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The Effect of Mentor Nurse Education Program on Clinical Guidance Skills and Practices: Mixed Method Randomized Controlled Study

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ABSTRACT

Aim: The aim is to examine the effect of the mentor nurse training program on mentor nurses' guidance skills and clinical guidance practices.

Background: There is a shortage of randomized controlled studies examining the effect of the mentor training program in nursing education.

Design: This is a mixed-method randomized controlled (pre- and post-test control group) experimental research.

Methods: The study population consisted of 131 mentor nurses who worked in two medical faculty hospitals affiliated with a university and guided students. The sample consisted of 60 nurses that 30 mentor nurses for intervention, 30 mentor nurses for control group. The data were collected using the mentor nurse information form, Mentoring Scale and semi-structured interview form. In the study, the mentor nurse training program was conducted as an intervention. Quantitative data were analyzed by the researchers using the SPSS version 25.0 software. A descriptive analysis method was used in the analysis of qualitative data.

Results: After the intervention, the total score, coaching, self-expression, counseling, acceptance and approval subdimension mean scores of the nurses in the intervention group were found (Total post-test $\bar{x}\pm$sd: 58.91±11.8) to be significantly (t=4.29 p=.000) higher compared to the control group (Total post-test $\bar{x}\pm$sd: 50.05±13.3, t=2.67 p=.010) and pre-training period (Total pre-test $\bar{x}\pm$sd: 48.96±13.4).

Conclusions: This research reveals that the prepared training program is effective.

Keywords: Mentors; Nurse; Nursing; Education; Mixed-Method

ÖZET

Amaç: Mentor hemşire eğitim programının mentor hemşirelerin rehberlik becerileri ve klinik rehberlik uygulamaları üzerindeki etkisini incelemektir.

Arka Plan: Hemşirelik eğitiminde mentor eğitim programının etkisini inceleyen randomize kontrollü çalışmalar yetersizdir.

Method: Bu karma yöntemli randomize kontrollü (ön test ve son test kontrol grubu) deneysel bir araştırmadır.

Yöntemler: Çalışma popülasyonu bir üniversiteye bağlı iki tıp fakültesi hastanesinde çalışan ve öğrencilere rehberlik eden 131 mentor hemşireden oluşmuştur. Örneklem büyüklüğü her grup için (müdahale ve kontrol grubu) 30 mentor hemşireyi içermektedir. Veriler mentor hemşire bilgi formu, Mentorluk Ölçeği ve yarı yapılandırılmış görüşme formu kullanılarak toplanmıştır. Çalışmada mentor hemşire eğitim programı bir müdahale olarak yürütülmüştür. Nicel veriler araştırmacılar tarafından SPSS sürüm 25.0 yazılımı kullanılarak analiz edilmiştir. Nitel verilerin analizinde tanımlayıcı analiz yöntemi kullanılmıştır.

Bulgular: Müdahale sonrasında müdahale grubundaki hemşirelerin toplam puan, koçluk, kendini ifade etme, danışmanlık, kabul ve onay alt boyut puan ortalamaları (Toplam son test $\bar{x}\pm$sd: 58,91±11,8) kontrol grubuna (Toplam son test $\bar{x}\pm$sd: 50,05±13,3, t=2,67 p=.010) ve eğitim öncesine (Toplam ön test $\bar{x}\pm$sd: 48,96±13,4) göre anlamlı düzeyde (t=4,29 p=.000) daha yüksek bulunmuştur.

Sonuçlar: Bu araştırma hazırlanan eğitim programının etkili olduğunu ortaya koymaktadır.

Anahtar Kelimeler: Mentorlar; Hemşire; Hemşirelik; Eğitim; Karma Yöntem

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With the changing and developing technology, increasing competition and globalization, traditional education approaches have been replaced by new approaches such as mentoring. The use of mentoring in nursing education is also becoming increasingly widespread (1, 2). Nursing students' guidance practices in the clinical teaching process are both formal and informal. Mentoring is an invaluable learning activity for educators, nurses, managers and other professionals as well as students (1, 3). The scientific scope of mentoring is well defined and suitable for today's conditions. Mentoring enables individuals to develop their knowledge and skills in line with their personal development goals, to reveal their real potential and hidden talents and to transfer them to life (2, 4).

In nursing education, it is recommended to use the mentoring model to develop knowledge and skills, to transfer the corporate culture and to train well-trained nurses in academic/career terms. There are many studies in the field of application revealing the benefit of the mentoring system in developing students' professional skills (1, 5, 6). The studies report that the mentorship model is cost effective, the chance of students working in the clinic where they study after graduation increases, they come to the clinic with much more knowledge and skills than other novice nurses, the orientation period is shorter and the work turnover decreases (7, 8). Mentoring practice positively affects behavior, attitude and motivation, focuses on the individual needs of the student, and mutual sharing and cooperation between the mentor and the mentee provides two-way benefits (2, 9). With an education program approved in the UK in 2007, it became compulsory for students to appoint a mentor to work with them during their placement in the clinic (10-12).

In the educational literature, although mentoring has many benefits for mentors and mentees, it is not trouble-free (13, 14). The mentor constitutes the cornerstone of clinical practices in supervising, teaching and evaluating the student (15). There are concerns that mentors may be unsuccessful/irrelevant in evaluating student performance (16, 17). The feeling of trust and comfort is important in the mentoring relationship (10, 11). The clinical learning environment involves a complex social climate due to interactions among students, mentors, nurse educators, and patients (18). As with many types of relationships, personality compatibility, commitment, trust, and support issues, or expectations about the mentoring process, and communication dynamics in the process can enhance or destroy the interaction between mentor and mentee (13,16).

The mentor needs to guide the mentee in line with his/her abilities. Mentoring training is vital for mentors to understand how mentees (clients) can help facilitate their learning (19). Mentors are expected to have teaching and social skills, to produce professional solutions to the problems encountered and to be role models (11, 16, 20). Nursing training can be provided in the hospital setting by an experienced clinical nurse or nurse manager or an external nurse educator. The type and length of training may vary depending on the nature and objectives of the program (21).

However, existing mentor training programs often lack standardized content, measurable outcomes, and evaluation tools that ensure consistency across clinical settings. This gap in the literature highlights the need for evidence-based and nationally regulated mentor training models to ensure effective implementation and continuity of mentoring practices in nursing education. Recent studies emphasize the importance of structured mentor training programs that enhance mentors' competencies and positively impact mentees' learning experiences (22, 23). For instance, a quasi-experimental study demonstrated that individualized mentoring approaches significantly improved the quality of mentoring support during clinical training (22). Additionally, a randomized controlled trial found that peer mentoring models effectively increased nursing students' self-confidence and satisfaction levels (23).

National standards should be developed and implemented to clarify the theory and practice of mentoring and the roles and responsibilities of the mentor (1, 10, 21, 24). It is emphasized that adequate preparation and support should be provided to mentors for good mentoring (16). In countries that benefit from the mentoring model, the institutions that regulate the program, the mentors who will conduct training and evaluation are trained in accordance with the standards determined by the

national nursing authorities and their training is updated every year (15, 19, 21). Although there are many studies focusing on the mentoring and practice environment, randomized controlled studies examining the effect of the mentor training program in nursing education are limited. Our study differs in this respect and contributes to the nursing literature with its experimental and qualitative aspects.

Although the sample group selected in the study is specific to a country, the intervention applied, the findings and results obtained include the applicable content, structure and results for the planned mentoring programs applied in all nursing education models.

Methods

Purpose of the Research

The aim of the research is to examine the effect of the mentor nurse training program on mentor nurses' guidance skills and clinical guidance practices.

Research Typ

A convergent mixed-method randomized controlled (pre- and post-test control group) experimental design was adopted. Quantitative and Qualitative data were collected to determine and explore the clinical guidance practices.

Research Hypotheses

Hypothesis 1: After mentor training, the perception of guidance skills of the nurses in the intervention group is higher than that of the control group.

Hypothesis 2: After mentor training, the perception score of the nurses in the intervention group is higher compared to pre-training period.

Hypothesis 3: After mentor training, the mentoring scale score of the nurses in the intervention group is higher than that of the control group.

Hypothesis 4: After mentor training, the mentoring scale score of the nurses in the intervention group is higher compared to pre-training period.

Population and Sample of the Research

The study population consisted of 131 mentor nurses who worked in two medical faculty hospitals affiliated with a university and guided students. Power analysis was performed to determine the number of samples (For mentoring scale scores the effect rate was 95% in the intervention group and 70% in the control group, and with a power of 80%, in the 95% confidence interval). According to the calculations, a total of 50 mentor nurses, 25 in the intervention group and 25 in the control group, should constitute the sample. Considering the possibility of data loss, a total of 60 guide nurses, 30 in the intervention group and 30 in the control group, constituted the sample group.

The study included nurses with at least a bachelor's degree, professional experience of three years or more, guiding at least two nursing students at least three days a week, not receiving mentor nurse training, mentoring during the research and volunteering to participate in the study. It was conducted with 58 nurses in total, including 30 in the intervention group and 28 in the control group (two were excluded due to the lack of data). There were two students per nurse and that these students assessed mentoring skills. In this context, a total of 118 students, 60 in the intervention group and 56 in the control group, participated in the study to evaluate the mentoring skills of the nurses in the intervention group.

The participants were randomly assigned to the intervention and control groups through www.random.org. The homogeneity of the nurses in the intervention and control groups in terms of age, gender, education level and working experience was tested ($p>0.05$). The research was conducted in accordance with the CONSORT diagram (Figure 1) and the qualitative part of the study was carried out based on COREQ (25).

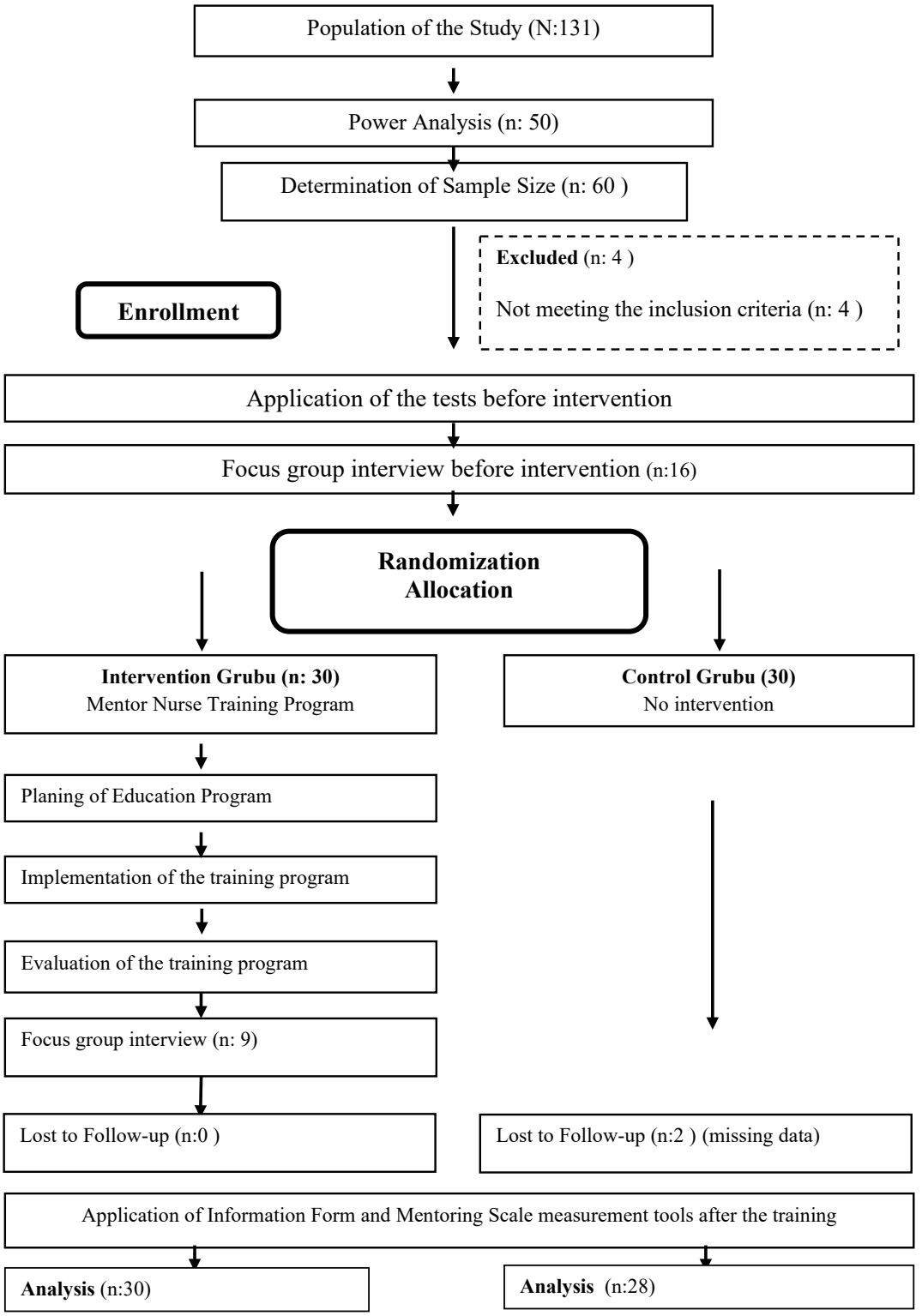


Figure 1: Study Flowchart

Data Collection Tools

The data were collected using the mentor nurse information form, Mentoring Scale and semi-structured interview form.

Mentor Nurse Information Form: The form was developed based on previous studies and grounded in the relevant literature (8, 13, 16). It includes 10 questions designed to assess mentor nurses' sociodemographic characteristics (age, gender, education level, etc.), professional background (professional experience, current unit, duration of work in the unit, and role), and their perception of guidance skills. A visual analog scale (VAS) was used to determine the perception of mentor nurses' guidance skills. In terms of coaching, role modeling, self-expression, counseling, and friendship qualities, mentors were asked to evaluate themselves in a way to give scores from 1 to 5 points.

Mentoring Scale: The Turkish validity and reliability study of the scale developed by Noe (1998) was conducted by Özkalp et al. (2006), and its Cronbach's alpha value was 0.96. The scale consists of 30 items and six subdimensions on a 5-point Likert-type scale (1- Completely disagree, 5- Completely agree). Subdimensions include coaching (five items), role modeling (five items), self-expression and visibility (five items), consultancy (five items), acceptance and approval (three items), and friendship (3 items). There are no reverse scored items in the scale. The Cronbach's alpha value of the scale was 0.97 in the study. The scale was administered to mentees.

Semi-Structured Interview Form: The form was developed by the researchers to determine the opinions of nurses about the mentoring process and mentoring education (3, 13, 16, 24). The form included three open-ended questions thoroughly examining the effect of nurses' mentoring practice and mentoring training program on clinical practice. The last question in the interview form—'How did the mentor training program affect your guidance skills, and what kind of reflections did it have on your guidance practices in the clinic?'—was addressed only to the nurses in the intervention group. This was because only the intervention group received the mentor training program and had the opportunity to implement their mentoring roles with students during the study period. Therefore, this question was aimed at exploring the perceived effects of the training and its practical reflections, which would not be applicable to the control group.

When necessary, the questions were detailed by the researchers with subquestions.

- What are the characteristics that a mentor nurse should have?
- What kind of preparation process should a mentor nurse undergo before being assigned?
- How did the mentor training program affect your guidance skills, and what kind of reflections did it have on your guidance practices in the clinic?

Development Process of the Semi-Structured Interview Form:

The semi-structured interview form was developed in accordance with the COREQ guidelines and based on a comprehensive review of relevant literature (3, 13, 16, 24). To enhance the content validity of the form, expert opinions were obtained from three faculty members with expertise in nursing education and qualitative research. These experts evaluated the appropriateness, clarity, and relevance of the questions. Based on their feedback, minor revisions were made to improve the comprehensibility and alignment of the questions with the study objectives.

Prior to the main data collection, a pilot interview was conducted with three mentor nurses who met the inclusion criteria but were not included in the actual study sample. The pilot interviews aimed to assess the clarity and functionality of the questions, the duration of the interview, and the suitability of the interview environment. Based on the pilot results, the interview questions were finalized with slight modifications to wording and sequencing to facilitate smoother data collection. This process ensured that the form was both comprehensible and capable of eliciting in-depth responses from participants.

Data Collection

The data were collected between December 2017 and August 2018.

Data were collected face-to-face from nurses and mentees (students) (Figure 1).

Stage 1: The mentor nurse information form was administered to the nurses who provided clinical guidance to the students before the beginning of the academic year and met the inclusion criteria. In addition, a focus group meeting consisting of two separate sessions was held. In line with these results, a mentor training program was prepared.

Stage 2: Participants were randomly assigned to the intervention and control groups. Twenty days before the clinical guidance practice started, the nurses in the intervention group were given mentor nurse training.

Mentor Nurse Training Program: During the preparation phase of the training program, "What basic competencies a mentor nurse should have?" (16, 20, 26). A mentor nurse training program was prepared in line with the literature, the focus group interview with the participants and knowledge and experience of the researchers. The program's aims and objectives, topics, teaching methods and tools, and evaluation methods and tools were planned. The aim of the mentor nurse training program is to improve the knowledge, skills, attitudes and behaviors of nurses who guide students in clinical education. Before the training, a knowledge test (pre-test) was administered to the nurses. The training program included topics such as the concept of mentor and mentoring, stages of the mentoring process, mentoring skills, mentor-mentee communication, effective listening, critical thinking and problem solving, and evaluation of the mentoring process. The training, which used interactive training methods, was carried out in three sessions lasting four hours each. The training, which lasted 12 hours in total, was completed in one and half days. For the training to be effective, nurses were divided into two groups of 15 people each. The training was carried out in the same way for both groups. At the end of the training, the knowledge test (post-test) was re-administered, and 85 points out of 100 points were taken as a success criterion. All participants were successful at the end of the training.

Stage 3: At the end of the clinical guidance practice (at the end of the academic year/12 weeks), the information form was administered to the nurses in the intervention and control groups. Two students/mentees guided by the nurses completed the Mentoring Scale for the mentee nurse.

4. Stage: At the end of the clinical guidance practice (at the end of the academic year/12 weeks), a focus group interview was held with the mentors in the intervention group to thoroughly examine the reflections/effects of the curriculum on clinical guidance practice.

Focus group interviews: These interviews were conducted before the training and at the end of the clinical guidance practice. The interviews, which lasted approximately 60-90 minutes, were conducted by two researchers who were trained and experienced. A voice recorder and observation notes were used during the focus group interviews and consent was obtained from the participants for recording. In the interview, one researcher conducted the group interview, while the other took notes by making observation. During the interview, in addition to the questions in the semi-structured interview form, subquestions were posed when necessary, and the interview was terminated when data saturation was achieved. The focus group interviews were conducted in a circle seating arrangement where mentor nurses could easily see each other.

Data Analysis

The quantitative data were analyzed by the researchers using the SPSS version 25.0 software. The skewness and kurtosis test was performed to test the normality of the data distribution, which was found to be between -1.5 and 1.5. Since the data were in the normal distribution range, parametric tests were applied. Frequency, arithmetic mean, standard deviation, Pearson correlation, one-way ANOVA, independent and paired sample t test, Bonferroni, and Tukey test statistical methods were used in the analysis of the data. The statistical significance level was set at $p<0.05$.

In the analysis of the qualitative data, content analysis was used. In the analysis of the qualitative data, the focus group interview records were manually decoded and transferred to the computer environment. After all data were analyzed, a code list was created. To ensure the reliability of the coding process, two independent researchers coded the data separately. The intercoder reliability was calculated as 97%, which is considered a highly acceptable level in qualitative research (27). When performing the descriptive analysis, the conceptual meaning of each expression was identified in light of the semi-structured interview form. In the focus group meeting held before the training, codes of knowledge and skills, professional experience, role model, trainer, leader, discipline, patience, desire, positive communication with

team members, observation and mentoring training were determined. In the focus group interview with the mentor nurses in the intervention group after the training, the codes of planned and conscious education, efficiency, and the development of educational skills were determined.

Per Protocol analysis was preferred instead of Intention to Treat analysis, considering that the inclusion of participants in the analysis would result in different results when considered together with the data obtained from individuals who completed the interview program.

Ethics of Research

Ethics committee approval (dated 1.11.2016 and Decision No: A-57) was obtained from hospitals before the study. The mentor nurses were informed according to the Helsinki Declaration about the research and they provided their verbal and written consent.

Results

All mentor nurses were female, with a mean age of 41.1±5.7 years (min: 28 max: 55). Of them, 65.5% had a master's degree and 34.5% had a bachelor's degree. Of them, 74.1% were manager nurses and 25.9% were stuff nurses. Of the mentor nurses, 73.4% had more than 15 years of professional experience. The comparison of the characteristics of the mentors in the intervention and control groups is given in Table 1.

Table 1: The comparison of the characteristics of the mentors in the intervention and control groups

	Intervention (n: 30) $\bar{x}$±sd		**Control (n: 28) $\bar{x}$±sd**		**Test and Significance ***
Age	42.97±4.6		39.21±6.2		t=2.59 p= .012
Total working time as a nurse	21.56±5.3		17.42±7.3		t=2.45 p= .017
Total working time in the unit they worked	16.66±7.6		13.96±8.4		t=1.27 p= .209
	n	**%**	**n**	**%**	
Education					
Bachelor's degree	23	76.7	15	53.6	t=-1.87 p= .066
Master's degree	7	23.3	13	46.4	
Position					
Nurse manager	27	90.0	16	57.1	t=-3.02 p= .004
Stuff nurses	3	10.0	12	42.9	
Worked unit/service					
Surgical Diseases	12	39.9	11	39.2	t=-,66 p=.510
Internal diseases	8	26.7	7	25.0	
Obstetrics	6	20.0	4	14.3	
Child Health and Diseases	4	13.3	4	14.3	
Psychiatry	1	3.3	2	7.1	

** Independent Sample t Test*

As seen in Table 1, there was a significant difference between the intervention and control groups in terms of age, professional experience and mentors' tasks ($p<0.05$). The mean age and professional experience of the intervention group and the number of those working as manager nurses were higher than those in the control group. This difference indicates that the response to the mentor training might have been influenced by the age and experience level of the participants in the intervention group, which could pose a risk of bias. These group differences should be taken into consideration when interpreting the impact of the training. There was no significant difference between the intervention and control groups in terms of the education level of the mentor nurses and the total working time in the unit and unit they worked in ($p>0.05$).

Table 2 compares the VAS scores of the mentors in the intervention and control groups in which they evaluated their guidance skills.

Mentor nurses made self-assessments of their guidance skills before and at the end of clinical guidance practice. In the measurement made using VAS ranging from 1 to 5 points, all scores of the mentors were above the median value of 2.5 points. Before the training, a significant difference was found only in the perception of coaching between the groups and the score of the mentors in the control group was higher. After the training, the perception scores of the mentors in the intervention group regarding coaching, role modeling, self-expression, counseling and friendship skills were higher than those in the control group ($p<0.05$), which confirmed the first hypothesis of the study. The perception scores of the mentors in the intervention group regarding post-training coaching, role modeling, self-expression, counseling and friendship skills were higher than their pre-training scores ($p<0.05$), which confirmed the second hypothesis of the study. There was no significant difference between the perception scores of the mentors in the control group regarding coaching, role modeling, self-expression, counseling and friendship skills before and after the clinical guidance practice ($p>0.05$) (Table 2).

Table 2: Opinions of mentor nurses on their guidance skills

Mentor nurses' self-assessments of their guidance skills (VAS)		Intervention (n: 30) $\bar{x}\pm sd$	Control (n: 28) $\bar{x}\pm sd$	Test and Significance *
Coaching	Pre-T	3.60±.8	4.21±.6	t=-3.00 p=.004
	Post-T	5.00±.0	4.21±.6	t=6.83 p=.000
	Test and Significance **	t=-8.57 p=.000	t=,00 p=1.000	
Role modeling	Pre-T	4.06±.8	4.21±.6	t=-,73 p=.464
	Post-T	4.93±.2	4.17±.7	t=5.37 p=.000
	Test and Significance **	t=-5.51 p=.000	t=1.00 p=.326	
Self-expression	Pre-T	4.10±.8	4.39±.6	t=-1.49 p=.140
	Post-T	4.97±.0	4.39±.6	t=4.62 p=.000
	Test and Significance **	t=-6.30 p=.000	t=,57 p=.573	
Counseling	Pre-T	4.16±.6	4.46±.6	t=-1.69 p=.095
	Post-T	4.96±.1	4.42±.7	t=3.85 p=.000
	Test and Significance **	t=-6.59 p=.000	t=1.00 p=.326	
Friendship	Pre-T	4.10±.8	4.50±.6	t=-1.97 p=.053
	Post-T	4.81±.3	4.49±.3	t=2.17 p=.034
	Test and Significance **	t=-4.32 p=.000	t=1.00 p=.326	

** Independent-Samples t test ** Paired-Samples t test*

In the study, mentees were also consulted about the mentoring skills of the nurses. Each mentor was evaluated by two mentees/students, whom they provided guidance, using the mentoring scale.

As seen in Table 3, the mentoring scale and subdimension scores of the nurses in the intervention and control groups were compared. After the training, the total scale score and the coaching, self-expression, counseling, acceptance and approval subdimension mean scores of the nurses in the intervention group were found to be significantly higher than those in the control group (p<0.05). There was no significant difference in role modeling and friendship subdimension scores (p>0.05). The third hypothesis of the study was confirmed except for two subdimensions. There was a significant difference between the pre-training and post-training mentoring scale total and subdimension scores of the mentors in the intervention group (p<0.05). Post-training scores were higher than pre-training scores, which confirmed the fourth hypothesis of the research. There was a significant difference between the pre-training and post-training role modeling and self-expression subscale scores of the mentors in the control group (p<0.05) and the scores decreased after the training (Table 3).

Table 3: Mentoring Scale and subdimension scores of the nurses in the intervention and control groups

Mentoring Scale		Intervention (n: 30) $\bar{x}$±sd	Control (n: 28) $\bar{x}$±sd	*Test and Significance **
Coaching	Pre-T	8.35±2.6	9.25±3.1	t=-1.16 p=.248
	Post-T	9.95±2.7	8.37±2.1	t=2.43 p=.018
	*Test and Significance ***	t=3.10 p=.004	t=- 1.30 p=.203	
Role modeling	Pre-T	8.15±2.0	9.83±2.8	t=-2.56 p=.013
	Post-T	9.18±2.1	8.53±2.3	t=1.10 p=.274
	*Test and Significance ***	t=2.80 p=.009	t=-2.46 p=.021	
Self-expression	Pre-T	9.03±2.7	10.35±3.6	t=-1.55 p=.125
	Post-T	10.43±2.5	8.67±2.9	t=2.42 p=.019
	*Test and Significance ***	t=2.60 p=.014	t=-2.20 p=.036	
Counseling	Pre-T	7.73±2.2	8.58±2.6	t=-1.32 p=.190
	Post-T	9.76±2.4	7.75±2.1	t=3.28 p=.002
	*Test and Significance ***	t=3.53 p=.001	t=-1.51 p=.141	
Acceptance and Approval	Pre-T	4.48±1.4	5.05±1.6	t=-1.36 p=.177
	Post-T	5.46±1.1	4.69±1.3	t=2.35 p=.022
	*Test and Significance ***	t=3.66 p=.001	t=-1.22 p=.232	
Friendship	Pre-T	7.80±2.1	7.03±2.2	t=1.33 p=.187
	Post-T	6.16±2.1	7.25±2.6	t=-1.69 p=.097
	*Test and Significance ***	t=5.02 p=.000	t=-,38 p=.700	
Total	Pre-T	48.96±13.4	55.85±17.1	t=-1.69 p=.097
	Post-T	58.91±11.8	50.05±13.3	t=2.67 p=.010
	*Test and Significance ***	t=4.29 p=.000	t=-1.70 p=.100	

** Independent-Samples t test ** Paired-Samples t test*

In the focus group interview conducted before the clinical guidance practice, the findings obtained regarding the characteristics that the mentor nurse should have are as follows: knowledge and skills, being a role model, trainer, leader, having professional experience, observation skills, being disciplined, patient and willing, and receiving mentoring training. Here are some statements from the participants.

"In my opinion, a mentor should have some characteristics related to education and leadership. He/she should have sufficient knowledge, skills and equipment related to education…." (Intervention Group Participant 2)

"Since the mentor will be a guide, he/she should have sufficient experience." (Intervention Group Participant 3)

"… I think it is important for him/her to be a good role model, willing and patient throughout the process" (Intervention Group Participant 8)

"...but I think he/she should receive training beforehand on mentoring." (Intervention Group Participant 9)

In the group interview, it was also emphasized that mentor nurses should do their job willingly and communicate positively.

"*Of course, first of all, he/she needs to be knowledgeable and selfless, his/her communication needs to be good, and his/her communication with team members should be good. Communication with patients is also important." (Control Group Participant 12)*

"Mentor nurses should have leadership characteristics, be a guide and have good communication." (Control Group Participant 3)

"I think the mentor should be someone who loves his/her job. Because if you do not like it, you cannot make the student love it in any way. Of course, I think it is important for ae mentor to love his/her job as well as to be well trained in knowledge." (Control Group Participant 7)

The participants stated that the mentor nurse training program should be planned as a long-term formal training and their mentoring skills cannot be acquired through short-term trainings. Here are some statements from the participants.

"… so we need to be trained too, but it needs to be in the long-term." (Intervention Group Participant 8)

"I think that a guide nurse should be competent and has proven herself in every aspect professionally. People cannot acquire this in a short time." (Intervention Group Participant 15)

"...intermittent training can be provided in order to solve the problems we encounter during the term." (Control Group Participant 8)

At the end of the clinical guidance practice, the effects of mentor nurse training on clinical guidance practices were discussed in the focus group interview with the mentors in the intervention group. After participating in the training program, mentor nurses stated that they experienced more planned and conscious training, the efficiency of the mentoring and training process increased and their training skills improved. Here are some statements from the participants.

"I think it is very good that we have education. We were mentors in previous years, but this year was even different. It was more planned and more beneficial for students." (Intervention Group Participant 3)

"I think the mentoring training you provide is very important... I need to know how to provide information." (Intervention Group Participant 6)

"… I think it is very important to share information and experience about the process. Our trainer skills have improved." (Intervention Group Participant 4)

Within the scope of the suggestions for the development of the mentor training program, nurses stated that it would be useful to update the knowledge and skills related to clinical guidance, to make interim evaluations during the training process, to determine the framework of clinical guidance process practices, to develop guidelines for mentors and to share these studies with mentors during the training process. Here are some statements from the participants.

"*Training can be done beforehand by the instructors in charge of the program. The program needs to be evaluated. How many mentees have we been able to help? Interim evaluations are required in the training process." (Intervention Group Participant 2)*

"Reminder trainings can be held. An update can be made." (Intervention Group Participant 4)

Discussion

The mentor nurses participating in the study are highly experienced in terms of age and professional experience. The fact that more than half of them have a master's degree and work as a nurse responsible for the service reveals that they are successful and competent in terms of professional competencies. These characteristics are among the qualities expected from mentor nurses (19, 21). Nurses who mentor in the hospital environment should be experienced clinical nurses or executive nurses and they are expected to have problem solving, teaching and social skills and to be role models (20). In the general analysis of the studies on the competence of mentors, the necessity of establishing appropriate relationships based on mutual trust with students, determining students' current competence levels, setting individual learning goals, and reflecting and evaluating students' learning is emphasized (11). From the mentees' point of view, mentors having good education skills, giving feedback, offering development suggestions and being willing to teach have been considered very important for the success of the mentoring process (16). Mentors who are confident, experienced, and open to guidance are also likely to be more willing to improve their mentoring skills. In addition, motivation of the mentor to be involved in the learning process and to provide the necessary support is associated with education that increases the development of mentor competence (7). However, it is an important result that the mentors in the intervention group were significantly older, had more years of nursing experience, and were more likely to be nurse managers compared to the control group. These differences may have contributed to the observed effects of the mentor training program and present a potential source of bias.

Considering the self-assessment scores of the mentor nurses' guidance skills, the mentors perceive themselves as sufficient. Before the training, the mentors in the control group scored higher than the intervention group in coaching skills. After the training, the scores of the intervention group were higher than the control group in all guidance skills. The scores of the mentors in the intervention group regarding post-training coaching, role modeling, self-expression, counseling and friendship skills increased compared to the pre-training scores. The scores of the control group before and after the clinical guidance practice did not change enough to make a difference. These results verify the first and second hypotheses of the research. The mentoring skills of the nurses who received mentor training improved and the training was effective. Mentoring education is very important for the mentoring process to be effective (19). Tuomikoski et al. (2020b) (28) stated that mentors' skills developed in all areas of competence after the mentoring training. A show that the learning process is positively affected in the presence of good mentor qualifications and mentees generally have expectations from mentors who can be good role models (16). Considering the development of the mentors receiving training in terms of coaching, role modeling, self-expression, counseling and friendship skills, we can say that guidance alone is not sufficient to develop mentoring skills. Our opinion is supported by similar statements of the mentors in the control group at the beginning and end of clinical practice. The control group had significantly higher baseline scores in coaching skills compared to the intervention group. The use of teaching methods such as role playing, case studies, and discussion focused on the student-mentor relationship may have increased the awareness of the mentor nurses in the experimental group regarding coaching skills.

Considering the mentoring skills of nurses from the viewpoint of mentees, it is noteworthy that the mentor scale scores of the nurses in the intervention group are higher after the training compared to the control group. The students agree on role modeling and friendship subdimension scores only; there is no difference between the two groups. The third hypothesis of the research is partially confirmed. It is gratifying that mentors in both groups are appreciated by the clients in terms of role modeling and friendship skills. A mentor's liking of a mentee encourages behaviors to help that person. Mentors, who show more interest in the person they mentor, provide more career and psychosocial support and are role models to them (2). The increase in the mentoring scale total and subdimension scores of the mentors in the intervention group compared to the pre-training group confirms the fourth hypothesis. It is a positive result for mentors in the control group to have higher scores from mentees in terms of role modeling and self-expression after clinical practice. The literature also emphasizes that the mentee-mentor relationship affects the outcome of the practice (30); personality compatibility, commitment, trust, and support can improve the dynamics between mentor and mentee (11, 13); and the feeling of trust and comfort in the internship relationship is important (10). Mentoring requires a variety of personal characteristics,

attitudes, values, motivation, participation, satisfaction, problem-solving abilities, and commitment to work. Studies reveal the necessity for mentors to receive regular and purposeful training in their continuous development (11). Olaolorunpo (2019) (31) states that the most important achievement of mentoring is the acquisition of positive and visible changes that can be measured or embodied in the psychomotor, cognitive and affective fields as a result of the relationship between mentee and mentor. In other words, the mentoring process is also a learning process in which mentoring skills are developed.

The focus group interviews conducted with the participants underline that the mentor nurses should have professional knowledge, skills and experience, characteristics of a role model, a trainer and a leader, observation skills; be disciplined, patient and willing; and do their job willingly; communicate positively and receive mentoring training. Hoover et al. (2020) (32) drew attention to the importance of sharing experience in the studies where retired nurses mentored young nurses in the mentoring process. Studies state that qualifications of mentors include skills such as determining learning needs and directing students to their own learning goals, supporting and motivating students, and giving them constructive feedback. The most important factor for these is that the mentor should be willing and motivated to develop and implement these competencies (11, 16). It is emphasized that the mentor nurse training program should be a long-term and formal training. It is certain that mentoring skills cannot be acquired through short-term training. The literature states that the type and duration of mentor training may vary according to the nature and objectives of the program (32), however, it is necessary to develop national standards to clarify the roles and responsibilities of the mentor, and ensure adequate preparation and support (10, 12). In the UK, mentor trainings are offered as three-month accredited courses in accordance with the standards set by the Nursing and Midwifery Council (NMC) (21).

At the end of the clinical guidance practice, the mentors in the intervention group have pointed that they do mentoring more consciously, the efficiency of the mentoring and training process increases, and the training they receive is very useful pointing out that their training skills improve. Studies found that mentors wanted more recognition of their roles, were content with their roles and considered themselves necessary for the observation and evaluation of students (33). In the interviews also, the mentors cared about their duties and found their contribution to the education of the students valuable. Participants made suggestions such as updating the mentor training program as well as knowledge and skills related to clinical guidance, making interim evaluations during the training process, standardizing clinical guidance practices, and developing guidelines for mentors. In the literature, studies stress that for good mentoring, mentors should be trained in accordance with the standards determined by the national nursing authorities and trainings should be updated annually (10, 15). The Association of Nursing Education in Turkey has a proposal for the Clinical Guidance Nurse Training Program (20). Hoover et al. (2020) (32) draws attention to the necessity of updating and developing mutual, interactive and learner-centered mentoring processes and models with contemporary approaches.

Conclusion

This research, which examines the effect of the mentor nurse training program on nurses' guidance skills and clinical guidance practices, reveals that the prepared training program is effective. Self-evaluation of the mentors and evaluation results of the mentees also show that the mentoring skills (in all fields such as coaching, role modeling, self-expression, counseling and friendship) of those receiving training have improved. In the group interviews, the participants emphasized that mentors should receive training on clinical guidance and these trainings should be updated. Mentors, who are sometimes more role models than educators, are critical for students in the clinical guidance process. For this reason, it is important that mentors are prepared, trained and supported regarding the problems experienced. We believe that it would be useful to conduct further research examining the problems experienced in the mentoring process from the perspective of the mentor, mentee and educational institution.

Relevance for clinical practice:

The effective mentoring process is indispensable for clinical learning in nursing education to be efficient and effective. And this research focused on developing mentoring skills to improve the mentoring process. This study reveals that the prepared training program is effective in improving the mentoring process. It is important that mentors are prepared, trained and supported regarding the problems experienced. These research findings provided an example of the necessary elements to develop mentoring

skills. This study highlights the following concrete recommendations and policy implications to improve the clinical mentoring process in nursing education:

Mentors' criterias should be standart and potential mentor nurses taken into account in the selection process.

A nationally standardized mentoring curriculum (such as developed mentor nurse training program) should be implemented in all healthcare institutions.

In line with the suggestions of the participants, annual refresher modules (e.g., simulation-based trainings, case studies) should be integrated to ensure continuity of mentor trainings.

Declarations

Article Type

Randomized Controlled Study

Declarations of interest

None

Funding Source

None

Conflict of Interest

No conflict of interest has been declared by the authors.

Ethical Approval

Ethics board approval was obtained for the study with the decision date of 01.11.2016 and decision number of A-57 from the Istanbul University Cerrahpaşa Faculty of Medicine Clinical Research Ethics Committee. Written permission was obtained from the authors who developed scales and made validity and reliability studies. Written permission was obtained from the Dean's office of the Nursing School where the data would be collected, and verbal consent was received from the participants.

Limitation of the research

The inability to conduct focus group interviews with the mentees is the limitation of the research.

Conflicts of Interest

No conflict of interest has been declared by the authors.

Ethical Approval

Ethics board approval was obtained for the study with the decision date of 1st November 2016 and decision number of A-57 from the İSTANBUL ÜNİVERSİTESİ Cerrahpaşa Tıp Fakültesi Klinik Araştırmalar Etik Kurulu Ethics Committee. Written permission was obtained from the authors who developed scales and made validity and reliability studies.

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