

Relationship between Personality Characteristics, Internal Locus of Control, Psychological Hardiness and Nurses' Quality of Life

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Received: 15 Jun 2016

Revised: 6 Aug 2016

Accepted: 15 Oct 2016

Background: Psychological characteristics affect the quality of life. This study aimed at determining the relationship between personal characteristics, internal locus of control, psychological hardiness and nurses' quality of life.

Methods: In this correlation study, 297 nurses were selected based on Curgesy and Morgan table via multistage cluster sampling among 1023 nurses of the public hospitals of the Urmia city in the year 2015. All of them filled out the questionnaires of personality characteristics (including neuroticism, extroversion, openness, agreeableness, and conscientiousness), internal locus of control, psychological hardiness and quality of life. The data was analyzed by correlation and multiple regression methods with step-by-step model.

Results: The findings showed a significant negative relationship between neuroticism and the nurses' quality of life. Furthermore, there was a positive correlation between extroversion, openness, agreeableness, conscientiousness, internal locus of control, psychological hardiness and their quality of life. Among the predictor variables, psychological hardiness, neuroticism, internal locus of control and openness could meaningfully predict 64.7% of the changes of nurses' quality of life. ($P < 0.01$).

Conclusion: According to the results, by increasing the psychological hardiness, internal locus of control and openness and by decreasing the neuroticism, the nurses' quality of life could be increased.

Keywords: Personal Characteristics, Internal Locus of Control, Psychological Hardiness, Quality of Life, Nurses

Introduction

Nursing is a stressful profession and the pressures have a significant negative effect on their mental health and quality of life (1). The quality of life is a complex and multi-dimensional structure by taking into account the cultural context, values and the situation in which people live (2). The quality of life is a framework for delivering services and the importance is so significant that some consider its improvement as the most important purpose of treatment (3). Given the extent of quality of life (physical health, mental health, social relations, emotions, bodily functions, spiritual and professional life), it is highly important to be fully considered (4).

Numerous variables are related to the nurses' quality of life, including personal characteristics, internal locus of control and psychological hardiness. One related variable is the personal characteristics. Personality is an organized series of almost stable and durable characteristics (5). Theories of Personality believe that personal characteristics have an important role in the prediction of the quality of life and restoring a normal balance (6). Personal characteristics have five aspects of neuroticism, extroversion, openness, agreeableness, conscientiousness. Neuroticism is the inclination to experience anxiety, tension, hostility and depression, extroversion is the inclination to be positive, courageous, energetic and intimate, openness is the inclination to be curious, artistic, flexible and wise, agreeableness is the inclination to generosity, kindness, sympathy, altruism and trust, and conscientiousness is characterized by being organized, effective, self-regulated, logical and calm (7). The results of the studies show a meaningful relationship between personality traits and the quality of life (8-11). Lichtenstein et. al (2014) found that psychological hardiness has a meaningful inverse relationship with the quality of life and extroversion, agreeableness and conscientiousness has a direct relationship with the quality of life (9). Kenarbarozhi et. al (2016) found that psychological hardiness (negatively), extroversion, openness, conscientiousness and problem-focused coping (positively) are related to the quality of life.

Another related variable with the quality of life is the internal locus of control. The internal

locus of control is based on the social learning theory of Rotter (1975). The people having internal locus of control believe that their actions determine their successes and failures (12). Also, they experience crimes and negative emotions much less and they cope better with stress (13). They have higher self-confidence, self-esteem, health and quality of life. In fact, the feeling of life control leads to psychological adjustment and decrease of bodily, mental and behavior issues (14). The results of studies indicated a meaningful positive relation between internal locus of control and the quality of life (15-17). Mohammad Aliha (2015) found in a study that the internal locus of control has a meaningful direct relationship with quality of life (15). Wray et. al reported that quality of life has a direct relationship with self-concept and internal locus of control (16). Ghasemizad et. al (2010) reported that the quality of life, self-esteem, locus of control and social resource has a positive and meaningful correlation (17).

Another variable related to the quality of life is the psychological hardiness. The expression of hardiness was first proposed by Kobasa (1979). From his point of view, hardiness is a group of personal characteristics that provides a resistance resource against the stressful events (18). Hardiness is a combination of beliefs about one's self and the universe that acts as a cognitive-emotional combination (19). The people with hardiness have three properties of commitment, control and challenge. People with commitment find a meaning for their every act. People with control, knows the life events controllable and predictable and people with challenge knows the change as a natural aspect of life and find the challenging situations as an opportunity for growth (20). The studies show a positive relationship between psychological hardiness with the quality of life (21-24). Moradi and Shaker (2015) reported that the psychological hardiness has a meaningful direct relationship with the quality of life (21). In Gharehzad Azari et. al's study, hardiness has a direct relationship with the quality of life and an inverse relationship with anxiety (22). Pourakbar et. al (2014) reported in their study that the psychological hardiness has a positive and meaningful relationship with the quality of life.

Nurses are responsible to maintain and improve the health of patients, which is stressful. Stress gives rise to a decrease in life satisfaction and life quality that in turn leads to disorders such as insomnia, fatigue, family issues and even low quality of service. Hospital officials should look for solutions to reduce the nurses' stresses and increase their quality of life. Also, in any organization, one important issue in the human resource management department is supplying the needs and motivation to increase the quality of services of their personnel (25). Although the previous studies have separately studied the relationship between the personal characteristics, internal locus of control and psychological hardiness with the quality of life, but no study has investigated the simultaneous role of these variables in the prediction of the quality of life. Therefore, the general purpose of this study is to determine the relationship between the personal characteristics, internal locus of control and psychological hardiness with the nurses' quality of life.

Methods

This correlational study was conducted on 1023 nurses of public hospitals in the city of Urmia in year 2014. The sample size, based on Curgesy and Morgan table, was 280 ; and by considering a 10% drop, 315 were selected by multistage cluster sampling. First, the city was divided into four zones of north, south, east and west (each zone having two hospitals) and then two zones were selected randomly. After enlisting the hospitals of each zone, two hospitals were selected (considering different sizes of the population of nurses, 60 to 90 nurses were selected from each hospital). The questionnaires were filled out without mentioning the names after stating the confidentiality of personal information and receiving the consent of informed participation by the nurses. For the sake of preventing the loss of credibility of the data, the questionnaires were given to the nurses and they were asked to carefully fill out the questionnaires without any time limitations. Among the 315 questionnaires distributed, after eliminating the incomplete questionnaires, 297 questionnaires were finally selected for the analysis. The criteria

for entering the study included physical health and the lack of any stressful event such as death of loved ones in the previous 6 months according to their reports and the criteria for exclusion from the study were the participant's refusal of cooperation and accessing incomplete questionnaires. The instruments were the following four questionnaires:

-Personality characteristics questionnaire (Costa & McCrae, 1992), which was arranged in the form of 60 items and based on 5-grade Likert scale (1-completely averse to, to 5-completely agree to). The tool consists of five aspects of neuroticism, extroversion, openness, agreeableness and conscientiousness (each aspect with 12 items). The method of calculating was the average of the grades of each item. Kozako et. al (2013). The validity of the structure of the tool, reported the consistencies of the aspects of neuroticism, extroversion, openness, agreeableness and conscientiousness by the Cronbach's alpha method to be 0.89, 0.81, 0.79, 0.83, 0.79, 0.79, respectively (27).

-Internal locus of control questionnaire (Rotter, 1975) was organized in the form of 29 items based on zero scale (lack of internal locus) and one (having internal locus). The method for calculating the grade was to average the grades of each statement. For confirming the validity of the tool, Rotter (1975) reported the consistency with Cronbach's alpha method to be 0.86 (28). Saffarian and Ashouri (2014) reported the consistency of the method with Cronbach's alpha to be 0.79 (29).

-Psychological hardiness questionnaire (Kobasa, 1979) which was organized in the form of 50 items based on 5-grade Likert scale (1-completely false, to 5- completely true). The method for calculating the grade was to average the grades of the statements. Kobasa (1979) reported the consistency of the questionnaire with Cronbach's alpha method to be 0.78 (30). Hamid (1389) reported the consistency of the tool with Cronbach's alpha method to be 0.87 (31).

Quality of life questionnaire (World Health Organization, 2004) , which was organized in the form of 26 items based on 5-grade scale (1-Very bad to 5- very good). The method for

calculating the grade was to average the grades of the statements. To verify the validity of the tool, the World Health Organization (2004) reported the consistency to be 0.70 in various countries (32) and Sepah Mansour et. al (1391) reported the consistency of the method with Cronbach's alpha method to be 0.84 (33).

Finally, the collected data were analyzed using SPSS-19 software with correlation and multiple regression (step-by-step model).

Results

The average age of the nurses in the study was 37.79 ± 5.16 who were mostly female with population 261 (87.88%) and 249 of them were married (83.84%). Two- hundred sixty- two nurses had a bachelor degree (88.22%) and 35 had master's degree (17.87%). Descriptive indicators of mean, standard deviation, minimum and maximum values of personal characteristics, internal locus of control, psychological hardiness and nurses' quality of life variables are presented in Table 1.

Table 1: Descriptive indicators of personal characteristics, internal locus of control, psychological hardiness and nurses' quality of life

Variables	Mean	Standard deviation	Minimum value	Maximum value
Neuroticism	2.542	0.701	1.16	3.83
Extroversion	2.820	0.320	2.00	3.33
Acceptance	2.946	0.428	2.00	3.83
Adjustment	3.077	0.371	2.17	3.75
Responsibility	3.089	0.345	2.25	3.75
Internal locus of control	0.480	0.062	0.36	0.61
Psychological hardiness	2.541	0.447	1.62	3.48
Quality of life	3.319	0.647	2.04	4.42

Descriptive indicators of study variables are shown in Table 1. Pearson's correlation coefficients were used to investigate the relationship between personal characteristics,

internal locus of control, psychological hardiness with nurses' quality of life (Table 2).

Table 2: Correlation coefficients of personal characteristics, internal locus of control and psychological hardiness with the nurses' quality of life

Predictor variables/Criterion variable	Quality of life	Significance
Neuroticism	-0.655	0.001
Extroversion	0.145	0.006
Acceptance	0.425	0.001
Adjustment	0.403	0.001
Responsibility	0.400	0.001
Internal locus of control	0.246	0.001
Psychological hardiness	0.679	0.001

The results of Pearson's correlations showed that neuroticism had a meaningful negative relationship and extroversion, openness, agreeableness, and conscientiousness had positive relationships with the nurses' quality of life (Table 2). Multiple regression with

step-by-step model was used for investigating the ability of personal characteristics, internal locus of control and psychological hardiness variables in predicting the nurses' quality of life.

Table 3: The summary of multiple regression study with the step-by-step model for prediction of nurses' quality of life

Model	Predictor variables	<i>R</i>	<i>R</i> ²	<i>R</i> ² variation	<i>F</i>	df1	df2	Sig
1	hardiness	0.679	0.461	0.461	252.176	1	295	0.001
2	Hardiness and neuroticism	0.761	0.579	0.118	82.279	1	294	0.001
3	Hardiness, neuroticism and internal locus of control	0.792	0.627	0.048	37.492	1	293	0.001
4	Hardiness, neuroticism, internal locus of control and acceptance	0.804	0.647	0.020	16.656	1	292	0.001

The results of regression showed that in the first mode, psychological hardiness entered the equation. The correlation coefficient of this variable with the quality of life was 0.679, which this variable could predict 46.1% of the variations in the nurses' quality of life. In the second model neuroticism entered the equation after psychological hardiness. The correlation coefficient of these two variables with the quality of life was 0.761 and these two variables could predict 57.9% of the variations in the nurses' quality of life. The third variable, which entered the equation was the internal locus of control. The correlation coefficient of these three variables with the quality of life was 0.792 and these three variables could predict 62.7% of the variations in the nurses' quality of life. In the fourth model, the last variable, which entered the equation, was openness. The correlation coefficient of these four variables with the quality of life was 0.804 and these four variables could predict 64.7% of the variations in the nurses' quality (Table 3).

Discussion

The results show that neuroticism has a meaningful negative relationship and extroversion, openness, agreeableness, and conscientiousness have a meaningful positive relationship with the quality of life, which is in accordance with previous studies (8-11). Filipovic et. al (2013) founded that neuroticism had a meaningful inverse relationship with the quality of life and extroversion, openness, agreeableness, and conscientiousness had meaningful direct relationship with the quality of life (9). Hamid and Zemestani (2013) reported in a study that neuroticism had a negative relationship and extroversion, openness, and conscientiousness have positive relationship with the quality of life (11). The result of this study regarding the positive

relationship of openness and quality of life was in disagreement with the results of the studies of Lichtenstein et. al (2014), which reported that no meaningful relationship existed between acceptance and the quality of life (8). In order to explain these findings, we can argue that people with neuroticism experience negative events more than others and evaluate them more negatively, since they put themselves in situations to strengthen their negative self-concept. The more these people with neuroticism experience these situations, the more decrease occurs in their quality of life. On the contrary, extrovert, open, agreeable, and conscientious individuals experience positive situation more often and this experience leads to life satisfaction and more favorable quality of life. Also, extrovert, open and agreeable individuals, having more friends, have higher motivations to establish intimate relations with others and have more optimistic view of themselves and life, consequently lead to increased life quality. Furthermore, conscientious individuals have great tendency of doing their duties and this in turn increases their chance for getting rewards from their managers. This will firstly increase the feeling of respect and prosperity and finally it will increase the positive perception of the quality of life (24).

Other results show that internal locus of control has meaningful positive relationship with the quality of life, which is in line with previous studies (15-17,35). Mohammad Aliha (2015) and Wray et. al (2010) reported that the internal locus of control had a meaningful direct relationship with the quality of life (15,16). Also, Hasanzadeh et. al (2006) found that internal locus of control of health has a meaningful positive relationship with the quality of life (35). In order to explain this finding based on Rotter theory (1975), we can

argue that individuals with internal control can affect the environment and this feature determines social adjustment, interpersonal interactions and problem solving. Therefore, these individuals know themselves effective in the changes of life and when facing challenges, use the compatible coping strategies which increases their quality of life. Also, people with internal control have more self-confidence, self-efficacy and problem solving abilities and face stressful situations less often and experience feeling helpless and mental, professional and family issues much less, which firstly leads to an increase in life satisfaction and efficacy, and finally to higher quality of life (12).

Moreover, other results showed that psychological hardiness has a meaningful positive relationship with the quality of life, which is in consistent with previous studies (21-24,36). For instance, Moradi & Shaker (2015) (21), Gharehzad Azari et. al (2013) (22) and Nguyen et. al (2012) (36) reported that psychological hardiness had a meaningful direct relationship with the quality of life. In order to explain these findings one can argue that people with hardiness possess a series of personal characteristics which acts as a source of resistance against stressful events. These individuals have the ability to control the life events and find the challenges as an opportunity of growth and development, which in turn enhances their quality of life. Also, individuals with hardiness evaluate the events more positively and more controllable which in turn results in less psychological arousal, which is a results of negative evaluation of events, and this will lead to higher quality of life (37). Other results show that personal characteristics, locus of control and psychological hardiness variables have the ability of meaningful prediction of quality of life. In order to explain this one can argue that individuals with positive personal characteristics (extroversion, openness, agreeableness, and conscientiousness) who achieve higher grades or individuals who get lower scores in negative personal characteristics (neuroticism) or individuals who know themselves as an effective factor in life changes (internal locus of control) or

individuals who have high abilities in facing with stressful events and insist on solving them (psychological hardiness), have less stress and issues in their lives and professions, are more satisfied with their job, are often humorous. Facing stressful events, they solve them well either individually or with other's assistance, and these factors will lead to higher quality of life. Another explanation is that extroversion, openness, agreeableness, internal locus of control and psychological hardiness variables have a positive correlation with various positive psychological indicators such as welfare, hope, resilience, etc., which have the ability of direct prediction of quality of life. The neuroticism has a negative correlation with various negative psychological indicators such as stress, anxiety, depression etc., which has the ability of inverse prediction of quality of life. If all of these variables are considered in a model for predicting the quality of life, they can meaningfully predict the quality of life. The first limitation was the numerous items in the questionnaires, the resulting tiredness could reduce the accuracy. Other limitations were the limited cooperation of some nurses leading to the limitation of samples to the nurses of public hospitals in the city of Urmia. It is recommended to use more concise questionnaires in the future studies or to perform the survey in two stages. Also, some comparative research among male and female nurses or nurses in public and private hospitals or other cities could lead to useful results. Furthermore, as the psychological hardiness has the highest correlation with the quality of life, it is recommended that the hardiness be taught for nurses.

Conclusion

Neuroticism has a meaningful negative relationship with the nurses' quality of life and extroversion, openness, agreeableness, conscientiousness, internal locus of control and psychological hardiness have a meaningful positive relationship with the nurses' quality of life, and only the psychological hardiness, neuroticism, internal locus of control and openness variables could meaningfully predict the nurses' quality of life. Therefore, the implementation of an appropriate education program (e.g. psychological hardiness training)

could improve the nurses' quality of life. Moreover, hospital officials should pay attention to the signs and effects of variables (specifically psychological hardiness, neuroticism, internal locus of control and openness) and design some programs to improve the nurses' quality of life. Undoubtedly, valuing the nursing profession by holding workshops, travel and pilgrimage tours etc.

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