

The Relationship Between the Big Five Personality Traits and Mental Health

العلاقة بين السمات الخمس الكبرى للشخصية والصحة النفسية

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Abstract: The study aimed to reveal the relationship between the Big Five Personality Traits and mental health. The sample of the study consisted of (528) students of the A'Sharqiyah University in Oman. The researchers adopted the correlational descriptive methodology. The results indicated that the level of mental health was at a high level with a mean (105.20) and a percentage (71%) and that the agreeableness trait is the most common among the study sample with a mean of (8.19), followed by the openness trait with a mean (7.61), then the alertness of consciousness trait with a mean (7.49). Neuroticism and extraversion were the lowest, with a mean of (6.05 and 5.98), respectively. The results also indicated a positive correlation between the level of mental health and personality traits: (agreeableness ($r = 0.42$), alertness of consciousness ($r = 0.58$), extroversion ($r = 0.17$), and openness ($r = 0.05$), and a negative relationship with the trait of neuroticism ($r = -0.43$). The multiple regression analysis results indicated that personality traits explained approximately (46%) of the mental health variance.

Keywords: Personality; Big Five Personality Traits; Mental Health; Universities Students.

ملخص: هدفت الدراسة إلى الكشف عن العلاقة بين السمات الخمس الكبرى للشخصية والصحة النفسية. باستخدام المنهج الوصفي الارتباطي، وتكونت عينة الدراسة من (528) طالباً وطالبة من جامعة الشرقية في سلطنة عُمان. أشارت النتائج إلى أن مستوى الصحة النفسية لدى عينة الدراسة كان في المستوى المرتفع بمتوسط حسابي (105.20) ونسبة مئوية (71%)، وأن سمة المقبولية هي الأكثر شيوعاً بين أفراد عينة الدراسة بمتوسط (8.19)، تليها سمة الانفتاح على الخبرة بمتوسط حسابي (7.61)، ثم سمة يقظة الضمير بمتوسط حسابي (7.49). وكانت سمي العصابية والانبساطية هما الأقل شيوعاً بمتوسط حسابي (6.05، 5.98) على التوالي. كما أشارت النتائج إلى وجود ارتباط إيجابي بين مستوى الصحة النفسية وسمات الشخصية: المقبولية ($r = 0.42$)، يقظة الضمير ($r = 0.58$)، الانبساطية ($r = 0.17$)، والانفتاح على الخبرة ($r = 0.05$)، وعلاقة ارتباطية سلبية مع سمة العصابية ($r = -0.43$)، كما أن السمات الشخصية ساهمت في تفسير ما يقارب (46%) من التباين في الصحة النفسية.

كلمات مفتاحية: الشخصية: السمات الخمس الكبرى للشخصية: الصحة النفسية: طلاب الجامعات.

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1- Introduction

As with any psychological trait, individuals vary in their personal traits due to many factors, which leads to their disparity in interacting with the stimuli around them, every individual has personal characteristics which make it unique. As a result, the psychologist tried to study the individual's characteristics to interpret human behaviors and interact with the variables. Also, they are trying to predict their responses with other variables. The psychologists have started their journey by defining the concept of personality. Allport (1961) described personality as a construct that influences human behaviors and activities and is a significant determinant of thoughts. Another definition of personality has been defined by Ryckman (2008). A personality is a set of characteristics possessed by an individual. They are well organized and dynamic, influencing a person's motivation, cognition, and behaviors in different situations. Individual differences affect personality, and it shapes a unique pattern about how a person will think and feel and how he will act and interact (Eysenck, 2013). According to Atkinson et al. (1996), personality recognizes individual interaction and responses with physical and social variables.

Although personality is one of the most controversial and comprehensive concepts, a consensus has been built by psychologists and researchers on basic dimensions of personality. A hierarchical system has been suggested about personality characteristics and how they could be categorized, which assumes five major and common personality factors. These factors are known as the Big Five. The acronym OCEAN refers to the Big Five factors: openness to experiences, Conscientiousness, Extroversion, agreeableness, and Neuroticism (Costa & McCrae, 1985; Digman, 1990; McCrae & John, 1992).

There are many systems about personality factors, and the Big Five did not replace the previous systems. So, the concept of personality is very comprehensive and challenging to be constricted and limited. All the definitions and interpretations of the personality's concept only attempt to understand human nature from a very particular domain. Over the last decade, the Big Five model has grown to become an effective structure in understanding a person's behavior and personality traits (John & Srivastava, 1999).

Openness: Openness is related to universalism ideologies, including fostering peace and tolerance and recognizing all people as equally worthy of justice and equality (Douglas et al., 2016). Openness to experience leads to one's chances of having a leadership role, possibly due to the willingness to consider new ideas and think outside the box (Lebowitz, 2016). Attributes openness

to experience to broad intellectual skills and expertise, and it can increase as we grow older. This means that openness to experience contributes to gains in skills and abilities, and as an individual grows older and has more experiences to learn from, it naturally increases (Schretlen et al., 2010). And openness is not only being related to knowledge and capabilities. It has also been found to positively associate with innovation, originality, and a desire to explore their inner self (Soldz & Vaillant, 1999).

Conscientiousness: This trait relates to a series of variables, including success, conformism, and the pursuit of security. Moreover, it is also negatively related to putting a premium on inspiration and enthusiasm. Those who excel in conscientiousness possess an appreciation for order, a sense of duty, achievement, and self-discipline. The same people are also in the habit of consciously practicing deliberation and thrive to increase their expertise (Roccas et al., 2008). Long-term research discovered that conscientiousness is positively associated with tolerance to life challenges and mature protective reactions, implying that those high in conscientiousness are also highly equipped to handle any difficulties that may encounter them on their way (Soldz & Vaillant, 1999). Depression, smoking, drug misuse, and participation in psychiatric care are negatively associated with conscientiousness. On the other hand, it tends to relate to Compatibility positively (Ones, et al., 1996).

Extroversion: Extroverted participants appreciate achievement and motivation. Furthermore, they show a tendency to shun tradition or conform to traditional norms. This proves further that extroverts are by nature active, highly sociable, assertive, and neglecting timidity in hopes of reaching optimal stages of excitement and ecstasy According to (Roccas et al., 2008). Higher levels of extroversion are positively associated with higher financial gains, conservative behaviors regarding politics, premature tuning to life challenges, and social affairs (Soldz & Vaillant, 1999). Extroversion is an outstanding indicator of the actual working mechanism and overall well-being. Moreover, on the positive affections, over-optimism in performing various tasks (Ozer & Benet, 2006; Schimmack et al., 2004; Verduyn & Brans, 2012). Highly extroverted individuals are highly sociable and can manage to expand their social circle expediently. They relish the social interactions and tend to neglect other people's needs (Ones, et al., 1996).

Agreeableness: Getting along with others is the crucial premise of the agreeableness factor, in the sense that it acts as a guide in human interactions. Therefore, individuals with high agreeableness are socially active and possess very close friends, and are engaged in successful family

relations. All these traits are very amusing if it was not for the side effects on their practitioners. Meaning, agreeable people tend to put other people before themselves, resulting in them missing out on life-changing chances in self-development, learning, and career success (Ozer & Benet, 2006). Supports this by showing that individuals high in agreeableness possessing well-managed family and friends' relations by the modulation of gratefulness and compassion. Moreover, he states that agreeable people have their desired occupations, and they live prolonged lives with relationship satisfaction and community service. agreeable people have a great sense of appreciation towards kindness, custom, and conformity (Roccas et al., 2008).

Neuroticism: This factor deals with one's emotional being and temper stability. High neuroticism people often experience severe mood swings, feelings of anxiety, fear, and frustration. Neuroticism is negatively related to an individual's self-image, belief in their abilities and competencies, and sense of self-control (Judge et al., 2002). Neuroticism has also been associated with lower work performance and lower productivity, including goal-setting motivation and self-efficacy. It is certainly no wonder that one's finest work is not supported by uncertainty and susceptibility to stress and anxiety. Therefore, it is safe to assume that neuroticism's fear and self-consciousness are positively associated with more conventional values and are negatively aligned with accomplishment values (Judge & Ilies, 2002) Generally speaking, high neurotic tendencies are attributed to additional life challenges, namely addiction, low work efficiency, and inappropriate adaptation to life changes (Judge & Ilies, 2002; Judge et al., 2002)

Obviously, the individual's personality is very complex, and it is affected by surrounding factors. One of the effects is mental health. Based on everyone's personality characteristics, there is a kind of relation between personality and mental health. Mental health, defined by the World Health Organization (WHO, 2018), is "a state of well-being in which the individual realizes his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can make a contribution to his or her community. So, mental health consists of our social well-being, emotions, and psychological. It affects how we think, act, and feel. It also gives people the ability to determine how they could handle stress, make a choice, and relate to others.

Many previous studies have indicated personality is innately linked with positive personal attributes and mental health. Where personality is found in constant solid relation with positive personal attributes alongside, human strength in the form of their mental health, their satisfaction about life, and forgiveness (Diener & Lucas, 1999; Schimmack et al., 2004; Walker, et al., 2002). The

results of other studies showed a positive connection that optimism possesses with extraversion and agreeableness, moreover, it found a stronger link with neuroticism than the other two (Ones, et al., 1996). And a solid indicator of the positive correlation between openness to experience and its components' positive and negative attributes. Furthermore, extraversion and neuroticism personality traits were found to be solidly correlated with personal mental health (Penly & Tomaka, 2002).

2- Methods

Participants

The study was conducted on (528) male and female students of A'Sharqiyah University in the Sultanate of Oman, of whom (176) were males by (33%), and (252) females by (67%), whose ages range between (18-25) years, their collective mean age was 20.87 years, with different educational levels and specializations.

Measures

A Brief Version of the Big Five Personality Inventory

A Brief Version of the Big Five Personality Inventory, (BFI-10) prepared by (Rammstedt & John, 2007). The scale consists of (10) items quintet Likert scale (1 strongly disagree, 5 strongly agree), and it measures five personality traits, which are: Agreeableness, Conscientiousness, Openness, Extraversion, Neuroticism, with two items per trait, one is positive, and the other is reverse - scored. The score on each trait ranges between (2-10). After translating it into Arabic, the list was presented to a group of arbitrators to verify the translation's accuracy. Its suitability for the Omani environment, the reliability stability (Test-Retest) of the inventory was verified by Pearson correlation coefficients between the two applications on an Initial sample consisting of (89) students, the values of the reliability coefficients ranged between (0.71-0.81), and the correlation coefficients were calculated between scores on the items and scores on the trait, and Pearson correlation coefficients ranged between (0.73-0.89). All were statistically significant at the level of significance (0.01), and confirmatory factor analysis of the scale was also performed, and the results were as follows: NFI = 0.84, CFI = 0.93, GFI = 0.94, AGFI = 0.90, RMSEA = 0.056, and SRMR = 0.014. Thus, the Inventory has good psychometric properties.

The mental health scale

Mental health scale prepared by (Alsoudi, et al., 2021), The scale consists of (30) items on the quintet Likert scale (1 strongly disagree, 5 strongly agree), the scale has four domains of mental health:

Social: (6 items) This domain measures the individual's ability to build relationships with others, form human relationships with trust, respect, and harmony. It also measures positive contributions to in social events and activities. Here are items of the social domain:

- a) I can easily make friendships.
- b) I behave confidently in social events.
- c) I feel others are watching me and talking about me.

Psychological: (11 items) This domain measures the extent to which the individual is free from illnesses and mental disorders. It measures self-acceptance and self-value as well. The domain can also find out the capabilities that make one capable of giving and facing difficulties. Here are some items of the psychological domain.

- a) I feel depressed.
- b) I have claustrophobia.
- c) I am nervous for no reason.

Physical: (7 items) This domain measures the individual's enjoyment of physical safety and freedom of diseases and physical disorders. Here are some items of the physical domain.

- a) I have constant headache.
- b) I am losing my appetite.
- c) I suffer from tiredness and fatigue.

Academic: (6 items) This domain measures the individual's ability to adapt to the educational environment, the academic achievement, and the maintenance of good relations with teachers. Here are some items of the academic domain:

- a) I can do my assignments independently.
- b) I have some memory inconveniences.
- c) I can hardly concentrate on my lessons.

The total score on the scale ranges between (30-150). The scale was presented to a group of referees to verify the clarity of its items, and their relevance to the dimensions to which they belong, as a set of modifications were made in light of the opinions of the arbitrators, the internal validity

was also verified through Pearson's correlation coefficients between items and dimensions on the one hand, and ranged between (0.41-0.81), and items and the overall score on the scale on the other hand, and ranged between (0.39-0.72) and all correlation coefficients were significant at the level of significance (0.01), and the reliability of the scale dimensions was verified using the Cronbach Alpha method and ranged between (0.72-0.82) and an overall reliability coefficient (0.89). As well as the reliability stability (Test-Retest) and the stability coefficients for the dimensions ranged between (0.79-0.81) and with a total coefficient of (0.90), indicating that the scale has good psychometric properties.

3- Results

The mean and standard deviations were calculated for the students' responses to the two study measures, and the results were as shown in Table (1).

It is evident from Table (1) that the level of mental health was high among the study Participants with a mean (105.20) and a percentage of (71%), while the agreeableness trait was the most common with a mean of (8.19), followed by the trait of openness with a mean of (7.61), then the conscientiousness trait with a mean of (7.49), Neuroticism and Extraversion were the lowest, with mean (6.05 and 5.98), respectively. It was also clear that the values of skewness and Kurtosis were all low and approaching zero.

Table 1. The mean and standard deviations on the two study measures

Variables	Mean	SD	Skewness	Kurtosis
Mental health	105.20	17.85	-0.22	-0.17
Agreeableness	8.19	1.39	-0.47	0.45
Conscientiousness	7.49	1.54	-0.28	-0.17
Openness	7.61	1.57	-0.25	-0.53
Extraversion	5.98	1.28	0.05	0.33
Neuroticism	6.05	1.79	-0.02	-0.16

Correlation coefficients were calculated (Pearson) between scores on the mental health scale, and the Big Five Personality Inventory, as shown in Table (2).

Table 2. Pearson correlation coefficients between mental health and the big five personality traits

Variables	1	2	3	4	5	6
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1. Mental health	1	0.42**	0.58**	0.05	0.17**	-0.43**
2. Agreeableness		1	0.40**	0.14**	0.06	-0.25**
3. Conscientiousness			1	0.12*	0.10*	-0.35**
4. Openness				1	0.04	-0.15**
5. Extraversion					1	-0.13**
6. Neuroticism						1

Notes: * $p < .05$, ** $p < .01$

It is evident from Table (2) that there is a positive and statistically significant correlation at a level of significance (0.01) between mental health and personality traits: Agreeableness ($r = 0.42$), conscientiousness ($r = 0.58$), Extraversion ($r = 0.17$), and a negative and statistically significant relationship with the trait of Neuroticism ($r = -0.43$), and a positive and non-statistically considerable association with the trait of openness ($r = 0.05$), and concerning the correlations between personality traits, they were associated with positive relationships except for the neuroticism trait. It was associated with negative correlation coefficients and a statistically significant function with all traits, and the correlation was not significant between agreeableness and openness with the trait of extroversion. And Hierarchical Regression Analyses were used to predict the mental health through personality traits, as the most important conditions of this analysis were first verified, which are: The normal distribution of the standard residuals, as the value of the significance level of the Kolmogorov-Smirnov test reached (0.18). Therefore, the residues follow the normal distribution. Table (3) illustrates the results of the hierarchical regression analysis.

Table 3. Predictive role of big five personality traits on mental health

Vs	Model 1				Model 2				Model 3				Model 4				Model 5			
	B	SE	β	t	B	SE	β	t	B	SE	β	t	B	SE	β	t	B	SE	β	t
C	13.5	0.8	0.58	16.37**	11.41	0.84	0.49	13.60**	9.74	0.87	0.42	11.22**	9.80	0.85	0.42	11.52**	9.70	0.85	0.42	11.48**
					-5.15	0.72	-0.26	-7.12**	-4.66	0.71	-0.23	-6.57**	-4.99	0.70	-0.25	-7.14**	-4.76	0.70	-0.24	-6.85**
A									5.22	0.93	0.20	5.61**	5.63	0.92	0.22	6.13**	5.61	0.91	0.22	6.16**
O													3.55	0.75	0.16	4.75**	3.61	0.74	0.16	4.87**
E																	2.82	0.90	0.10	3.13**
R			0.58				0.63				0.66				0.67				0.68	
R ²			0.338				0.396				0.430				0.454				0.464	
Adj R ²			0.336				0.394				0.427				0.449				0.459	
SE			14.54				13.9				13.52				13.25				13.14	
F			268.02				172.03				131.80				108.55				90.27	
Sig			0.00				0.00				0.00				0.00				0.00	

Notes: ** $p < .01$. C: Conscientiousness, N: Neuroticism, A: Agreeableness, O: Openness, E: Extraversion.

It is noted from Table (3) that all the models had a statistical significance in predicting mental health, as the level of significance was equal to (0.00) for the five models, and all the values of the squared multiple correlation adjusted coefficient (Adj R²) in all models were greater than (0.26), as this value indicates that the Effect Size is high according to (Cohen, 1992). Where the size of the effect is considered small if it is between (0.02-0.12), medium if it is between (0.13-0.25), and high if it is greater than (0.26), it is noticed that the first model indicates that the conscientiousness explains approximately (34%) of the variance in mental health, and (F (1,527) = 268.02, P <0.01), and in the second model (F (2,527) = 172.03) (P <0.01) the neuroticism variable was inserted and the explained variance ratio became (39%), Where the percentage change in the squared multiple correlation adjusted coefficient amounted to (5%) ($\Delta R^2 = 0.05$), and in the third model (F (3, 527) = 131.80, P <0.01) when adding the agreeableness variable, the explained variance ratio became approximately (43%) That is, the rate of change reached (5%) and ($\Delta R^2 = 0.05$) as well, and when adding the variable of openness in the fourth model (F (4, 527) = 108.55, P <0.01), the value of the explained variance became (45%), meaning that the percentage of change was (2%) ($\Delta R^2 = 0.02$), and finally in the fifth model. (F (5, 527) = 90.27, P <0.01), the explained variance increased to (46%) with a change of (1%), meaning that ($\Delta R^2 = 0.01$). Therefore, all personality variables are statistically significant for predicting mental health, and it is evident from the last step (the fifth model) that the Conscientiousness ($\beta = 0.42$, P <0.01), agreeableness ($\beta = 0.22$, P <0.01), and extroversion ($\beta = 0.10$, P <0.01) and openness ($\beta = 0.16$, P <0.01) positively predict mental health, while neuroticism ($\beta = -0.24$, P <0.01) negatively predicts mental health.

4- Discussion

The study aimed to reveal the relationship between the big five personality traits and mental health in a sample of students from the A'Sharqiyah University in the Sultanate of Oman, the results of the study indicated that the level of mental health was high among students, with a mean (105.20) and a percentage (71%). As the personality of the student at this age stage and the positive and negative behaviors it contains are a product of the socialization process, so this result may be attributed to the methods of sound family upbringing, psychological harmony with the family, and positive interaction with members of society (Hegazy, 2004). In addition to the aspects of development being completed by the university student, which enables him to strive towards independence, and becomes he can form relationships saturated with trust and respect and becomes qualified to exploit his energies and capabilities, which generates a sense of satisfaction and self-

fulfillment. This enables him to strive towards independence, and he can form relationships saturated with trust and respect and becomes qualified to exploit his energies and capabilities, which generates a sense of satisfaction and self-esteem.

Mental health is that an individual is psychologically, socially, and emotionally compatible with himself and his environment, and he can meet the requirements of life (Zahran, 2005). This result was consistent with the personality traits most common among the study sample, as the agreeableness trait was the most common with a mean of 8.19. This trait includes the ability of individuals to form good relationships with their families and with society, in addition to having a high degree of psychological and social compatibility (Ozer & Benet, 2006). And that these individuals have a desire to comply with customs and traditions (Roccas et al., 2008). In addition to having a strong social morality. They commit to social responsibilities (Soldz & Vaillant, 1999).

With regard to the relationship between personality traits and mental health, the results indicated a positive correlation between mental health and personality traits: acceptability ($r = 0.42$), Conscientiousness ($r = 0.58$), extroversion ($r = 0.17$), and openness ($r = 0.05$). This result is logical, as individuals who enjoy good mental health possess a set of indicators, the most important of which are: The ability to socialize and build relationships with others, a sense of competence and self-confidence, emotional maturity and the ability to self-control, the ability to use energies and capabilities in a manner that does not conflict with the interests of others, respect for the rights and feelings of others, adherence to moral values, and self-acceptance (Al-Quraiti & Al-Shahas, 1992). Accordingly, individuals who have these traits possess many of these indicators. For example, individuals with the agreeableness trait are characterized by self-efficacy and self-confidence, taking into account others' feelings and sympathizing with them (Bruck & Allen, 2003).

Likewise, those with the attribute of conscientiousness are distinguished by the ability to control and self-control, and to act according to the dictates of their consciences and moral values, in addition to the ability to assume responsibility (Barrick & Mount, 1991; Salgado, 1997). As for individuals in the trait of extraversion, their tendency distinguishes them to social participation and concern for others, and they are active, energetic, optimistic people with positive feelings (Penly & Tomaka, 2002). Their openness distinguishes individuals to experience the characteristics by their broad imagination, curiosity, respecting others' opinions, and the enjoyment of emotional feelings, in addition to their academic achievement (Farsides & Woodfield, 2003). On the other hand, there was a negative and statistically significant relationship with the Neuroticism trait ($r = -0.43$), and this

result is also logical, as individuals in this trait are characterized by negative behavioral emotions such as anxiety, depression, aggression, and anger (Zhang, 2006). They are also characterized by emotional instability, low self-confidence, and a feeling of inability to help others (Bruck & Allen, 2003). And we also find that the neurotic trait was negatively associated with all other psychological traits.

Finally, the regression analysis results indicated that the fifth model, which contains all personal traits, contributed to explaining approximately (46%) of the variance in mental health, which reinforces the difference in individuals' mental health level with different personal characteristics.

5- Conclusion

The current study concluded that there is a positive correlation between mental health and personality traits: agreeableness, Conscientiousness, extroversion, and openness. On the other hand, there was a negative correlation with the neurotic trait, as the level of mental health is low in individuals who are characterized by neuroticism, compared to other personality traits.

The current study recommends designing counselling and training programs for university students to get rid of the neurotic trait, with the aim of preserving their mental health.

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