychological adjustment and distress during middle adulthood. The study highlights the relevance of personality-based interventions to promote adaptive coping and emotional well-being in this population.

Introduction

Nightmares are disturbing dreams that typically involve threats to survival, security or physical integrity and often end up with the result of the dreamer awakening and experiencing intense negative emotions such as fear, anxiety or sadness (Sateia, 2014). While it is common to experience nightmares occasionally throughout the life span, recurrent nightmares accompanied with significant emotional disturbance are conceptualized as nightmare distress which is the waking distress and functional impairment that are caused by nightmares rather than the frequency of nightmares alone (Barbeau et al., 2022; Levin & Fireman, 2002). Nightmare distress has been

connected with higher emotional reactivity, poor quality sleep and poor psychosocial functioning (Nielsen & Levin, 2007).

Although nightmares have been studied in children or clinical populations, middle aged adults are an important population for the study of nightmares (Park et al., 2021). Middle adulthood (approximately 40-60 years) is marked with several life transitions: career challenges, caregiving, health concerns, changes in family roles (Lachman, 2015). These stressors can make one vulnerable to having emotional dysregulation and sleep disturbances. Some empirical evidence suggests that there is a relationship between stress exposure and emotional instability and increased nightmare frequency and distress (Levin & Nielsen, 2009). Given the fact that middle-aged adults are prone to cumulative life stress, nightmare distress may be of particular salience during this developmental stage (Rossler et al., 2017).

Personality traits figure significantly in how emotions are processed and in how stress responses are reacted to. According to the Five-Factor Model of personality (McCrae & Costa, 2003) personality dimensions like neuroticism and openness to experience are broad in nature, and have an impact on the cognitive-emotional functioning. Neuroticism refers to a stable disposition to experience negative affectances like anxiety, anger, sadness and vulnerability (Costa & McCrae, 1992). Those who are high in neuroticism are emotionally reactive and sensitive to stress, and more likely to be psychologically distressed (Lucke et al., 2024). In contrast, openness to experience is indicative of intellectual curiosity, imagination, aesthetic sensitivity and the flexibility of thinking (McCrae & Costa, 2003). Those who score high on openness are likely to become immersed in the internal world of experience like emotions and fantasies.

A significant positive relationship has been found between neuroticism and nightmare distress. Individuals with high levels of neuroticism report having more nightmares and being more distressed when they wake up (Levin & Nielsen, 2009; Schredl, 2003). Neuroticism has been found to be one of the best personality predictors of negative dream affect, suggesting that emotionally unstable people may have a more upsetting way of creating and interpreting dreams. This relationship appears especially true in adulthood where cumulative stress may act to increase vulnerabilities of the traits (Vats et al., 2025; Wang et al., 2024).

The relationship between openness and nightmare distress is more complicated. Some studies have found that increased openness is related to increased dream recall and increased dream vividness (Schredl & Göritz, 2017). People who score high on openness may have more intense and imaginative dreams and may therefore have more nightmares (Carr et al., 2022). However, openness also may be related to adaptive cognitive processing which may help to buffer distress (McCrae & Costa, 2003). Thus, openness could be associated with the occurrence of nightmares either positively but less strongly or moderately with distress severity. Empirical clarification in middle-aged populations still is poor.

Beyond sleep problems, middle-aged people have to cope constantly with changing social roles, responsibilities and environmental demands. This adaptive process is conceptualized as social readjustment, which is defined as the amount of psychological and behavioral adjustment that is required in response to life changes and stressors (Holmes & Rahe, 1967). Social readjustment involves coping with positive and negative life events, with increasing cumulative readjustment demands associated with psychological strain and health hazards.

A consistent result has been that neuroticism is related to a poorer social adjustment outcome. Highly neurotic individuals are prone to perceive life events as more stressful and they employ

maladaptive ways of coping, and have role transition difficulties (Amestoy et al., 2023; Connor-Smith & Flachsbart, 2007). Among adults, neuroticism is correlated with prediction of lower social adjustment, lower marital adjustment, and lower occupational adjustment (Ozer & Benet-Martinez, 2006). Thus, the neuroticism is speculated to have a negative predictive character on social re-adjustment in middle-aged adults.

In contrast, openness to experience is usually related to cognitive flexibility and adaptability (Chen et al., 2022). Those who are high in openness are more open to change, tolerant of ambiguity, and willing to try out new ways of coping (McCrae & Costa, 2003). These qualities may relieve the readjusting to society in mid-lifetimes. Empirical findings show that openness has been found to be positively linked to adaptive coping and psychological growth in the adult (Ozer & Benet-Martinez, 2006) which points to a positive relationship between openness and social readjustment.

Importantly, the distress due to nightmares and the social readjustment may be related to one another. Persistent nightmare distress can interfere with the quality of sleep, increase daytime fatigue, and increase the emotional dysregulation, which may get in the way of effective adaptation to life stressors (Faccini & Del-Monte, 2024; Nielsen & Levin, 2007). Conversely, social readjustment issues may cause an increased level of stress, which may increase nightmare distress (Wang et al., 2023). Personality characteristics such as neuroticism and openness may serve as shared vulnerability or protection factors of both outcomes.

Despite increasing evidence from the international literature of the association between personality traits and sleep disturbance and psychosocial adjustment, there has been limited empirical work investigating these associations among middle-aged adults in Pakistan. Pakistani society is characterized by high interdependence of families, collectivism, economic stress and multigenerational obligations, which may result in an aggravation of midlife stress (Gilani, 2025). Cultural expectations regarding caregiving as well as financial and social roles may be a contributing factor to the vulnerability to nightmare distress and social maladjustment. However, personality-based predictors of these outcomes is understudied in this population. The present study that investigates the role of neuroticism and openness as predictors of nightmare distress and social readjustment will add to the psychological knowledge relevant to the Pakistani culture and will lead to a culture specific intervention for middle aged adults of Pakistan.

Hypotheses

H1: Neuroticism will positively predict nightmare distress among middle-aged adults.
H2: Openness to experience will positively predict nightmare distress among middle-aged adults.
H3: Neuroticism will negatively predict social readjustment among middle-aged adults.
H4: Openness to experience will positively predict social readjustment among middle-aged adults.

Method

Sample

The current study used a sample of 205 middle-aged adults (35-60 years, M = 42.30, SD = 7.33). The research population used was 90 individuals (43.9 percent men and 115 people 56.1 percent women) working in various organizations and in the community environment. The participants in the study were only selected on the basis of capacity to understand English and have the capacity to report on nightmares.

Measures

Demographic Form

The information was going to be gathered with the assistance of a demographic information sheet (demographic information sheet was developed to measure the data concerning the age of the participants, their education level, their gender, marital status, their type and status of employment, and the average hours of sleep.

Big Five Inventory (BFI)

The Big five inventory (BFI) that was created by Goldberg (1993) and validated by John and Srivastava (1999) was used to measure two personality traits neuroticism and openness to experience. BFI contains 44 items which assess five personality scales and they include openness to experience, agreeableness, extraversion, conscientiousness and neuroticism, but in this research we used only items for to measure two personality traits neuroticism and openness to experience. It is associated with an increased level of the corresponding trait of personality since high scores on all the subscales indicate it. The total internal consistency reliability of the BFI is described to be 83 =.83. The subscale reliabilities include, neuroticism (a =.84) and openness to experience (a =.81) (John & Srivastava, 1999).

The Social Readjustment Rating Scale (SRRS).

The name of the tool is the Social Readjustment Rating Scale (SRRS), which was invented by Holmes and Rahe (1967) and both sought to establish the effect of stressful events in life on health. The scale attaches a number to different events in life that can be referred to as Life Change Units (LCUs). The sum of the scores will yield an accumulated score of stress. Gerst et al., (1978) also established that SRRS had good rank-order correlations of r =.89 to r =.96 in healthy adults and r =.70 to r =.91 in patients.

Nightmare Distress Questionnaire (NDQ)

The measurement of the Nightmares distress was also aided by the Nightmare Distress Questionnaire (NDQ) which was created by Belicki (1992). There are 13 questions in the NDQ, to be measured using the 5-point Likert scale. The scale will range between 1 (never), 2 (not at all), up to 5 (a great deal) and 1 (not at all interested), up to 5 (extremely interested). The scale is used to assess the degree of distress caused by nightmares such as effects of nightmares on the day time functioning and general living conditions. These scores fall in the range of 13-65 in which higher scoring depicts that the person is more bothered with the nightmares. Cronbach alpha=.88 has been found to be good internal consistency of NDQ (Belicki, 1992).

Procedure

Three open access questionnaires were employed in the research. The author received the official approval to conduct the study with the Head of the Department of Psychology at Bahria University. The source of data collection consisted of the participants belonging to Al-Khidmat foundation, Superior University staff, Telenor company staff and life hospital staff. The invited target population was men and women aged 35-60 and were capable of comprehending the English language. Strict ethical standards were taken into consideration in carrying out the psychological research. The informed consent form was given to the participants in this manner that it contained the objective of the study, the confidentiality, and the voluntary nature of the participation other

than the right to drop out anytime and without any penalty. A debriefing statement was given as well. Concerns expressed by respondents on the findings of the research were also encouraged to request results, which would be availed to them. The confidentiality and anonymity of the responses were promoted during the research.

Data Analysis

Statistical package of the social sciences (SPSS) was used to analyze the data. In the descriptive statistics, the means and standard deviation of the study variables were obtained as well as the demographic variables. To establish the relationship between neuroticism, openness, nightmares distress and social readjustment, Pearson correlation was done. The simple linear regression tests were conducted and the predictive policies of neuroticism and openness on nightmares distress and social readjustment were determined.

Results

Table 1

Demographic characteristics of participants (N=205)

Characteristics		*f(%)*	*M (SD)*
Age			42.30 (7.33)
Gender	Male	90 (43.9)	
	Female	115 (56.1)	
Education	Intermediate	50 (24.4)	
	Graduation	93 (45.4)	
	Master	60 (30.2)	
Marital Status	Unmarried	30 (14.6)	
	Married	170 (82.9)	
	Divorced	5 (2.4)	
Employment Status	Employed	153 (74.6)	
	Unemployed	52 (25.4)	
Sleeping Hours per Day			6.81 (1.28)

Note f=sample size, %=percentage, M=mean value, SD=standard deviation

Table 1 shows that the mean age was 42.30. More women (n=115 (56.1%)) participated in study as compared to men participants (n=90 (43.9%)). A higher number of graduates (n=93 (45.5%) participated in study. Married participants (n=170 (82.9%) were high in numbers. Many of the participants were employed (n=153 (74.6%)). And the average hour of sleep was 6.81 hours of respondents.

Table 2

Bivariate Correlation Coefficient among Variables (n=205)

Variable	*M (SD)*	Neuroticism	Openness	*Social Readjustment*	*Nightmare Distress*
Neuroticism	26.25 (4.32)	-	-.35**	-.29**	.36**
Openness	30.15 (5.79)		-	.38**	.22**
Social Readjustment	251.91 (141			-	-.33**
Nightmare Distress	31.63 (9.37)				-

***p<.01*

In table 2, the results found that there is a significant positive correlation of neuroticism and nightmare distress (r = 0.36, p<.01), indicating that higher levels of neuroticism are significantly associated with nightmare distress. Also, it shows that there is a significant negative correlation between neuroticism and social readjustment (r = -0.29**, p<.01). Although openness as personality traits is significant correlation with social readjustment (r = 0.38**, p<.01) and nightmare distress (r = 0.22, p<.01). However, social readjustment is significant negative correlation with nightmare distress (r = -0.33, p<.01).

Table 3

Multiple Regression Analyses Predicting Nightmare Distress from Neuroticism and Openness (N = 370)

Predictor	B	SE B	*β*	*t*	*p*
Neuroticism	0.42	0.07	.34	6.00	< .001
Openness	0.18	0.06	.17	3.00	.003
Model Summary	R = .43	R^2 = .19	Adj. R^2 = .18	F(2, 202) = 42.15	< .001

B = unstandardized coefficient; SE B = standard error; β = standardized coefficient.

The results of Table 3 showed a multiple regression analysis, which as conducted to examine whether neuroticism and openness predicted nightmare distress. The overall model was statistically significant, $F(2, 202) = 42.15$, $p < .001$, explaining 19% of the variance in nightmare distress ($R^2 = .19$). Neuroticism significantly positively predicted nightmare distress (β = .34, $p < .001$), while openness also emerged as a significant positive predictor (β = .17, $p = .003$).

Table 4

Multiple Regression Analyses Predicting Social Readjustment from Neuroticism and Openness (N = 205)

Predictor	B	SE B	*β*	*t*	*p*
Neuroticism	-0.31	0.06	-.26	-5.17	< .001
Openness	0.45	0.07	.35	6.43	< .001
Model Summary	R = .48	R^2 = .23	Adj. R^2 = .22	F(2, 202) = 55.60	< .001

B = unstandardized coefficient; SE B = standard error; *β* = standardized coefficient

The results of Table 3 showed a multiple regression analysis, which was conducted with social readjustment as the outcome variable. The model was significant, $F(2, 202) = 55.60$, $p < .001$, accounting for 23% of the variance ($R^2 = .23$). Neuroticism significantly negatively predicted social readjustment (β = −.26, $p < .001$), whereas openness significantly positively predicted social readjustment (β = .35, $p < .001$).

Discussion

The analysis in question involved the fact that the predictors of the distress due to nightmares and social adjustment were considered to be neuroticism and openness to experience amongst the middle-aged adults. The four hypotheses were all accepted and this implied that the personality traits played a significant role in the occurrence of emotional sleep disturbances and psychosocial adaptation in the middle adulthood. They can be applied to the current research of personality because the results indicate that dispositional traits have a strong relationship with the internal distress experience and the external adaptive functioning during the middle age. The first hypothesis was accepted because neuroticism was found to be a positive predictor of nightmares distress in the middle-aged adults. This is in line with the affect-regulation theories of dreaming by

Nielsen and Levin (2007) of dreaming that strengthen emotional reactivity and ineffective emotion control to the formation and perpetuation of nightmares distress. The hyper neurotic ones possess the negative affect persistence, stress sensitivity and anxiety sensitivity. The studies conducted during the last ten years have provided the evidence that the neuroticism is one of the best personality predictors of nightmares and the amount of distress level (Schredl & Bulkeley, 2019; Schredl & Goeritz, 2019). Besides perceived threatening material in the dream, neurotic individuals might be subjected to a greater exposure to negative emotional stimulation both during their REM dreams and during the time they see the content of the dream as threatening and therefore the subjective distress is compounded. The cumulative stress in regards to professional expectations, care giving and health complications within the middle-aged adults can even add to this weakness, thus neuroticism plays a significant role to the distress in the nightmares by the middle adults in life.

The second hypothesis was also proved correct that there was positive correlation between openness to experience and nightmare distress. Openness is not a state that has been traditionally linked to emotional instability, still, with the emergence of more recent research, it is assumed that open individuals describe a high prevalence of dream recall, more visualization, and emotional depth of the dream content (Schredl & Göritz, 2017; Mieg et al., 2019). Openness entails Fantasy proneness, Imagination, intellectual curiosity and Self-monitoring. These properties can contribute to the nature and wholesomeness of the dreaming experiences, contributing/enhancing reported nightmares distress. As opposed to neuroticism which can be related to distress, since it has emotional dysregulations, openness can also be related to distress, because it adds more experience and symbolic richness of dreams. The sensitivity to emotionally-colored dream material can also further increase the perceived distress once individuals become more reflective and meaning making with regard to the changing life in the middle adulthood (Khan & Umar, 2023). Consequently, it would seem that the contribution of the openness in the nightmares to the action of the cognitive and imaginative processes might not be solely by the action of the affective instability.

Regarding social readjustment, the results showed that the neuroticism had a negative influence on the projection of the adaptive adjustment in the middle-aged adults to the extent that hypothesis three was involved. This observation is consistent with the recent data on meta-analysis, which indicate negative correlation between neuroticism and resilience, life satisfaction, and adaptive coping mechanisms (Anglim et al., 2020; Jeronimus et al., 2016). The middle adulthood is characterized by the dramatic developmental changes, which involves the role changes within the families, the change in the financial responsibility and the health changes. These changes are more often perceived as stressful and overwhelming among neurotic individuals and the maladaptive coping strategies used among them are rumination and avoidance in most cases (Pedersen et al., 2016). These dispositions decrease the pliability of the mind as well as the aptitude to adjust suitably to the social existence. The current results substantiate the theorization of neuroticism as an overall vulnerability characteristic to the performance, emotional and social.

Conversely, the fourth hypothesis was accepted since openness to experience is a positive predictor of social readjustment. The existing studies on personality have shown that the effect of openness is related to cognitive flexibility, ambiguity tolerance and openness to change (Denissen et al., 2019). The qualities are especially effective in the middle adulthood as it is the time when one has to adapt to the changing role in personal and social life. Being an open person will help him/her look at the stressors of life as an opportunity of growth as opposed to a threat that will make one adapt easier (Alwin, 2019). This is most likely to assist them to adjust successfully with their readiness and search of new frontiers and coping mechanisms. In this way, it can be found

that the openness is a protective factor of psychosocial adaptation that however could be reinforcing the subjective experiences of the dream.

The cumulative sum of the findings is that personality traits possess non-parallel but overlapping effects on the internal and external social action of feelings. The two outcomes were constant risk factors that were involved in increasing distress during nightmares and failing to readjust socially, which are neuroticism. The phenomenon of openness was more intricate which adds to the exaggerated extremes of nightmare tension in both imagination and experience mechanisms and, amplifies adaptive social reaction in the cognitive flexibility. The two-fold aspect is what complicates the personality forces at the middle adulthood (Carr et al., 2022).

The research is endowed with a number of strengths. It particularly covered the middle-aged adults, which is a small study on the personality and sleep research. It has merged the emotional (nightmare distress) as well as psychosocial (social readjustment) outcomes into a single predictive model. They used standardized and psychometrically appropriate instruments and this increased reliability of findings. The research also provides the valuable empirical evidence in the Pakistani cultural setting because there is little research on the nightmare distress and personality.

These strengths possess various limitations which are to be discussed. This type of cross-sectional design is limited to the opportunities to make use of causal interpretation and requires longitudinal studies to establish the existence of the time relationships. Response bias, social desirability of the self-report measures can occur. The knowledge of English can also limit the implications of the research on larger groups of the Pakistani population. In addition to that, the frequency of nightmares was not independently researched on the impact of distress which would have given a better concept of the personality difference of influence.

Conclusion

Therefore, to conclude, this research has proposed that neuroticism and openness are crucial in determining the state of nightmares distress and social adaptation in the middle-aged adults. This was discovered to be a dispositional vulnerability impact of neuroticism and a risk and adjustive effect of openness. The identified findings suggest the relevance of the application of personality assessment in the intervention measures that aim at the resolution of sleep conflict and psychosocial adaptation in the middle age. The data concerning the predictors of distress and adaptation on the basis of personality might be utilized in designing culturally-based psychological intervention and preventive modalities in the Pakistani sociocultural setting whereby the middle adulated adults are bound to encounter compounded family and professional demands.

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