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**Original Article**

# Relationship between clinical competence and motivation needs of nurses based on the McClelland theory

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ABSTRACT

**Background & Aim:** Nurses' clinical competence is the most important topics of nursing professional influenced by intrinsic motivational factors in addition to external motivational factors. This study is designed to determine the relationship between clinical competence and motivational factors from McClelland's theory of needs that include: need for affiliation, need for achievement and need for power.

**Methods & Materials:** This descriptive–correlation survey was performed on 200 nurses in three hospitals of Babol University of Medical Sciences, by simple random sampling method. Data collection tools for this study were included: demographic information, motivational needs questionnaire, and clinical competence questionnaire. Among 200 questionnaires distributed, 175 questionnaires were collected, of which 171 questionnaires completed (response rate 87.5%), this number exceeded the number was defined by sample size calculation as based sample (165 participants). The data after collecting were analyzed, using SPSS, statistical software version 19 with descriptive statistics and Pearson tests, ANOVA test, Scheffe test, and t-test.

**Results:** Based on the results of the survey, there was a significant relationship between clinical competence and the motivation need for affiliation ($r = 0.377$, $P = 0.000$), need for achievement ($r = 0.291$, $P = 0.000$) and need for power ($r = 0.200$, $P = 0.009$). As well as corresponding self-assessment nurses, need for achievement with the highest mean of $45.27 \pm 6.39$ ranked first, need for affiliation with a mean of $44.36 \pm 5.83$ ranked second and need for power with a mean of $39.24 \pm 7.19$ was ranked third. In addition, the results showed significant differences in clinical nurses competence of hospital "C" with a mean of $115 \pm 14.97$ compared with nurses competence of hospital "A" with a mean of $122.55 \pm 11.65$ and hospital "B" with a mean of $121.67 \pm 9.57$.

**Conclusion:** There is a significant relationship between motivational needs and clinical competence, hence that the strongest relationship had existed between need for affiliation and clinical competence and the weakest relationship had existed between need for power and clinical competence, so more attention by nursing managers is essential to provide appropriate feedback to steer nurses' efforts for improving patients' care.

## Introduction

Nursing is essentially clinical, and most of the researches' programs in the field are also focused on clinical activities (1), therefore, clinical competence of nurses is of great importance to recognize their professional and educational needs. Nowadays, quality assurance of cares to ensure clinical competence of nurses in hospitals and other functioning environments is the concern and the center of attention of managers and caring systems (2).

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Clinical competence is a combination of ethics and values and its reflection is in the knowledge and skills. Moreover, honesty, caring, communication skills, and adaptability are well-known hallmarks of a person's qualification (2). Given the close association between clinical competency and quality of care, clinical competence in nursing practice as a discipline, has a unique position (3). Currently, lack of nurses' clinical competence is one of the most important problems that cause issues in the provision of nursing services (4). Evidences exist indicating a gap between theory (what is being trained in class) and practice (what is implemented in practice) (5). Thus, the need to reform nursing academic education and programs with much emphasis on competence to provide quality services are induced (6). On the other hand, according to conducted researches, a lot of factors exist that affect the clinical competence of nurses including: experience, environment, taking advantage of opportunities, motivation, theoretical knowledge, and individual characteristic (7). Motivation is one of the factors influencing clinical competence, though in studies conducted on the relationship between manifestation of clinical competence – the performance – and the motivation not clinical competence by itself which is a potential power. Al-Jishi (8) believes that regarding performance and motivation effects on each other, more motivated nurses are more satisfied with their performances' and less willing to quit their jobs, while losing motivation affects their performance negatively. Therefore, concerning the close relationship between clinical practice and performance (6), we can conclude that there is a direct relationship between motivation and clinical competence. David Clarence McCelland motivation needs theory, which is more concerned with the aspects of learning and attaining, has been selected as the theoretical framework to investigate its effects on clinical competence.

David Clarence McCelland introduced needs acquired gradually and through experience. These needs include need for achievement, need for affiliation and need for power. Individuals in need of achievement, permanently desire to be appreciated. They prefer to receive feedbacks on how well they fulfill their task. People who are achievement-motivated typically do not like to be engaged in team works, they prefer to master a task or situation individually. These people avoid low risk tasks with no appreciable results. On the other hand, they also keep away from high risk tasks doomed to failure. Money is not a motivation for them unless given as feedback or encouragement. They set real and reasonable goals to achieve. In contrast, those who seek affiliation are looking for coordinated relationship and harmony with others. They are willing to obey the group and avoid expressing themselves. They are wishing to present a positive image acceptable by others. Unlike the previous mentioned people, these individuals enjoy being a part of groups and maintaining social relationships. Finally, people in need of power desire to influence others and achieve higher goals. People in this category enjoy offering suggestions in meetings, competition and winning. They hate losing. These people are not afraid to confront others and be against them. They do not expect to be encouraged or approved, just waiting and agree to be complied (8).

Clinical competence of nurses is their professional necessity; so regarding their motivation needs it seems necessary to carry out a study to investigate the correlation between clinical competency and motivation needs for the appropriate assignment of nurses. Therefore, this study was conducted to examine this relationship.

## Methods

This is a descriptive–correlation study. A total of 200 nurses in three hospitals affiliated with Babol University of Medical Sciences have been invited to participate in the study. After approval of the proposal by the Ethics Committee and obtaining a referral from the Nursing and Midwifery Care Research Center of Tehran University of Medical Sciences, we received a list of nursing personnel of each unit.

Using table of random numbers, subjects selected using simple random sampling method. A number of 165 subjects have been selected. Considering the probability to remove some subjects, a number of 200 nurses have been consid-

ered. Sample has been classified according to hospital wards into medical, surgery, and emergency wards. Inclusion criteria in the study for the nurses was having a B.A. university degree with at least 6 months job experience in a hospital without having the position of being a supervisor or a head of nurses. Subjects have been selected from three hospitals: 40 from Yahya Nejad Hospital, 70 from Beheshti Hospital, and 90 from Rohani Hospital.

After obtaining consent from participants, the survey questionnaire consisting of demographic information, clinical competence, and motivational needs information were given to be filled by them for self-evaluation. The same number of clinical competency questionnaires with each nurse's name printed at the top had been given to the head nurses to assess clinical competence score of subjects without further notice of the self-assessment results. Individual questionnaires were distributed at the beginning of the shift and collected at the end of the shift. The process of delivering and collecting of questionnaires with head nurses was longer and sometimes it took a week. Of 200 questionnaires distributed, 175 questionnaires were collected, of which 4 were excluded from the research due to incomplete questionnaires and the present project was carried out with 171 participants.

This study collected data on motivation needs, by a questionnaire combined of Mains and Moss (9), Steers and Braunstein (10) questionnaires adjusted in a five-point Likert scale. After translating, the questionnaire was revised by seven masters of the nursing faculty to check its validity. The questionnaire after content validity consisted of 36 questions analyzing three dimensions of needs, i.e., need for affiliation (12 items), need for achievement (12 questions) and the need for power (12 questions) according to Likert scale, with score "1" for "never" and score "5" for "always" has been measured. According to the questionnaire, scale scores range varies between 36 and 180. To assess questionnaire' reliability, 10 nurses were tested and then re-tested in a 2-week interval. Calculated reliability of various dimensions of the questionnaire is as the followings: need for affiliation ($r = 0.96$); need for achievement ($r = 0.85$); and need for power ($r = 0.87$).

To collect data on the clinical competence, Meretoja clinical competence questionnaire translated, validated, and made reliable by Bahraini was used. The content validity of the questionnaire has been conducted by seven masters. Finally 32 questions (out of 73 Meretoja questions) considering seven dimensions of clinical competence: the assistance, helping patient, teaching and guiding, diagnostic proceeding, management capabilities, treatment, quality assurance, and organizational and professional tasks using Likert scale, with score "1" for "never" and score "5" for "always" has been measured. The minimum and the maximum scores of the questionnaire were "32" and "160", respectively. The questionnaire was pre-tested and re-tested and the result of $r = 0.82$ was obtained.

Collected data have been analyzed using SPSS software version 19. For data analysis, descriptive statistics, ANOVA tests, t-test, Pearson test, and Scheffe were used.

## Results

171 questionnaires out of total of 200 distributed questionnaires were analyzed. The number exceeds the number determined based on sample size calculations (sample size = 165).

According to the results of descriptive statistics, 26.3% of participants in the study consisted of men with an average age of $36.18 \pm 7.67$ and 73.7% were female with an average age of $32.72 \pm 5.64$. About 13% of subjects were single and 87% married.

About 27.5% of participants were employed in intensive care units, 30% in surgery wards, 26% in internal wards, and 13.5% in emergency wards (Table 1). About 45.6% of participants were hired on a contract basis, others were employed or vocational trainee. Furthermore, nurses with 5–10 years of experience comprised 46.8% of the subjects at the highest frequency.

Analysis of the motivation needs self-reported questionnaires shows that the need for achievement with an average score of $45.27 \pm 6.39$ stands in the first place, and then the need for affiliation with an average score of $44.36 \pm 5.83$ and the need for power with an av-

erage score of 39.24 ± 7.19 are at the second and third orders, respectively. The average score of nurses according to self-reported clinical competence questionnaires was 123.59 ± 17.18, while the evaluations made by head nurses showed the average score of 115.31 ± 18.65. Also, averaging the evaluations made by head nurses and nurses brought us the average score of 119.74 ± 12.49.

Pearson's test revealed that there is the strongest significant correlation between need for affiliation and clinical competence (r = 0.377, P = 0.000). The relationship between need for achievement and clinical competence (r = 0.291, P = 0.000) was the second, while the relationship between need for power and clinical competence (r = 0.200, P = 0.009) was ranked third (Table 2).

Although all three hospitals nurses in comparison had an appropriate levels of clinical competence (96–128), ANOVA test suggests that the level of nurses' clinical competence in hospital "C" was significantly lower than that of hospitals "A" and "B". This finding was confirmed by Scheffe test (Tables 3 and 4).

Independent t-tests, ANOVA, and Pearson did not show any significant relations between motivation needs variables and clinical competence, and demographic and occupational characteristics.

## Discussion

The main objective of this study was to determine the motivational factors influencing nurses' clinical competence. The results showed that, there is a significant correlation between clinical competence and all three acquired needs of McCelland theory. Of the three motivation needs, the first priority was related to need for affiliation. This finding is somehow consistent with Adib-Hajbaghery and Dianati (11) believing that nursing profession needs social, artistic, and seeking characteristics such as patience, closeness, social behavior, spirit of cooperation and helping others, sense of responsibility, and love for others. In addition, Khomeiran et al. (12) in a qualitative research on factors affecting the clinical competence introduced a factor known as "character traits" which is closely related to the need for affiliation by McCelland theory. Nurses who were under the influence of "character traits" said that what makes their success in the workplace is their willingness to ask questions and get help from others (from doctor and/or nurse assistant) to take better care of the patient. They preferred their patients than their pride. Marquis and Houston (13) belive that need for affilliation in women is stronger than men and nurses have a high level of this need. This finding is not confirmed by this study. There is no significant correlation between the need for affiliation and gender. This is because men acquire the need for affiliation characteristics during the process of professionalization.

**Table 1.** Frequency distribution of nurses in hospital wards

| Wards | Nurse frequency | % |
|---|---|---|
| ICU/CCU/NICU | 47 | 27.5 |
| Surgery (orthopedic, surgery and transplantation, ENT, caesarean) | 52 | 30.0 |
| Internal (neurology, internal, cardiology, infectious, and digestive) | 49 | 29.0 |
| Emergency | 23 | 13.5 |
| Total | 171 | 100.0 |

ICU: Intensive care unit; CCU: Critical care unit; NICU: Neonatal intensive care unit; ENT: Ear, nose, and tongue

**Table 2.** Motivation variables average and their relation to clinical competence

| Variable | Average | SD | Relation to clinical competence based on Pearson's test | P-value |
|---|---|---|---|---|
| Need for achievement | 45.27 | 6.39 | r = 0.291 | p<0.001 |
| Need for affiliation | 44.36 | 5.83 | r = 0.377 | p<0.001 |
| Power need | 39.24 | 7.19 | r = 0.200 | P = 0.009 |

**Table 3.** Clinical competence comparison in studied hospital

| Variable | Clinical competence average score | SD |
|---|---|---|
| Hospital A | 122.55 | 11.65 |
| Hospital B | 121.67 | 9.57 |
| Hospital C | 115.84 | 14.97 |

**Table 4.** Results of Scheffe test

| Hospital (i) | Hospital (j) | Average (i-j) | SD | P-value |
|---|---|---|---|---|
| A | B | 0.88 | 2.48 | 0.93 |
| A | C | 6.71 | 2.55 | 0.03 |
| B | A | −0.88 | 2.48 | 0.93 |
| B | C | 5.82 | 2.10 | 0.02 |
| C | A | −6.71 | 2.55 | 0.03 |
| C | B | −5.82 | 2.10 | 0.02 |

The highest rank in the rankings of needs assigned to the need for achievement. Khomeiran et al. (2006), uses motivation as a factor to describe the nurses who initially had no interest in the nursing field before beginning the nursing but become conscientious individuals to the task after starting their work at the hospital. These nurses explaining their behavior say that the patient satisfaction gives them the necessary energy for work and efforts in the field of nursing (12).

This explanation shows the relationship between "motivation" in Khomairan study and the need for achievement by McCelland theory. In the same research conducted by the Department of Nursing Research, Korea University (14) confirms the results. Possible answers about why the subjects rated high on need for achievement on studies can be due to the lack of appropriate response to the needs of affiliation of nurses by nursing systems.

Though there is a significant positive relation with clinical competence and need for power, the magnitude of the correlation is not so high. This is probably due to a majority of nurses (90%) are women in nursing and they are unwillingness to assume power. Meanwhile, other studies has shown that hospitals allowing nurses to act independently and participate in the decision making gain the greatest success with the recruitment and the maintenance of them. Further studies on the role of power in nursing have shown that in hospitals where nurses are taking control of the situation, patient satisfaction dramatically increases (15).

This study shows no relationship between demographic characteristics such as age, sex, marital status, experiences, experiences in the current ward, working shifts, and motivation needs. This may result from the lack of effective and efficient use of promotional methods that prevent nurses to compete with each other.

In addition to the above mentioned, the results of this research on clinical competence indicates no significant correlation between the clinical competence and age, total work experience, and experience in the current ward which is in compliance with Bahreini et al. (16). According to Bahreini et al. the problem may be caused by low salary, burnout caused by heavy work and job dissatisfaction among nurses. Nurses burnout and dissatisfaction increase with rising age and experience, so they present this dissatisfaction in their evaluations. In addition to the above, it can be mentioned that experienced and qualified personnel withdraw from clinical tasks while engaging in non-direct care or management as in charge. Khomairan et al. has the opposite view (12). Also a study on clinical competencies of 1044 operating room nurses have indicated that demographic characteristics of age, gender, experience or work experience and employment status were significantly related to clinical competence (17). Perhaps, it is because of the rather large number of participants in the study that small but significant factors revealed through statistical calculations. Moreover, there was no significant relationship between the amount of clinical competence and the type of employment in this research, while it was expected that vocational trainees show lower competencies compared to the others. It is probably because vocational trainees work on evening and night shifts, show more independence and gain more skills on clinical cares.

However, Gillespie et al. (2010) divided employees into two categories of full-time and part-time or overtime personnel that showed a significant relation between employment status and clinical competence (17).

According to this study hospital "A" nurses exhibited significantly higher levels of clinical competence compared to hospital "B" and hos-

pital "C" nurses. This may be due to lack of personnel, lack of motivation, nurses' job burnout, frustrating shifts, and personnel dissatisfaction.

Dimensions of clinical competence in relation to the study samples in this study indicated that nurses gave the most points based on their self-report to assistance and management dimensions; while reviewing the average scores of nurses and head nurses indicated the level of these dimensions of skill reduced from good to the middle. In other word, all the important aspects of the clinical competence took intermediate scores. The study findings are in consistence with Karimi Moonghi et al. (18) and Liu et al. (19).

## Conclusion

A significant relationship exists between the motivation need and clinical competence as the most powerful relationship was between need for affiliation and clinical competence and the weakest relationship was observed between the need for power and clinical competence. Therefore, it is essential that managers pay more attention to understanding the needs of nurses and provide appropriate feedback to the nurses' motivation for improving quality of care. Having the knowledge of individual motivation needs can help managers on the appropriate assignment of nurses to increase their job satisfaction and the quality of the services.

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