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Comparison of the Effect of Mentorship with a Senior Student or Qualified Nurse on Knowledge and Clinical Self-Efficacy of the Second-Semester Nursing Students

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Abstract

Background: Due to the pivotal role of clinical education in the nursing profession, paying attention to effective approaches in improving the quality of education is of great importance.
Objectives: The current study aimed at determining the effect of mentorship with senior students or nurses on knowledge and clinical self-efficacy of nursing students.
Methods: The current trial was conducted on 72 nursing students in Lorestan University of medical sciences in academic year 2012 - 2013. The participants selected by convenience sampling method and assigned, using stratified random blocks, to one control group which supervised by a faculty member only and two intervention groups supervised by a faculty member and a senior student or nurse as mentor. Clinical self-efficacy scale and a researcher-made questionnaire were used to measure the participants' knowledge and self-efficacy before and after the educational intervention. ANOVA and paired samples *t* test and chi square were used to analyze the data.
Results: The mean score of knowledge and clinical self-efficacy increased in all the three groups, but the increase was significantly higher in the third group (the group supervised by a faculty member and a qualified nurse as mentor) than the others.
Conclusions: Due to the positive effects of mentorship with a qualified nurse, it is suggested that mentorship programs be included in the curriculum of nursing students.

Keywords: Mentorship, Undergraduate, Nursing Students, Knowledge, Self-Efficacy, Clinical Education

1. Background

Clinical experience plays an important role to increase the learning process for nursing students (1), in addition, it is the philosophy of clinical education in nursing to let students acquire the skills and the application of theoretical information in the patient's bedside (2). Therefore, medical education has an essential role in the formation of professional identity to such an extent that it is referred to the heart of professional education (3, 4). One of the great challenges that nursing education has been faced from the past to present, is the theory-practice gap, which caused multitude problems to provide appropriate clinical services. Previous literatures report a far distance between the desirable situation and the current status of the performance of newly graduated nurses (5) which can lead to poor quality of health care (6). In addition, studies conducted in Iran show inefficiency of clinical and theoretical education in nursing (7). On the other hand, all over the world, how to provide high quality clinical education is a major concern for policy makers in nursing education (3).

One of the challenges in clinical nursing education is the teaching style (8). Since bringing up nursing students to successfully transform knowledge into real world role playing is always a challenge in nursing education (9). Therefore, it is expected that the clinical environment to provide opportunities for students to gain useful experiences (10, 11). Today, it is proven that, in clinical practices, students need to have motivated supporters in order to maintain and strengthen learning to such an extent that they become a skilled and competent nurse and play their professional roles, with adequate confidence, (4, 12). On the other hand, the lack of a satisfactory relationship be-

tween the instructor and student as well as formal relationship between students and faculty members in Iran can lead to many complicated matters (13). Anxiety due to clinical complexities affects students' mental activity and reduces their concentration, efficiency, and ability to acquire skills (12). A review of studies in Iran shows many attempts conducted to reduce such stresses. Studies show that the implementation of mentorship program with appropriate surveillance effectively reduce the stressors of clinical environment, anxiety of nursing students, and increase learning motivation (14-17). Also, several studies indicated the effect of peer mentoring or qualified nurse mentoring on students' satisfaction (8, 18-20).

Evidence supports the role of mentorship programs in promoting teaching-learning, counseling, friendship, protection, and coaching processes as well as commitment to professional society (21, 22). In a study by Mahmoudifar, nursing educational program planners were recommended to emphasize on the presence of the instructors and advisors during mentorship in order to guide the students and resolve their educational problems and meet their needs (23). Students' experiences show that lack of a mentor can have a detrimental impact on their sense of belonging as well as learning, and this can clarify the need for alternative structures in the absence of mentors (24). Mentorship means an advanced personal relationship between an individual with a high level of knowledge and experience, and a novice individual in order to be helped (25). The mentor supports students as an advisor and provides them recommendations regarding patient care processes. This educational strategy gives students an opportunity to work with skilled clinical staff (nurses) in a clinical setting, while they are still under the supervision of a faculty member (2, 5).

In recent years, much attention is paid to the peer mentorship model in nursing and it has been known as a useful method to prevent anxiety and confusion, promote active learning, and create an appropriate learning environment (20, 26). In this way, the mentor and mentee are matched by age and the field of education (17, 27). The mentor is a senior student (second- or third-year student) that establishes an intimate and proper relationship with junior (the student under his/her supervision) to give proper advice, counsel, support, information, and feedback for academic achievement (28).

Establishment of a supportive system, especially during the first year of study, and its improvement throughout the clinical education seems necessary (29). In addition, inattention to improve self-efficacy in students in the clinical setting undoubtedly reduces the quality of trained human resources in the nursing profession. Bandura says: "Self-efficacy is one's belief in the ability to perform the desired function and understand to perform a certain task effectively and properly". Self-efficacy is a bridge between knowledge and related professional behaviors. (30). High level of self-efficacy increases students' academic achievement, learning, and participation in student activities (31, 32). Therefore, acquiring knowledge and academic skills is only one of the variables affecting their clinical performance, and teachers should pay attention to other factors such as self-efficacy in students. Therefore, paying attention to the factors such as self-efficacy and trying to improve them, especially in clinical settings, helps to measure the performance of nursing students more accurately (30).

2. Objectives

Since no study was conducted so far on the effect of mentorship program on the clinical self-efficacy and knowledge of the second-semester nursing students in Iran, the current study aimed to investigate the effect of mentorship with a senior student or qualified nurse on knowledge and clinical self-efficacy of the second-semester nursing students.

3. Methods

The current study was an educational trial which conducted on second-semester nursing students who were in the clinical training course (internal medicine ward) in the academic year 2012-2013 in Lorestan University of Medical Sciences, Iran. The inclusion criteria were studying at the second semester of nursing and willingness to participate in the study. The trial was registered at Iranian Registry of Clinical Trials (RCT201201308866N1).

The convenience sampling method was used to select the subjects. To match the study groups according to gender and grade point average (GPA) which may affect the outcome, stratified random blocks (33) used to allocate the participants to three groups. Group A (control group): Supervised by a faculty member only, group B (intervention group): Mentorship with a senior nursing student and a faculty member and group C (intervention group): Mentorship with a qualified nurse and a faculty member. The qualified nurse is referred to a nurse with at least five years of clinical experience. Same contents and procedures were offered in all the three groups.

The clinical self-efficacy scale was completed by the students during mentorship in each group. This instrument had 37 items in four subscales including patient evaluation, diagnosis and planning, implementation and nursing intervention, and health care evaluation which scored

based on a five-point Likert scale (never, rarely, sometimes, most often, and always). The instrument developed by Cheraghi et al., in Iran for nursing students and its validity and reliability has been confirmed (15).

To evaluate effective clinical learning about the contents educated by the mentors or instructors, the level of knowledge about basic nursing skills assessed before and after educational intervention by a researcher-made questionnaire. The questionnaire contained 10 questions on knowledge about nursing care in internal medicine ward. The content and face validity of the questionnaire was approved by five faculty members. All the mentors and instructors attended the briefing session to be informed about the study procedure and training contents.

According to the main objective of the study (comparison of the groups), using the PASS11 software, and considering the power of 0.8 and the significance level of 0.05, equality of the three groups, SD of 10.22 and assumed means of 130, 135 and 140; the sample size of each group was set to 24 and a total of 72.

The mentorship was scheduled in such extent way that during the study, the faculty member, the senior student, and the qualified nurse did not change in order to overcome the impact of behavioral intimidation and training differences of instructors and mentors. ANOVA, paired samples *t* test and chi square were used to analyze the data.

Ethical considerations were observed in the current study; for this purpose, after providing adequate explanations about the importance and objectives of the study, the subjects were assured that they were free to withdraw from the study at any stage.

The personal characteristics of the participants were kept completely confidential at all stages of the study and the results of the study were provided on request. The study protocol was approved by the Ethics Committee of Tehran University of Medical Sciences (ethics approval code: 67657. 200).

4. Results

Of 72 participants, 17 (23.6%) students were male and 55 (76.4%) female. The demographic characteristics of the participants are presented in Table 1 based on the groups. The number of individuals in each group was somewhat equal and there was no statistically significant difference among them (Table 1).

The results of the current study showed that, in all groups, the frequency of the correct answers before intervention was significantly lower than the ones after intervention. The results of paired *t* test showed a significant difference among the groups before and after intervention. In fact, the students' knowledge has been increased by education. Tukey post hoc tests showed that there was a significant difference among the groups. Accordingly, the highest increase in the score was observed; in the third group (C) (mentorship by a qualified nurse accompanied with a faculty member), the second group (B) (mentorship by a senior student accompanied with a faculty member) and the first group (A) (clinical education by a faculty member alone), respectively (Table 2). In the other words, the presence of a qualified nurse as a mentor accompanied with a faculty member for clinical nursing education was more effective to increase the students' knowledge than peer mentorship and/or the faculty member instructor alone.

The results of ANOVA showed there is a significant difference among the groups in the mean score of self-efficacy. According to Tukey post hoc test, the third group (a qualified nurse accompanied with a faculty member) obtained the highest self-efficacy score (Table 2); in the other words, the presence of a qualified nurse as mentor along with the faculty member in the clinical education settings could increase self-reported clinical self-efficacy in students and was much more beneficial than peer mentoring or mentoring with a faculty member alone.

5. Discussion

This study aimed to determine the effect of mentorship programs by a senior student and a qualified nurse on knowledge and clinical self-efficacy of undergraduate nursing students. The results showed an increase in self-reported knowledge in all three groups. In a study by Eller et al. students also stated the communication with mentors may give them the confidence to demonstrate their skills and motivation to use their potential power (34). Bandura pointed out that mentors help students to overcome complicated and difficult challenges which it cause individualized growth also they encourage students to solve their problems and help them to gain more skills, and improve their self-efficacy (35). The results of the study by Myall et al. highlighted the importance mentor's role in the students' prequalifying, and emphasized the need to a mentor with adequate support and readiness (22).

The results of the current study showed that the third group (C), mentorship with a qualified nurse accompanied with a faculty member, obtained significantly higher knowledge and clinical self-efficacy scores than other two groups (A, B), which it indicated the presence of a qualified nurse with a faculty member has more impact on increasing knowledge and undergraduate nursing students' clinical self-efficacy. The results of other studies also confirmed that the mentorship program with a qualified nurse accompanied with faculty member has more positive effects

Table 1. Demographic Characteristics of Participants Based on Groups

Variable	Group A	Group B	Group C	P Value
Gender				0.964[a]
Male	6	5	6	
Female	18	18	19	
GPA				0.984[a]
≥ 15	10	9	10	
≤ 15	14	14	15	
Age, y (mean ± SD)	19.25 ± 1.64	19.13 ± 2.04	19.91 ± 1.51	0.414[b]

[a] χ^2 test.
[b] *t* test.

Table 2. The Comparison of Knowledge and Self-Efficacy Scores According to the Groups and Before/After the Intervention in Each Group[a]

Group	Before, Mean ± SD	After, Mean ± SD	Paired *t* Test	P Value
Knowledge				< 0.001
A	12.07 ± 4.61	14.20 ± 5.76	< 0.001	
B	12.91 ± 5.02	16.11 ± 5.94	< 0.001	
C	11.15 ± 3.81	17.48 ± 6.39	< 0.001	
Self-efficacy				< 0.001
A		128.33 ± 8.91		
B		131.34 ± 9.72		
C		135.71 ± 10.74		

[a] Group A, the control group; groups B and C, the intervention groups.

on improving the clinical practice skills of nursing students compared with clinical education by a faculty member alone. (13, 36) The reason can be explained by that the qualified nurses have the adequate experience in coping with the job-related challenges. Hosseinabadi et al. also confirmed that one of the factors leaded to positive outcomes in their study was the collaboration of clinical nurses in teaching and guiding the students and sharing their knowledge and experiences with students. It seems that using methods that involve the nurses working in clinical settings in the process of students' clinical training can have positive impacts on the promotion of nursing students' clinical education and clinical competency (37).

The second group in which a senior student accompanied with the faculty member, acquired higher scores in knowledge and clinical self-efficacy than the control group. Other studies also confirmed that the students as mentors were preferred, since they had more empathy with younger students (38). The findings of the study by El-Sayed showed the performance score of nursing students who had peer mentorship program (with senior students) was significantly higher than the ones traditionally trained by instructors in clinical education. Students in these groups agreed with the benefits of peer education through both as teaching providers and learners (39). Also, the results of a study by Gilmour et al. indicated the peer mentoring program make to increase the motivation among peers to interact with each other and learning among nursing students (27). Other studies showed the effect of peer mentorship on reducing anxiety and increasing self-esteem in students, which can improve students' learning (14, 16, 40). Also, the results of a study conducted by Asefzadeh et al. indicated the employing the third-year medical students as mentors for the first-year students, from students' perspective, was a satisfactory program (18).

5.1. Limitations

Since the current study examined the clinical self-efficacy of students based on their individual viewpoints, the results may contain participants' inappropriate responses, because people may experience selfishness or selflessness in their self-evaluation, which can be considered as a limitation of this study.

5.2. Conclusions

This study showed the mentorship with a qualified nurse accompanied with a faculty member and then mentorship with a senior student along with a faculty member were more efficient on nursing students' self-reported knowledge and self-efficacy. Although the results of several studies reported the efficacy of both these mentorship methods, no study so far has evaluated and compared these two methods to report the superiority of one over the other. Therefore, it is suggested mentorship programs be applied in nursing clinical education according to organizational and educational infrastructures in Iran.

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Footnotes

Conflict of Interests: None declared.

Ethical Considerations: The study protocol was approved by the Ethics Committee of Lorestan University of Medical Sciences (ethics approval code: 67657. 200).

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Patient Consent: We obtained the informed consent from the participants.

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