

The Effect of Training Given to Rehabilitation Nurses: A Qualitative Study

Rehabilitasyon Hemşirelerine Verilen Eğitimin Etkisi: Kalitatif Bir Çalışma

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ABSTRACT Objective: This study aims to determine the views of trained nurses about the planned training given to rehabilitation nurses. **Material and Methods:** This research was conducted with descriptive, in-depth interview and exploratory qualitative method. This study reported following the Standards for Reporting Qualitative Research guidelines. The nurses (n=40) working in a physical therapy and rehabilitation clinics were given an hour of online training every week between February and May 2022. The training content was prepared according to the Association of Rehabilitation Nurses of Professional Rehabilitation Nursing Competency Model by two nurse faculty members and one specialist doctor. Firstly, depending on the declaration of Helsinki, Ethics Committee approval and individual consent from participants were obtained. Data on the descriptive characteristics of the participants were collected using the Personal Information Form and the "Semi-Structured Interview Form" to evaluate information about education. In order to evaluate the effectiveness of the training, the data of the research were collected by in-depth interviews with the participants 21 days after the training was completed. **Results:** Data analysis revealed three main themes: 1) Raising awareness through education, 2) Learning the roles and duties of rehabilitation nursing, and 3) Obtaining new and updated information. **Conclusion:** Our results show that with the regular training given to rehabilitation nurses, the knowledge of nurses in rehabilitation care and responsibilities of rehabilitation nurses has improved. It has been revealed that their interest and desire for the use of evidence-based practices have increased. The knowledge and competencies of nurses in the field can be increased through regular trainings.

Keywords: Awareness; education; qualitative research; rehabilitation nursing

ÖZET Amaç: Bu araştırmanın amacı, rehabilitasyon hemşirelerine verilen planlı eğitim hakkında hemşirelerin görüşlerinin belirlenmesidir. **Gereç ve Yöntemler:** Tanımlayıcı, derinlemesine görüşme ile keşfedici nitel yöntemle yapılmıştır. Araştırmada Nitel Araştırmaların Raporlanmasında Standartlar kontrol listesine uyulmuştur. Fizik tedavi ve rehabilitasyon kliniklerinde çalışan hemşirelere (n=40) Şubat-Mayıs 2022 tarihleri arasında her hafta 1 saat çevrim içi eğitim verilerek gerçekleştirilmiştir. Eğitim içeriği 2 hemşire öğretim üyesi ve 1 uzman doktor ile birlikte Avustralya Rehabilitasyon Hemşireleri Derneğinin Profesyonel Rehabilitasyon Hemşireliği Yetkinlik Modeli'ne göre hazırlanmıştır. Araştırmada Helsinki Deklarasyonu prensiplerine uyulmuş, etik kurul onayı ve katılımcılardan onay alınmıştır. Araştırmanın verileri, katılımcıların tanımlayıcı özelliklerine ilişkin veriler "Kişisel Bilgi Formu", eğitime ilişkin bilgileri değerlendirmek amacıyla "Yarı Yapılandırılmış Görüşme Formu" kullanılarak toplanmıştır. Eğitimin etkinliğini değerlendirmek amacıyla araştırmanın verileri eğitimler bittikten 21 gün sonra katılımcılarla derinlemesine görüşme yaparak alınmıştır. **Bulgular:** Araştırmanın sonucunda 3 ana tema oluşmuştur. Bu temalar; 1) Eğitim ile farkındalık oluşması, 2) Rehabilitasyon hemşireliğine ait rol ve görevleri öğrenmek, 3) Yeni ve güncel bilgilerin öğrenilmesidir. **Sonuç:** Rehabilitasyon hemşirelerine düzenli olarak verilen eğitim ile hemşirelerin rehabilitasyon bakımı, rehabilitasyon hemşiresinin sorumlulukları gibi konulara ilişkin bilgi dağarcıklarının genişlediği; kanıt dayalı uygulamaların kullanımına ilişkin ilgilerinin ve isteklerinin arttığı ortaya çıkmıştır. Hemşirelere sağlanacak düzenli eğitimler ile hemşirelerin alandaki bilgileri ve yetkinlikleri artırılabilir.

Anahtar Kelimeler: Farkındalık; eğitim; kalitatif çalışma; rehabilitasyon hemşireliği

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Rehabilitation is universally defined as a set of services aimed at improving and maintaining the existing functions of individuals with physical limitations as well as all individuals with poor health conditions due to chronic problems.¹⁻³ When the authority and responsibility area of nursing is examined, it is seen that it aims to protect, maintain, and increase the health of all individuals and families and it is closely related to rehabilitation goals in terms of supporting individuals to increase their capacity to cope with health problems within their current competencies and providing appropriate care so that they can achieve the best possible quality of life. Nurses, who have the longest period of relationship with patients and caregivers due to their professional codes, should have a better understanding of both personal and relational factors of patients and families during the rehabilitation process.³

The rehabilitation nurse is responsible for making patients more independent and effective during physical therapy.⁴ As the patient and family gain skills, dependency levels and secondary complications decrease. In this process, the nurse has responsibilities such as understanding the concerns of family members of the patient, identifying the problems together and determining a roadmap together.^{2,3} In order to do these, a nurse must have knowledge of the current disease, treatment regimen, possible complications, patient limitations, and systems that can be independent.²⁻⁴ Most important is the implementation of evidence-based rehabilitation interventions.⁵ In this context, nurses have a key role in the whole of the acute, end of acute, and long-term rehabilitation process.

In the literature, there are many studies on the quality rehabilitation provided by nurses and its outcomes for patients.⁶⁻¹⁰ The findings of the studies conducted so far have revealed that good training of nurses, including empowerment skills, is vital in order to provide high-quality rehabilitation and achieve optimum results. As it is known, the most effective way to improve care outcomes is to increase the level of knowledge nurses have. Based on this fact, in this study, a planned training model was applied to rehabilitation nurses.

MATERIAL AND METHODS

STUDY TYPE

This study was carried out to determine the opinions of nurses about the planned training model applied to rehabilitation nurses. The descriptive study included in-depth interviews and employed the exploratory qualitative method. The qualitative method of the present study is based on the Standards for Reporting Qualitative Research by O'Brien et al.¹¹ In-depth interviews were conducted 21 days after the training. Because; the recommended time interval for evaluation after the training is 21 days.^{11,12}

STUDY POPULATION AND SAMPLE

The population of the research made up nurses (n=40) working in physical therapy and rehabilitation clinics of a training and research hospital located in a province of Türkiye. The criteria for (1) inclusion in the study were working in the physical therapy and rehabilitation clinics where the study was conducted for at least 3 months, (2) participating in the trainings regularly, (3) filling in the data collection forms completely, and (4) attending the in-depth interviews. The study was completed with 25 nurses between February and June 2022, as five nurses did not want to participate in the study, three nurses had coronavirus disease-2019 (COVID-19), three nurses did not attend the trainings regularly, and four nurses did not attend the last interview.

INTERVENTION

The nurses (n=40) working in a physical therapy and rehabilitation clinics were given one hour of online training every week between February and May 2022 (17 weeks in total). The content of the training was prepared by two nurse faculty members and one specialist doctor based on the Professional Rehabilitation Nursing Competency Model.⁵ This model can be adopted and adapted by countries in the process of developing rehabilitation education and systems of rehabilitation care for persons across the globe with disability and/or chronic conditions.⁵ Considering the fact that health systems can vary across countries, the content of the training was specifically designed considering Turkish culture and included

First lesson	Rehabilitation Nursing: Historical Perspectives, Current Practice and legal status in Türkiye
2 and 3. lesson	Domain 1: Nurse-Led Interventions Competency 1.1: Use Supportive Technology for Improved Quality of Life Competency 1.2: Implement Interventions Based on Best Evidence
4 and 5. lesson	Domain 1: Nurse-Led Interventions Competency 1.3: Provide Patient and Family Education Competency 1.4: Understanding the Worldview of Culturally Different Individuals Competency 1.5: Deliver Patient- and FamilyCentered Care
6 and 7. lesson	Domain 2: Promotion of Health and Successful Living Disability or Chronic Illness Across Life-span
8, 9 lesson	Domain 3: 3.1 Promote Accountability for Care 3.2 Disseminate Rehabilitation Nursing Knowledge 3.3 Empower Patient Self-Advocacy
10 and 11. lesson	Domain 4: Intra/Interprofessional Teams 4.1 Develop Intra/Interprofessional Relationships 4.2 Implement an Intra/Interprofessional Holistic Plan of Care 4.3 Foster Effective Intra/Interprofessional Collaboration
12. lesson	Gerontological Rehabilitation Nursing
13. lesson	Traumatic Injuries: Traumatic Brain Injury and Spinal Cord Injury
14. lesson	Rehabilitation Nursing Care for Stroke
15. lesson	Bowel and Bladder Care. Wound care
16 and 17. lesson	Case Study (general)

Association of Rehabilitation Nurses. The Specialty Practice of Rehabilitation Nursing: A Core Curriculum. 8th ed. ARN; 2020.

the four main areas in the competency model (Table 1). The training included additional topics different from the model. The nurses to receive the training were interviewed and it was decided that the cerebrovascular attack (CVA) group they mostly care for, the elderly patients, and wound care were also included in the training content since the training program.^{4,13,14}

DATA COLLECTION TOOLS

Data on the descriptive characteristics of the participants were collected using the Personal Information Form and “Semi-Structured Interview Form”.

Personal Information Form: The Personal Information Form was created by reviewing the relevant literature.¹³⁻¹⁷ It included questions such as nurses’ age, gender, and years of experience as a rehabilitation nurse.

Semi-Structured Interview Form: In-depth interviews were conducted online for approximately

1. What do you think about this training given regularly?
2. What effect did the training content have on patient care?
3. When you think about the content of the training, which topic was particularly useful for you?
4. What kind of a perspective did the education provide you?
5. How did the training improve your knowledge on legal duties and responsibilities and evidence-based practices?

45-60 minutes by the other researcher who did not provide the training. The in-depth interview form included five open-ended and semi-structured questions that did not employ any manipulative or directive tactics on the participants (Table 2). Any confusing statements were avoided by following a step-by-step path from simple to more challenging questions.

Since the study aimed to evaluate the opinions of nurses will be talking about the training given, all

40 nurses in the research setting were asked to participate in the training sessions. The participants were asked to approve the informed consent form before information on their socio-demographic characteristics was obtained. At the beginning of the study, it was planned to collect data through face-to-face interviews; however, three participants were infected with the COVID-19 virus and the researchers were in different provinces, and thus, a semi-structured online interview was performed by the participants. The first interview was ended when the researcher determined that data saturation was already achieved. Because the nurses repeated their answers. However, a second interview was made, and the nurses were asked to confirm if there were any other statements they would like to add. Research was completed with only two interviews.

EVALUATION OF THE DATA

The data on socio-demographic characteristics was analyzed using a statistical package program. No program was used in the qualitative coding process. Four basic criteria are important in the validity and reliability of qualitative research. These criteria are; credibility, reliability, confirmability, and transferability. The results of the study were evaluated in terms of these four criteria.¹² In this study, the researchers examined the credibility by independent reading and listening. Online records were read many times and the data were coded. After the codes were grouped according to the integrity of their meaning, themes were created to represent these codes. The analysis approach developed by Creswell was used in the analysis of the interviews.¹² In order to eliminate research bias, the data were evaluated using descriptive and content analysis methods under the supervision of an expert whose field of expertise is PhD sociology. All participants confirmed our findings.

ETHICAL ASPECTS OF THE STUDY

Firstly depending on the declaration of Helsinki (2013), Ethics Committee approval was obtained from Ankara Medipol University (date: February 4, 2022, no: E-81477236-604.01.01-278). Written permission was obtained from the hospital administrators. Informed consent was obtained from the

participants, and they were informed that they could withdraw from the study if they felt uncomfortable with the questions or the interviewer. They were further informed that their names would be kept confidential and codes would be used instead of their names such as “N1, N2, N3, etc.”.

RESULTS

Of the nurses, 92% were female, 48.2% were between the ages of 44 and 56, and 72% had worked as rehabilitation nurses for at least 15 months (Table 3).

The analysis of the online in-depth interviews revealed three sub-themes: 1) Raising awareness through education, 2) Learning the roles and duties of rehabilitation nursing, and 3) Obtaining new and updated information.

Raising Awareness Through Education

All of the participants stated that their awareness increased through the training they received. *Awareness was created with a planned education model.*

Socio-demographic characteristics	n (25)	%
Age		
18-30	5	20
31-43	8	32
44-56	12	48
Gender		
Female	23	92
Male	2	8
Education levels		
High school	7	28
Associate degree	13	52
University	5	20
Marital status		
Single	3	12
Married	22	88
Working years as a rehabilitation nurse		
3-6 month	4	16
6-9 month	3	12
15 month ≥	18	72
Work shift		
Only nights	2	8
Daytime	2	8
Day and night	21	84

N6: “What is being said here is not something new to me, but of course, listening to this information again in this COVID period is a novelty.”

N21: “I have been working as a rehabilitation nurse for 3 years. We generally do similar things, the same job, but the trainings were like an awakening. We felt more aware of what we are doing and the care process”.

N5: “I always perceived rehabilitation nursing as a job done after an accident or an illness. But I guess it is not like that at all. I also learned that the rehabilitation process should start immediately after an accident or any situation”.

Learning the Roles and Duties of Rehabilitation Nursing

The majority of the participants (75%) stated that they knew the roles and duties of nursing. However, when the roles of rehabilitation nurses were asked, it was seen that they did not have sufficient knowledge regarding their roles. This theme includes two sub-themes as information about regulations and roles and duties.

Information about regulations

The participants stated that they knew the regulation on nursing, but they did not know the section on rehabilitation nursing in the regulation (86%).

N14: “I know of the regulation on nursing. I know my roles and responsibilities written in the regulation; however, I did not know the part where rehabilitation nursing is defined.”

N3: “Prevention of deformities is a very important issue. It is a task that must be performed carefully for the future life of the patient. In the regulation, it is recommended to maintain physical movement in order to ensure joint range of motion. We do not generally perform this task. The interventions are usually carried out by physiotherapists. Training is usually given by physiotherapists”.

Roles and duties

The majority of the participants (78%) were familiar with the definitions of their roles and duties, while some participants did not have a grasp of all their roles and duties. The analysis of in-depth interviews

revealed that the nurses were not aware of their roles and duties of ensuring the training of the patient’s family and their participation in care and the continuation of physical therapy exercises in the service.

N7: “As a rehabilitation nurse, we have many duties such as helping patients adapt to their new lives, cope with obstacles, and comply with treatment. Sometimes we forget the family training part. I always think that I have to explain everything to the patient.”

Obtaining New and Updated Information

One of the most important aims of the training program was helping nurses obtain new and updated information and make a difference in this regard. This theme consists of three sub-themes: discovery of evidence-based information, updating information, and the most important piece of information kept in mind after the training.

Evidence-based care

Only 8% of nurses stated that they follow up-to-date evidence-based information and try to apply it to patients. It was revealed that other nurses performed their routine care.

N25: “I was surprised to learn that necrotizing tissue should be separated once for wound care. I thought it could be done several times according to the type and severity of the wound”.

N19: “Although it is recommended to use water in evidence-based wound care, I think I would not prefer it”.

N11: “The mobile application for improving the mobility of stroke patients is very impressive. I wish we could use it, too”.

Updating information

All the nurses stated that they participated in the routine trainings organized in the hospital. However, it has been observed that since the training given in this study is specific to rehabilitation nursing and long-term, it was evaluated as more effective than the routine trainings provided in the hospital.

N17: “Actually, I have been giving the same care for years, but I have obtained up-to-date information with trainings. It was good”.

N18: *“When caring for patients, I remember the information given in the training. It was good to use this new information for patients”.*

Information kept in mind

Of the nurses, 60% were stated that they remembered the complications and the care after the CVA. 20% of the nurses reported that they remember the topic of ensuring family participation in the care of the patient, while the remaining nurses stated that they equally understood and remember all the topics in the training.

N13: *I remember that I should not forget to evaluate my patients who are in the clinic after CVA in terms of pneumonia.*

N15: *I did not know that the patient’s water intake should be restricted before eating.*

DISCUSSION

Chronic diseases or some geriatric conditions that bring along multiple complications, cause disability, and oblige the individual to receive lifelong professional health care require the skills and competencies of rehabilitation nurses to be supported by training programs in the environments they care for. In this way, it can be expected that the care given by nurses will be of sufficient quality as a result of both increasing job satisfaction and improving awareness.

Research results in the literature have shown that nurses need more training to strengthen their contribution to the rehabilitation of patients and increase their awareness.^{13,14,16} The nurses in our study stated that as a result of the training given for 17 weeks, their awareness of the rehabilitation care they provided increased. In addition, the nurses who felt supported by the training program stated that the information conveyed in the training sessions was memorable and applicable. However, in our study, nurses’ opinions about education were asked, but its effect on patient outcomes was not examined. In parallel with our research, Bilir Kaya, Bjartmarz et al. and Steensgaard et al. provided training to rehabilitation nurses and determined that the awareness levels of the nurses increased.^{14,15,17} Also, unlike our study, they also evaluated the effect of education on

patient care. Bilir Kaya reported that the rate of new pressure sores was zero as a result of the awareness created by the training given to nurses working in the rehabilitation hospital twice a year.¹⁴ Steensgaard et al. reported that they tried a new empowerment method called action research in rehabilitation nursing and with the training, the nurses both gained awareness in a wider perspective about what their job was and ensured better patient participation in care.¹⁷ Bjartmarz et al. developed a guide for the care of stroke patients and investigated nurses’ views about the care they provide and care outcomes using this guide.¹⁵ The study revealed that thanks to the guide, the nurses provided more education to the patients and their families, paid more attention to the symptoms of depression, and observed depression symptoms in their patients. Nurses who used the guide defined the basic components of rehabilitation and integrated them into daily nursing care, and they also stated that they found the guide applicable and practical.

The study revealed that most of the participants had a good level of knowledge about the roles and duties of a rehabilitation nurse; however, their definitions about the responsibilities regarding family training and participation in care were not sufficient. Shirozhan et al. state that the participation of patients and caregivers in rehabilitation nursing care facilitates care delivery.¹³ Nilsson et al. and Lindberg also stated that patient participation in care is one of the fundamental factors and prerequisites for the rehabilitation process, contrary to our study.^{18,19} We can consider the fact that our results are different from other studies as a cultural feature. Nurses may want to provide all care in the hospital on behalf of the patient. It is an important finding that the training given to nurses in our study has raised their awareness about improving their knowledge in this regard. The statements of the participants indicate that re-learning the roles and responsibilities of rehabilitation nurses arouses a desire to provide care with awareness. Nurses were aware of not only the care and treatment of patients, but also educating the patient and her family. Similarly, in his systematic review on stroke rehabilitation, Clarke stated that the clarity of nurses’ roles facilitates nursing care.²⁰ In a qualitative study, they determined that nurses experienced

uncertainties regarding their roles and duties, in parallel with our research findings.¹⁶

Few of the rehabilitation nurses in our study stated that they followed evidence-based practices while providing care. In addition, some nurses reported that they found the evidence-based care practices that they became aware of with the training interesting. We think that there may be many reasons why evidence-based care practices aren't followed. Nurses don't know where to follow new information and do not have English language proficiency. Similar to our finding, Friesen-Storms et al. reported in their study that evidence-based practices do not receive the desired level of attention since nurses have little knowledge about or negative attitudes towards these practices, or their English reading proficiency is weak.²¹ Yet, nurses are enthusiastic and open to innovations to provide quality care. In addition, as a part of the results of Delphi studies, Suter-Riederer et al. stated that an evidence-based approach in rehabilitation nursing is significant.²² It is stated in the literature that education-oriented interventions that include innovations in practice improve the knowledge and skills of rehabilitation professionals, while the effect on behavior change varies. In our research, only evidence-based information in rehabilitation nursing care was described. However, there was no follow-up on nurses' use of them. Other studies have evaluated the use of training provided in patient care.^{23,24} Doyle and Bennett found that attending an 8-hour theory-based evidence-based workshop and providing care using this evidence increased practitioners' knowledge, behavior, and self-confidence.²³ Fruth et al. also reported that participation in special presentations to improve knowledge increases the tendency of rehabilitation practitioners to incorporate published research into their care practices.²⁴

LIMITATIONS

Studies with a larger sample size can be conducted, adding more training topics. It may be recommended

to conduct large-sample or multi-center studies in which the effect of the training provided on patient outcomes is objectively evaluated.

CONCLUSION

The study found that the regular training given to the rehabilitation nurses improved their knowledge on rehabilitation care and the responsibilities of a rehabilitation nurse. Furthermore, it was revealed that nurses' interest in and desire for the use of evidence-based practices have increased. Thanks to the training, the nurses continued their rehabilitation care with more awareness compared to the past. Therefore, we think that regular and guide-based training will be effective in increasing nurses' awareness and reflecting it on patient care in future studies.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Nilay Bektaş Akpınar, Ulviye Özcan Yüce, Sabire Yurtsever; **Design:** Nilay Bektaş Akpınar; **Control/Supervision:** Nilay Bektaş Akpınar, Ulviye Özcan Yüce, Sabire Yurtsever; **Data Collection and/or Processing:** Nilay Bektaş Akpınar, Ulviye Özcan Yüce; **Analysis and/or Interpretation:** Nilay Bektaş Akpınar, Ulviye Özcan Yüce; **Literature Review:** Nilay Bektaş Akpınar, Ulviye Özcan Yüce; **Writing the Article:** Nilay Bektaş Akpınar, Ulviye Özcan Yüce, Sabire Yurtsever; **Critical Review:** Nilay Bektaş Akpınar, Ulviye Özcan Yüce, Sabire Yurtsever.

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