Original Article

Journal of Occupational Health and Epidemiology
Journal homepage: http://johe.rums.ac.ir

Interpersonal communication skills and its association with personality dimensions of nurses in Rafsanjan University of Medical Sciences, Iran, in 2015

Parvin Agha Mohammad Hasani[1], Mohammadreza Mokhtaree[2*], Mahmood Sheikh Fathollahi[3], Jamileh Farokhzadian [4]

1- Assistant Prof., Dept. of Psychiatry, Rafsanjan University of Medical Sciences, Rafsanjan, Iran.
2- Msc of Educational Psychology, Social Determinants of Health Research Center, Rafsanjan University of Medical Sciences, Rafsanjan, Iran.
3- Assistant Prof. of Occupational Environment Research Center, Medical School, Rafsanjan University of Medical Sciences, Rafsanjan, Iran.
4- Assistant Prof., Dept. of Community Health Nursing, School of Nursing and Midwifery, Nursing Research Center, Kerman University of Medical Sciences, Kerman, Iran

Citation: Agha Mohammad Hasani P, Mokhtaree M, Sheikh Fathollahi M, Farrokjzadin J. Interpersonal communication skills and its association with personality dimensions of nurses in Rafsanjan University of Medical Sciences, Iran, in 2015. JOHE. 2018; 7(2):112-8.

Article Info

*** Corresponding authors:**
Mohammadreza Mokhtaree,
E-mail:
mrmokhtaree@yahoo.com

Article history
Received: Jan, 2018
Accepted: April, 2018

10.29252/johe.7.2.112

Print ISSN: 2251-8096
Online ISSN: 2252-0902

Peer review under responsibility of Journal of Occupational Health and Epidemiology

Abstract

Background: Communication is a necessity of social life which is very important in health care settings due to the type of work and clients. The aim of this study was determine the association between interpersonal communication skills (ICSs) and personality dimensions of nurses working in Rafsanjan University of Medical Sciences.

Materials and Methods: In this descriptive study, 223 nurses were selected by stratified random sampling method and they completed the Burton ICSs and the Revised NEO Personality Inventory . Data were analyzed using the Pearson correlation, independent t-test, and multiple linear regression at a significant level of P = 0.050.

Results: Among the selected nurses, 9.9%, 75.8%, and 14.3% had a poor, moderate and good communication skills respectively. The association between age (P = 0.026) and work experience (P = 0.025) with ICSs were inversely significant. There was a significant correlation between good communication skills and the extroversion personality aspect (P = 0.001), pleasure (P < 0.001), and accountability (P = 0.039). The pleasure and extroversion were able to predict and explain 8.7% of the ICSs nurses.

Conclusions: More than half of the nurses had difficulties in ICSs. The communication pattern of nurses is effective in their performance and quality of work; therefore, their personality dimensions and traits can be taken into account in the process of recruiting, transferring, or moving them. Hence, each person can be appropriately located in the right place in terms of the area of activity, and type and number of clients.

Keywords: Communication, Skill, Personality, Nurse, Iran.

Introduction

The human being is a social being and this characteristic requires communication with others. The exchange of ideas, beliefs, and feelings initiates through the process of communication (1). Individuals communicate in various ways through the responsibility and professions they have in the community. One of the occupations in the success of which communication has a special role is nursing. Nurse-patient communication is a professional type of communication based on trust and mutual respect (2, 3).

Through establishing effective communication, the quality of health improves (4), patient safety is provided (5), and patient satisfaction, which is the ultimate goal of any health care system, increases

Copyright: 2018 The Author(s); Published by Rafsanjan University of Medical Sciences. This is an open-access article distributed under the terms of the¬ Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited

(6). In this regard, Bahr et al. pointed out the important role of communication of the treatment team, especially the nurses, at the time of discharge, and considered it as a factor in preventing re-admission of the patient due to recurrence of the disease (7). Flanagan et al. declared poor nurse-patient communication and weak nursing responsiveness to patient needs as the two important factors of the three factors involved in disease progress and re-admission of patients (8); to the extent that some researchers have stressed how to train nurses on effective communication both theoretically and using a simulated patient (SP) (9).

Communication is an active process; therefore, it can be influenced by various environmental or interpersonal factors (10). The personality pattern of individuals seems to be one of the important factors influencing their communication pattern (11). Personality is the largest, most powerful, and most effective factor of stability affecting the attitude, feelings, beliefs, and behavior of the humankind. McCrae and Costa's five factor model (FFM) is one of the most influential and most important models in the study of personality traits and examines the 5 main dimensions of personality including neuroticism, extroversion, experientialism, acceptability, and conscientiousness (12).

According to the studies by Plonien and Götlind, personality factors are effective in the communication of nurses as the most important element in the recovery of patient health (13, 14), as personality and personality traits form the basis of behavior, thoughts, and emotions of the individual (15). Sabzi and Yousefi reported in their study that personality traits of individuals can determine their social relationships (16). In this study, extraversion was a positive and significant predictor and a negative predictor of emotional regulation and insight in the communication, respectively. In addition, the neuroticism personality dimension was a negative predictor of perception of verbal and nonverbal messages and emotional regulation (16). In two other studies, the researchers reported that there was a positive and significant relationship between personality traits and communication skills (17, 18). Therefore, investigation of personality traits of nurses is of particular importance and is taken into account as an important factor in demonstrating their ability to provide patient care services for patients and their resilience in the hospital environment. Effective communication with patients and their companions and other health care professionals is essential to nursing (19). Therefore, determination of the level of interpersonal communication skills (ICSs) of nurses and their relevant and influential factors is one of the requirements for improving the quality of services and enhancing satisfaction (6). Therefore, the present study was conducted with the aim to determine the ICSs of nurses and their relationship with personality dimensions.

Material and Methods

The present study was a descriptive study with a statistical population including all nurses (N = 510) working in Ali-ibn Abi Talib, Moradi, and Niknafs Hospitals affiliated to Rafsanjan University of Medical Sciences, Rafsanjan, Iran, in 2015. The sample size was calculated using the Cochran formula: $\frac{\frac{z^2pq}{d^2}}{1+\frac{1}{N}(\frac{z^2pq}{d^2}-1)}$

Due to the lack of access to the estimate of the ratio, the maximum value of 0.5 was considered for P; in this case, the q-value would also be 0.5. The sample size based on the community size (N), the degree of confidence (d), and the standard percentage error of the acceptable reliability coefficient (z) of, respectively, 510, 0.05, and 1.96 was obtained as 217 individuals. Then, taking into account a potential drop of 10%, 240 nurses were selected using stratified random sampling method (based on the proportion of women to men) and entered the study. Finally, 223 assessable inventories were returned (response rate of 92.92%).

The study inclusion criteria included employment during the study, having a work experience of more than 6 months, and having a bachelor's degree or higher degree. The study exclusion criteria were a history of mental illness causing hospitalization or prescription of drug treatment, a history of death of close relatives during the past 3 months, divorce during the past year, severe marital conflicts requiring psychological counseling, reluctance to participate in the study, and incomplete inventory form.

Initially, the list of nurses was taken from the university's nursing office, and then, the nurses were selected randomly based on the women to men ratio. Subsequently, the researchers received nurses' working schedule from nursing offices of hospitals, and then, they referred to the nurses' workplaces and gave them the necessary explanations regarding the study objectives and how to complete the inventories. In the next step, the researchers assured the nurses that the

inventories would be anonymous; in addition, they reassured them that their information would be examined confidentially and collectively. Then, after receiving informed consent from the patients, and in case of their passing the inclusion and exclusion criteria, they were provided with the inventories and were requested to hand them in to the hospital's nursing office within one day after completion.

A demographic characteristics checklist including age, sex, and work experience, the Revised NEO Personality Inventory (NEO PI-R), and Burton's Interpersonal Communication Skills Inventory were used to collect data.

The original version of the NEO PI with 181 items was provided by McCrae and Costa in 1985, and after several revisions, its current version (NEO PI-R) includes 60 items (20). This inventory was translated into Persian and its factor structure was investigated by Garousi et al. This 5-factor inventory includes 60 items scored based on a 5-point Likert scale ranging from totally agree to totally disagree with a score range of 4 to 0, respectively; each 12 items are related to one of the five major factors of personality (neuroticism, extroversion, flexibility, pleasure, and accountability). The total score range for each scale was 0-48. This inventory does not have a total score. The higher the score is in any of the personality trait scales, the greater the severity of that trait is (21). In the study by Mirzaei et al., the Cronbach's alpha, total alpha, and total score retest validity of the factors of this inventory were obtained as 0.68 to 0.881, 0.95, and 6.033, respectively (22). In the present study, Cronbach's alpha of the neuroticism, extroversion, flexibility, pleasure, and accountability dimensions, and the total inventory were obtained as 0.68, 0.46, 0.68, 0.64, 0.84, and 0.72, respectively.

Burton's Interpersonal Communication Skills Inventory consists of 18 items in 3 dimensions of verbal skill, effective listening skill, and feedback skill (23). The items are scored according to a 5-point Likert scale ranging from 1 to 5 (totally disagree to totally agree, respectively). Therefore, the range of the total score will be between 18 and 90. The higher the score is, the higher the individual's use of that communication skill is. In the study by Safavi et al., the total validity of the inventory was 0.880. Moreover, the total reliability of the inventory, and the verbal skill, listening skill, and feedback skill scales was 0.800, 0.715, 0.705, and 0.700, respectively (24). Furthermore, the Cronbach's alpha of the inventory in the present study was calculated to be 0.821.

Finally, the data were collected and analyzed in SPSS software (version 17, SPSS Inc., Chicago, IL, USA). The skewness and kurtosis of the interpersonal Communication Skills score were in the range of ± 2; in addition, the significance level of the Kolmogorov-Smirnov (K-S) test of this variable was less than 0.05. However, according to the central limit theorem (CLT) and the high sample size (25, 26), the Pearson correlation coefficient, independent t-test, and multiple linear regression (MLR) tests were used to analyze the data. The significance level of the tests was considered as 0.050.

Results

In total, 223 nurses with a mean±SD age of 31.43 ± 5.95 years (range: 21-52 years) and a mean±SD work experience of 7.23 ± 5.92 years (range: 1-30 years) were studied. Of these, 146 (65.5%) were women. Independent t-test results indicated that the mean age and work experience of men nurses were significantly higher compared to the women (P = 0.012 and P = 0.021, respectively).

The mean±SD of ICS score was 57.43 ± 8.54 and the highest mean score was related to the listening communication skill (19.63 ± 3.32). There was no significant difference between men and women nurses and married and single nurses in terms of ICS and its dimensions (P > 0.050) (Table 1).

Table 1: Mean scores of interpersonal communication skills among nurses of Rafsanjan University of Medical Sciences, Rafsanjan, Iran, in 2015 based on sex and marital status (n = 223)

Variable	Mean ± SD			
	Communication skill	Verbal Skill	Listening skill	Feedback skill
Total	57.43±8.54	18.81±3.37	19.36±3.32	18.99±3.16
Man (n = 77)	57.32±10.09	18.57±3.96	1.92±3.56	18.83±3.60
Women (n = 146)	57.49±7.64	18.94±3.01	19.48±3.19	19.07±9.92
P*	P= 0.849	P= 0.345	P= 0.440	P= 0.596
Single (n = 146)	54.20±9.02	18.67±3.61	19.52±3.24	19.01±3.33
Married (n = 74)	57.87±7.56	19.09±2.85	19.84±3.47	18.93±2.84
P*	P= 0.544	P= 0.454	P= 0.353	P= 0.893

SD: Standard deviation, * According to t-test

The analysis of the results showed that 22 (9.9%), 169 (75.8%), and 32 (14.3%) of participants had a poor, moderate and good communication skills respectively. The correlation of age and work experience with ICSs (P = 0.026, P = 0.008), good listening skill (P = 0.049, P = 0.013), and feedback skill (P = 0.001) was inversely significant (Table 2).

Table 2: Pearson correlation coefficients of interpersonal communication skill and its dimensions with age and work experience of nurses of Rafsanjan University of Medical Sciences, Rafsanjan, Iran, in 2015 (n = 223)

Variable	Communication skill	Verbal Skill	Listening skill	Feedback skill
Age	r= -0.149 p= 0.026	r= -0.046 p= 0.494	r- -0.132* p= 0.049	r= -0.214** p= 0.001
Work experience	r= -0.177** p= 0.008	r= -0.081 p= 0.231	r= -0.166* p= 0.013	r= -0.218** p= 0.001

P<0.05*, p<0.01**, Pearson correlation coefficient

The five main patterns of nurses' characters were studied using the NEO PI-R. Comparison of scores revealed that the mean scores of extroversion, pleasure, and accountability of women nurses were significantly higher than those of the men nurses (P < 0.001). In addition, the mean score of neuroticism (P < 0.001) and flexibility (P = 0.013) of married nurses as well as the mean score of extroversion and pleasure (P < 0.001) of single nurses were significantly higher. The accountability of married and single nurses was not significantly different (P = 0.549).

The results of the Pearson correlation coefficient indicated that the relationship between ICSs of nurses and the personality dimensions of extroversion, pleasure, and accountability was significant (P = 0.001, P < 0.001, and P = 0.039, respectively) (Table 3).

Table 3: Pearson correlation coefficients of personality dimensions with interpersonal communication skills of nurses of Rafsanjan University of Medical Sciences, Rafsanjan, Iran, in 2015 (n = 223)

Personality dimensions	ICSs			
	Communication skill	Verbal skill	Listening skill	Feedback skill
Neuroticism	r= -0.064 p= 0.339	r= -0.033 p= 0.626	r= -0.003 p= 0.961	r= -0.203** p= 0.002
Extroversion	r= 0.226** p= 0.001	r= 0.245 p< 0.001	r= 0.127 p= 0.059	r= 0.304** p< 0.001
Flexibility	r= 0.099 p= 0.139	r= 0.041 p= 0.538	r= 0.077 p= 0.253	r= 0.002 p= 0.972
Pleasure	r= 0.276** p< 0.001	r= 0.203** p= 0.002	r= 0.223** p= 0.001	r= 0.302** p< 0.001
Accountability	r= 0.138* p= 0.039	r= 0.229** p= 0.001	r= 0.062 p= 0.357	r= 0.108 p= 0.108

ICSs: Interpersonal communication skills, Pearson correlation coefficient

MLR was used to predict communication skills of nurses based on personality dimensions. Statistical assumptions were reviewed. The predicting and dependent variables were quantitative and interval.. The normality of the distribution of error values was investigated. According to the CLT and the high sample size (25, 26), the K-S test significance level of the variables was less than 0.050. The multicollinearity was investigated among the variables and the collinearity assumption of the variables was rejected (VIF = 1.797-1.201, tolerance < 1.0). The independence of the errors was examined. The Durbin-Watson statistic was equal to 0.847, illustrating the lack of correlation among errors [regression equation was significant (P < 0.001)]. Moreover, 8.7% of the pattern of interpersonal communication of nurses was determined based on personality dimensions. Among the personality dimensions, extroversion (P = 0.020) and pleasure (P = 0.003) were able to predict the ICSs of nurses (Table 4).

Table 4: Prediction of nurses' communication pattern in Rafsanjan University of Medical Sciences, Rafsanjan, Iran, in 2015 based on personality dimensions

Model	Unstandardized coefficients		Standardized coefficients	t	P value
	B	Standard error	β		
Fixed	40.15	5.03		7.99	P<0.00
Extroversion	0.189	0.081	0.165	2.34	P= 0.02
Pleasure	0.399	0.135	0.255	2.96	P= 0.003

Discussion

The results of this study showed that 85.7% of the nurses were not able to communicate interpersonally, and their ability to communicate, hear, and comment was mediocre. Findings of Rostami (27), Khadivzadeh (11), Barati (28), Javaher (29), McCabe (30), and Alasad (31) also confirmed the results of this study. However, Zeighami evaluated the communication skills of most nurses to be good (2). It seems one of the reasons for nurses' communication skills being average is similar and somewhat flawed education that is presented to nurses according to specific guidelines (32). Of course, the working environment of the nurses must be taken into account. The present study was conducted in governmental hospitals with the highest operational capacity in areas such as trauma emergency, pediatric emergency, general emergency, general surgery, orthopedics, internal medicine, obstetrics and gynecology, and specialized departments. These environments are stressful and patients have high expectation to receive the best services in the shortest possible time. Practically, these issues influence the nurse's energy and capacity and provided that the work environment is stressful, the nurse will suffer from burnout (33, 34), and consequently, the disorderliness in the relationship between the nurse and the patient is not unexpected (35). Without doubt, these issues should not be a justification of the problem.

In this study, the mean scores of interpersonal skills of male and female nurses did not show a significant difference. In this respect, it contradicted the results of Safavi and Barati which showed that female nurses were more capable in communication skills (24, 28).

In this study, there was a meaningful and inverse correlation between age and communication skills. This result was consistent with the finding of the study of Gholami (36) and contradicted that of the study by Amiri (37). Perhaps less fatigue due to work experience, less job burnout, or less family problems are the reasons behind better communication skills of nurses of younger age.

In this study, the correlation of nurses' ICSs with the personality dimensions of extroversion, pleasantness, and accountability was significant. Leung's belief is that the relationship between personality styles and personality patterns depends, to a large extent, on the individual's view of self and self-valuation (38). Riggio considers personality as an effective factor in communication and social competence of nurses (39).

Extrovert people have a more objective and outward view and their practical activity is of higher quality (40). These people would like to influence the work atmosphere, compete with others, and tend to appear more in public gatherings (41). The ability to control impulses and desires and usage of plans and schemes in behavior are the two main characteristics of responsible people in their attempt towards reaching their objectives (42, 43). In this regard, it can be said that nurses who are hopeful, and have a positive attitude towards the future and the ability of constructive thinking, can appropriately deal with the patients and establish a constructive relationship with them in the face of problems and unexpected events. Such characteristics also help them to be aware of the patient's conditions, and consequently, through a sense of gaiety and joyfulness and a promising speech, they increase patients' hopefulness in the treatment and their recovery. As a result, the nurse will earn the patient's trust over the hospitalization period (44).

The results of this study showed correlation between the personality dimensions of extroversion, pleasantness, and responsibility and communication skills; thus, they contradict the findings of the studies by Kuntze et al. and Smith et al. (45, 46). Perhaps, in addition to intrapersonal issues such as personality, issues such as teaching effective communication (47), regional culture (10), patient's behavior (48), and intra-organizational issues (3, 49) are also important in this regard. Getting the best and fastest health care with maximum safety is the right of every

human being (50) and the nurse is at the forefront of providing these services in hospitals. In this regard, suitable communication along with adequate knowledge and a healthy personality are of the most important tools for professional and modern nursing (18).

This study also had limitations. First, in questionnaire studies, understanding of questions, bias, and self-expression are of the most important and influential factors in the accuracy and completeness of the answers. This can affect the degree of trustability and generalizability of the results.

Furthermore, inserting numerous questions in the questionnaires was of the other limitations of this study, which may result in boredom and decline in accuracy in completing the questionnaires. Finally, in this study, factors such as income, work shift, nurses' position, passing courses of effective communication, and the hospital section in which they were working were not considered. It is suggested that in future studies questionnaires with fewer items be used and the above factors (which were not included in this study) be taken into account.

Conclusion

The ICSs were at an average level among the majority of the nurses. This issue doubles the need for specialized training, review of various aspects of management, including manpower management, financial management, and welfare management; however, these factors were not investigated in the present study. Moreover, the conscientiousness personality dimensions were related to the communication skills of nurses. This can help authorities in selecting and arranging nurses in the desired wards. In this regard, considering personality traits through the use of personality tests or psychological interviews would be more beneficial.

Acknowledgment

Finally, the material and spiritual support of the Research Deputy of Rafsanjan University of Medical Sciences and patient collaboration of the nurses with the researchers in this study are sincerely appreciated.

Conflict of interest: None declared

References

1. Karimi Ziveh M. The effectioveness of communicatiom skill teaching on social development and social acceptanc of boys students of area 5 of Tehran in 2014. [Msc thesis]. Tehran, Iran: Allameh-Tabatabaee University; 2014.
2. Zeighami Mohammadi SH, Hagigi S. The association between nurses communication skills and nurse-physician relationship and collaboration. Journal of Urmia Nursing and Midwifery Faculty 2008; 6(4):189-96.
3. Valentine NM. Communicating nursing's excellence and value: on the way to Magnet. Nurs Econ 2013; 31(1):35-8, 43.
4. Nasiripour AA, Saeedzadeh ZS, Sabahi Beedgoli M. Correlation between nurses' communication skills and inpatient service quality in the hospitals of Kashan University of Medical Sciences. Journal of Health Promotion Management 2012; 1(1):45-54.
5. Hemmati M, Sheikhbaglu M, Baghaie R. Relationship between the communication skill of nurse - patient with patient safety in the critical care units. Journal of Clinical Nursing and Midwifery 2014; 3(2):77-84.
6. Farmahini Farahani M, Kashaninia Z, Hosaini MA, Biglarian A. The Effect of Communication Skills Training on Nurses on Patients' Satisfaction with Communication. Iranian Journal of Nursing Research 2007; 1(3):47-54.
7. Bahr SJ, Siclovan DM, Opper K, Beiler J, Bobay KL, Weiss ME. Interprofessional health team communication about hospital discharge: an implementation science evaluation study. J Nurs Care Qual 2017; 32(4):285-92.
8. Flanagan J, Stamp KD, Gregas M, Shindul-Rothschild J. Predictors of 30-Day readmission for pneumonia. J Nurs Adm 2016; 46(2):69-74.
9. MacLean S, Kelly M, Geddes F, Della P. Use of simulated patients to develop communication skills in nursing education: an integrative review. Nurse Educ Today 2017; 48:90-8.
10. Taylor SP, Nicolle C, Maguire M. Cross-cultural communication barriers in health care. Nurs Stand 2013; 27(31):35-43.
11. Khadivzadeh T, Katebi MS, Sepehri Shamloo Z, Esmaily H. Assessment of midwives' communication skills at the maternity wards of teaching hospitals in Mashhad in 2014. Journal of Midwifery and Reproductive Health 2015; 3(3):394-400.
12. Costa PT, McCrae RR. Normal personality assessment in clinical practice: the NEO personality inventory. Psycholo Assess 1992; 4(1):5-13.
13. Plonien C. Using personality indicators to enhance nurse leader communication. AORN J 2015; 102(1):74-80.
14. Götlind B. The phenomenon "The Genuine Meeting" in Nursing: An Interview Study with Nurses = "The Genuine Meeting" in Caring: a phenomenological study from the perspective of nurses / Birgit Götlind. 1st ed. Swedish: Linköping University; 1998.
15. Hosseini Nasab D, Mohammadi S. The relationship between the personality characteristics, mental health with emotional intelligence of girl high school third grade students in Tabriz. Journal of Instruction and Evaluation 2009; 2(8):129-50.
16. Sabzi N, Yousefi F. The role of personality dimensions in students' communication skills. Quarterly Social Psychology Research 2013; 2(8):63-84.
17. Mortazavi M. The relationship between personality characters and demographic variables with communication skills of sport experts in education

organization of Khuzestan. [Msc thesis]. Ahvaz, Iran: Shahid Chamran Univarsity of Ahvaz; 2011.
18. Bang M, Sim S. The relationship among personality, interpersonal relations and stress of clinical practice of nursing students. International Journal of Advanced Nursing Education and Research 2016;1(1):69-74.
19. Taran S. An examination of the factors contributing to poor communication outside the physician-patient sphere. Mcgill J Med 2011; 13(1):86.
20. McCrae RR, Costa Jr PT. A contemplated revision of the NEO Five-Factor Inventory. Pers Individ Dif 2004; 36(3):587-96.
21. Garousi Farshi MT, Mehryar AH, Ghazi Tabatabaei M. Application of the NEOP I-R Test and analytic evanuation of its characteristics and factorial structure among Iranian university students. Journal of Humanities 2001; 11(39):173-98.
22. Mirzae Gh, Mehrabi H, Ghahvehchi-Hosseini F, Fathi-Ashtiani A. Psychometric properties of the personality characteristics questionnaire among militaries. Journal of Military Medicine 2015;17(1):17-23.
23. Burton M. The environment, good interactions and interpersonal skills in nursing. Interpersonal Skills in Nursing: Research And Applications 1985; 76-88.
24. Safavi M, Ghasemipenchah S, Fesharaki M, Esmaeilpour Bandboni M. Communication skills and its related factors in Guilans teaching hospitals' nurses 94. Scientific Journal of Hamadan Nursing & Midiwifery Faculty 2016; 24(1):50-7.
25. Uchaikin VV, Zolotarev VM. Chance and Stability, stable distributions and their applications. Ulyanovsk, Russian Federation: Ulyanovsk State University; 1999. Available from: http://staff.ulsu.ru/uchaikin/uchzol.pdf
26. Kwak SG, Kim JH. Central limit theorem: the cornerstone of modern statistics. Korean J Anesthesiol 2017; 70(2):144-56.
27. Rostami H, Golchin M, Mirzaei A. Evaluation of communication skills of nurses from hospitalized patients' perspective. Journal of Urmia Nursing and Midwifery Faculty 2012; 10(1):27-34.
28. Barati M, Afsar A, Ahmadpanah M. Assessment of communication skills level among healthcare practitioners. Scientific Journal of Hamadan University of Medical Sciences 2012;19(1):62-9.
29. Javaher AA, khaghanizade M, Ebadi A. Study of communication skills in nursing students and its association with demographic characteristics. Iranian Joural of Medical Education 2014; 14(1):23-31.
30. McCabe C. Nurse–patient communication: an exploration of patients' experiences. J Clin Nurs 2004; 13(1):41-9.
31. Alasad J, Ahmad M. Communication with critically ill patients. J Adv Nurs 2005; 50(4):356-62.
32. Chant S, Tim, Randle J, Russell G, Webb C. Communication skills training in healthcare: a review of the literature. Nurse Educ Today 2002; 22(3):189-202.
33. Naseh M, Jalilvand J, Vahdani M. Relationship between personality dimensions and job burnout of nurses. Modern Care Journal 2012; 9(2):87-94.
34. Mazloomy Mahmoodabad SS, Safaeifar M, Gharraee B, Fallahzadeh H. Effect of communication skills training on components of burnout among nurses work in Tehran university of medical science hospitals. The Journal of Toloo-e-behdasht 2016; 15(3):198-208.
35. Ahmadi A, Ahmadi M, Elyasi F, Ahmadi A, Ahmadi N. The relationship of occupational burnout and communication skills in nurses. Journal of Mazandaran University of Medical Sciences 2013; 23(106):130-9.
36. Gholami HR, Sarhangy F, Mokhtari Nouri J, Javadi M. Nurses' communication skills in military hospitals. Journal of Nursing and Midwifery Sciences 2015; 2(1):40-5.
37. Sadeghi Sharme M, Amiri H, Karimi Zarchi A, Bahari F, Binesh A. Effectiveness of Solution-Focused Communication Training (SFCT) in nurses' communication skills. Iranian Journal of Military Medicine 2013; 14(4):271-8.
38. Leung SK, Bond MH. Interpersonal communication and personality: self and other perspectives. Asian J Soc Psychol 2001; 4(1):69-86.
39. Riggio RE, Taylor SJ. Personality and communication skills as predictors of hospice nurse performance. J Bus Psychol 2000; 15(2):351-9.
40. Siasi AA. Personality theories. 16 th ed. Tehran: University of Tehran Press; 2016.
41. Matthews G, Deary IJ, Whiteman MC. Personality traits. 3rd ed. New York, United States: Cambridge University Press; 2009.
42. John OP, Robins RW, Pervin LA. Handbook of Personality: Theory and Research. 3rd ed. New York, United States: Guilford Press; 2008.
43. Shaye A. Infidelity in dating relationships: Do big five personality traits and gender influence infidelity? 1st ed. Los Angeles, California, United States: Alliant International University, California School of Professional Psychology; 2009.
44. Davoodi I, Aliakbari Dehkordi M, Raisian S, Mohseni P. The relationship between emitional intelligence and personality characters of nurses with patient satisfaction of nursing services in the academic Hospitals of Ahvaz. Jentashapir Journal of Health Research 2011; 1(2):10-9.
45. Kuntze J, van der Molen HT, Born MP. Big five personality traits and assertiveness do not affect mastery of communication skills. Health Professions Education 2016; 2(1):33-43.
46. Smit GN, van der Molen HT. Three methods for the assessment of communication skills. Br J Educ Psychol 1996; 66(4):543-55.
47. Kourkouta L, Papathanasiou IV. Communication in nursing practice. Mater Sociomed 2014; 26(1):65-7.
48. Bramhall E. Effective communication skills in nursing practice. Nurs Stand 2014; 29(14):53-9.
49. Lapeña-Moñux YR, Cibanal-Juan L, Pedraz-Marcos A, Macía-Soler ML. Interpersonal relationships among hospital nurses and the use of communication skills. Texto & Contexto - Enfermagem 2014; 23(3):555-62.
50. Abbasi M, Dehghani Gh, Rezaie R. Legal requirements of international documents in public health and the challenges facing it. Journal of Medical Council of Iran 2015; 33(2):138-46.