The relationship between personality and psychological well-being with the mediation of positive affectivity in high school students

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Article Info	Abstract
Article type: *Original Research* **How to cite this article:**	**Objective:** The present study was conducted to investigate the relationship between personality and psychological well-being with the mediation of positive affectivity in high school students. **Methods and Materials:** The research method was descriptive-correlational. Data collection tools included the short form of the NEO five-factor inventory, the Ryff psychological well-being scale (1989) and Watson and Tellegen's Affectivity Scale (1985). The statistical population of the current research was all the male and female students of the first secondary level of the 5th district of Tehran in the academic year 2021-22; according to the Morgan sampling table, 370 students were selected as a statistical sample by random sampling and the questionnaires were distributed among the people. Structural equation model (SEM) was used to analyze the data and it was analyzed by SPSS and AMOS software. **Findings:** The results showed that there is a positive and significant relationship between all dimensions of personality and mental well-being in secondary school students, but there is a negative and significant relationship between emotional distress and mental well-being. Also, positive affect significantly plays a mediating role in these relationships, so that it has a positive and significant relationship with all dimensions except neuroticism, and it has a significant negative relationship with neuroticism. **Conclusion:** Therefore, it is suggested to identify the level of positive emotion and personality of students by conducting standard tests in schools and to improve their psychological well-being. *Keywords: Personality, psychological wellbeing, positive affectivity, high school students.*

1. Introduction

The nature and structure of well-being have been a subject of interest for philosophers and scientists from various scientific fields in the past due to its importance, and recently, it has also received attention from positive psychology, which is the scientific study of optimal human functioning (Ahangar Ghorbani, 2022). The scope of its studies has extended from personal life to social interactions (Bahari & Farkish, 2019).

Positive psychological well-being refers to positive psychological functioning and is recognized as emotional reactions to personal attributes and achievements, effective

interaction with the world, social coherence, and positive progress over time (Agrawal et al., 2020). High levels of psychological well-being are essential for growth, maintaining health, and preventing many psychological disorders. Additionally, psychological well-being not only produces a good feeling but also reduces the likelihood of illness (Balaei et al., 2021). Given the importance of psychological well-being, numerous studies have been conducted to investigate the factors that affect it. For example, Tabik (2016) showed in a study that personality traits can predict psychological well-being. Each personality trait has its special importance, such as those who score low on neuroticism are emotionally stable, calm, and able to cope effectively with stressful situations (Tabik, 2016). Another factor is extraversion, which is based on the inclination for sociability, an interest in being in large groups, activity, daring, sexual arousal, excitement, and optimism. Researchers have increasingly focused on studying personality and its dimensions as an influential factor in psychological well-being of individuals (Covington & Müeller, 2001). The influence of personality traits on behavior and cognition is sometimes direct and sometimes results in behavioral and cognitive outcomes through intermediary factors. In addition, there is an unparalleled relationship between the big five personality factors and dimensions of psychological well-being (Khan, 2020). Studies have shown that extraversion is positively related to positive social and psychological experiences and negatively related to negative emotions and experiences (Hong Sun, 2020).

Emotions are also an essential part of the dynamic system of human personality and among the factors that affect individual behavior and relationships (Aghaziarati et al., 2023; Aghaziarati, Nejatifar, & Ashori, 2021; Chen et al., 2021). Tellegen (2001) divides emotions into two basic dimensions: negative affectivity, meaning to what extent a person enjoys experiencing inner distress, discomfort, disengagement from enjoyable activities, resulting in avoidant mood states such as anger, sadness, disgust, contempt, guilt, fear, and irritability. Individuals with high negative affectivity are more prone to experiencing negative emotions, and they are characterized by excessive and conditional emotional arousal (Overall et al., 2020). The second emotional dimension is positive affectivity, which is a state of active energy, high focus, and enjoyable engagement in work and includes a wide range of positive mood states, such as joy, feeling capable, enthusiasm, interest, and confidence. Positive affectivity leads to positive

effects on the individual's interaction with others and their environment. These emotions help individuals to process emotional information accurately and efficiently to solve problems, plan correctly, and achieve success (Asadi et al., 2020). Given the presented findings, the contradiction of the results obtained, and the research gap in the relationship between personality and psychological well-being, this study aims to determine the relationship between personality and psychological well-being among secondary school students.

2. Methods and Materials

2.1. Study Design and Participants

The research method was descriptive-correlational. The statistical population of the current research was all the male and female students of the first secondary level of the 5th district of Tehran in the academic year 2021-22; according to the Morgan sampling table, 370 students were selected as a statistical sample by random sampling and the questionnaires were distributed among the people. Data collection tools included the short form of the NEO five-factor inventory, the Ryff psychological well-being scale (1989) and Watson and Tellegen's Affectivity Scale (1985).

2.2. Measures

2.2.1. Personality Traits

The NEO Personality Inventory, originally developed by Costa and McCrae (1992), is a revised version of the personality inventory and has led to the development of the NEO Five-Factor Inventory. The revised version of NEO is a self-report personality questionnaire based on a well-known personality model called the Five-Factor Model. The five main personality traits evaluated by this brief version of NEO include: A) Neuroticism: the tendency to experience negative emotions and psychological distress in response to stressful situations. B) Extraversion: sociability, positive affectivity, and general activity level. C) Openness to experience: levels of curiosity, judgement, and caution. D) Agreeableness: friendliness, cooperativeness, and pro-social orientation. E) Conscientiousness: level of self-control in planning and organization. The short form contains 60 items and is used to evaluate the five main personality traits. Respondents rate each of the 60 statements on a 5-point Likert scale ranging from "completely disagree" to "completely agree". The reported alpha coefficients of the scale range from 0.74 to 0.98, with an average of 0.81 (Costa

Jr & McCrae, 1992; Jafari, Najjarzadeh, & Feizabadi, 2017; Rezaifar et al., 2019).

2.2.2. Psychological Well-being

This scale was designed by Ryff (1989). In this study, the 18-item form of the inventory was used. This version consists of six subscales and each subscale has three items. Respondents rate each question on a 6-point Likert scale ranging from "completely disagree" to "completely agree". Questions 3, 4, 5, 10, 13, 16, and 17 are scored in reverse (Ryff & Singer, 2014; Ryff & Singer, 2006). In a study, the results of a confirmatory factor analysis showed that, in the overall sample and in both genders, the six-factor model of this scale (self-acceptance, environmental mastery, positive relations with others, having a purpose in life, personal growth, and autonomy) had a good fit. The internal consistency of this scale, assessed using Cronbach's alpha coefficients, was 0.81. The reliability coefficient for the psychological well-being inventory using the retest method was 0.82, and the subscales of self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth were 0.71, 0.77, 0.78, 0.77, 0.70, and 0.78, respectively (Rahmani, 2020).

2.2.3. Positive Affectivity

The Positive and Negative Affect Scale (PANAS) is a 22-item self-report measure developed to assess two linear dimensions of affect, namely negative affectivity and positive affectivity. Each subscale consists of 11 items that capture positive and negative feelings through specific words. This instrument has been widely used in various studies and has demonstrated good internal consistency reliability and convergent validity. The internal consistency coefficients (alpha) for the positive affectivity subscale and negative affectivity subscale were 0.88 and 0.87, respectively. Test-retest reliability coefficients after an 8-week interval were reported to be 0.68 for the positive affectivity subscale and 0.71 for the negative affectivity subscale. The positive affectivity subscale had a correlation of 0.26 with the Beck Depression Inventory and a correlation of 0.24 with the Manifest Anxiety Scale (Watson, Clark, & Carey, 1988; Watson & Tellegen, 1985).

2.3. Data analysis

Structural equation model (SEM) was used to analyze the data and it was analyzed by SPSS and AMOS software.

3. Findings and Results

The descriptive statistical findings are shown in Table 1.

Table 1

Descriptive statistics findings

Variable	Mean	Standard deviation	Skewness	Kurtosis
positive affectivity	22.19	3.17	0.299	-0.219
Psychological Well-being	51.19	7.12	0.333	0.781
Conscientiousness	31.42	3.44	-0.078	0.229
Openness	32.56	3.91	0.892	-0.104
Extraversion	34.17	3.59	-1.034	0.192
Agreeableness	30.84	3.60	0.904	-0.088
Neuroticism	31.92	4.11	-0.742	0.232

Based on the values in the Table 2, it can be concluded that the data follows a normal distribution, given that the skewness and kurtosis of all research variables are between 2 and -2.

Table 2

The results Pearson's correlation test

Variable	1	2	3	4	5	6	7
1. Neuroticism	1						
2. Extraversion	-0.580[*]	1					
3. Openness	0.449[*]	-0.320[*]	1				

|							
4. Agreeableness	0.656*	-0.324*	0.549*	1			
5. Conscientiousness	-0.676*	0.596*	-0.473*	0.556*	1		
6. Psychological well-being	-0.496*	0.578*	0.445*	0.359*	0.256*	1	
7. Positive affectivity	-0.492*	0.511*	0.460*	0.334*	0.271*	0.399*	1

*p<0.05

According to the results in Table 2, significant relationships were found between personality traits and psychological well-being, as well as between psychological well-being and positive affectivity, in high school students. As observed, there is a significant positive relationship between all personality dimensions with psychological well-being and positive affectivity in high school students at the 99 percent level, whereas there is a significant negative relationship between psychological distress and psychological well-being. Prior to examining the structural equation model, the model assumptions were first tested and confirmed. Additionally, the fit indices of 0.677 PCFI, 0.689 PNFI, 2.91 CMIN/DF, 0.077 RMSEA, 0.920 IFI, 0.921 CFI, and 0.917 GFI from the model fit tests show that the proposed model fits well with the data. Therefore, the proposed model has a good fit with the data. The figure below illustrates the standardized parameter coefficients of the direct effects of variables on each other in the proposed research model. Given the significance of the paths shown in the structural equation model, we can deduce that the indirect effect of the research model is significant, indicating that the mediating variable in the current model has a significant mediating role (p<0.001). Finally, with confidence in the appropriate fit of the model, the total standardized path coefficients, both direct and indirect paths of the structural equations, taking into account the mediating role of positive affectivity, are displayed in the table below.

Table 2 displays the parameters of the direct effects of variables on each other in the proposed research model. As the results shown in Table 3 indicate, all direct paths have significant coefficients. Figure 1 illustrates the standardized coefficients of the proposed research model.

Figure 1

Final model with direct effects
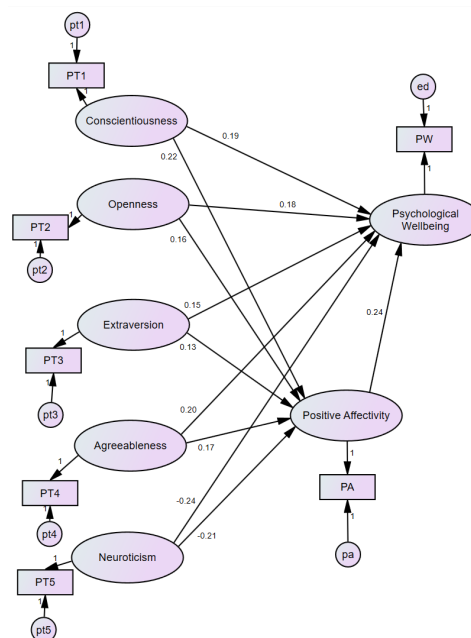
**p<0.01

The Figure 1 illustrates the standardized parameter coefficients of the direct effects of variables on each other in the proposed research model. Given the significance of the paths shown in the structural equation model, we can deduce that the indirect effect of the research model is significant, indicating that the mediating variable in the current model

has a significant mediating role (p<0.001). Finally, with confidence in the appropriate fit of the model, the total standardized path coefficients, both direct and indirect paths

of the structural equations, taking into account the mediating role of positive affectivity, are displayed in the Table 3.

Table 3

Descriptive statistics and Pearson's correlation coefficients

From	To	Mediator	Direct effect	Indirect effect	Total effect
Conscientiousness	Psychological well-being	positive affectivity	*0.19*	0.05	0.24
Openness	Psychological well-being	positive affectivity	*0.18*	0.04	0.22
Extraversion	Psychological well-being	positive affectivity	*0.15*	0.03	0.18
Agreeableness	Psychological well-being	positive affectivity	*0.20*	0.04	0.24
Neuroticism	Psychological well-being	positive affectivity	*-0.21*	-0.05	-0.26
positive affectivity	Psychological well-being	-	*0.24*	-	-
Conscientiousness	positive affectivity	-	*0.22*	-	-
Openness	positive affectivity	-	*0.16*	-	-
Extraversion	positive affectivity	-	*0.13*	-	-
Agreeableness	positive affectivity	-	*0.17*	-	-
Neuroticism	positive affectivity	-	*-0.24*	-	-

As the results shown in Table 3 indicate, the lower limit of the confidence interval for alexithymia as a mediator variable between approach motives and sexual intimacy is 0.0917, and the upper limit is 0.3917. The lower limit of the confidence interval for alexithymia as a mediator variable between self-compassion and sexual intimacy is 0.0392, and the upper limit is 0.1396. The lower limit of the confidence interval for alexithymia as a mediator variable between mindfulness and sexual intimacy is 0.1264, and the upper limit is 0.4188. The confidence level for these confidence intervals is 95, and the interval of bootstrap resamples is 5000. Since zero is not outside the confidence intervals, the indirect relationship between the variables is significant. These results indicate that the effects of approach motives, self-compassion, and mindfulness on sexual intimacy are significant through the mediating variable of alexithymia.

4. Discussion and Conclusion

The aim of this research is to investigate the relationship between personality and psychological well-being in high school students. The results showed a positive and significant relationship between all dimensions of personality and psychological well-being in high school students, but there was a negative and significant relationship between psychological distress and psychological well-being. Additionally, positive emotions played a significant mediating role in these relationships, such that they had a positive and significant relationship with all dimensions of personality except for neuroticism, and a

negative and significant relationship with neuroticism. These findings are consistent with the findings of some other studies (Abid et al., 2015; Chalmeh, 2014; Gupta & Parimal, 2020; Khalatbari et al., 2019; Khan, 2020; Kokko, Tolvanen, & Pulkkinen, 2013; Mohammadi Farahmand, 2021; Rahimi et al., 2012; Sheikh Bahaei, 2021; Tabik, 2016).

In explaining these research findings, it should be noted that students with extroverted personality traits such as interest in teamwork, collectivism, optimism, expressiveness, activity, and high energy can benefit from each other's abilities, solve their problems and issues, and experience less psychological pressure when facing challenges. Consequently, they have higher levels of psychological well-being. Additionally, the high expressiveness of these students provides them with a platform for success in oral exams and classroom activities, which can ultimately lead to success and progress in their learning, which in turn can act as a powerful motivational factor for increasing psychological well-being (Aghaziarati, Nejatifar, & Ashori, 2021). Extraversion is positively associated with positive emotions and experiences, which can contribute to optimism, positive outlook, and overall psychological well-being in students. Regarding the inverse relationship between psychological distress and psychological well-being, it should be noted that psychological distress, which is associated with anxiety, depression, and other psychological and physical dysfunctions, activates negative emotions and prevents positive emotions, which play a fundamental role in the

process of well-being, from replacing negative emotions. Additionally, positive and negative emotions are among the predictors of life satisfaction (Parsakia, Rostami, & Saadati, 2023). When individuals judge their level of life satisfaction, they often pay attention to their negative and positive emotions, which indicate the dominance of their positive emotions over negative emotions (Overall et al., 2020).

Positive affectivity indicates one's enthusiasm for life and their level of agency and alertness. "High positive affectivity" is associated with high energy, complete focus, and enjoyable engagement, while "high negative affectivity" is associated with sadness and difficulty in concentration. Positive and negative affectivity are the principal dimensions of emotional states. It seems that individuals who experience high positive affectivity should also experience less negative affectivity, and those who experience high negative affectivity have less positive affectivity (Chen et al., 2021). Studies show that positive affectivity can neutralize negative emotions and their detrimental effects. However, there is considerable evidence indicating that positive and negative affectivity are not related and are two sides of the same coin. The reason being that the generator of positive affectivity is pleasant events and experiences, while negative affectivity arises from unpleasant events. When defining emotions, other topics such as emotional differentiation, feeling, and mood are also discussed (Horn et al., 2019).

5. Suggestions and Limitations

One limitation of the study was the statistical population which only included the high school students of Tehran; So, the results cannot be generalized. Therefore, it is recommended to identify the positive affect and personality of students and promote their psychological well-being by conducting standardized tests in schools. Additionally, this study showed that the psychopathological trait is negatively correlated with psychological well-being. Therefore, it is suggested that adolescents, parents, and educational and training instructors are provided with the necessary awareness and training in workshops and educational classes about reducing anxiety, stress, and depression and useful coping strategies.

Acknowledgments

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics principles

In this study, ethical considerations such as obtaining full consent from all participants, maintaining confidentiality and secrecy of information, and allowing participants to withdraw from study.

Authors' Contributions

All authors contributed equally.

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