



Evaluating the Clinical Competence of Junior Nursing Staff Based on Self-Assessment in Valiasr Hospital of Birjand in 2015 - 16

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Abstract

Background: Evaluating the clinical competence of nurses plays a significant role in managing the care process and determining their educational needs. This study aimed to evaluate the clinical competence of junior nursing staff in Valiasr hospital of Birjand based on self-assessment.

Methods: In this descriptive analytical study, all nurses working in Valiasr hospital of Birjand (90 nurses), who qualified with the inclusion criteria, participated. The data collection tool included 2 questionnaires, which consisted of demographic information and clinical competence of nursing (CIRN) that were completed by nurses. Data were analyzed using SPSS 15 statistical software, independent t-tests, One-way ANOVA, Tukey range follow-up, U Mann-Whitney test, as well as Kruskal-Wallis and Friedman tests.

Results: The mean score of clinical competence in the nurses was 2.98 ± 0.50 . The highest mean was related to the ethical and legal activities component (3.18 ± 0.56) and the lowest mean was devoted to the professional development component (2.89 ± 0.63). The mean score of nurses' clinical competence in general and its components in terms of gender, marital status, age, work experience, location of work, type of employment, and overtime hours was not significantly different ($P > 0.05$), however, the mean score of clinical competence in interpersonal relationships component for nurses with 2-3 years of work experience was significantly higher than nurses with more than 3 years of work experience ($P < 0.05$).

Conclusions: According to the results, reviewing the curricula for improving clinical competence of nurses and applying new educational methods for junior nurses by nursing managers are recommended.

Keywords: Clinical Competence, Nursing Staff Hospital, Self-Assessment

1. Background

The health sector has been considered among the most significant areas of sustainable health development that has a direct association with human health and holds the crucial responsibility of maintaining health in human society (1). Nurses, as the largest group providing services in the health systems and holding considerable potential, could affect the quality of health care and nursing quality influence the efficiency of the health system directly (2).

Nurses play an essential role in the continuity of care and service accountability to patients where this responsibility requires their clinical competence (3). Clinical competence is defined as the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served (4). Clinical competence is a changing and dynamic pro-

cess including skills and abilities needed in the cognitive, psychomotor, and affective areas for a safe performance consistent with standards in the real environments (5). Clinical competence is considered as an influential factor in the patients' satisfaction as well as safety (6) and the higher this competency in nurses, the higher the possibility of practical efficiency of their skills in clinical setting (7).

Various factors such as rapid changes in health monitoring systems, the necessity of safe and affordable services, increased awareness about health-related issues among people, and elevated expectation of high quality services along with organizations tendency toward applying skilled workforce has highlighted the importance of clinical competence more than ever (8). Therefore, nurses' clinical competence evaluation becomes necessary. Assessment of clinical competence of nurses plays an important role in managing care process and achieving the goals of care (9). It is also influential in identifying areas in the

need of improvement and ensuring the provision of optimal care. The significance of this subject has turned the clinical competence into the most fundamental factor in the performance of quality assurance systems, workforce planning, as well as human resource management, and is considered as the key responsibility of the nursing managers in clinical settings (10).

Evaluating the clinical competence not only leads to more recognition and knowledge of the nurses and managers toward nurses' general competency, but also identifies their cognitive and skill deficiencies (11). Among different methods of evaluation, self-assessment or assessment of clinical competence by nurses themselves allows them to improve their clinical practice in the workplace through increasing self-awareness and commitment to change. In fact, through self-assessment and deployment of the reflection process, nurses will gain deeper insight into their performance and will identify strengths, challenges, and the areas in need of improvement in their performance, and in this way, play a more active role in their continuous learning process (12).

Salonen et al., (2007) conducted a study on 235 newly graduated nurses working in emergency and intensive care centers at a hospital in Finland and assessed their clinical competence from average to good (13). Parsa Yekta et al. (2007), in a study, investigated 91 senior nursing students and reported their clinical competence to an average level (14).

Based on the importance of the nursing profession in the protection and improvement of the health of society as well as the significance of clinical competence of nurses in caring practices under the framework of professional criteria, standards, avoidance of committing errors and negligence (15), awareness of junior nurses' position regarding the acquisition of nursing skills seems necessary and will contribute greatly to the development of competent personnel in the health system (16). Therefore, this study was conducted to assess the clinical competence of junior nursing staff of Birjand Vali Asr (AS) hospital based on self-assessment.

2. Methods

In this descriptive analytical study, all nurses (90 people) working in Valiasr hospital of Birjand who qualified with the inclusion criteria was entered by the census method. Inclusion criteria included work experience less than 5 years, at least a bachelor's degree, no history of an administrator position (matron), and willingness to cooperation.

The data collection instrument questionnaires included demographic information such as age, sex, educa-

tion level, marital status, work location, work experience, number of overtime hours, and the nurse clinical competence questionnaire (CIRN or competency inventory for registered nurse). The latter questionnaire was developed and psychometrically evaluated by Liu et al. (2009), which consisted of 55 items. The validity as well as reliability of tool for assessing nurses' clinical competence by self-assessment and colleague assessment have been approved (17). This tool assesses the competency of nurses in 7 dimensions of clinical care (10 items), leadership (9 items), ethical and legal activities (8 items), professional development (6 items), coaching and training (6 items), desire to research and critical thinking (8 items), as well as interpersonal relationship (8 items). This scale is graded based on the 5-point Likert scale from 0 to 4; 0: no competency, score 1: little competency, score 2: moderate competency, score 3: enough competency, and score 4: high competency. By adding the item scores of each subscale and dividing it by the number of its related items, the subscale score is achieved that the mean score above 3, between 2 - 3, and less than 2 are considered as high, moderate, and low competency respectively (17).

The reliability of this questionnaire in the Liu et al. (2009) study, using Cronbach's alpha coefficient, was totally 0.91 and 0.72 - 0.90 for its dimensions (18), while the Ghasemi et al. (2014) study was 0.97 and 0.68 - 0.87 for its dimensions (17). The data were analyzed in SPSS 15 statistical software. Normal distribution of data was examined by Kolmogorov-Smirnov test. According to the normal distribution of clinical competence variables in general and the components of clinical care, leadership and ethical and legal activities, parametric independent t-tests, one-way ANOVA, and Tukey range post hoc were utilized. Since there was no normal distribution in the variables of interpersonal relations, professional development, coaching and training, as well as desire to research and critical thinking, the nonparametric Mann-Whitney U test and Kruskal-Wallis test were used, while the Friedman test was applied to compare mean of the clinical competence component. The Ethics Committee of Birjand University of Medical Sciences approved the ethical considerations of the present study under No Ir.bums.REC.1394.417.

3. Results

Among 90 studied nurses with an average age of 24.53 \pm 2.51 years, 25 nurses (27.8%) were men and 65 (72.2%) were female. Most of the subjects were married (54.4%), between 25-24 years of age (41.1%), and had a work experience of 2 - 3 years (52.2%). Other demographic characteristics are presented in Table 1. Clinical competence of 6 nurses (6.7%) was low, 36 nurses (40%) were moderate and 48 nurses (53.3%)

were high. The total mean score of the studied nurses obtained was 2.98 ± 0.50 . The highest average was concerned with the component of ethical and legal activities (3.18 ± 0.56), the lowest one was related to professional development (2.89 ± 0.63) ($P < 0.001$), and the average of ethical and legal activities was significantly higher compared with other components (Table 2).

The mean score of nurses' clinical competence in general and its components in terms of gender, marital status, age, work experience, location of work, type of employment, and overtime hours were not significantly different ($P > 0.05$), however, the mean score of clinical competence in interpersonal relations of nurses with work experience of 3-2 years in comparison to nurses with more than 3 years of work experience was significantly higher ($P = 0.04$) (Table 3).

4. Discussion

Based on the results of this study, the mean score of clinical competence in all nurses was 2.98 ± 0.50 , which is considered higher than average. The highest and lowest score of clinical competence obtained was 3.18 ± 0.56 and 2.89 ± 0.63 for ethical and legal activities as well as professional development, respectively.

Abdi et al. (2015), in their study on nurses' clinical competence, reported the mean score of 69.56 ± 10.74 , which was higher than average. The highest and lowest clinical competencies resulted for "management abilities" and "assistance and help to the patients" respectively (15). Komeili-Sani et al. (2015), in their study on nurses' clinical competencies, achieved the mean score of 61.15 ± 18.48 (more than average clinical competence) where nurses had their best competency in coaching and training and their lowest score in quality assurance area (19). The results of the Bahreini et al. (2010) study reflected scores in nurses' clinical competence of the Shiraz University and the Booshehr University more than average (86.39 ± 10.03 and 71.07 ± 13.66 , respectively). These nurses expressed their highest competency in the management conditions, their lowest level in coaching and training component, and quality assurance in Booshehr and Shiraz hospitals, respectively (20). Parsa Yekta et al. (2007) assessed the clinical competence of fourth-year undergraduate nursing students as moderate (14). In the Hakimzadeh et al. (2012) study, this competency was calculated more than moderate (21).

The results of the above-mentioned studies are consistent with this research, however, Jafari Golestani, as quoted from Bahraini et al. (2010) in examining the clinical activities of the junior nurses in one of Tehran's medical and educational center, assessed their clinical competence as

weak in the areas of communication with patients, cognitive, and clinical performance in all studied sectors (12) that was not consistent with the present study.

Various factors influence on the acquisition, preservation, and promotion of the clinical competence of nurses, which among them, we can refer to organizing clinical setting, the psychological atmosphere, continuing education programs, available technologies, effective management, control, and supervision (22). In this regard, increasing skill levels, and in general, clinical competencies of the junior nurses through organizing committees as well as adoption of new teaching methods, conferences, and training courses are recommended.

Due to different measuring tools of clinical competence, the comparison between the highest and the lowest skill of clinical competence in the present and above-mentioned studies was not possible; nevertheless, internal and personal factors such as knowledge and skills, work ethics and accountability, as well as external or environmental factors such as management and educational factors can contribute to these differences. Since in the present study the highest average of clinical competence was devoted to ethical and legal activities, it can be said that probably holding professional ethics training courses and conferences in this field in recent years could be effective in promoting the ethical and legal criteria in nurses. Although ethics are significant in all jobs, they are more necessary in nursing. Ethical behaviors along with responsibility of nurses play an important role in improving and returning patients to their health. Furthermore, it could be argued that the nursing profession is based on ethics (23). Observing ethical criteria in nursing performance is more significant and sensitive than other caring issues. Following the ethical standards in nursing results in improving the quality of nurses' services. This improvement has a considerable influence on promoting the patient's recovery process; therefore, some researchers in the clinical nursing consider care as a combination of 3 basic principles of ethics, clinical judgment, and care (24).

The lowest mean score of clinical competence was related to professional development. Since professional development is regarded as the most influential point in the performance of quality assurance systems, workforce planning, and human resource management (25), its improvement is crucial in ensuring care desirability. Results showed that the mean score of clinical competence in interpersonal relations of nurses with the work experience of 2 - 3 years was significantly higher than the score of nurses with more than 3 years of work experience, however, the mean scores of the nurses' clinical competence based on gender, marital status, age, work experience, location of work, type of employment, and overtime hours

Table 1. Demographic and Job Characteristic of the Nurses

Variable	Frequency	Percent
Sex		
Male	25	27.8
Female	65	72.2
Marital status		
Single	41	45.6
Married	49	54.4
Age (years)		
≤ 23	32	35.6
24 - 25	37	41.1
> 25	21	23.3
Work history (years)		
< 2	26	28.9
2 - 3	47	52.2
> 3	17	18.9
Working ward		
General (infectious, internal, obstetrics, pediatrics)	26	28.9
Special (Maternity, operating room, CCU, PICU, ICU, dialysis)	42	46.6
Emergency	22	24.4
Employment status		
Apprenticeship, contractual	70	77.8
Fixed-term, permanent	20	22.2
Overtime hours (per month)		
< 60	24	26.7
60 - 100	35	38.9
> 100	31	34.4
Working shift		
Fixed	10	11.1
Rotation	80	88.9

Table 2. Compare Mean of Dimensions of the Clinical Competence at Nurses

Variable	Mean	Std Deviation
Clinical care	2.93	0.55
Leadership	2.90	0.62
Interpersonal relationship	2.98	0.60
Ethical and legal activities	3.18 ^a	0.56
Professional development	2.89	0.63
Coaching and training	2.97	0.67
Desire to research and critical thinking	2.98	0.66
Friedman test		P < 0.001

^aThe mean score of ethical and legal activities was significantly higher than other components.

were not significantly different. These results are consistent with the studies of Parsa Yekta et al. (14), Bahrain et al. (12), and Namadi-Vosoughi et al. (5).

Komeili-sani et al. (2015) confirmed that all fields of clinical competence in nurses have a direct association with their work experience except the areas of therapeutic interventions, occupational, and organizational responsibilities (19). This result is not consistent with the present

study.

Researchers believe that low salary, high burnout resulting from heavy duty, and job dissatisfaction cause increased burnout and dissatisfaction with increased work experience in nurses. These results reflect in their assessments and can therefore be a reason for higher clinical competence in interpersonal relations in nurses with lower work experience.

Table 3. Compare Mean of Dimensions of the Clinical Competence at Nurses in the Base of Demographic Characteristic

Variable	Clinical Care	Leadership	Interpersonal Relationship	Ethical and Legal Activates	Professional Development	Coaching and Training	Desire to Research and Critical Thinking	Clinical Competence Total
Sex								
Male	3.02 ± 0.57	3.01 ± 0.63	3.07 ± 0.64	3.14 ± 0.57	2.93 ± 0.72	2.93 ± 0.77	3.10 ± 0.60	3.04 ± 0.55
Female	2.90 ± 0.54	2.86 ± 0.61	2.94 ± 0.58	3.19 ± 0.56	2.87 ± 0.60	2.99 ± 0.63	2.94 ± 0.68	2.95 ± 0.49
Marital status								
Single	2.89 ± 0.61	2.95 ± 0.58	2.96 ± 0.56	3.18 ± 0.55	2.96 ± 0.69	2.99 ± 0.68	3.02 ± 0.62	2.99 ± 0.51
Married	2.97 ± 0.49	2.85 ± 0.66	2.99 ± 0.63	3.17 ± 0.57	2.83 ± 0.58	2.96 ± 0.66	2.95 ± 0.68	2.96 ± 0.50
Age								
≤ 23 years	3.01 ± 0.48	3.00 ± 0.62	2.96 ± 0.65	3.19 ± 0.59	2.91 ± 0.61	3.06 ± 0.58	3.00 ± 0.62	3.02 ± 0.48
24 - 25 years	2.93 ± 0.64	2.93 ± 0.69	3.03 ± 0.63	3.23 ± 0.56	2.96 ± 0.60	3.03 ± 0.67	2.99 ± 0.66	3.01 ± 0.55
> 25 years	2.81 ± 0.45	2.70 ± 0.62	2.90 ± 0.45	3.06 ± 0.52	2.73 ± 0.72	2.75 ± 0.76	2.93 ± 0.73	2.84 ± 0.44
Work history								
< 2 years	2.83 ± 0.57	2.83 ± 0.74	2.83 ± 0.64 ^a	3.17 ± 0.61	2.84 ± 0.67	2.89 ± 0.76	2.96 ± 0.64	2.91 ± 0.59
2 - 3 years	3.06 ± 0.51	3.00 ± 0.61	3.12 ± 0.55	3.22 ± 0.56	2.94 ± 0.60	3.09 ± 0.63	3.06 ± 0.71	3.07 ± 0.47
> 3 years	2.74 ± 0.56	2.71 ± 0.39	2.79 ± 0.55 ^b	3.06 ± 0.48	2.80 ± 0.69	2.77 ± 0.59	2.81 ± 0.53	2.81 ± 0.41
Working ward								
General	2.85 ± 0.59	2.83 ± 0.68	2.88 ± 0.62	3.07 ± 0.61	2.78 ± 0.73	2.91 ± 0.70	2.88 ± 0.73	2.89 ± 0.58
Special	2.95 ± 0.57	2.94 ± 0.64	2.97 ± 0.63	3.21 ± 0.58	2.90 ± 0.62	2.97 ± 0.66	3.01 ± 0.64	2.99 ± 0.50
Emergency	3.00 ± 0.46	2.90 ± 0.52	3.10 ± 0.50	3.23 ± 0.47	2.99 ± 0.54	3.06 ± 0.67	3.05 ± 0.62	3.05 ± 0.43
Employment status								
Apprenticeship, contractual	2.97 ± 0.55	2.94 ± 0.67	2.98 ± 0.61	3.17 ± 0.60	2.89 ± 0.63	3.01 ± 0.71	2.99 ± 0.69	2.99 ± 0.53
Fixed-term, permanent	2.81 ± 0.54	2.74 ± 0.38	2.96 ± 0.55	3.18 ± 0.43	2.87 ± 0.66	2.87 ± 0.51	2.96 ± 0.53	2.91 ± 0.40
Overtime hours (month)								
< 60 hours	2.96 ± 0.69	2.97 ± 0.61	3.04 ± 0.54	3.16 ± 0.63	2.88 ± 0.74	3.05 ± 0.64	2.96 ± 0.73	3.00 ± 0.51
60 -100 hours	2.97 ± 0.38	2.93 ± 0.55	3.02 ± 0.52	3.30 ± 0.39	2.99 ± 0.60	2.98 ± 0.63	3.09 ± 0.65	3.04 ± 0.40
> 100 hours	2.88 ± 0.59	2.80 ± 0.71	2.88 ± 0.71	3.04 ± 0.71	2.78 ± 0.60	2.90 ± 0.74	2.88 ± 0.66	2.88 ± 0.60

^aValues are expressed as mean (SD). Significant at P = 0.04, a: < 2 years, b: 2 - 3 years, c: > 3 years.

4.1. Conclusion

According to the results, reviewing the curricula for improving clinical competence of nurses and applying

new educational methods for junior nurses by nursing managers are recommended.

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