

Relationship between dark and light personality traits, interpersonal problem, life and job satisfaction in nurses

Leila Hefazi Torghabeh¹, Azam Farah Bijari^{1*}, Gholamreza Dehshiri¹

¹: Department of Psychology, Faculty of Educational and Psychology, Alzahra University, Tehran, Iran.

***Corresponding author:** Azam Farah Bijari, Department of Psychology, Faculty of Educational and Psychology, Alzahra University, Tehran, Iran, Email:a.f.bidjari@alzahra.ac.ir

Abstract

Background: Since nurses are the largest health care group and include more than any other group of hospital staffs, they affect the productivity and progress of the organization.

Objectives: The aim of this study was to investigate the role of dark and light personality traits in predicting interpersonal problems, life and job satisfaction in nurses.

Methods: The method was descriptive and correlational. The statistical population included 220 nurses working in Mashhad private hospitals in 2020. Data were analyzed using Pearson correlation and multivariate regression.

Results: Results show that light and dark personality traits was significant on interpersonal problems, life and job satisfaction in nurses.

Conclusions: Thus, it can be stated that light personality traits increase the feeling of satisfaction with the work environment by improving social relationships with colleagues and patients, so by increasing these personality traits, nurses can increase their job satisfaction.

Keywords: Nurses, Dark and Light Personality Traits, Life and Job Satisfaction, Interpersonal Problems

Introduction

The health sector is one of the most important areas related to sustainable development in any country due to its direct relationship with the health of people (1). Thus, staffs working in this sector should be an acceptable level of mental and emotional health. Undoubtedly, emotional reactions and job stress in this sector cause many problems for staffs (2). For this reason, it is crucial to investigate the factors affecting the emotions of nurses and treatment staffs due to their emotional communication with patients. Interpersonal problems, life satisfaction and job satisfaction are among the factors that can be considered in nurses and they were investigated in the present study. Interpersonal problems are among the problems that people with personality problems create for themselves through their behavior (3-11).

A combination of different factors causes a person to feel satisfied with his or her job. Several studies on job satisfaction show that many variables are associated with job satisfaction. Some attribute job satisfaction to internal and external satisfaction (12). If people can select a job according to their personality traits, they can work with good behavior and patience and without enduring much stress and can be productive (1). The main characteristic of dark personality traits is that they are socially and interpersonal annoying and unpleasant. High frequency of these traits can manifest themselves in everyday family, job and educational situations (13).

The new component proposed for the family of dark personality traits was sadism component, characterized by hurting others and enjoying their discomfort (14). Dark personality traits in varying degrees include a socially malicious personality with self-centered behavioral tendencies, emotional coldness, deception, and aggression (15). The results of some studies indicate that dark personality traits are associated with interpersonal problems (16-18), job problems (19) and life satisfaction (20).

In general, studies indicate the relationship between personality traits and interpersonal problems (21), job problems (19) and life satisfaction (22,23). It highlights the importance of paying attention to personality traits. Since nurses are the largest health care group and include more than any other group of hospital staffs, they affect the productivity and progress of the organization. In addition, the productivity of nurses ultimately lead to better making decisions in planning the provision of services and care. Hence, it is important to examine personality-related problems in this vulnerable group. Therefore, the present study seeks to answer the question "Do dark and light personality traits play a role in predicting interpersonal problems, life satisfaction and job satisfaction of nurses?"

Methods

The research method is applied in terms of aim, and descriptive and correlational in terms of data collection method. In the present study, the target population included all 500 nurses who were working in

private centers and hospitals affiliated to Mashhad University of Medical Sciences in the summer and autumn of 2020. The sample size of the study was estimated to be 220 people based on Morgan table. Since not all questionnaires were completed fully, 250 people were considered for more confidence. Due to the special working conditions of nurses during Covid-19 outbreak and the difficulty of accessing many of them, a convenience sampling method was used and questionnaires were distributed online. Inclusion criteria of the study were having at least a bachelor's degree in nursing, employment history of at least 3 years, being employed at the time of research and willingness and satisfaction to participate in research. Exclusion criteria also included incomplete filling out of questionnaires and unwillingness to continue cooperation in the research process.

Research Tools

Questionnaire of light personality traits

This questionnaire was designed by Johnson (2018) and has 24 items and 3 sub-components of empathy (items 1 to 8), compassion (items 9 to 16) and humanism (items 17 to 24). This questionnaire is scored on a 5-point Likert scale (strongly disagree = 1 to strongly agree = 5). Items 22, 21, 20, 18, 15, 12, 8, 7, 4, and 1 are scored in reverse. A high score indicates that the trait is more in the person. Using Cronbach's alpha coefficient, Johnson (2018) reported the reliability of this questionnaire for the 0.67 for empathy factor, 0.80 for compassion factor, and 0.79 for humanism factor and he reported the reliability of whole scale at 0.88. Since this scale has not been used in Iran, three skillful people first translated it into English (17).

Questionnaire of four dark personality traits

This questionnaire was designed in the research conducted by Atadokht et al. (2019) (24), based on the Kasif Questionnaire (18). Omeara et al. sadism questionnaire (2011) and has 36 items. The questionnaire has four components: Machiavellianism (items 1 to 9), narcissism (items 10 to 18), psychopathy (items 19 to 27), and sadism (items 28 to 36). It has a total of 36 items. This questionnaire is scored on a 5-point range (strongly disagree = 1 to strongly agree = 5). Items 25, 20, 17, 15, and 11 are scored in reverse. The higher score in each trait indicates higher level of that trait in the person. Johnson (2018) reported the Cronbach's alpha coefficient 0.79, 0.68, 0.76, and 0.87 for Machiavellian factor, narcissism factor, psychopathy factor, and sadism factor, respectively. Also, its content validity was confirmed in this study (17).

Inventory of interpersonal problems

The standard inventory of interpersonal problems was designed by Pilkonis et al. (1996) and has 47 items and 5 components. Its components are interpersonal sensitivity (items 1, 17, 18, 22, 27, 29, 32, 40, 41, 43, and 46), interpersonal ambivalence (items 6, 7, 12, 13, 14, 16, 19, 20, and 21), aggression (items 30, 28, 26, 33, 39, 42, and 47), need for social approval (items 2, 5, 8, 24, 31, 34, 26, 27, and 38), and lack of sociability (items 3, 4, 9, 10, 11, 15, 23, 25, 35, and 45). It is scored on a 5-point Likert scale (strongly disagree = 1 to strongly agree = 5). Pilkonis et al. (1996) reported its Cronbach's alpha coefficient at 0.83 to 0.90 for subscales (25). In Iran, Aftab (2016) calculated Cronbach's alpha coefficient for the subscales of interpersonal sensitivity, ambivalence, aggression, the need for social approval, and sociability at 0.77, 0.71, 0.80, 0.77 and 0.85, respectively (44).

Satisfaction with life scale

The Satisfaction with life scale was designed by Diener et al. (1985) and has 48 items. This scale consists of 5 items that measure the cognitive component of actual well-being. This scale is scored on a 7-point Likert. The reliability of satisfaction with life scale was obtained at 0.83 using Cronbach's alpha method and at 0.69 using test-retest method (26). The construct validity of the Satisfaction with life scale was assessed through convergent validity using the Oxford Happiness Index (OHI) (27) and the Beck Depression Inventory (BDI) (28). It showed positive correlation with Happiness Index and negative correlation with Depression Inventory. In Iran, Goodarzi et al. (2007) obtained the validity of the scale at 0.83 by Cronbach's alpha method and 0.69 by test-retest method. Also, the range of correlation coefficients of the questions with the total score of the scale was between 0.54 and 0.73 with a mean of 0.73 (29).

Satisfaction with job scale

The Satisfaction with job scale was designed by Preez and Bendixen (2015) and has 9 items, of which 6 items measure job satisfaction and 3 items measure intention to stay at work. It is scored on a 5-point Likert scale (strongly disagree = 1 to strongly agree = 5) (30). Preez and Bendixen (2015) reported the validity of the scale at 0.86 using Cronbach's alpha method. In Iran, the construct validity of this scale was assessed using confirmatory factor analysis and its significance was confirmed by rejecting the items related to the desired

structures. Also, the internal consistency of the used tools was evaluated with Cronbach's alpha coefficient in this study, which all values were obtained above 0.70(31).

Results

As seen, there is a positive and significant correlation between job satisfaction and light personality of empathy. Also, there is a significant positive correlation between life satisfaction and empathy (0.19) and a negative correlation between life satisfaction and ambivalence (0.18), aggression (0.27), need for social approval (0.15) and lack of sociability (0.23). There is also a significant negative correlation between job satisfaction and interpersonal problems. Before testing the model, the assumptions of normality, collinearity of variables, and independence of errors were first examined. Kolmogorov-Smirnov test was used to examine the normality of data. Kolmogorov test was not statistically significant in all variables and the assumption of normality of the data was confirmed ($P > 0.05$). Also, a tolerance index of 0.1 or less indicates collinearity. Variance inflation factor (VIF) is another method of detecting collinearity that indicates the ratio of general standardized variance to single variance. Also, the value of Durbin-Watson is 2.32, which is less than 4, and it can be stated that the assumptions have not been violated. Thus, according to the obtained indicators, it can be concluded that the test conditions have been observed.

Table 1. Results of regression to predict interpersonal sensitivity of light and dark personality traits components.

Source of changes	Squared sum	df	Squared mean	F	Sig
Predictor	37.2856	7	05.408	34.20	0.001
residual	15.4272	213	05.20		
total	53.7128				
		0.63=R	0.40=R ²	0.38 =ADJ.R ²	

The results of multiple regression show that the components of dark and light personality traits can predict interpersonal sensitivity in nurses ($p < 0.05$, $F_{(7,213)} = 34.20$). The results also show that the coefficient of explanation is $R^2 = 0.40$, which indicates that dark and light personality traits can explain 40% of interpersonal sensitivity changes, which is a significant value. The results of multiple regression analysis examine the combined effects of predictor variables on the criterion variable. As a result, the results of regression coefficients are reported to investigate which variables can predict interpersonal sensitivity.

Table 2. The results of regression to predict ambivalence by light and dark personality traits

Source of changes	Squared sum	df	Squared mean	F	Sig
Predictor	45.1776	7	77.253	27.12	0.001
Residual	09.44.3	213	67.20		
Total	54.6179	220			
		0.53=R	0.27=R ²	0.26 =ADJ.R ²	

The results of multiple regression show that the components of dark and light personality traits can predict ambivalence in nurses ($p < 0.05$, $F_{(7,213)} = 27.12$). The results also show that the coefficient of explanation is $R^2 = 0.27$ which is a significant value and indicates that dark and light personality traits can explain 27% of the changes in ambivalence in nurses. The results of regression coefficients are reported to investigate which variables can predict ambivalence.

Table 3. Regression performance results for predicting aggression by light and dark personality traits

Source of changes	Squared sum	df	Squared mean	F	sig
Predictor	16.999	7	73.142	7.58	0.00
Residual	26.4007	213	81.18		
Total	42.5006	220			

0.44=R 0.20=R² 0.17 =ADJ.R²

The results of multiple regression show that the components of dark and light personality traits can predict aggression in nurses ($p < 0.05$, $F_{(7,213)} = 7.58$). The results also show that the coefficient of explanation is $R^2 = 0.20$, which is a significant value and indicates that dark and light personality traits can explain 20% of the changes in aggression in nurses. The results of regression coefficients are reported to investigate which variables can predict aggression.

Table 4. Results of regression to predict the need for social approval of light and dark personality traits

Source of changes	Squared sum	df	Squared mean	F	sig
Predictor	36.1103	7	62.157	77.12	0.001
Residual	00.2628	213	33.12		
Total	36.3731	220			
0.54=R 0.29=R ² 0.27 =ADJ.R ²					

The results of multiple regression show that the components of dark and light personality traits can predict the need for social approval of aggression in nurses ($p < 0.05$, $F_{(7, 23)} = 77.12$). The results also show that the coefficient of explanation is $R^2 = 0.29$, which is a significant value and indicates that dark and light personality traits can explain 29% of the changes in the need for social approval in nurses. The results of regression coefficients are reported to investigate which variables can predict the need for social validation.

Table 5. Results of regression to predict the non-sociability by light and dark personality traits

Source of changes	Squared sum	df	Squared mean	F	sig
Predictor	40.684	7	77.97	96.4	0.001
Residual	01.4194	213	69.19		
Total	42.4878	220			
0.37=R 0.14=R ² 0.11 =ADJ.R ²					

The results of multiple regression show that the components of dark and light personality traits can predict the non- sociability in nurses ($p < 0.05$, $F_{(7, 23)} = 96.4$). The results also show that the coefficient of explanation is $R^2 = 0.14$, which indicates that dark and light personality traits can explain 14% of the changes in non-sociability in nurses. The results of regression coefficients are reported to investigate which variables can predict non- sociability.

Table 6. Regression results for predicting job satisfaction by light and dark personality traits components

Source of changes	Squared sum	df	Squared mean	F	sig
Predictor	59.264	7	22.35	31.4	0.001
Residual	65.174	213	17.8		
Total	24.1987	220			
0.35=R 0.12=R ² 0.09 =ADJ.R ²					

The results of multiple regression show that the components of dark and light personality traits can predict nurses' job satisfaction ($p < 0.05$, $F_{(7, 23)} = 31.4$). The results also show that the coefficient of explanation is $R^2 = 0.12$, which indicates that dark and light personality traits can explain 14% of job satisfaction changes. The results of multiple regression analysis examine the combined effects of predictor variables on the criterion variable. As a result, the results of regression coefficients are reported to evaluate which variables can predict job satisfaction.

Table 7. The results of regression to predict life satisfaction by components of light and dark personality traits

Source of changes	Squared sum	df	Squared mean	F	sig
Predictor	38.554	7	19.79	51.3	0.001
Residual	45.4807	213	57.22		
Total	83.5361	220			
		0.32=R	0.10=R ²	0.07 =ADJ.R ²	

The results of multiple regression show that the components of dark and light personality traits can predict life satisfaction of nurses ($p < 0.05$, $F_{(7, 213)} = 51.3$). The results also show that the coefficient of explanation is $R^2 = 0.10$, which indicates that dark and light personality traits can explain 10% of life satisfaction changes. The results of multiple regression analysis examine the combined effects of predictor variables on the criterion variable. As a result, the results of regression coefficients are reported to investigate which variables can predict life satisfaction.

Discussion and Conclusion

The present study was an attempt to investigate the role of dark and light personality traits in predicting interpersonal problems, life satisfaction and job satisfaction of nurses. The results of correlation showed that the subcomponents of dark personality traits have a positive and significant relationship with interpersonal problems in nurses and a negative and significant relationship with life satisfaction and job satisfaction. Also, the results of the correlation showed that only the dark trait of Machiavellianism from the subscale of dark personality traits had a significant positive relationship with nurses' job satisfaction and the rest of the subscales did not have a significant relationship. The results also showed that light personality traits have a negative and significant relationship with interpersonal problems in nurses and a positive and significant relationship with life satisfaction and job satisfaction in nurses.

The results of present study are consistent with the results of Jonason et al. (2010), Johnson (2018), Arvan (2013) and Duarte et al. (2016) who showed that abnormal personality dimensions are associated with interpersonal problems (16,17,18,21). Also, regarding the relationship between dark personality traits and life satisfaction, the results of this study are consistent with those of studies conducted by Sharifiniya and Haroonrashidi (2020) (20), Tamanaifar and Mansouri Nik (2013) (23) and Malkoç (2011) (22). Also, the results of this study are in line with those of studies conducted by Manteghian et al. (2019) (19) and Leiter and Maslach (2004) (32) on the existence of a relationship between dark personality traits and job problems. The results of present study are consistent with the results of the studies conducted by Jonason and Webster (2010) (18), Duarte et al. (2016) (21), Reniers et al. (2011) (33) who showed that light personality traits are associated with interpersonal problems and relationships of people. Also, regarding the relationship between light personality traits and life satisfaction, the results of this study are in line with those of studies conducted by Hashemi (2018) (34), Amirpour et al. (2018) (35), Zarei and Fooladvand (2019) (36), and Neff (2003) (37). Also, the results of this study are in line with those of studies conducted by Arimitsu and Hofmann (2015) (38), Neely et al. (2009) (39), Khedmati (2020) (40), Gracia-Gracia and Oliván-Blázquez (2017) (41), Kord and Babakhani (2016) (42), Atharian (2018) (43) that showed a relationship between light personality traits and job problems.

Since sadism also reduces social relationships and causes social rejection, it increase interpersonal problems. People with narcissism trait will not be able to communicate properly with others due to their special attention to themselves and high self-esteem and this factor will cause many interpersonal problems and social rejection. Finally, interpersonal information creates profiles associated with each of the dark personality traits in various levels of the interpersonal circle (45-52). It can also be stated that various factors such as physical and mental health, personality traits and social and cultural factors affect the level of life satisfaction. Among individual characteristics, and Paulhus and Williams (2002) believe that dark personality traits have common characteristics such as incompatibility, deception, self-centeredness, lack of honesty and humility, and a tendency to interpersonal exploitation. People with narcissism trait focus more themselves and consider themselves more important, so they have problems in social adjustment and communication with others and have low life satisfaction (15,20,53-74).

In other words, with increasing light traits of humanism and compassion, less interpersonal problems will be experienced and the fewer problems are encountered in social relationships. Hence, it can be stated that they will be successful in the work relationships and will have better job satisfaction. It can be also stated that people with high life satisfaction experience positive emotions and will have a positive assessment of themselves and

others .They experience deeper emotions and have higher general health. According to research findings, one of the personality traits having a significant positive correlation with life satisfaction is the light traits of empathy, humanism and compassion. In addition, light personality traits allow the person to make effective contact with the social and work environment and facilitate the process of caring for patients .These traits improve the quality of interpersonal relationships with patients and reduce problems with other colleagues. Thus, it can be stated that light personality traits increase the feeling of satisfaction with the work environment by improving social relationships with colleagues and patients, so by increasing these personality traits, nurses can increase their job satisfaction.

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