

Humor and self-esteem as mediators of the relationship between personality and life satisfaction among students of the Faculty of Arts / Benghazi



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Abstract

Personality traits are among the strongest predictors of individual behavior, particularly extroversion and neuroticism. The current study examined two constructs that potentially mediate the relationship between personality factors (extroversion, neuroticism) and life satisfaction: humor styles and self-esteem. Path analysis was used to validate the proposed mediation model by testing the hypothesis that humor styles would mediate the relationship between personality factors and life satisfaction through self-esteem.

The model was tested on a sample of 234 male and female students from the University of Benghazi. The study data were analyzed by AMOS software using the bootstrap method. The results showed the presence of

statistically significant direct effects at a statistical significance level of 0.01 for the factors of extroversion and neuroticism individually on life satisfaction, as well as on humor styles and self-esteem. The study results also showed the presence of statistically significant direct effects at a statistical significance level of 0.01 for all mediating variables (humor styles and self-esteem) individually on life satisfaction. The study results also revealed the presence of total mediating effects of humor styles on the relationship between personality factors and life satisfaction through self-esteem, as the direct effect of the path of the extroversion factor on life satisfaction in the presence of mediating variables; Its value reached " $B_1 = 0.05$ " which is not statistically significant at a statistical significance

level of 0.05. The value of the indirect effect of the extroversion factor in the presence of the mediating variables reached " $B_{1.1} = 0.27$ ", which is statistically significant at a statistical significance level of 0.01 and below.

The results also showed that the direct effect of the neuroticism factor on life satisfaction, in the presence of mediating variables, reached a value of " $B_2 = -0.08$ " which is not statistically significant at a significance level of 0.05. The indirect effect of neuroticism, in the presence of mediating variables, reached a value of " $B_{2.1} = -0.26$ ", which is statistically significant at a significance level of 0.01 or less. The results also showed that approximately 55% of the total variance in the life satisfaction variable is attributed to the mediation model.

Keywords: Personality, humor styles, self-esteem, life satisfaction

* Introduction

The primary purpose of psychology, as an applied field, is to promote our mental health. One of the key components of mental health is life satisfaction, and physical health is also linked to life satisfaction. Life satisfaction is a cognitive evaluation of life; it encompasses all areas of an

individual's life. In this context, research on subjective well-being (SWB) has sought to understand the cognitive-emotional influences on an individual's evaluation of positive life experiences. Subjective well-being is a holistic personal evaluation—involving an individual's view of all aspects of their life—and is evidenced by relatively high levels of positive affect and life satisfaction, and relatively low levels of negative affect (Diener, 2000). Although important in their own right, positive and negative affect are not the focus of current research, as life satisfaction has been found to independently predict several important life outcomes, such as high achievement motivation, happiness, increased levels of ambition, reduced stress, and reduced psychological distress (Halama, 2010; Herero & Extremera, 2010).

Life satisfaction is a vital topic in psychology in general, and positive psychology in particular. It has attracted the attention of researchers in recent years, as it is an important indicator of an individual's psychological balance, mental and physical health, and is linked to the quality of life they experience. It is also the basic cognitive structure of subjective well-being.

On the other hand, life satisfaction represents an individual's answer to the question "What is a good life?" It is, in essence, ".....an overall evaluation of the quality of one's life according to one's own self-selected criteria" (Diener, 1984, p. 543). This evaluation is based on a long-term perspective based on the conscious perception of desirable elements in one's life, as well as the perception of the absence of undesirable elements. This evaluation is influenced by the individual's assessment of the difference between what is and their ideas of what ought to be (Pavot and Diener, 1993). High levels of life satisfaction are typically achieved when the individual believes the answers to these two questions are close, or when there is a perception that what is is greater than what ought to be!

A review of previous literature—such as Lahamuddin (2013), Qudsyi (2015), and Hermawati (2023)—observes that life satisfaction is influenced by many factors, including those related to the individual, such as personality traits, age, gender, socioeconomic status, and education, as well as cultural factors, such as socialization styles and parental treatment. Among the most influential factors in life

satisfaction is personality traits. Personality trait theory assumes that people naturally deal with different situations and interact with their environment in different ways. Information about an individual's personality can provide valuable insights into how best to communicate with the individual and the types of jobs and tasks that are most suitable for them. However, personality traits may also be key indicators of other aspects of an individual's life, including life satisfaction (Ali, 2017).

The results of a longitudinal study conducted by Headey (2007) showed that extroversion and neuroticism, among personality factors, are the strongest predictors of subjective well-being, including life satisfaction. The results of this study supported Diener's (1996) hypotheses that individuals who espouse more extroverted traits may experience more positive life events and social support, which in turn predicts higher subjective well-being, including overall life satisfaction. Conversely, neuroticism may predispose an individual to fewer coping strategies and more negative life experiences, which negatively predict subjective well-being.

Other studies have found that extroversion and neuroticism are

particularly strong predictors of components of subjective well-being. For example, De Neve and Cooper (1998) found evidence that neuroticism was the strongest predictor of life satisfaction, with high scores on neuroticism being associated with low life satisfaction and low happiness scores. Keys, Shmotkin, and Ryff (2002) also noted that high extroversion and low neuroticism scores increase the likelihood of endorsing optimal well-being. Schimmack, Oishi, Furr, and Funder (2004) also found a strong, positive effect of extroversion on life satisfaction and a strong, negative effect of neuroticism on life satisfaction. Malvaso and Kang (2022) found a negative effect of neuroticism on life satisfaction. While the results did not reveal an effect of extroversion on life satisfaction, the results of Pandey's (2024) study supported the hypothesis that extroversion has a positive effect on life satisfaction and that neuroticism has a negative effect on life satisfaction.

Despite evidence of strong relationships between extroversion, neuroticism, and life satisfaction outcomes in numerous studies, the specific mechanisms contributing to these associations and the other variables that may influence this

relationship are not well understood. The current study aims to examine the relationship between the personality factors extroversion and neuroticism and life satisfaction, through the mediating variables of humor styles and self-esteem. In this regard, several personality theorists—such as Freud (1928), Maslow (1954), and Jordan Allport (1961)—have found that certain types of humor promote psychological well-being, while others diminish it. Martin, Puhlik-Doris, Larsen, Gray, and Weir (2003) considered these ideas; they hypothesized that the absence of some potentially harmful uses of humor may be important for psychological well-being, which is reflected in an individual's psychological health. These researchers also suggested that individuals display certain patterns in the ways they use humor, and that these patterns can be divided and conceptualized as four distinct humor styles: self-enhancing humor, affiliative humor, self-defeating humor, and aggressive humor.

The four humor styles developed by Martin et al. (2003) consist of two positive or adaptive styles: affiliative and self-enhancing; and two negative or maladaptive styles: self-defeating and aggressive.

Adaptive styles are more likely to promote psychological and social well-being, whereas maladaptive styles may lead to more negative psychological and social consequences. Previous studies, such as Wang (2023) and Mendiburo, Páez, and Martínez (2015) have shown very high correlations between the two personality factors, extroversion and neuroticism, and humor styles. Extroversion was positively correlated with self-enhancing and affiliative humor styles, while negatively correlated with self-defeating and aggressive humor styles. The neuroticism factor in personality was found to have the opposite effect; it was negatively correlated with self-enhancing and affiliative humor styles, while positively correlated with self-defeating and aggressive humor styles. Adaptive humor styles (affiliative and self-enhancing) were positively correlated with life satisfaction, while maladaptive humor styles (self-defeating and aggressive) were negatively correlated with life satisfaction.

Other factors are also expected to influence the relationship between personality traits and life satisfaction, including self-esteem, which relates to the positive or negative attitude an individual takes toward themselves.

It is an evaluation process conducted by the individual regarding their self-worth (Orth, Robins, and Widaman, 2012). Most definitions indicate that self-esteem is a positive or negative personal view of oneself; that is, it is an adaptive personal strength that provides resilience against real or perceived threats (Greenberg et al., 1992).

Self-esteem has been linked in numerous studies to the variables involved or relevant to the current study. Meta-studies investigating how self-esteem predicts life satisfaction have shown that self-esteem is a strong predictor of life satisfaction (Teke, 2020 & Kurnaz). High self-esteem scores are expected to predict high life satisfaction.

The results of the studies also provided evidence of strong negative relationships between self-esteem and the personality factor of neuroticism, and strong positive relationships between self-esteem and extroversion. The results of the study by Robins, Tracy, Trzesniewski, Potter & Gosling (2001) showed that there are direct and positive effects of the extroversion factor path on self-esteem, and that there are strong and negative effects of the neuroticism factor path on self-esteem. In this context, the results of the study by Varanarasamma, Gurmit Singh &

Nalla Muthu (2018) and the results of the study by Lopez, Santiago & Castro (2024) also showed that the magnitude of the effects of the Big Five personality factors on self-esteem was very strong, as the researchers found positive effects of the extroversion factor path on self-esteem as well as negative effects of the neuroticism factor path on self-esteem. The consistency of the results of such studies shows us how important personality traits are in predicting self-esteem.

As for the relationship between humor styles and self-esteem, Kuiper and Martin (1993) observed strong positive correlations between self-esteem and both self-enhancing humor and synergistic humor, and strong negative correlations between self-esteem and both self-defeating humor and aggressive humor (Muhammad, 2019).

Based on the above, it is expected that self-esteem and humor styles will have an impact on the relationship between personality factors (extroversion and neuroticism) and life satisfaction. The results of Averitt's (2019) study showed a partial mediation effect of humor styles on the relationship between personality traits and life satisfaction through self-esteem, while the results of Marcionetti's

(2019) study revealed a complete mediation effect of self-esteem on the relationship between personality traits and life satisfaction.

Humor styles, self-esteem, and life satisfaction are strongly influenced by cultural factors within societies. Previous studies have shown that Easterners and Westerners differ in their perception of humor (e.g., Chen & Martin, 2005, 2007). These cultural differences, along with their customs, traditions, and socialization styles, directly influence the perception and use of humor. In Western culture, humor has become an indispensable coping strategy. It serves as a defense mechanism to help people combat negative events. On the one hand, humor acts as a cathartic for negative energy. Humor allows people to perceive the anger and fear caused by ambivalence in different ways, making them more adaptable to stressful life situations. However, research has found that humor is not as important a coping tool in Japan and China as it is in the United States (Abe, 1994).

This raises the possibility that the study variables will interact with each other in different ways, depending on the cultural context in which they are tested. Therefore, the current study aims to identify the

total, partial, direct, and indirect mediation effects of humor styles on the relationship between personality traits and life satisfaction through self-esteem. This general assumption will be tested in Libyan culture, which, although similar to other Arab societies, has its own cultural specificities, including parental upbringing methods, customs, and traditions that classify it among closed societies that encourage obedience and compliance with authority and encourage dependence on others.

* The problem of the current study

The problem of the study is defined in the following question: -

How do the specific personality factors of extroversion and neuroticism as "external" variables predict life satisfaction as a "standard" variable through the "mediating" variables of self-esteem and humor styles: self-enhancing humor, affiliative humor, and self-defeating humor?

To answer this question, a mediation model was proposed in the current study (see Figure 1). It was hypothesized that extroversion and neuroticism would predict the likelihood of using specific humor styles, and that humor styles, in turn, would predict self-esteem, which would positively predict life

satisfaction. To elaborate further, it was hypothesized that individuals higher in extroversion would use more self-enhancing and affiliative humor and less self-defeating humor, while individuals higher in neuroticism would use more self-defeating humor and less self-enhancing and affiliative humor. Humor styles would then predict self-esteem, with adaptive humor styles being associated with higher self-esteem and self-defeating humor being associated with lower self-esteem. It was then hypothesized that high self-esteem would positively predict life satisfaction. In this model, humor styles served as the proximal mediator and self-esteem as the distal mediator between personality and life satisfaction.

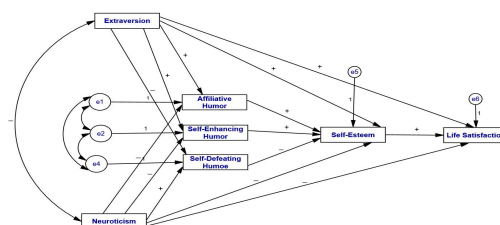


Figure 1: Proposed mediation model: humor styles and self-esteem in the relationship between personality traits and life satisfaction.

* Purpose of the current study

The importance of the current study stems from the scarcity of such studies in the context of Arab culture. The results of this study support and enhance studies related to personality components, humor styles, self-

esteem, and life satisfaction. Understanding how humor styles and self-esteem influence the relationship between personality and life satisfaction contributes to a deeper understanding of how these components influence each other and how this influence can be intentionally regulated to bring about positive change in individuals' lives.

Self-enhancing, affiliative, and self-defeating humor are of particular interest after examining their influence within the mediation model presented in the current study. This will inform future research that sheds light on these intriguing relationships. The practical importance of the current study lies in the fact that the centrality of humor to the human experience makes psychological research on humor naturally applicable to practical interventions and collective action for positive social change. The positive effects of humor on well-being are numerous, and recent research has focused on how to harness these positive effects therapeutically.

*** Study Hypotheses**

1- Hypothesis $H_{0.1}$: There is no statistically significant direct effect at a significance level of 0.01 of personality traits (individualism) on life satisfaction as the dependent variable, and self-esteem and humor

styles as mediating variables among the study sample.

2- Hypothesis $H_{0.2}$: There is no statistically significant direct effect at a significance level of 0.01 of mediating variables (self-esteem and humor styles: synergistic, self-enhancing, and self-defeating) on life satisfaction as the dependent variable among the study sample.

3- Hypothesis $H_{0.3}$: There are no statistically significant effects at a significance level of 0.01 of mediating variables (humor styles and self-esteem) on the relationship between extroversion and neuroticism as predictors (external) and depressive symptoms as a mediating variable.

*** Methods and materials**

Study Sample: Based on the study methodology and the characteristics of the study population, which comprised a gender split, the sample was selected using a stratified proportional random sampling method. The sample represented 9% of the study population, with a total sample size of 234 male and female students, with males representing 15% and females representing 85% of the study sample. Accordingly, the number of male students was 35, while the number of female students was 200.

* Measurements

1- The Big Five (Neuroticism and Extroversion) Scale: This is a self-report instrument developed by John, Donahue, and Kentle (1991). It consists of 44 personality traits divided into five factors. The main factors of interest in the current study are neuroticism and extroversion, each with eight personality traits. These traits were assigned a five-point Likert scale; five points were assigned for strongly agree, four points for agree, three points for somewhat agree, two points for disagree, and one point for strongly disagree. The highest score a respondent can obtain on each factor is 40, and the lowest is 8. This scale has been found to have very satisfactory reliability and validity in previous studies.

In the current study, the researcher extracted the apparent validity of the extroversion and neuroticism factors by calculating the validity associated with the synchronic criterion. Pearson's correlation coefficient was calculated between the neuroticism and extroversion factors and the Big Five (synchronic criterion) scale developed by Costa and McCrae (1992). The correlation coefficient between the two scales for the extroversion factor was 0.68, while

for the neuroticism factor, the correlation coefficient value was 0.75 from a sample of 40 subjects, randomly selected from the main study sample.

As for reliability, the researcher calculated the Cronbach's coefficient for each factor separately. The Cronbach's coefficient for the neuroticism factor was 0.75, while the Cronbach's coefficient for the extroversion factor was 0.76. The researcher also calculated reliability by extracting the stability coefficient by re-applying the scale with a two-week time interval. The correlation coefficient between the two applications for the neuroticism factor was 0.70, while for the extroversion factor, the correlation coefficient value was 0.74. Thus, it is clear to us that this scale has very appropriate degrees of validity and reliability.

2- The Humor Styles Scale: It is a self-report instrument (questionnaire), prepared by Martin and colleagues (2003) (Martin, Puhlik-Doris, Larsen, Gray, & Weir). It consists of 32 items distributed over four styles (patterns) of humor, namely synergistic humor, self-enhancing humor, aggressive humor, and self-defeating humor, with 8 items for each style. It is measured on a seven-point scale starting with:

completely disagree = 1, somewhat disagree = 2, slightly disagree = 3, neither agree nor disagree = 4, slightly agree = 5, strongly agree = 6, completely agree = 7. It is clear from previous literature that the scale has very suitable degrees of validity and reliability, while in the current study the researcher did not obtain another scale that measures humor styles. Therefore, the researcher was satisfied with calculating reliability based on the famous saying in measurement that “reliability is an indicator of validity.” Accordingly, the scale was extracted. The Cronbach's alpha coefficient for each humor style was as follows: synergistic humor was 0.69, self-enhancing humor was 0.76, aggressive humor was 0.67, and self-defeating humor was 0.73. The stability coefficient was also extracted by re-administering the scale two weeks apart. The correlation coefficients between the two applications were as follows: synergistic = 0.76, self-enhancing = 0.65, aggressive = 0.68, and self-defeating = 0.71.

3- Self-esteem scale: This scale was developed by Rosenberg (1989). It is a self-report instrument consisting of 10 items distributed on a four-point Likert scale, starting with strongly agree = 4, agree = 3, disagree = 2, and

strongly disagree = 1. The highest score a subject can obtain is 40, and the lowest score is 10. This scale has excellent psychometric properties and is widely used in previous literature. The researcher extracted face validity from the concurrent validity type by calculating the correlation coefficient between it and the Morris scale (2000) on a sample of 40. The correlation coefficient value was 0.81. As for reliability, the researcher calculated the Cronbach's alpha coefficient, which reached 0.77. The researcher also extracted the stability coefficient by calculating the correlation coefficient between the first and second applications, with a two-week interval. The correlation coefficient value was 0.83.

4- Life Satisfaction Scale:

Developed by Diener, Emmons, Larsen, and Griffin (1985), it is a self-assessment tool consisting of five items that measure life satisfaction as a comprehensive and holistic evaluation of an individual's life, distributed on a seven-point Likert scale, with strongly disagree = 1, disagree = 0, and strongly agree = 0. Agree = 2, Slightly disagree = 3, Neutral = 4, Slightly agree = 5, Agree = 6, Strongly agree = 7. This scale has very high degrees of validity and reliability. The researcher extracted the reliability by calculating the

Cronbach's alpha coefficient, and its value reached "0.81".

5- Statistical analyses: Mediation analyses were conducted to test the hypothesis that humor style variables (synergistic humor, self-enhancing humor, aggressive humor, self-defeating humor) and self-esteem mediate the relationship between personality traits (extroversion, neuroticism) and life satisfaction. Simple correlations were examined between the predictor variables (extroversion, neuroticism), the mediator variables (humor styles, self-esteem), and the criterion variable (life satisfaction), see Table (1). The basic condition for the existence of mediation is that all correlations between the predictor and the mediator, the mediator and the criterion, and the predictor and the criterion are statistically significant (Baron & Kenny, 1986). Mediation analyses were conducted only for the two personality traits (extroversion and neuroticism) and the corresponding mediators that met this condition. To test the potential mediating effects of humor styles and self-esteem, the bootstrap sampling procedure developed by Preacher and Hayes (2008) was used. This procedure examines the direct effect of the predictor variable on the criterion variable and the indirect

(i.e., mediator) effect through the path of the mediator variable. The bootstrap procedure uses sampling with replacement to draw a large number of samples, up to 1,000 in the current study. The data set and path coefficients are calculated for each sample. Using estimates based on 1,000 samples, the average of the direct and indirect effects, as well as confidence intervals, are also calculated. These confidence intervals are used to determine whether the effect is statistically significant. For each effect, the bias correction coefficient was examined for each 95% or 99% confidence interval. If the range did not exceed zero, the data set and path coefficients were calculated.

The effect is considered statistically significant at the 0.05 or 0.01 level, respectively. The advantage of bootstrap sampling is that it does not require a normal distribution of variable

Results: Before testing the study hypotheses statistically, the researcher calculated the correlation matrix to ensure the existence of interrelationships between the variables, and also extracted descriptive statistical methods. Table (1) illustrates this.

Table (1) shows that there are reciprocal relationships between

personality traits, life satisfaction, self-esteem, and humor styles, and all correlation coefficients are statistically significant at a statistical significance level of "0.01"; except for the aggressive humor style, where the correlation coefficient between it and the extroversion factor was not statistically significant at a statistical significance level of "0.05". Therefore, it was excluded from the mediation model.

The first hypothesis: H_0 : There is no direct statistically significant effect at a statistical significance level of "0.01" for personality traits - uniqueness - on life satisfaction as a dependent variable, and self-esteem and humor styles as mediating variables in the study sample. For this purpose, standard regression weights and estimation error were extracted. Table (2) shows this.

Table (1) Correlation matrix, means, standard error, skewness and kurtosis coefficient

Variables	1	2	3	4	5	6	7	8	SE	SK	KU
Extroversion 1	1							23.44	0.32	0.08	-0.69
Neuroticism 2	-0.41**	1						24.69	0.36	0.06	-0.54
Affiliative Humor 3	0.57**	-0.38**	1					37.85	0.60	-0.23	-0.57
Enhanced humor 4	0.53**	-0.51**	0.66**	1				36.35	0.66	-0.26	-0.49
Aggressive Humor 5	-0.06	0.18**	-0.07	-0.18**	1			25.72	0.58	0.20	-0.50
Defeating humor 6	-0.36**	0.37**	-0.44**	-0.46**	-0.30**	1		22.25	0.69	0.91	0.05
Self-esteem 7	0.50**	-0.55**	0.56**	0.61**	-0.18**	-0.47**	1	28.42	0.33	-0.42	0.04
Life satisfaction 8	0.46**	-0.48**	0.43**	0.50**	-0.20**	-0.31**	0.74**	25.27	0.51	-0.37	-0.73

Table (2) shows the presence of direct effects of the two personality factors (extroversion, neuroticism) individually, as independent variables on the dependent variable (life satisfaction) and on the mediating variables, which are self-

esteem and humor styles (affiliative, self-enhancing, and self-defeating), where all the standard regression weights for the paths from personality traits to life satisfaction, humor styles, and self-esteem were statistically significant at a statistical significance level of "0.01".

The second hypothesis: H_0 : There is no direct statistically significant effect at the statistical significance level of "0.01" for the mediating variables represented by self-esteem and humor styles: synergistic, self-enhancing, self-defeating - unique - on life satisfaction, as a dependent variable in the study sample. For this purpose, the standard regression weights and estimation error were extracted. Table (3) shows this

Table (2) Direct effects of personality traits on the mediating variables and the dependent variable

Independent variable	path	Dependent variable	Direct impact	(S.E)	(C.R)	P	Comments
			Estimate (B)				
Extroversion	→	Life satisfaction	0.46	0.09	7.81	***	reject the null hypothesis (H_0)
Extroversion	→	Self-Esteem	0.56	0.05	10.35	***	reject the null hypothesis (H_0)
Extroversion	→	Affiliative humor	0.57	0.10	10.59	***	reject the null hypothesis (H_0)
Extroversion	→	Enhancing humor	0.53	0.11	9.62	***	reject the null hypothesis (H_0)
Extroversion	→	Defeating humor	0.36	0.13	5.92	***	reject the null hypothesis (H_0)
Neuroticism	→	Life satisfaction	0.48	0.08	8.27	***	reject the null hypothesis (H_0)
Neuroticism	→	Self-Esteem	0.56	0.05	10.33	***	reject the null hypothesis (H_0)
Neuroticism	→	Affiliative humor	0.38	0.10	6.25	***	reject the null hypothesis (H_0)
Neuroticism	→	Enhancing humor	0.50	0.10	8.93	***	reject the null hypothesis (H_0)
Neuroticism	→	Defeating humor	0.37	0.12	6.11	***	reject the null hypothesis (H_0)

The second hypothesis: H_0 : There is no direct statistically significant effect at the statistical significance level of "0.01" for the mediating variables represented by self-esteem and humor styles: synergistic, self-enhancing, self-defeating - unique - on life satisfaction, as a dependent variable in the study sample. For this

purpose, the standard regression weights and estimation error were extracted. Table (3) shows this

Table (3) Direct effects of mediating variables on the dependent variable

Mediator variable	Path	Dependent variable	Direct impact Estimate (B)	(S.E)	(C.R)	P	Comments
Self-esteem	→	Life satisfaction	0.74	0.07	16.66	***	reject the null hypothesis (H ₀)
Affiliative humor	→	Life satisfaction	0.42	0.05	7.16	***	reject the null hypothesis (H ₀)
Enhancing humor	→	Life satisfaction	0.50	0.04	8.74	***	reject the null hypothesis (H ₀)
Defeating humor	→	Life satisfaction	0.31 -	0.05	5.04 -	***	reject the null hypothesis (H ₀)

Table (3) shows the presence of direct effects of the mediation variables, namely self-esteem and humor styles, on the dependent variable (life satisfaction), as all standard regression weights for the paths of the mediation variables are unique to self-esteem - statistically significant at a statistical significance level of "0.01".

The Third hypothesis H₀: There are no statistically significant effects at the statistical significance level of "0.01" for the mediating variables, namely humor styles and self-esteem, on the relationship between the two personality factors, extroversion and neuroticism as predictor (external) variables, and life satisfaction as a standard variable.

In the mediation model: which assumes that humor styles are the closest mediator of the two personality traits, and the alternative model when the self-esteem variable is the closest mediator of the two personality factors.

The model included two exogenous variables (extroversion and neuroticism) and five endogenous variables (affiliative humor style, self-enhancing humor style, self-defeating humor style, self-esteem, and life satisfaction). To ensure the condition of normal distribution, the skewness and kurtosis coefficients were extracted for the study variables (see Table 1); the skewness coefficients ranged between -0.42 and 0.91, while the kurtosis coefficients ranged between -0.73 and 0.05, respectively. These average values of the skewness and kurtosis coefficients meet the condition of normal distribution of the study data, as described by Weston and Gore (2006).

The statistical analysis also showed that the model did not fit (match) well and completely with the study data; as χ^2 (6, N = 234) = 0.89.36 which is statistically significant at the statistical significance level of "0.01". The value of GFI = 0.900; the value of RMSEA = 0.24; while the value of CFI = 0.887. Although all these indicators are good fit indicators for the model; the value of Chi-square was significant at the statistical significance level of "0.001". However, we can accept the quality of the proposed model; however, the

researcher preferred to use modification indicators; to modify the mediation model, as the variances between the error terms between the humor styles were added.

The modified mediation model provided very good fit indices to the data; the value of χ^2 (6, N = 234) = 2.78 which is not significant at the statistical significance level of "0.05". The value of GFI = 0.998; the value of RMSEA = 0.000; while the value of CFI = 1.00. With a confidence interval of CI = 90%

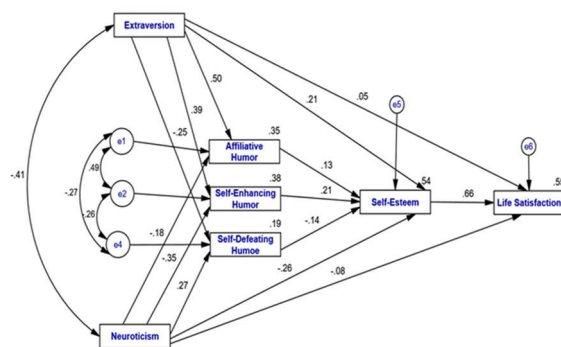


Figure (2) Mediation of humor styles in the relationship between personality traits and life satisfaction through self-esteem

Independent variable	Person at Mediator or	Distal Mediator or	Dependent variable	β Standardized Direct Indirect Effect	B Mean Direct Indirect Effect	SE	90%CI Lower Upper
Ext →		AdH		0.50**	0.921	0.11	(0.742, 1.099)
Ext →		EnH		0.39**	0.807	0.11	(0.614, 0.988)
Ext →		S-Def		-0.25**	-0.534	0.14	(-0.763, -0.321)
Ext →		S		0.21**	0.511	0.09	(0.342, 0.680)
Ext →		AdH		0.05	0.078	0.03	(0.019, 0.137)
Neur →		AdH		-0.18**	-0.203	0.07	(-0.353, -0.053)
Neur →		EnH		-0.35**	-0.634	0.10	(-0.842, -0.427)
Neur →		S-Def		0.29**	0.512	0.12	(0.274, 0.750)
Neur →		S		-0.26**	-0.251	0.06	(-0.371, -0.131)
Neur →		AdH		-0.08	-0.122	0.08	(-0.284, 0.041)
Self-Esteem →		AdH		0.13*	0.175	0.07	(0.033, 0.317)
Self-Esteem →		EnH		0.21**	0.104	0.04	(0.024, 0.184)
Self-Esteem →		S-Def		-0.14**	-0.071	0.03	(-0.121, -0.021)
Self-Esteem →		S		0.06*	0.091	0.04	(0.009, 0.173)
Ext →	AdH		EnH	(0.39)(0.13) = 0.005**	0.009	0.00	(0.002, 0.017)
Ext →	Self-Esteem		EnH	(0.30)(0.21) = 0.002**	0.041	0.00	(0.007, 0.077)
Ext →	S-Def		EnH	(-0.25)(0.14) = 0.001**	0.038	0.01	(-0.003, -0.092)
Ext →	Self-Esteem		S	(0.21)(0.09) = 0.001**	0.036	0.00	(0.004, 0.342)
Ext →	AdH		S	(0.05)(0.11) = 0.024**	-0.022	0.01	(-0.049, 0.005)
Neur →	Self-Esteem		EnH	(-0.35)(0.14) = 0.001**	-0.066	0.00	(-0.084, -0.046)
Neur →	S-Def		EnH	(0.29)(0.08) = 0.001**	-0.280	0.00	(-0.271, -0.289)
Neur →	Self-Esteem		S	(-0.26)(0.06) = 0.001**	0.034	0.00	(-0.007, 0.080)
Neur →	AdH		S	(-0.08)(0.06) = 0.132**	0.103	0.00	(-0.018, 0.103)
Self-Esteem →	Self-Esteem		EnH	(0.13)(0.06) = 0.023**	-0.070	0.00	(-0.100, -0.040)
Self-Esteem →	S-Def		EnH	(0.21)(0.06) = 0.001**	0.008	0.00	(0.003, 0.161)
Self-Esteem →	Self-Esteem		S	(-0.14)(0.06) = 0.054**	0.083	0.00	(0.023, 0.143)
Self-Esteem →	AdH		S	(0.06)(0.14) = 0.023**	0.038	0.00	(0.007, 0.069)
Ext →	AdH	EnH	EnH	(0.39)(0.13) = 0.001**	-0.021	0.00	(-0.062, -0.019)
Ext →	Self-Esteem		EnH	(0.30)(0.21) = 0.001**	-0.065	0.00	(-0.084, -0.046)
Ext →	S-Def		EnH	(-0.25)(0.14) = 0.001**	-0.026	0.00	(-0.081, -0.024)
Ext →	Self-Esteem		S	(0.21)(0.09) = 0.001**	-0.026	0.00	(-0.081, -0.024)

a These values based on unstandardized regression coefficients. CI = Confidence Interval. * p < .05. ** p < .01. *** p < .001. Ext = Extraversion; Neur = Neuroticism; Affil = Affiliative Humor; S-Enh = Self-Enhancing Humor; S-Def = Self-Defeating Humor; RSE = Rosenberg Self-Esteem; SWLS = Satisfaction with Life Scale

Table (4) and Figure (4) of the model show that the path of the direct effect of the extroversion factor on life satisfaction in the presence of mediating variables (humor styles and self-esteem) reached a regression weight value of "B₁=0.05", which is not statistically significant at a significance level of "0.05" or less. When compared to the regression weight value for the path of the direct effect of the extroversion factor on life satisfaction without mediation

effects, it reached "0.46" (see Table 2). Whereas it was significant at a statistical significance level of "0.01". The lack of statistical significance of this path in the presence of mediation variables indicates that the type of mediation is total mediation. This is supported by the results in Table (4), as the value of "zero" fell between the values of the highest and lowest estimate according to the Snowbell test. Total mediation means that the mediation variables play a major role in explaining the relationship between extroversion and life satisfaction.

The results also showed that the path of the direct effect of neuroticism on life satisfaction in the presence of mediating variables (humor styles and self-esteem) reached a regression weight value of " $B_2 = -0.08$ ", which is not statistically significant at a significance level of "0.05" or less. When compared to the regression weight value for the path of the direct effect of neuroticism on life satisfaction without mediating effects, it reached "-0.48" (see Table 2). It was significant at a statistical significance level of "0.01". The lack of statistical significance of this path in the presence of mediating variables indicates that the type of mediation is total mediation. This is supported by the results in Table (4), as the value

of "zero" fell between the highest and lowest values according to the Snowbell test. Total mediation means that the mediating variables play a major role in explaining the relationship between neuroticism and life satisfaction.

As for the general assumption that states: that humor styles mediate the relationship between extroversion, neuroticism, and life satisfaction through self-esteem; it has become clear from Table (4) and Figure (2) that all humor styles mediated the relationship between extroversion and life satisfaction through self-esteem; The greatest mediation effect was the self-enhancing humor style, where the mediation effect value was " $\beta = 0.043$ ", which is located between the lower and upper estimates : (90% CI = 0.023 / 0.160). This was followed by the mediation effect of the affiliative humor style, where the mediation effect value was " $\beta = 0.043$ ", which is located between the lower and upper estimates: (90% CI = 0.013 / 0.141). Then the mediation effect of the self-defeating humor, where the mediation effect value was " $\beta = 0.023$ ", which is located between the upper and lower estimates: (90% CI = 0.078 / 0.091).

It was also found that all humor styles mediated the relationship

between neuroticism and life satisfaction through self-esteem. The self-enhancing humor style was the most influential humor style, with a value of " $\beta=0.048$ ", which was located between the lower and upper estimates: (90% CI = -0.04 / -0.01). Then came the self-defeating humor style, with an effect value of " $\beta = 0.025$ ", which was located between the lower and upper estimates: (90% CI = -0.03 / -0.02). Then came the effect of the affiliative humor style, with a mediation effect value of " $\beta = 0.015$ ", which was located between the lower and upper estimates: (90% CI = -0.04 / -0.02).

Through these paths, this means that extroversion positively predicted both self-enhancing and affiliative humor, which in turn positively predicted self-esteem, which in turn positively predicted life satisfaction. Extroversion negatively predicted self-defeating humor, which in turn negatively predicted self-esteem, which in turn positively predicted life satisfaction. Neuroticism negatively predicted self-enhancing and affiliative humor, which in turn positively predicted self-esteem, which in turn positively predicted life satisfaction. Neuroticism positively predicted self-defeating humor, which in turn negatively predicted self-esteem,

which in turn positively predicted life satisfaction.

The results of this hypothesis also showed that the value of the indirect effect of the extroversion factor on life satisfaction in the presence of the mediating variables - combined - reached "0.27", meaning that about "27%" of the variance of life satisfaction is attributed to the mediating variables. While the value of the indirect effect of the neuroticism factor on life satisfaction in the presence of the mediating variables reached "0.26", which means that about "26%" of the variance of life satisfaction can be explained by the change in the mediating variables combined. While the value of the total effect of the effect of extroversion on life satisfaction in the presence of the mediating variables reached "0.314", while the value of the total effect of the effect of neuroticism on life satisfaction in the presence of the mediating variables reached "0.349".

*** Discussion**

The results of the first hypothesis showed statistically significant effects of the factors of extroversion and neuroticism - uniquely - without the effects of mediating variables on the dependent variable (life satisfaction). This result is consistent with the results of the

study by Schimmack et al. (2004), as well as with the results of the study by Malvaso and Kang (2022), and also with the results of the study by Pandey (2024). This result can be explained by the nature of the traits included in the extroversion factor, which include feelings of warmth and assertiveness, a predominance of positive emotions, activity and excitement-seeking, a tendency to dominate, high social skills, a desire to work with others, self-assertion, and competitive activities. Such positive traits make individuals more active, energetic, and optimistic when interacting with daily life situations, making them more accomplished, organized, and in harmony with themselves and their social environment. This is reflected in their overall assessment of all aspects of their lives, resulting in higher levels of life satisfaction. The neuroticism factor includes personality traits such as anxiety, mood swings, irrational beliefs toward perfectionism, and increased general pessimism. Such traits are expected to make their individual more susceptible to depression and feelings of sadness and frustration, leading to decreased energy, vitality, and activity, as well as lower levels of ambition and achievement. This makes them less compatible with themselves and their

external environment, increasing feelings of failure. This may cause them to evaluate all aspects of their lives negatively, leading to lower levels of life satisfaction.

The results of this hypothesis also showed statistically significant effects of extroversion and neuroticism on humor styles and self-esteem. This result is consistent with the results of the study by Mendiburo et al. (2015) and Wang (2023). It is also consistent with the results of the study by Robins (2001), Varanarasamma (2018), and Lopez (2024). We can interpret this result by saying that humor styles are personal styles that are relatively stable and tend to act when facing the pressures of daily life. The extroversion factor, which includes the characteristics of openness to experience and interacting with others with vitality and activity, may lead an individual to be more inclined to use affiliative humor and self-enhancing humor as coping strategies and less likely to use self-defeating humor, which ultimately leads to higher levels of self-esteem. Neuroticism, which has traits such as anxiety, tension, and social withdrawal, makes the individual less likely to use affiliative and self-enhancing humor, while these traits are likely to make the individual more likely to use self-

defeating humor, which may lead to negative self-evaluations, leading to lower self-esteem.

The results of the second hypothesis also showed a statistically significant effect of the mediating variables alone on life satisfaction. We can interpret this result based on the nature of humor styles and self-esteem. Humor styles are essentially adaptive strategies used by individuals to maintain their mental well-being and to relieve the pressures of daily life. They also use them to make life meaningful and more psychologically comfortable. Perhaps this is reflected in their overall assessment of the quality of their lives, leading to higher levels of life satisfaction. On the other hand, self-esteem has a direct impact and connection to life satisfaction, as the nature of both depends on the individual's assessment of his abilities, potential, and all aspects of his life.

Regarding the main hypothesis, which stipulates statistically significant effects of humor styles on the relationship between extroversion, neuroticism, and life satisfaction through self-esteem, the results of this hypothesis showed an overall effect of humor styles through self-esteem on the relationship between extroversion,

neuroticism, and life satisfaction, and a complete mediation. This means that the mediating variables play a significant role in explaining the relationship between the independent variables (personality factors) and the dependent variable (life satisfaction). That is, there is no direct effect of personality factors on life satisfaction in the absence of mediating variables. This study differs from the results of Averitt (2019), which showed that humor styles and self-esteem have partial mediating effects on the relationship between extroversion, neuroticism, and life satisfaction. It also agrees with the results of Marcionetti (2019), which showed an overall effect of self-esteem as a mediating variable on the relationship between extroversion, neuroticism, and life satisfaction.

This result can be partly explained by the cultural context in which such variables interact. While personality traits are inherited tendencies, environmental factors play a significant role in their manifestation in individual behavior. Libyan culture, like other Arab cultures, is a closed social society that promotes obedience, tolerance, and dependence on the group. The evaluations of others play a prominent role in individual self-development, and individual self-

evaluations place great importance on the opinions of others. This may be why the variables of humor styles and self-esteem have a significant impact on the relationship between personality traits and life satisfaction. In contrast, Western cultures, parenting styles and interactions encourage individuality, achievement, and independence from others. Self-esteem is also more subject to the individual's evaluations of their achievements, abilities, and individual characteristics than to the evaluations of others. This may explain why the variables of humor styles and self-esteem have partial effects on the relationship between personality traits and life satisfaction.

The result of this hypothesis can also be explained by referring to the nature of the study variables themselves. By conceptualizing a sense of humor as a set of interconnected traits that constitute a stable component of an individual's personality and are characterized by the individual's tendency to perceive, enjoy, or create humor, it is likely that extroverts will tend to use synergistic humor to create an effective social atmosphere with others. There is a close connection between the construct of extroversion and the construct of synergistic humor; as both are social in nature, it is likely

that extroverts will engage in the use of synergistic humor to make people laugh, entertain them, and support them psychologically and socially. Accordingly, this style of humor can be considered a type of social intelligence, which makes others provide positive feedback to such individuals. This is reflected in their positive presentations of their psychological and social qualities and characteristics, which increases their levels of self-esteem, which in turn increases feelings of life satisfaction. As for the style of self-enhancing humor, it is a psychological construct; It refers to the extent to which an individual maintains a humorous outlook on life. It is a style that describes an individual's humorous tendencies towards stressful and tense events in order to cope with or overcome them. It also achieves positive reinforcement for the individual's self and life, raising his morale, and thus enhancing and maintaining the individual's psychological health. This is achieved by approaching life matters with simplicity and optimism and viewing difficulties and challenges from a humorous perspective. This enhances the individual's self-confidence and self-esteem, which in turn is reflected in higher levels of life satisfaction. While self-defeating

humor is also a psychological construct directed towards the self, this type of humor targets the individual with humor in an offensive manner, which belittles, ridicules, and mocks himself with the aim of gaining social approval from others. This type of humor suppresses the positive traits of extroverts, reducing their competitive spirit, constructive social interaction, warmth, and assertiveness. This can lower their self-esteem, increasing the likelihood of lower levels of life satisfaction.

Neuroticism, as we explained earlier, includes negative traits, especially tension and mood swings, which makes individuals who possess such traits anxious and moody people whose behavior and feelings are difficult to predict when dealing with them, which makes them socially incompatible with others. This is reflected in their use of self-defeating humor as an incompatible defense method, which further distorts their perception of themselves, thus lowering their level of self-esteem. This, in turn, is a predisposition to evaluate aspects of their lives negatively, leading to lower levels of life satisfaction.

*** Conclusions**

1- There are direct effects for each independent variable, independent of the other independent variables in the

model; that is, extroversion positively affects life satisfaction, while neuroticism negatively affects life satisfaction.

Furthermore, extroversion positively affects both affiliative humor, self-enhancing humor, and self-esteem, and negatively affects self-defeating humor. Neuroticism negatively affects both affiliative humor, self-enhancing humor, and self-esteem, while positively affecting self-defeating humor. Both affiliative humor and self-enhancing humor positively affect self-esteem and positively affect life satisfaction. Self-defeating humor negatively affects self-esteem but also negatively affects life satisfaction. Self-esteem also positively affects life satisfaction.

2- There is a total mediation and direct and indirect effects of humor styles on the relationship between personality factors and life satisfaction through self-esteem. It was also clear from the model that this model explained approximately 30.25% of the change in the variance of life satisfaction.

*** Recommendations**

Based on the study results, the researcher recommends that when designing counseling programs to raise life satisfaction and self-esteem, personality factors should be taken

into consideration as a predisposing factor for raising or lowering self-esteem, which in turn is an effective factor in raising life satisfaction. The psychological counselor or whoever prepares these counseling programs should also consider the variables of humor styles, especially self-enhancing humor and synergistic humor, as they play a significant role in influencing the relationship between self-esteem and life satisfaction. In other words, some counseling techniques and skills should be included that would incorporate a sense of humor and adaptive humor, which helps to increase and elevate self-esteem and increase activity, vitality, and constructive social interactions among individuals suffering from some psychological problems, helping them get rid of feelings of distress, sadness, and depression.

*** Suggestions**

- 1- Conduct similar studies testing the same model but at different age stages, such as adolescence, middle adulthood, or late adulthood, because life satisfaction is affected by age.
- 2- Test the same model with the humor styles variable altered as a close mediating variable and replaced with other variables, such as meaning-of-life variables.

*** References**

- Ali, Imran (٢٠١٧) Personality traits, individual innovativeness and satisfaction with life. *Journal of Innovation & Knowledge*, DOI: 10.1016/j.jik.2017.11.002
- Abel, M. H. (2002). Humor, stress, and coping strategies. *Humor Int. J. Humor Res.* 15, 365–381. doi: 10.1515/humr.15.4.365
- Clark, D. A., Beck, A. T., & Alford, B. A. (1999). *Scientific foundations of cognitive theory and therapy for depression*. New York: Wiley
- Chen, G., and Martin, R. A. (2007). A comparison of humor styles, coping humor, and mental health between Chinese and Canadian university students. *Humor Int. J. Humor Res.* 20, 215–234. doi: 10.1515/HUMOR.2007.011
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, 124, 197-229. <http://dx.doi.org/10.1037/0033-2909.124.2.197>
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*,

- 95, 542-575.
<http://dx.doi.org/10.1037/0033-2909.95.3.542>
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55, 34-43.
- Erol, R & Orth, U (2011). Self-Esteem Development From Age 14 to 30 Years: A Longitudinal Study. *Journal of Personality and Social Psychology*, Vol (10), NO (3). pp 607 – 619. 0022-3514/11/\$12.00 DOI: 10.1037/a0024299
- Greenberg, J. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety-buffering function. *Journal of Personality and Social Psychology*, 63, 913-922.
<http://dx.doi.org/10.1037/0022-3514.63.6.913>
- Halama, P. (2010). Hope as a mediator between personality traits and life satisfaction. *Studia Psychologica*, 52, 309-314.
- Herero, V. G., & Extremera, N. (2010). Daily life activities as mediators of the relationship between personality variables and subjective well-being among older adults. *Personality and Individual Differences*, 49, 124-129.
<http://dx.doi.org/10.1016/j.paid.2010.03.019>
- Headey, B. (2007). The set-point theory of well-being needs replacing – On the brink of a scientific revolution. (German Institute for Economic Research Discussion Paper No. (3). Retrieved from DIW Berlin website:
<http://www.diw.de/documents/publikationen/73/77545/dp753.pdf>
- Hermawati, R (2023). Organizational Citizenship Behavior and the Impact of Organizational Commitment and Work-Life Balance with Job Satisfaction as an Intervening Variable. *UTSAHA (Journal of Entrepreneurship)*, 2(1), 54–68
- Issa, Hussein Abdul Hamid (2013). Social intelligence and its relationship to emotional stability and life satisfaction among traffic police personnel in the Gaza Governorate. Unpublished master's thesis, Islamic University, Gaza.
- Jaber, Abdul Hamid Jaber (2008). *Personality Theories*, 2nd ed., Kingdom of Saudi Arabia:

- Quba Publishing and Distribution House.
- Jalala, Suhaila Saeed (2015). Life satisfaction and its relationship to psychological stress resulting from the blockade among government sector employees in Gaza. Unpublished master's thesis, Islamic University - Gaza.
- Joshanloo, M., & Afshari, S. (2011). Big Five personality traits and self-esteem as predictors of life satisfaction in Iranian Muslim university students. *Journal of Happiness Studies*, 12, 105-113.
<http://dx.doi.org/10.1007/s10902-009-9177-y>
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory – Versions 4a and 54*. Berkeley: University of California, Berkeley, Institute of Personality and Social Research
- Keys, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: the empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82, 1007-1022.
<http://dx.doi.org/10.1037/0022-3514.82.6.1007>
- Kurnaz, M & Teke, E (2020). Relationship between Self-Esteem and Life Satisfaction: A Meta-Analysis Study. Vol 4 (2) PP. 236-253.
<http://dergipark.org.tr/rep>
- Lahamuddin, H. (2013). *Life Satisfaction Mahasiswa Cosplayer. Proposal Metode Penelitian Kualitatif*
- Lopez - Gomez , I ., Chaves , C., & Vazquez, C.(2020). Life Satisfaction. *The Wiley Encyclopedia of Personality and Individual Differences*. Vol. (3). Personality processes and individual differences (pp.275-280)
- Lopez, Jose Manuel, Santiago, María Jose & Castro, María Cristina (2024). Big Five Personality Traits and Compulsive Buying: The Mediating Role of Self-Esteem, *Eur. J. Investig. Health Psychol. Educ.* 2024, 14(1), 103 116;
<https://doi.org/10.3390/ejihpe14010007>
- Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal*

- of Research in Personality, 37, 48-75.
[http://dx.doi.org/10.1016/S0092-6566\(02\)00534-2](http://dx.doi.org/10.1016/S0092-6566(02)00534-2)
- Malvaso, A. & Kang, W (2022). The relationship between areas of life satisfaction, personality, and overall life satisfaction: An integrated account. Vol (13).
<https://doi.org/10.3389/fpsyg.2022.894610>
- Mendiburo, Andres, Paez, Darío & Martínez, Francisco (2015). Humor styles and personality: A meta-analysis of the relation between humor styles and the Big Five personality traits. Scandinavian Journal of Psychology. 56(3) DOI:10.1111/sjop.12209 pp 1 – 16
- Mohammed, Al-Nabigha Fathi (2019). Styles of humor and expression of gratitude as predictors of marital compatibility among a sample of married couples. Journal of Psychological Studies, Vol. (29), No. (1), pp. 9-87.
- Pandey, K (2024). Relationship between Personality Traits and Life Satisfaction among College Student of Varanasi U.P. The International Journal of Indian Psychology, Vol (12), No (2): 2279 – 2290.
<https://www.ijip.in>
- Pavot, W., & Diener, E. (1993). Review of the Satisfaction with Life Scale. Psychological Assessment, 5, 164-172.
<http://dx.doi.org/10.1037/1040-3590.5.2.164>
- Robins, Richard., Tracy, Jessica., Trzesniewski, Kali, potter, jeff & Gosling, Samuel (2001). Personality Correlates of Self-Esteem. journal of Research in Personality. doi:10.1006/jrpe.2001.2324, available online at <http://www.idealibrary.com> on Middletown, CT: Wesleyan University Press
- Schimmack, U., Oishi, S., Furr, R.M & Funder, D (2004). Personality and Life Satisfaction: A Facet-Level Analysis. Journal of Personality and Social
- Varanarasamma, Eswari, Avanish Kaur, Gurmit Singh & Kavitha, Nalla Muthu(2018). The Relationship between Personality and Self-Esteem towards University Students in Malaysia. Advances in Social Science, Education and Humanities Research (ASSEHR), volume 304. 4th ASEAN Conference on

- Psychology, Counseling, and Humanities pp 410 – 414
- Orth, Ulrich & Robins, Richard (2014). The Development of Self-Esteem. Current Directions in Psychological Science VOL (23) NO (5). PP 382 – 394
- Uetell, N. (2006). Life satisfaction, a Sloan Work and Family Encyclopedia entry.
- Qudsyi, H., Novitasari, R., Fakhrunnisak, Ambarito, T. P., & Yudhani, E. (2015). Kepuasan hidup orang yang bekerja ditinjau dari faktor pribadi, pekerjaan dan pasangan. Makalah Seminar Nasional, 1–16. <http://dx.doi.org/10.1037/0003-066X.55.1.34>
- Wang, Wei (2023). Laughing Matters: Investigating the relationship between humor, personality, and social relations. Faculty of Social and Educational Science, Norwegian University of Science and Techno.