



The Relationship between Five Personality Traits and Happiness: The Mediating Role of Problematic Instagram Use

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Abstract

Background: Personality plays a key role in many psychosocial variables. Happiness as a source of motivation can also play a major role in a society's individual and collective development. In this regard, the Instagram platform, as a popular platform among the Iranian population, has attracted a high level of engagement (and can make individuals happy), but it has been associated with the risk of behavioral addiction for a small minority. Therefore, the present study evaluated the relationship between personality traits and happiness with the mediating role of problematic Instagram use.

Methods: The present study comprised an online survey among married individuals living in Tehran ($N=418$). The survey included the 10-item Big Five Inventory (BFI-10), the 15-item Instagram Addiction Scale (IAS-15), and the six-item Short Depression-Happiness Scale (SDHS-6).

Findings: The results indicated that extraversion, agreeableness, conscientiousness, and openness to experience had a significant negative relationship, and neuroticism had a significant positive relationship with problematic Instagram use. Moreover, conscientiousness and openness to experience had a significant positive relationship and neuroticism had a significant negative relationship with happiness. Problematic Instagram use also has a significant negative relationship with happiness. The results also showed that neuroticism, conscientiousness, and openness were significantly associated with happiness and that problematic Instagram use mediated the relationship.

Conclusion: Personality traits may facilitate or prevent problematic Instagram use. Moreover, addiction to social networks such as Instagram can affect the happiness of users and may lead to further psychosocial problems.

Keywords: Personality traits, Happiness, Social networks, Problematic Instagram use

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Introduction

Happiness is a significant component of well-being¹ and is defined as “a state of pleasure and contentment in life.”² It has been asserted that happiness comes with three components. Namely, it (i) is subjective, (ii) actively reflects the positive aspects of life, and (iii) includes an overall measurement of life. Individuals describe happiness differently. Some see happiness in the moment, while others may consider happiness in the span of life to assess how it is formed and subsequently experience feelings of happiness or sadness. Evidence also suggests that happiness may be experienced differently across cultures. For example, one study reported that Western individuals emphasize the person's inner experiences, whereas Chinese individuals emphasize the outer experiences for experiencing happiness.² For this reason, happiness has been given special attention in most

cultures at both individual and societal levels.³

Happiness is associated with desirable life outcomes, including life satisfaction, better social relationships, and less psychological harm.³ The most important studies in the area of happiness have also emphasized positive emotion and life satisfaction as the most important components of happiness.^{4,5} Fundamental factors, including attachment, basic psychological needs, and personality traits, also affect happiness.^{6,7}

Personality can be defined as a dynamic and organized set of traits of an individual that uniquely affects an individual's cognitions, motivations, and behaviors in different situations.^{8,9} Personality traits shape individuals' expectations, values, and attitudes and predict their reactions.¹⁰ McCrae and Costa¹¹ also defined personality as a stable pattern of feelings, thoughts, and behaviors.



In this regard, the 'Big Five' traits (i.e., openness, conscientiousness, extraversion, agreeableness, and neuroticism) are the most common and widely used describing personality.^{12,13} Some studies suggest that, apart from neuroticism, a positive and significant relationship exists between the other four traits and happiness.^{14,15} The study conducted by Garousi Farshi et al¹⁶ reported a positive and significant relationship between three of the traits (i.e., extraversion, conscientiousness, and agreeableness) and happiness and a negative relationship between neuroticism and openness with happiness. Pishva et al⁸ also reported a positive and significant relationship between extraversion and happiness and a significant negative relationship between neuroticism and psychoticism and happiness. As a close study, Sharifi Fard et al¹⁷ reported a negative and significant relationship between problematic Instagram use and psychological well-being (a variable close to happiness).

Due to the growing popularity and increasing use of social network platforms¹⁸, including Instagram,^{19,20} addiction to Instagram as a mediator between personality traits and happiness was examined in the present study. Although addiction to social networks has not been formally recognized as a disorder²¹, it has been viewed as a potentially addictive behavior.^{22,23} In this regard,²⁴ we posited a biopsychosocial framework to identify six core components (i.e., tolerance, withdrawal, conflict, relapse, salience, and mood modification) to describe addictive behaviors in relation to Instagram use. Griffiths²⁴ asserts that any behavior meeting all six components qualifies as addictive. A study by Sharifi Fard et al²⁵ reported a prevalence rate of 21% for problematic Instagram use among Iranian students. Andreassen and Pallesen²⁶ also reviewed various studies, concluding that individuals who are members of social networks spend much time on these networks and that addicted individuals use these networks as a tool to reduce negative emotions (e.g., guilt, anxiety, restlessness, and depression). If people with an addiction do not access social networks, they become stressed, restless, and irritable, and they are unable to reduce the duration of their social network use. Also, the addictive use of social networks interferes with other activities, such as interpersonal relationships and occupational and/or educational tasks.^{27,28}

Statistics show that more than two-thirds of internet users are also active social network site (SNS) users.²⁹ A meta-analytic study also concluded that all Big Five personality dimensions are involved in internet addiction.^{30,31} Other studies have shown that (i) neuroticism, extraversion, and agreeableness are positively associated with social media addiction,^{32,33} (ii) openness to experience, emotional stability, and low level of conscientiousness are positively associated with Facebook addiction,³⁴ and (iii) introversion, low agreeableness, and low conscientiousness are positively associated with Twitter addiction.³⁵

One study has investigated personality traits and problematic Instagram use, revealing a significant negative relationship between agreeableness and conscientiousness with problematic Instagram use.²³ Regarding problematic Instagram use and happiness, a study identified a significant negative relationship between social comparison on social networking platforms (Instagram and LinkedIn) and users' social happiness.³⁶ Other studies have shown that internet addiction^{37,38} and Facebook addiction³⁹ have a significant negative relationship with happiness. Baltaci⁴⁰ showed that addiction to social networks has a significant negative relationship with happiness and a significant positive relationship with feeling lonely.

Given the fundamental role of personality traits and happiness in various psychological and social dimensions of human behavior, it seems necessary to examine these variables. With the increased popularity of social media, particularly Instagram, the present study examined the relationship between the Big Five personality traits and happiness and the mediating role of problematic Instagram use among Iranian adults.

Methods

The present study used an online survey. The participants were all married individuals living in Tehran. A total of 595 individuals were selected from this population using a purposeful and convenience sampling method. The final sample size was 418 individuals (mean age = 27.59 years; SD = 4.47), and all were Instagram users (48 cases were outlier data, and 129 cases did not complete the questionnaire). According to some studies,^{25,34} the highest rate of addiction to social platforms is in the age range of 20 to 50 years; all individuals were married and aged between 20 and 50 years to ensure participant homogeneity. Previous studies^{41,42} have investigated the addiction to social platforms mostly in single individuals (teenagers and young individuals), and the research on problematic Instagram use in married people is very limited. Therefore, only married individuals were investigated in this study. Their education level ranged between high-school diploma (35.7%), bachelor's degree (38%), and master's degree (26.3%).

Instruments

The Big Five Inventory (BFI-10): The 10-item short-form version of the BFI-10^{43,44} was used to assess the Big Five personality traits. Each trait (e.g., "I know myself as a person who gets angry easily" – which trait is this?) is assessed by two items and rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Five items are reverse-scored (one from each dimension). Cronbach's alpha in the present study for each trait was 0.66 for extraversion, 0.71 for neuroticism, 0.68 for agreeableness, 0.70 for conscientiousness, and 0.75 for openness.

Instagram Addiction Scale (IAS-15): The 15-item IAS-

15^{23,25} was used to assess Instagram addiction. This scale comprises two factors (social influence and coercion). Items (e.g., “How much do you try to hide your presence on Instagram from others?”) are rated on a six-point scale from 1 (*never*) to 6 (*always*). Scores range from 15 to 90, with higher scores indicating a greater risk of problematic Instagram use. Cronbach’s alpha for the IAS-15 in the present study was 0.90.

Short Depression-Happiness Scale (SDHS-6): The six-item SDHS-6 was used to assess happiness. The scale is a shorter version of the 25-item Happiness-Depression Scale.^{5,45} Items (e.g., “I have felt that life is enjoyable for me over the past seven days”), and rated on a scale from 0 (*never*) to 3 (*often*). Three items (1, 3, and 6) are reverse-scored. Scores range from 0 to 18; the higher the score, the higher the happiness. A score of 8 or higher indicates greater happiness, while a score below 8 suggests increased feelings of depression. Cronbach’s alpha for happiness in the present study was 0.71.

Procedure and ethical considerations

The participants were recruited using snowball sampling (e.g., social media platforms like Telegram, WhatsApp, especially Instagram). A link to the survey was sent to approximately 50 married participants who used Instagram regularly. They were asked to share the link with other married Instagram users who were willing to participate in the survey. Married Instagram users were chosen so that the sample was homogenous in terms of relationship status. The participants in the study provided electronic informed consent. On the first page of the survey, after opening the link, a short explanation about the purpose of the study was provided. Participants were assured that their data would be treated confidentially, and they were assured of their anonymity. A question at the start of the survey asked participants if they were Instagram users and married. The survey shut down if they answered ‘no’ to either of these. The study was approved by the research team’s university ethics committee.

Statistical analysis

The normality of the variables was checked with skewness and kurtosis statistics, and outlier data was checked using a box plot and Z score (Z scores higher than +3 and lower than -3 were excluded, and there were 48 outlier data in total, which were removed from the analysis). Pearson’s correlation and path analysis were used to test the proposed model. The current study examined how personality traits influence happiness, while considering the mediating role of problematic Instagram use, so path analysis was used to explore both direct and indirect effects of variables.

Results

The sociodemographic information is shown in Table 1. Descriptive indicators (mean and standard deviation) and

Table 1. Sociodemographic information of the sample

Variable	Mean	SD
Age (y)	34.62	4.37
N		Percent
Gender		
Male	89	21.3
Female	329	78.7
Marital status		
Married	418	100
Have a child		
No	157	37.6
Yes	261	62.4
Education Status		
Diploma	149	35.6
Bachelor’s degree	159	38.00
Master’s degree	110	26.3
Income (per month)		
≥ \$1000	14	3.3
\$500–1000	38	9.1
\$200–500	250	59.8
≤ \$200	116	27.8
Occupational status		
Unemployed	19	4.5
Freelance	93	22.2
Employed	94	22.5
Part-time employed	212	50.8

statistics relating to skewness and kurtosis of personality traits, problematic Instagram use, and happiness are shown in Table 2. Table 2 presents the means and standard deviations of the key research variables. The means of personality traits ranged from 5.33 ± 1.91 (out of 10) for neuroticism to 6.73 ± 1.79 (out of 10) for conscientiousness, 31.81 ± 13.62 (out of 90) for problematic Instagram use, and 15.24 ± 2.38 (out of 18) for happiness. The statistical indices of skewness and kurtosis ranged between +1 and -1, indicating that the research variables follow a normal distribution (Table 2). The Pearson correlations between the variables are presented in Table 3.

There were significant negative correlations between problematic Instagram use and (i) extraversion ($r = -0.25$, $P < 0.01$), (ii) agreeableness ($r = -0.24$, $P < 0.01$), (iii) conscientiousness ($r = -0.42$, $P < 0.01$), and (iv) openness ($r = -0.33$, $P < 0.01$). A significant positive correlation existed between problematic Instagram use and neuroticism ($r = 0.56$, $P < 0.01$). There were significant positive correlations between happiness and (i) extraversion ($r = 0.21$, $P < 0.01$), (ii) agreeableness ($r = 0.23$, $P < 0.01$), (iii) conscientiousness ($r = 0.40$, $P < 0.01$), and (iv) openness ($r = 0.44$, $P < 0.01$). A significant negative correlation existed between problematic Instagram use

and neuroticism ($r=-0.41, P<0.01$). Finally, there was a significant negative correlation between problematic Instagram use and happiness ($r=-0.49, P<0.01$) (Table 3). Path analysis explored how problematic Instagram use mediates the relationship between personality traits and happiness. The default model assessed the non-collinearity among the independent variables by examining tolerance indices and the variance inflation factor (VIF). The results revealed that all VIF values were below 3, while tolerance values exceeded 0.3, indicating that multicollinearity was not an issue. The results of the path analysis are presented in Figure 1.

Various criteria were used to fit the model indices. The chi-square ratio to the degree of freedom was 2.14, with values below 3 considered good ($P<0.05$). The goodness of fit indexes (i.e., GFI, CFI, NFI) was above 0.9 which can be considered suitable for all fit indices. Additionally, the root mean square error of approximation (RMSEA) was 0.011, where values below 0.05 indicate a good fit, and values between 0.05 and 0.08 are considered acceptable. Overall, the model fit results presented in Figure 1 demonstrate that the relationship between personality characteristics and happiness, mediated by problematic

Instagram use, shows a good fit. The standard coefficients and significant levels of the variables in the model based on Figure 1 are presented in Table 4.

The results of Table 4 show the direct effects of all paths. The direct effects of extraversion on problematic Instagram use ($\beta=-0.09, P<0.05$), agreeableness on problematic Instagram use ($\beta=-0.08, P<0.05$), conscientiousness on problematic Instagram use ($\beta=-0.24, P<0.01$), and openness on problematic Instagram use ($\beta=-0.28, P<0.01$) were negative and significant. The direct effects of neuroticism on problematic Instagram use ($\beta=0.43, P<0.01$) were positive and significant. The direct effects of neuroticism on happiness ($\beta=-0.16, P<0.01$), conscientiousness on happiness ($\beta=0.19, P<0.01$), and openness on happiness ($\beta=0.15, P<0.01$) were positive and significant. The direct effects of neuroticism on happiness ($\beta=-0.16, P<0.01$) were negative and significant. The effects of extraversion ($\beta=0.03, P>0.05$) and agreeableness ($\beta=0.05, P>0.05$) on happiness were non-significant. The direct effect of problematic Instagram use on happiness ($\beta=-0.37, P<0.01$) was also negative and significant (Table 4). The bootstrap method using the Macro program in SPSS version 22 software was utilized

Table 2. Mean, standard deviation, and normality of personality traits, problematic Instagram use and happiness

Variable	Mean	Standard deviation	Skewness	Kurtosis
Extraversion	6.70	1.66	0.36-	-0.01
Neuroticism	5.33	1.91	0.29	-0.62
Agreeableness	6.15	1.54	-0.25	0.13
Conscientiousness	6.73	1.79	-0.33	-0.18
Openness	6.49	1.93	-0.19	-0.79
Problematic Instagram use	31.81	13.62	-0.95	0.33
Happiness	15.24	2.38	0.14	0.34

Table 3. Correlation matrix of research variables

Variable	1	2	3	4	5	6	7
1 Extraversion	-						
2 Neuroticism	-0.17**	-					
3 Agreeableness	0.01	-0.18**	-				
4 Conscientiousness	0.20**	-0.28**	0.22**	-			
5 Openness	0.23**	-0.22**	0.17**	0.19**	-		
6 Problematic Instagram Use	-0.25**	0.56**	-0.24**	-0.42**	-0.33**	-	
7 Happiness	0.21**	-0.41**	0.23**	0.40**	0.44**	-0.49**	-

* $P<0.05$, ** $P<0.01$.

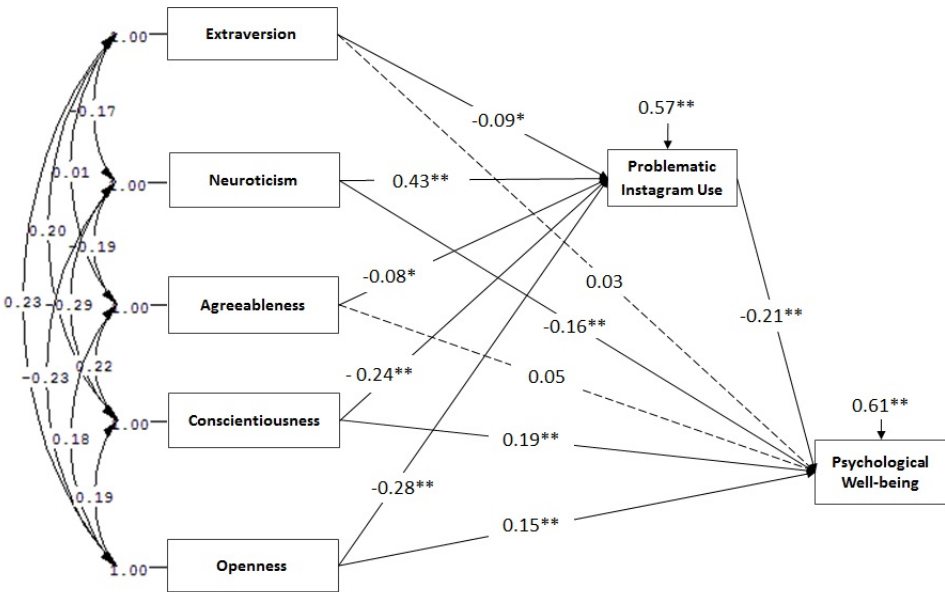


Figure 1. Proposed model with mediation. Note: the dotted line is not significant (* $P<0.05$, ** $P<0.01$)

to investigate the mediating role of Problematic Instagram use in the relationship between personality characteristics and happiness. The results are presented in Table 5.

Table 5 shows the bootstrap results and 95% confidence intervals, and bootstrap re-sampling for 5000 samples is considered. The role of the mediator variable is considered significant if the upper and lower limits of the confidence intervals do not include zero. Based on the results of bootstrapping (95% confidence interval), the indirect impact of neuroticism on happiness via problematic Instagram use ($\beta = -0.09$, $P < 0.01$) with a confidence interval ranging from -0.012 to -0.076 was significant. The indirect effect of conscientiousness on happiness via problematic Instagram use ($\beta = 0.05$, $P < 0.05$) with a substantial confidence interval ranging from 0.001 to 0.052 was significant. Finally, the indirect impact of openness on happiness via problematic Instagram use ($\beta = 0.06$, $P < 0.01$) with a confidence interval ranging from 0.031 to 0.117 was significant. The indirect effects of extraversion and agreeableness on happiness via problematic Instagram use were non-significant (Table 5).

Discussion

The results of the model showed that three of the Big Five personality traits (i.e., neuroticism, conscientiousness, and openness) were significantly associated with happiness. Moreover, that openness was related to happiness with the mediating role of problematic Instagram use. In this

regard, no similar findings have been found in previous studies. The results of direct relationships also showed that four of the Big Five personality traits (i.e., extraversion, agreeableness, conscientiousness, and openness) had a significant negative relationship with problematic Instagram use and that neuroticism had a significant positive relationship. These findings are consistent with the results of studies by others examining the use of Facebook and Twitter.^{34,35} Concerning Instagram use, they are in line with the study by Kircaburun and Griffiths²³ but differ from those conducted by Wang et al³² and Sumaryanti et al³³. This difference may be due to cultural differences. Also, the samples of the two aforementioned studies were college students and high school students, respectively. However, the present study samples were married individuals aged between 30 and 40 years.

Extroverts have a higher tendency than introverts to engage in outdoor and physical activities, such as attending social gatherings, going to parties, and engaging in jobs and work.⁴⁶ Individuals with high agreeableness are better able to adapt to the existing conditions and situations (for example, a student in a situation close to an exam spends less time on Instagram and studies more) and are less prone to addictive behaviors (for example, Internet addiction).^{41,47} Due to their high adaptation to the environment, individuals with high agreeableness adapt to current conditions and requirements or daily tasks instead of spending too much time on Instagram. Similarly, individuals with high conscientiousness avoid spending much time on social network platforms (such as Instagram) because they would rather spend time engaging in what they feel is more effective and useful work.

Regarding agreeableness and conscientiousness, spending a lot of energy and time on Instagram reduces the opportunity and ability to engage in other useful activities, such as satisfying family relationships or academic achievement.^{27,28} It, therefore, conflicts with the traits of agreeableness and conscientiousness.¹¹ Individuals with high openness are more likely to seek new experiences and engage in new feelings and experiences. Moreover, they avoid repetition and stillness and like to keep moving. Therefore, openness is also in contrast with addictive Instagram use. Finally, individuals with high neuroticism have a tendency towards pathological and

Table 4. Standard coefficients and significant levels of relationships between research variables

Variable	Direct effect	<i>p</i>
Extraversion → Problematic Instagram use	-0.09	0.021
Neuroticism → Problematic Instagram use	0.43	0.001
Agreeableness → Problematic Instagram use	-0.08	0.032
Conscientiousness → Problematic Instagram use	-0.24	0.001
Openness → Problematic Instagram use	-0.28	0.001
Extraversion → Happiness	0.03	0.214*
Neuroticism → Happiness	-0.16	0.008
Agreeableness → Happiness	0.05	0.163*
Conscientiousness → Happiness	0.19	0.01
Openness → Happiness	0.15	0.01
Problematic Instagram Use → Happiness	-0.21	0.01

*Not significant.

Table 5. Results of examining the mediating role of problematic Instagram use in the relationship between personality traits and happiness using the Bootstrap method

Direction	Indirect effect	Standard error	95% Confidence interval	
			(Lower limit)	(Upper limit)
The effect of extraversion on happiness	0.02	0.023	-0.098	0.052
The effect of neuroticism on happiness	-0.09**	0.007	-0.012	-0.076
The effect of agreeableness on happiness	0.01	0.011	-0.141	0.021
The effect of conscientiousness on happiness	0.05*	0.026	0.001	0.052
The effect of openness on happiness	0.06**	0.018	0.031	0.117

* $P < 0.05$, ** $P < 0.01$.

self-destructive behaviors. These individuals can easily become attached to a behavior or situation⁴⁸ because repeating a behavior is likely to be a way to reduce their anxiety and stress.⁴⁹ Moreover, their negative thoughts and emotional sensitivities often lead them to avoid the real world because they do not want to experience bad feelings in their interpersonal relationships. Here, being online can create a safe space.

The results also showed that conscientiousness and openness to experience had a significant positive relationship with happiness, whereas neuroticism had a significant negative relationship with it. The results of studies in this area are varied, except for neuroticism, which has consistently shown a negative association with happiness, and extraversion, which has shown a positive association with happiness.^{8,16} The present study's findings (happiness being positively associated with conscientiousness and openness and negatively associated with neuroticism with happiness) are in line with the studies conducted by Ghaderi and Ghaderi¹⁴ and Ziapour et al.¹⁵

Individuals with high conscientiousness traits feel high competencies due to having purposeful and useful lives, avoiding useless work, being effective in professional and social fields, and receiving positive feedback from their environment (e.g., encouragement, social approval, and/or achieving personal goals make them feel good). This increases the feeling of inner satisfaction and consequent happiness directly and situationally, resulting in the formation of positive thoughts (*"I am useful and effective"*). Individuals with high openness constantly experience happiness because they continually discover and enjoy the beauty of nature (e.g., sunrise and sunset). They are always happy to experience new emotional states, and positive emotional experiences occur easily. Consequently, openness is, by nature, very close to the feeling of happiness. Also, their view of life is generally positive,⁴⁸ which can lead to inner satisfaction and happiness. Individuals high in neuroticism tend to have mental health problems and negative thoughts.⁴⁹ Feelings of hostility and anxiety are also among the negative emotions that conflict with the feeling of happiness. Persistent problems in their interpersonal relationships also lead to feelings of loneliness and isolation, which increases depressive mood states, so they experience less happiness.¹¹

In the present study, problematic Instagram use also had a negative and significant relationship with happiness. This finding is consistent with the study conducted by Chae³⁶ on Instagram and with Uysal et al³⁹ and Baltaci⁴⁰ on other social media platforms. Problematic Instagram use can reduce happiness in two ways. First, spending too much time on Instagram reduces the opportunity to spend time with family and friends and can lead to family and interpersonal problems.⁵⁰ Additionally, social

comparisons on Instagram can also reduce happiness.³⁶ Therefore, it may create or increase irrational or excessive expectations and feelings of social deprivation. Second, addiction to social network platforms (in this case, Instagram) reduces the opportunity to engage in personal growth activities, including career and academic advancement.^{27,42} Here, time and energy are transferred from structured and purposeful activities to spending all their time on Instagram. Staying away from important tasks or potential achievements can result in feelings of failure, which in turn can lead to negative emotional states such as regret and sadness or feelings of worthlessness.

Limitations and future research

The present study has several limitations. The sample size was modest and non-representative as it only comprised married participants (predominantly female) from one Iranian city. Therefore, future studies require large sample sizes, should include single individuals, and should be recruited from other cities and with other cohorts (e.g., adolescents). Also, the data were self-reported, and the design was cross-sectional, which caused other limitations. Therefore, future studies should use other methods, such as experiments or longitudinal research designs. Another limitation was the low Cronbach alpha for extraversion and agreeableness. However, given that these traits were assessed using only two items, low scores are common. Based on the findings, addiction to social network platforms such as Instagram could perhaps be prevented by interventions that facilitate and strengthen openness and conscientiousness, as well as treating mental health problems such as anxiety and depression which would help to reduce neuroticism. Problematic Instagram use leads to spending time on this platform. However, in this study, the number of hours spent on Instagram was not investigated, and this can produce different results, so it is suggested that in future studies, the amount of time spent on the Instagram platform should be assessed.

This study showed that problematic Instagram use mediates the relationship between personality traits and happiness. A potential theoretical mechanism is that excessive and addictive use of Instagram or any other social platform is problematic and reduces happiness. In addition, personality traits except neuroticism had a negative relationship with problematic Instagram use and a positive relationship with happiness, which should be considered in behavioral and psychological interventions in the treatment of individuals with problematic Instagram use. In examining strategies to improve happiness, especially in educational programs or interventions aiming at increasing physical and mental health and preventing addiction to social platforms, it is necessary to consider personality traits. The results of the current research model can be helpful for parents, educational institutions, and offices of Government to

regulate the use of social media and prevent physical and mental discomforts caused by addiction to social platforms in the future.

Conclusion

The results of the proposed model in the present study showed that the traits of neuroticism, conscientiousness, and openness were significantly associated with happiness through the mediating role of problematic Instagram use. The results of direct relationships also showed that extraversion, agreeableness, conscientiousness, and openness had a negative and significant association with Problematic Instagram use and that neuroticism had a positive association with it. The results also showed that conscientiousness and openness had a positive association with happiness and that neuroticism had a negative association with it. Problematic Instagram use also has a negative and significant association with happiness. Personality traits may be facilitating or preventive factors for problematic Instagram use. Moreover, addiction to social networks such as Instagram can affect the happiness of users and may lead to further psychosocial problems.

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Competing Interests

The authors declare that they have no conflict of interest.

Data Availability Statement

Data and materials are available at reasonable request.

Ethical Approval

The study was approved by the research team's university ethics committee (Ethical code: IR.BASU.REC.1402.004). Also, Electronic informed consent was provided by all the participants.

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References

- Gentzler AL, Palmer CA, Ford BQ, Moran KM, Mauss IB. Valuing happiness in youth: associations with depressive symptoms and well-being. *J Appl Dev Psychol*. 2019;62:220-30. doi: [10.1016/j.appdev.2019.03.001](https://doi.org/10.1016/j.appdev.2019.03.001).
- Shin HJ, Kim JI. Development and validation of the happiness scale for middle-aged women based on existence, relation, and growth theory. *Asian Nurs Res (Korean Soc Nurs Sci)*. 2021;15(2):96-104. doi: [10.1016/j.anr.2020.12.002](https://doi.org/10.1016/j.anr.2020.12.002).
- Parks AC, Della Porta MD, Pierce RS, Zilca R, Lyubomirsky S. Pursuing happiness in everyday life: the characteristics and behaviors of online happiness seekers. *Emotion*. 2012;12(6):1222-34. doi: [10.1037/a0028587](https://doi.org/10.1037/a0028587).
- Helliwell JF, Layard R, Sachs J, De Neve JE. World Happiness Report 2020. New York: Sustainable Development Solutions Network; 2020. p. 1-203. Available from: https://www.wellbeingintlstudiesrepository.org/hw_happiness.
- Joseph S, Linley PA, Harwood J, Lewis CA, McCollam P. Rapid assessment of well-being: the short depression-happiness scale (SDHS). *Psychol Psychother*. 2004;77(Pt 4):463-78. doi: [10.1348/1476083042555406](https://doi.org/10.1348/1476083042555406).
- Moghadam M, Rezaei F, Ghaderi E, Rostamian N. Relationship between attachment styles and happiness in medical students. *J Family Med Prim Care*. 2016;5(3):593-9. doi: [10.4103/2249-4863.197314](https://doi.org/10.4103/2249-4863.197314).
- Neufeld A, Malin G. Exploring the relationship between medical student basic psychological need satisfaction, resilience, and well-being: a quantitative study. *BMC Med Educ*. 2019;19(1):405. doi: [10.1186/s12909-019-1847-9](https://doi.org/10.1186/s12909-019-1847-9).
- Pishva N, Ghalehban M, Moradi A, Hoseini L. Personality and Happiness. *Procedia Soc Behav Sci*. 2011;30:429-32. doi: [10.1016/j.sbspro.2011.10.084](https://doi.org/10.1016/j.sbspro.2011.10.084).
- Ryckman RM. Theories of Personality. Belmont, CA: Thomson/Wadsworth; 2004. p. 544.
- Butcher JN, Rouse SV. Personality: individual differences and clinical assessment. *Annu Rev Psychol*. 1996;47:87-111. doi: [10.1146/annurev.psych.47.1.87](https://doi.org/10.1146/annurev.psych.47.1.87).
- McCrae RR, Costa PT Jr. Personality in Adulthood: A Five-Factor Theory Perspective. 2nd ed. New York, NY: Guilford Press; 2003.
- Digman JM. Personality structure: emergence of the five-factor model. *Annu Rev Psychol*. 1990;41(1):417-40. doi: [10.1146/annurev.ps.41.020190.002221](https://doi.org/10.1146/annurev.ps.41.020190.002221).
- Goldberg LR. The structure of phenotypic personality traits. *Am Psychol*. 1993;48(1):26-34. doi: [10.1037//0003-066x.48.1.26](https://doi.org/10.1037//0003-066x.48.1.26).
- Ghaderi D, Ghaderi M. Survey the relationship between big five factor, happiness and sport achievement in Iranian athletes. *Ann Biol Res*. 2012;3(1):308-12.
- Ziapour A, Khatony A, Jafari F, Kianipour N. Correlation of personality traits with happiness among university students. *J Clin Diagn Res*. 2018;12(4):26-9. doi: [10.7860/jcdr/2018/31260.1145](https://doi.org/10.7860/jcdr/2018/31260.1145).
- Garousi Farshi M, Mehriar A, Ghazi Tabatabai M. The use of neo personality test and analysis of features and its factor structure among Iranian university students. *J Humanities Res Alzahra*. 2001;11:173-98. [Persian].
- Sharifi Fard SA, Griffiths MD, Mohseni F, Nabi Zadeh S, Ali Babaei G. Basic psychological needs and psychological well-being: the mediating role of Instagram addiction. *J Technol Behav Sci*. 2024;9(2):171-9. doi: [10.1007/s41347-023-00313-6](https://doi.org/10.1007/s41347-023-00313-6).
- Choi TR, Sung Y. Instagram versus Snapchat: self-expression and privacy concern on social media. *Telemat Inform*. 2018;35(8):2289-98. doi: [10.1016/j.tele.2018.09.009](https://doi.org/10.1016/j.tele.2018.09.009).
- Perrin A, Anderson M. Share of US Adults Using Social Media, Including Facebook, is Mostly Unchanged Since 2018. Pew Research Center; 2019.
- Zargar SM. Modeling the effect of Instagram addiction on self-confidence and students' sense of happiness (case: students of Islamic Azad University, Science and Research Branch, 2019). *Commun Res*. 2020;27(101):75-94. doi: [10.22082/](https://doi.org/10.22082/)

- cr.2020.117332.1957. [Persian].
21. Statista. Most Popular Social Networks Worldwide as of January 2023, Ranked by Number of Active Users. 2023. Available from: <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>. Accessed February 14, 2023.
 22. Moqbel M, Kock N. Unveiling the dark side of social networking sites: Personal and work-related consequences of social networking site addiction. *Inf Manag*. 2018;55(1):109-19. doi: [10.1016/j.im.2017.05.001](#).
 23. Kircaburun K, Griffiths MD. Instagram addiction and the Big Five of personality: the mediating role of self-liking. *J Behav Addict*. 2018;7(1):158-70. doi: [10.1556/2006.7.2018.15](#).
 24. Griffiths M. A 'components' model of addiction within a biopsychosocial framework. *J Subst Use*. 2005;10(4):191-7. doi: [10.1080/14659890500114359](#).
 25. Sharifi Fard SA, Griffiths MD, Ali Babaei G, Nabi Zadeh S, Majidi AH. Validation of the Persian version of the Instagram addiction scale among Iranian students. *Journal of Concurrent Disorders*. 2022;4(3):53-70. doi: [10.54127/zawa9276](#).
 26. Andreassen CS, Pallesen S. Social network site addiction - an overview. *Curr Pharm Des*. 2014;20(25):4053-61. doi: [10.2174/13816128113199990616](#).
 27. Ponnusamy S, Iranmanesh M, Foroughi B, Hyun SS. Drivers and outcomes of Instagram addiction: psychological well-being as moderator. *Comput Human Behav*. 2020;107:106294. doi: [10.1016/j.chb.2020.106294](#).
 28. Serenko A, Turel O. Integrating technology addiction and use: an empirical investigation of Facebook users. *AIS Transactions on Replication Research*. 2015;1:2. doi: [10.17705/1attr.00002](#).
 29. Kemp S. Digital in 2017: Global Overview. *We Are Social*; 2017. Available from: <https://wearesocial.com/sg/blog/2017/01/digital-in-2017-global-overview/>. Accessed November 6, 2023.
 30. Kayış AR, Satici SA, Yılmaz MF, Şimşek D, Ceyhan E, Bakioglu F. Big five-personality trait and internet addiction: a meta-analytic review. *Comput Human Behav*. 2016;63:35-40. doi: [10.1016/j.chb.2016.05.012](#).
 31. Zhou Y, Li D, Li X, Wang Y, Zhao L. Big five personality and adolescent internet addiction: the mediating role of coping style. *Addict Behav*. 2017;64:42-8. doi: [10.1016/j.addbeh.2016.08.009](#).
 32. Wang CW, Ho RT, Chan CL, Tse S. Exploring personality characteristics of Chinese adolescents with internet-related addictive behaviors: trait differences for gaming addiction and social networking addiction. *Addict Behav*. 2015;42:32-5. doi: [10.1016/j.addbeh.2014.10.039](#).
 33. Sumaryanti IU, Azizah S, Diantina FP, Nawangsih E. Personality and social media addiction among college students. In: 2nd Social and Humaniora Research Symposium (SoRes 2019). Paris: Atlantis Press; 2020. p. 376-9. doi: [10.2991/assehr.k.200225.079](#).
 34. Błachnio A, Przepiorka A, Senol-Durak E, Durak M, Sherstyuk L. The role of personality traits in Facebook and Internet addictions: a study on Polish, Turkish, and Ukrainian samples. *Comput Human Behav*. 2017;68:269-75. doi: [10.1016/j.chb.2016.11.037](#).
 35. Kircaburun K. Effects of gender and personality differences on Twitter addiction among Turkish undergraduates. *J Educ Pract*. 2016;7(24):33-42.
 36. Chae J. Reexamining the relationship between social media and happiness: the effects of various social media platforms on reconceptualized happiness. *Telemat Inform*. 2018;35(6):1656-64. doi: [10.1016/j.tele.2018.04.011](#).
 37. Rastgar S, Abdollahi MH, Shahgholian M. Internet addiction, social intimacy and happiness in college students. *J Iran Psychol*. 2015;11(42):159-68. [Persian].
 38. Bandani Tarashoki E, Beiranvand R, Mehranfarid S, Ahmadi Majin S, Pelarak F, Madmoli Y, et al. Relationship between internet addiction and feelings of happiness at Dezfoul University of Medical Sciences. *Iran J Nurs Res*. 2017;12(1):23-9. doi: [10.21859/ijnr-12014](#). [Persian].
 39. Uysal R, Satici SA, Akin A. Mediating effect of Facebook addiction on the relationship between subjective vitality and subjective happiness. *Psychol Rep*. 2013;113(3):948-53. doi: [10.2466/02.09.18.PR0.113x32z3](#).
 40. Baltacı Ö. The predictive relationships between the social media addiction and social anxiety, loneliness, and happiness. *International Journal of Progressive Education*. 2019;15(4):73-82.
 41. Andreassen CS, Griffiths MD, Gjertsen SR, Krossbakken E, Kvam S, Pallesen S. The relationships between behavioral addictions and the five-factor model of personality. *J Behav Addict*. 2013;2(2):90-9. doi: [10.1556/jba.2.2013.003](#).
 42. Casale S, Lecchi S, Fioravanti G. The association between psychological well-being and problematic use of Internet communicative services among young people. *J Psychol*. 2015;149(5):480-97. doi: [10.1080/00223980.2014.905432](#).
 43. Rammstedt B, John OP. Measuring personality in one minute or less: a 10-item short version of the Big Five Inventory in English and German. *J Res Pers*. 2007;41(1):203-12. doi: [10.1016/j.jrp.2006.02.001](#).
 44. Mohammad Zadeh A, Najafi M. Validating of the Big Five Inventory (BFI-10): a very brief measure of the five factor personality model. *Quarterly of Educational Measurement*. 2010;1(2):117-30. [Persian].
 45. Sharifi Fard SA, Ghotbi S, Ahmadpanah M, Ali Babaei G, Madani M. Investigation of psychometric properties of the Persian version of the short depression-happiness scale among students. *Culture in Islamic University*. 2023;13(47):185-202. doi: [10.22034/ciu.2023.47.185](#). [Persian].
 46. Mesurado B, Mateo NJ, Valencia M, Richaud MC. Extraversion: nature, development and implications to psychological health and work life. In: Haddock AD, Rutkowski AP, eds. *Psychology of Extraversion*. Hauppauge, NY: Nova; 2014. p. 107-19.
 47. Zeighami R, Hosseini SM, Mohammadi N, Shahsavari S. Predicting addiction susceptibility based on big five personality traits. *Iran J Psychiatry Behav Sci*. 2021;15(4):e109103. doi: [10.5812/ijpbs.109103](#).
 48. McCrae RR. Personality theories for the 21st century. *Teach Psychol*. 2011;38(3):209-14. doi: [10.1177/0098628311411785](#).
 49. Sadock BJ, Sadock VA, Ruiz PO. Kaplan & Sadock's Synopsis of Psychiatry: Behavioral Science/Clinical Psychiatry. 11th ed. Wolters Kluwer Health; 2015. p. 1472. Available from: <https://api.semanticscholar.org/CorpusID:81053253>.
 50. Satici B, Kayis AR, Griffiths MD. Exploring the association between social media addiction and relationship satisfaction: psychological distress as a mediator. *Int J Ment Health Addict*. 2023;21(4):2037-51. doi: [10.1007/s11469-021-00658-0](#).