



Research paper

Investigating the Mediating Role of Loneliness and Attachment Styles in the Relationship between Internet Addiction and the Dark Tetrad Personality Traits

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Abstract

This research sought to examine the mediating role of loneliness and attachment styles in the association between Internet addiction and Dark Tetrad personality traits. The study utilized a descriptive, correlational research design. The sample population comprised students from University of Tabriz, with 395 participants selected through convenience sampling. Instruments employed in the study included the Dark Tetrad Personality Traits Questionnaire, the Internet Addiction Test, the Adult Attachment Inventory, and the Loneliness Questionnaire. The findings revealed a significant direct effect of Dark Tetrad traits on Internet addiction. Furthermore, the results indicated that loneliness and attachment styles function as mediators in the relationship between Dark Tetrad traits and Internet addiction. These outcomes may offer valuable insights for therapists in the development of targeted interventions and preventative strategies for addressing Internet addiction.

Keywords: Anxious attachment style, dark tetrad personality traits, internet addiction, loneliness.

Introduction

Personality includes approximately stable traits that often a person presents in situations (Antonoplis, 2024). Dark Personality Traits are as the personality structures that have taken the attention of personality psychologists in recent years. These traits are obscene by society and lead to the destruction of interpersonal relationships (Demirkaiglu & Kose, 2021). Dark tetrad personality traits include Narcissism, Psychopathy, Machiavellianism, and Sadism (Maheux-Caron et al., 2024). Since Dark Traits have unpleasant characteristics and can have destructive effects on society, recent research has shown that Internet addiction is related to Dark personality traits and personality can be an important predictor variable for Internet addiction (Turan et al, 2024). On the other hand, studies have shown that people with Dark personality traits have insecure Attachment styles. People with Dark personality traits have high level of loneliness due to insecure attachment styles and then surf the Internet to experience satisfying relationships (Li et al., 2022). One of the variables that can mediate the relationship between Dark personality traits and Internet addiction is Loneliness. According to the history of researches, people who have dark personality traits, are more involved in the Internet and social networks to compensate their friendships by social relationships (Li et al., 2022). This

relationship seems to be mediated by Loneliness and attachment styles. The present research has been carried out by examining the following hypotheses:

-The dark tetrad personality traits have an indirect effect on Internet addiction by the mediation role of loneliness and attachment styles.

Method

The current research is descriptive/correlational in terms of its implementation method, which has been carried out by the path analysis method. The statistical population included all the students of University of Tabriz in the academic year of 2023-2024, that 395 of them selected according to Kline (2023) as the sample of the study using available sampling method. Finally, 381 data were analyzed. The participants took part in this research consciously and consent the agreement and had given the chance to leave the research in any part of it. In order to comply with ethical considerations, the participants were assured that all their information is confidential and will be analyzed for research purposes only. In order to investigate the mediating role of loneliness and attachment styles in the relationship between Internet addiction and dark personality traits, path analysis performed using SPSS version 26 and Amos version 24 software.

Tools

Questionnaire of Quadruple Dark Personality Traits (SDPT): This scale has 37 items and 4 subscales. Jones & Paulhus (2014) obtained the test-retest reliability coefficient for the subscales in the range of 0.76 to 0.87. In the present study, the internal consistency coefficient for Machiavellianism was 0.71, narcissism 0.72, Psychopathy 0.75, and Sadism 0.80.

Internet addiction Test (IAT): This questionnaire has 20 items and its purpose is measuring the level of Internet Addiction. The main creators of this questionnaire reported the reliability of this questionnaire using Cronbach's alpha method of 0.71 (Young et al, 2009). Cronbach's alpha was 0.84 for internet addiction in the present study.

Adult Attachment Inventory (IAT): This questionnaire has 15 items and three subscales of secure, insecure avoidant and anxious insecure attachment style. Reliability with Cronbach's alpha was 0.87 (Hazan & Shaver, 1987). In the present study, Cronbach's alpha coefficient was 0.81 for secure attachment, 0.80 for anxious attachment, and 0.78 for avoidant attachment.

Loneliness Questionnaire (UCLA): This scale has 20 items and measures the level of loneliness. The reliability of this questionnaire was reported from 0.84 to 0.94 based on Cronbach's alpha (Russell, 1996). Cronbach's alpha for loneliness scale was 0.71 in this study.

Results

Assumptions of normality of scores were reported using skewness and kurtosis. Indirect effects of endogenous variables on exogenous variables were reported by Bootstrap test.

Table 1. Descriptive statistics and inter variable correlations

Variables	1	2	3	4	5	6	7	8
1.Machiavellianism	1							
2. Antisociality	0.36**	1						

3. Narcissism	0.33**	0.17*	1					
4. Sadism	0.18**	0.61**	0.02	1				
5. Loneliness	0.19**	0.35**	0.03	0.26**	1			
6. Anxious Attachment	0.19**	0.18**	0.10	0.02	0.47**	1		
7. Avoidant Attachment	0.17**	0.24**	0.04	0.27**	0.42**	0.07	1	
8. Internet Addiction	0.20**	0.35**	-0.05	0.28**	0.46**	0.37**	0.26**	1
Mean	28.99	19.95	26.98	14.89	39.47	51.33	57.13	57.13
SD	5.28	5.09	4.48	5.87	11.71	14.72	7.36	10.58

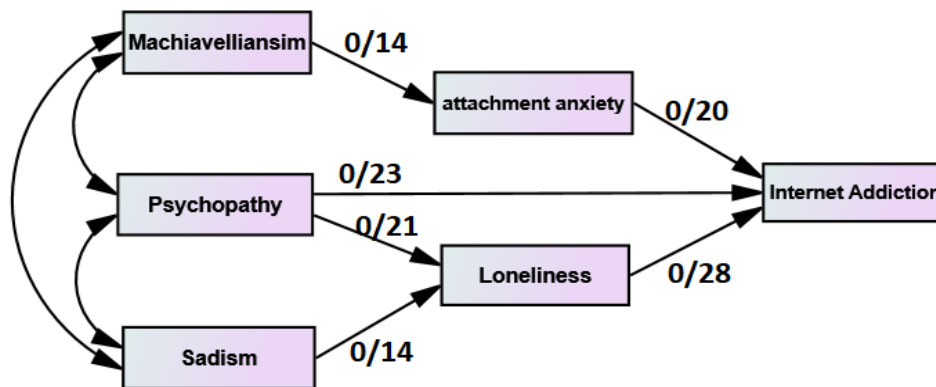


Figure 1. The final research model

The fit indices of the final research model showed that these indices indicate the optimal fit of the model. The value of the indices ($X^2/df=1.93$, $CFI=0.97$, $GFI=0.98$, $AGFI=0.92$, $NFI=0.95$) is closer to one (greater than 0.90) indicating a good fit. It is a research model. According to the desired indicators, which are more than 0.90, it can be said that the research model has a good fit. Also, the RMSEA value is 0.06, which is less than 0.08 and indicates the good fit of the current model.

Discussion and Conclusion

In explaining the main hypothesis, it can be said that based on attachment theory, people with anxious attachment style, mistrust and feel insecurity in interpersonal relationships. As a result, the Internet and virtual social networks for people with high level of Machiavellianism, can be a way to escape from real life and failures. By resorting to the social aspects of cyberspace, these people reduce their psychological needs for approval and fear of rejection through the availability and ease of interacting with others. It can be said that the feeling of loneliness in antisocial people creates a kind of monotony in their lives. Based on this, antisocial people turn

to use the internet to search for new relationships with the aim of seeking excitement, gaining pleasure and reducing the negative emotions caused by feeling lonely, and they achieve this goal through harassing others, online aggression and abusing others. One of the limitations of the present study was that the research method was not random and gender differences were not investigated. In future studies, it is suggested to use random sampling methods and to generalize the results better, to conduct research on another sample group and to consider gender differences.

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Conflicts of interest

Authors found no conflict of interests.



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