MAS Journal of Applied Sciences
Uygulamalı Bilimler Dergisi

ISSN: 2757-5675
masjaps.com

OPEN ACCESS

Araştırma Makalesi / Research Article

The Effect of Self-Care Deficit Nursing Theory Based Practice Training On Nurse and Patient Outcomes in Internal Medicine Clinics

Nese KISKAC[1*] , Sevgi KIZILCI OZ[2]

[1]Istanbul Gelisim University, Faculty of Health Sciences, Department of Nursing, Istanbul
[2]Uskudar University, Faculty of Health Sciences, Department of Internal Medicine Nursing, Istanbul

*Sorumlu yazar (Corresponding author): nkiskac@gelisim.edu.tr

Abstract

This study aims to evaluate the effect of the training given to nurses working in internal medicine clinics so that they can practice based on nursing theory of self-care deficit, on nurse and patient outcomes. The research conducted in a quasi-experimental design. The sample of the study consisted of 33 nurses working in internal medicine clinics and 322 patients. Data collection tools applied to nurses and patients before and after the training. After the training given to nurses; it found that the time spent by nurses for patient care increased, their attitude evidence-based practices, patient-centered care competence, counseling skills and job motivation increased significantly (p<.05), awareness of nursing actions that support patients' individuality and perception of their individuality in their own care significantly increased (p<.05). It can be recommended that nurses working in internal medicine clinics should be taught in the nursing theory of self-care deficiency and support the theory-based study, and that the study should be conducted out in different clinics other than internal medicine clinics.

Keywords: Nursing agency, self-care, self-care agency, theory

1. Introduction

Internal medicine clinics; These are units that require a holistic and multisystemic approach, especially in the treatment, care and rehabilitation, monitoring and diagnosis of acute and chronic diseases of elderly individuals (Karahan and Aydın, 2018). In cases where the needs of individuals diagnosed with chronic diseases cannot be met, complications develop and the first step of treatment is a lifestyle change. In this process, nurses are with individuals 24/7 and use their knowledge for self-management and self-care of individuals (Orem, 2001). Nursing theories and models contribute to the development of the profession by directing nursing-specific research, nursing education and practices (Orem, 2001). Nurses need to incorporate nursing theories into the nursing process to effectively deliver quality and patient-centered care. Because of these studies, it is seen that the use of nursing theory and models in clinical practice is uncommon (Göçmen et al., 2019). Biggs (2008), in his literature review, determined that the most used theory is Orem's self-care deficit nursing theory (SCDNT) (Biggs, 2008). In Turkey and in different countries around the world, academicians tried improving the self-care abilities of patients diagnosed with chronic diseases, and the results have been tested with applications based on SCDNT (Biggs, 2008; Kirigo, 2017). In only one study, nurses working in the clinic taught SCDNT to provide theory-based work in clinics, nurses' perspectives on the use of theory, patients' participation in care, and nurse and patient satisfaction evaluated (Kirigo, 2017). For this reason, it is aimed to evaluate the effect of the training given to nurses working in internal medicine clinics so that they can practice based on the nursing theory of self-care deficiency on nurse and patient outcomes. It is important to develop self-care skills so that individuals with chronic diseases can adapt to life changes and prevent complications. In Turkey and in different countries around

the world, the self-care skills of patients with chronic diseases tried to be developed and the results have been tested with applications based on SCDNT by academics in different countries (Afrasiabifar et al., 2016; Afrasiabifar et al., 2020; Aish and Isenberg, 1996; Altay and Cavusoglu, 2013; Bal and Kapucu, 2016; Deng et al., 2021; Hemati et al., 2015; Jaarsma et al., 2000; Khademian et al., 2020; Mohammadpour et al., 2015; Nasresabetghadam et al., 2021; Saeedifar et al., 2018; Tok and Kasikci, 2020; Tuna and Alparslan, 2021; Zhang and Pan, 2021; Zhu et al., 2021). In only one study, nurses working in the clinic were taught SCDNT to provide theory-based work in clinics, nurses' perspectives on the use of theory, patients' participation in care, and nurse and patient satisfaction were evaluated (Kirigo, 2017). Apart from this study, we could not find a study evaluating the effect of nurses' practices based on SCDNT.

2. Materials and Methods

2.1. Study design

The study was conducted in a quasi-experimental design in the internal medicine clinic of a training and research hospital between April 21 and December 31, 2021. The Ethics committee (Uskudar University 26.02.2021/61351342-February 2021–27 February) and institutional permission were obtained to conduct the research. Written informed consent obtained from each participant. No sample calculation was made for nurses. All nurses who agreed to participate in the study were included in the study. The sample of the patients was calculated with the G*Power 3.1.9.7 software program. In this program, the power was taken as 80%, the effect size was 0.3, the margin of error was 0.05, and the sample was 90. A total of 322 patients, including two different patients in Group 1 (n=161) and Group 2 (n=161), who were hospitalized in the clinic for at least five days, aged 18 and over, and agreed to participate in the study, were included in the study.

2.2. Intervention
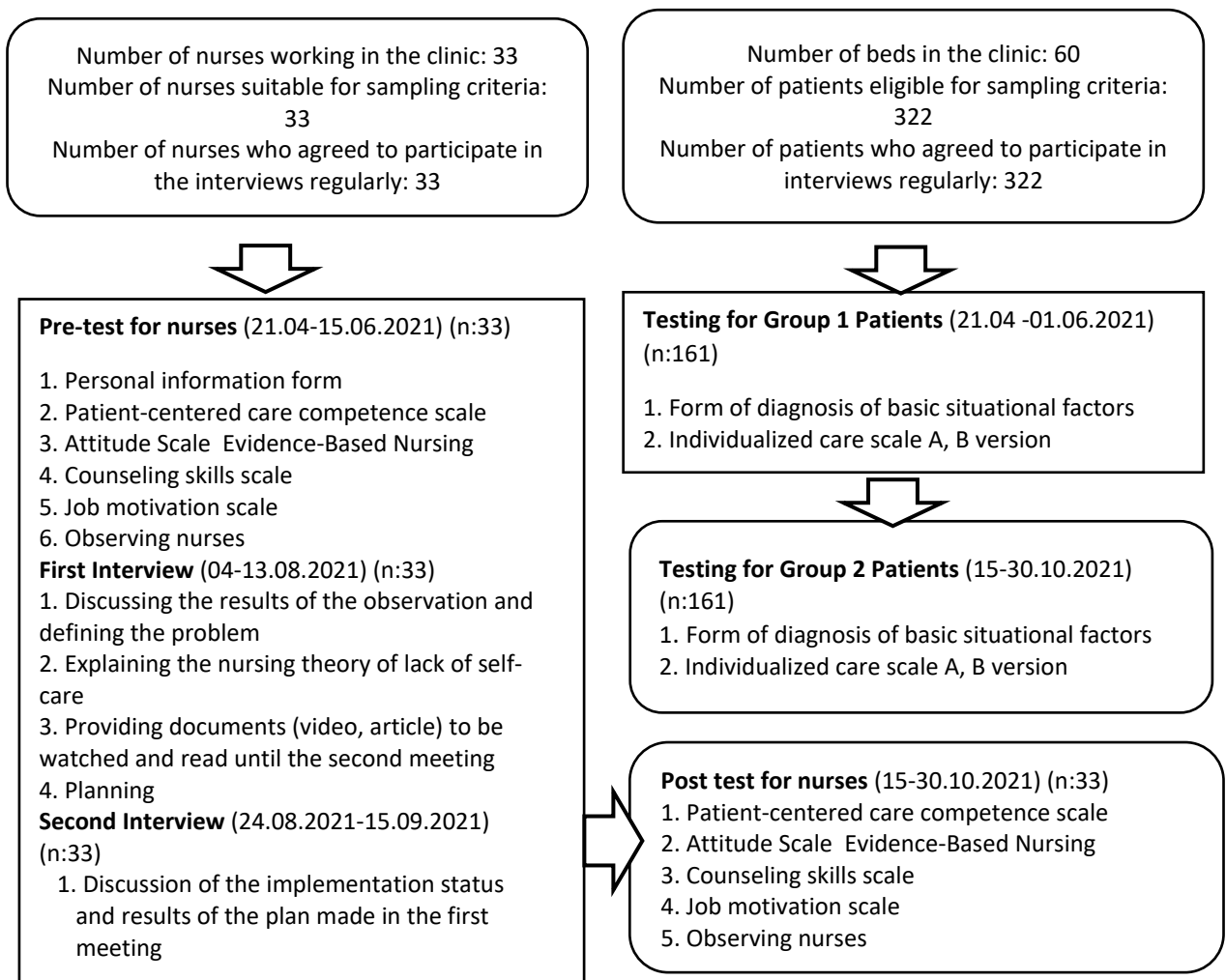
The flow chart of the study is shown in Figure 1.

Number of nurses working in the clinic: 33 Number of nurses suitable for sampling criteria: 33 Number of nurses who agreed to participate in the interviews regularly: 33	Number of beds in the clinic: 60 Number of patients eligible for sampling criteria: 322 Number of patients who agreed to participate in interviews regularly: 322

Pre-test for nurses (21.04-15.06.2021) (n:33)

1. Personal information form
2. Patient-centered care competence scale
3. Attitude Scale Evidence-Based Nursing
4. Counseling skills scale
5. Job motivation scale
6. Observing nurses

First Interview (04-13.08.2021) (n:33)
1. Discussing the results of the observation and defining the problem
2. Explaining the nursing theory of lack of self-care
3. Providing documents (video, article) to be watched and read until the second meeting
4. Planning

Second Interview (24.08.2021-15.09.2021) (n:33)
1. Discussion of the implementation status and results of the plan made in the first meeting

Testing for Group 1 Patients (21.04 -01.06.2021) (n:161)

1. Form of diagnosis of basic situational factors
2. Individualized care scale A, B version

Testing for Group 2 Patients (15-30.10.2021) (n:161)
1. Form of diagnosis of basic situational factors
2. Individualized care scale A, B version

Post test for nurses (15-30.10.2021) (n:33)
1. Patient-centered care competence scale
2. Attitude Scale Evidence-Based Nursing
3. Counseling skills scale
4. Job motivation scale
5. Observing nurses

Figure 1. Flow chart of the research

2.3. Preparation of Training Material

The study material was prepared according to the nurses' first observation result. The data obtained because of the observations were evaluated; According to Orem's theory, aspects of nurses that need to be developed in the social, interpersonal and professional-technological areas, which are the dimensions of nursing agency, determined (Table 3). Because of this evaluation; a file containing videos and articles in the electronic environment prepared for the materials and the identified needs of the nurses on SCDNT, and an interview form developed to provide the training to the nurses. In the content of the file, SCDNT concepts (nursing system, self-care needs, basic situational factors, self-care / dependent care agency, deficit of self-care / dependent care, self-care / dependent care, nursing agency), SCDNT metaparadigm concepts (nursing, human, environment, health concepts), procedures obtained from the hospital system (fall events, verbal orders, medication orders and distribution, medication safety, fall events, patient transfer), articles (nursing care, nursing law, patient safety, ethical principles and responsibilities of nurses, professionalization, spiritual care, nurses' roles, crying/refusing treatment/communication with angry

patients, nurses' roles, correct use of asthma and COPD medications, patient safety). Additionally, an updated book on internal medicine nursing left to the clinic for nurses to read when needed.

2.4. Training for nurses

The application of the training to the nurses carried out face-to-face in the responsible nurse's room in the form of two interviews. Each interview lasted an average of 90 min. The training carried out using an interview form that prepared using the literature (Orem, 2001; Miller and Moyers, 2007; Ogel, 2009). **In the first meeting;** observation results and pre-test results of each nurse shared with them, patient care, meeting the needs of the patients was the most difficult for them, their feelings and thoughts asked, and the problem/situation defined. Awareness of the importance of the problem and a decision to plan to solve the problem ensured with questions such as what he wants to happen in the future, what he will feel good if it changes, what his preferences are, whether there are any obstacles in front of him, what are the benefits of his choice, and what the result will be if he does not change. Questions such as what he can do to solve this problem, how much he trusts himself, how he will understand that he has succeeded, asked to him and he was made to plan. Orem's concepts of nursing agency, nursing system, basic situational factors of patients, self-care needs, self-care agency, dependent care agency, deficit of self-care, deficit of dependent care, self-care and dependent care discussed together. The output related to the nursing agency given to the nurse and she given the opportunity to talk about the social dimension, interpersonal dimension and professional technological dimensions she taught, and what she wanted to do discussed until the second interview, the file prepared as educational material sent to her in an electronic environment, procedures, articles and the content of the video explained, and the internal medicine nursing book left to the clinic introduced. Additionally, how he can access the scientific information he requires is shown in the computer environment. After talking about how the interview went, what he learned, what happened, whether he had a problem during the interview, what he wanted to have/not to be in the next meeting, the meeting date was determined by considering the criterion that at least 10 days should pass for the second interview, and a phone number where he could ask if needed given. **In the second meeting;** it started by discussing the experiences and results of the decisions taken in the first interview, by asking specific questions from the video on "the use of scientific knowledge in nursing and the art of nursing" sent via message to his personal phone, what he liked in the video, his use in clinical practice, how he felt, the legislation and articles discussed. It questioned which one he read, why he chose the relevant article, how he reflected it to the clinic and by asking what had changed for him in practice, how he felt, awareness of the new situation and definition of the problem, if any, provided. Questions asked about how he would continue in the next process, his plans for his new situation discussed, an evaluation made and the session completed.

2.5. Evaluation

For nurses; Nurse personal information form, evidence-based nursing attitude scale (EBNAS), patient-centered care competence scale (PCCCS), nurses counseling skills scale (NCSS), nurse job motivation scale (NJMS), observation instruction. **For patients;** diagnosis form of the patients' main situational factors, individualized care scale-patient version (ICS) (A and B). While determining the nurse-related scales, Orem's nursing agency components were effective. Orem nursing strength agency components; It is defined as "the ability to gain valid and reliable information, the ability to make decisions and apply, motivation, the nurse's desire to provide care, the ability to see and combine differences while reaching the goal, continuity in the performance of nursing

practices, making changes in nursing practices according to changing situations and self-management" (Orem, 2001). Orem's definition of self-care was effective in determining the scale for the patient. Orem emphasizes that patients should participate in their individual care and make decisions in their care for self-care. The scale explains the patient's individual decision-making and participation in his care.

2.5.1. Nurse personal information form

In the form prepared by scanning the literature, the gender, age, marital status, education level, child status and working years of the nurses were questioned, and it consisted of six items (Table 1).

Table 1. Descriptive characteristics of nurses (n=33)

	n	%
Gender		
Woman	29	87.9
Man	4	12.1
Age (average)	29±7.31	
Marital status		
Married	11	33.3
Single	22	66.7
Educational status		
High school	1	3
Associate degree	4	12.1
Licence	26	78.8
Graduate	2	6.1
Child presence		
Yes	9	27.3
No	24	72.7
Years of work in the clinic (average)	5±6.09	

Descriptive Statistics (mean, percent, standart deviation)

2.5.2. Diagnosis form of patients' main situational factors

Self-care deficiency was prepared by using nursing theory (Orem, 2001). The form consists of five questions about the basic situational characteristics of an individual with chronic disease (gender, marital status, educational status, age, chronic disease status) (Table 2).

Table 2. Descriptive characteristics of the patients (n=161)

	Grup 1*		Grup 2**	
	n	%	N	%
Gender				
Woman	75	46.6	92	57.1
Man	86	53.4	69	42.9
Age (average)	58±17.03		59±16.41	
Marital status				
Married	107	66.5	101	62.7
Single	54	33.5	60	37.3
Educational status				
Literate	46	28.6	43	26.7
Primary school	56	34.8	34	21.1
Middle School	9	5.6	9	5.6
High school	32	19.9	47	29.2
Licence	18	11.2	28	17.4
Chronic disease status				
Yes	141	87.6	118	73.3
No	20	12.4	43	26.7

Descriptive Statistics (mean, percent, standart deviation)
* Patients hospitalized in the internal medicine clinic before training to nurses
** Patients hospitalized in internal medicine clinic after training to nurses

2.5.3. Individualized care scale (ICS)-Patient

Suhonen et al developed the scale in 2000. Acaroğlu et al. performed Turkish validity and reliability in 2010. The scale has three sub-dimensions. These; clinical situation, personal life situation, decision-making control (Acaroğlu et al., 2010; Suhonen et al., 2007). In this study, the BBS-A Cronbach's alpha coefficient of the scale was 0.767, and the sub-dimensions of the scale were 0.754, 0.756, and 0.750, respectively; the BBS-B Cronbach's alpha coefficient was 0.767, and the sub-dimensions of the scale were 0.753, 0.756, and 0.751, respectively (Suhonen et al., 2000; Suhonen et al., 2005).

2.5.4. Patient-centered care competence scale (PCCCS)

Hwang (2015) developed the scale in order to determine the competencies of nurses in patient-centered care. Arslanoğlu and Kırılmaz (2019) performed the Turkish validity and reliability of the scale. The Cronbach alpha coefficient was 0.850. In this study, the Cronbach's Alpha coefficient of the scale was found to be 0.756.

2.5.5. Evidence-based nursing attitude scale (EBNAS)

Ruzafa-Martinez et al developed the scale in 2011. Ayhan et al. (2015) adapted the scale into Turkish. The scale can also be applied to nurse students. The Cronbach α reliability coefficient of the scale is $\alpha = .90$. In this study, the Cronbach's alpha coefficient of the scale was found to be 0.765.

2.5.6. Nurses counseling skills scale (NCSS)

Avcı and Kumcagiz created the scale in 2019. The reliability of the scale was examined with Cronbach's alpha coefficient and Split-half. Cronbach alpha was calculated as .88 and Split-half as .86. In this study, the Cronbach's alpha coefficient was found to be 0.766.

2.5.7. Nurse job motivation scale (NJMS)

Engin and Çam developed the scale in 2009. The scale consists of 27 questions. The reliability coefficient of the scale was determined as 0.847. In this study, the Cronbach's alpha coefficient of the scale was found to be 0.719.

2.6. Observation instruction

Observation instruction; self-care deficiency is prepared according to nursing theory (Orem, 2001). The prepared directive presented for evaluating expert opinions of two nurses in charge and four nurses/faculty members, it rearranged according to the feedback, and pilot observation made in the clinic with its final version. The form composed of 11 (eleven) items related to the practice of nurses in the clinic, the time they spent and meeting the patient's needs.

2.7. Interview form

The interview form prepared using the related literature, according to the SCDNT and motivational interview technique (Orem, 2001; Miller and Moyers, 2007; Ogel, 2009). The first interview form; The second interview form consists of five steps: defining the problem/situation, clarifying feelings and thoughts, planing, evaluating the interview, and making the next interview plan; It is a form in which there are questions about what he decided to change in the first meeting, what has changed in the functioning of the clinic and what he feels, whether he has a problem with his new situation, and how he wants to progress from now on.

2.8. Application of Data Collection Tools

The application of data collection tools is shown in Figure 1. Nurses (n=33) filled pre-tests (nurse personal information form, PCCCS, EBNAS, NCSS, NJMS) with group 1 patients (n=161) (Diagnosis form of patients' main situational factors, ICS-Patient (A_B)) who were hospitalized for at least five days. After the pre-tests were applied, nurses (each nurse was 4 h) were observed in the clinic for 14 days using the observation form. At the end of 14 days, two interviews were conducted with the nurses using the interview form. One month after the second interview, the same tests were applied to the nurses (n=33) and

group 2 (n=161) patients. After the post-test, the second observations of the nurses were made using the observation form (each nurse was between 4 h and the hours observed in the first observation).

2.9. Statistical Analysis

The IBM SPSS 22.0 statistical program was used for statistical analysis. Descriptive statistics (mean, standard deviation, frequency, median, percentage) methods were used to evaluate the central tendency and distribution of study variables, skewness and kurtosis values and the Shapiro-Wilk test was used to evaluate the normal distribution of the data. Student T-test and Paired-Samples T-test were used to compare normally distributed data, Mann-Whitney U test and Wilcoxon signed ranks test were used to compare data that were not normally distributed. Again, linear regression analysis was used to evaluate the effect of training and non-educational parameters on test results. The results were evaluated at the 95% confidence interval and a significance level of $p<0.05$.

3. Results

3.1. Nurse Results

3.1.1. The working process of nurses in the clinic

It was observed that the time nurses spent in internal medicine clinics increased from 40±11 min to 30±6 min at the nurse desk, from 87±25 min to 56±16 min at the bedside, from 20±8 min to 17±5 min in the treatment room, from 32±36 min to 27±29 min in non-clinical work, the time allocated for patient delivery did not change (15 min±0), and the time spent in the patient room increased from 45±17 min to 95±24 min. (Table 3).

Table 3. Nurses' working process in the clinic (n:33)

Evaluated apps	Before training		After training	
	Duration (min)	Activity done	Duration (min)	Activity done
Time spent and activity in the nurse's room	40±11	1. Rest	30±6	1. Rest
Time spent and activity at the nurse's desk	87±25	1.Entering the care/treatment materials and applications into the computer system 2. Answering the questions of patients and their relatives 3. Filling out maintenance forms	56±16	1.Entering the care/treatment materials and applications into the computer system 2. Answering the questions of patients and their relatives 3. Filling out maintenance forms
Time spent and activity in patient rooms	45±17	1. Drug therapy 2. ECG shooting 3. Blood sugar and urine monitoring 4. Vital signs measurement 5. Patient admission and diagnosis 6. Informing the patient and their relatives	95±24	1. Drug therapy 2. ECG shooting 3. Blood sugar and urine monitoring 4.Vital signs measurement 5. Patient admission and diagnosis 6. Informing the patient and their relatives 7. Defining patient needs 8. Meeting patient needs
Time spent in non-clinical work and activity	32±36	1. Take the patient for imaging 2. Buying medicine from the pharmacy 3.Administrative affairs	27±29	1. Take the patient for imaging 2. Buying medicine from the pharmacy 3.Administrative affairs
Time spent in the treatment room	20±8	Preparing medication and care supplies	17±5	Preparing medication and care supplies
Patient delivery	15±0	Delivery at the bedside	15±0	Delivery at the bedside

Descriptive Statistics (mean, standart deviation)

3.1.2. Nurses' attitudes toward evidence-based nursing, patient-centered care competence, counseling skills, and job motivation

The mean scores and analysis results of nurses before and after the training "patient-centered care competence, counseling skills, attitude toward evidence-based nursing and job motivation" are shown in Table 4. A significant difference was found between nurses' attitudes toward evidence-based nursing, patient-centered care competence, counseling skills, work motivation pre-test and post-test scores ($p<0.05$).

Table 4. Nurses' attitudes towards evidence-based nursing, patient-centered care competence, counseling skills, and job motivation

Scales	min-max points	pre-test	Median	post-test	median	p
Attitude Scale Towards Evidence-Based Nursing	15-75	57.30±10.99	55	67.84±7.28	70	0.001
Patient-Centered Care Competency Scale	17-85	67.15±11.46	68	77.66±6.75	79	0.001
Counseling Skills Scale for Nurses	10-50	43.12±7.70	46	46.45±3.80	48	0.017
Nurs Job Motivation Scale	25-75	30.03±4.21	47	47.06±10.10	29	0.001

Descriptive Statistics (mean, standart deviation, median)/ Paired-Samples T test, Wilcoxon signed ranks test

3.2. Patient Results

3.2.1. Being aware of nursing actions is aims at supporting the individuality of patients and perceiving their individuality in their own care

The results of the tests applied to Group 1 and Group 2 patients regarding the awareness of nursing actions aimed at supporting the individuality of the patients (ICS-A) and the perception of their individuality in their own care (ICS-B) are shown in Table 5, and the result between the two groups is significant ($p< 0.05$) (Table 6).

Table 5. Patients' awareness of nursing actions aimed at supporting their individuality and their perception of their individuality in their own care

		Scales	Min-max points that can be obtained		Group 1	Group 2	p
Awareness of nursing actions aimed at supporting the individuality of patients	**Scale Sub-Dimensions**	**Clinical status**	average score	1-5	3.29±1.16	3.80±0.93	0.001
			total score	7-35	23.05±8.15	26.66±6.55	
		Clinical life situation	average score	1-5	2.91±1.09	3.79±0,96	0.001
			total score	4-20	11.64±4.36	15.19±3.85	
		Decision making control	average score	1-5	3.42±1.28	3.92±1.04	0.001
			total score	6-30	20.54±7.70	23.52±6.25	
		Scale	average score	1-5	3.24±1.05	3.84±0.94	0.001
			total score	17-85	55.24±18.01	65.37±16.09	
Situations of patients' perception of their individuality in their own care	**Scale Sub-Dimensions**	**Clinical status**	average score	1-5	3.36±1.18	3.91±0.96	0.001
			total score	7-35	23.57±8.28	27.40±6.75	
		Clinical life situation	average score	1-5	2.92±1.07	3.74±0.93	0.023
			total score	4-20	11.70±4.28	14.96±3.74	
		Decision making control	average score	1-5	3.54±1.29	4.08±0.91	0.001
			total score	6-30	21.28±7.76	24.52±5.50	
		Scale	average score	1-5	3.32±1.07	3.93±0.89	0.001
			total score	17-85	56.56±18.28	66.89±15.28	

Descriptive Statistics (mean, standart deviation, range)/ Student T test, Mann-Whitney U test

Table 6. Recognition of nursing actions aimed at supporting the individuality of patients, perception of their individuality in self-care and linear regression analysis of related parameters

Scales	Key situational factors of patient groups	B	ß	t	p	
Awareness of nursing actions aimed at promoting the individuality of patients	**Group 1 and Group 2 patient groups**	11.44	0.322	5.743	0.001	
	Age	-0.123	-0.116	-1.551	0.122	
	Gender	-1.263	-0.036	-0.652	0.515	**R²:0.100 p:0.001**
	Chronic disease	6.765	0.151	2.398	0.017	
	Educational status	-0.232	-0.019	-0.270	0.787	
Patients' perception of individuality in their care	**Group 1 and Group 2 patient groups**	11.767	0.335	6.002	0.001	
	Age	-0.169	-0.161	-2.164	0.031	
	Gender	-0.903	-0.026	-0.474	0.636	**R²:0.110 p:0.001**
	Chronic disease	7.105	0.160	2.560	0.011	
	Educational status	-0.411	- 0.034	-0.487	0.627	

Linear regression analysis

Linear regression analysis was performed to evaluate the effect of additional factors (patient age, gender, presence of chronic disease, educational status) that may affect the reason for the significant results of the scale applied to Group 1 and Group 2 patient groups. Because of the linear regression analysis, in the scale of "patients' awareness of nursing actions aimed at supporting their individuality"; Although the presence of chronic disease was significant ($p=0.017$), no significant difference was found in terms of patient age, gender and educational status ($p>0.05$). Although the age of the patients ($p=0.031$) and the presence of chronic disease were significant ($p=0.011$), it was determined that the gender and educational status of the patients were not significant ($p>0.05$). When all these factors are evaluated together, independently of other factors (patient age, gender, presence of chronic disease, educational status), the scales of "patients' awareness of nursing actions aimed at supporting their individuality" and "patients' perception of their individuality in their own care" scales in Group 1 (pre-

education) and Group 2 It was found to be significant in the (after training) patient groups ($p<0.05$) (Table 6).

4. Discussion

In this study, nurses working in internal medicine clinics were given training on practice based on SCDNT, and nurse and patient outcomes were examined. In this section, the practice of nurses based on SCDNT; clinical working process, patient-centered care competence, counseling skills, attitude evidence-based nursing, job motivation and patients'; the effect on the awareness of nursing actions aimed at supporting individuality and on the perception of individuality in self-care will be discussed.

4.1. Nurses' Working Process in the Clinic

For quality care, the time that the nurse spares for the care of the patient is important to determine and meet the individual needs of the patient from the moment they are admitted to the clinic (Morgan and Yoder, 2012). In this study, it was determined that while the time spent by nurses in patient care was 45±17 min

(18.75% of the total working time) before the training, it increased to 95±24 min (39.58%) after the training (Table 3). In the descriptive study, which was determined when the literature was examined, the rate of time spent by nurses on patient care was found to be 33% (Michel et al., 2021). In this study, the fact that the time spent by nurses in the patient room before the training was less than the results of the previous study, this time increased twice (39.58%) after the training, and more time compared to the results of the previous study shows the effectiveness of practices based on the nursing theory of self-care.

4.2. Nurses' attitudes evidence-based nursing, patient-centered care competence, counseling skills and job motivation

The nurses' pre- and post-training "patient-centered care competence, counseling skills, evidence-based nursing attitude and job motivation" score averages and analysis results are shown in Table 4, and a significant difference was found between the pre-test and post-test scores (p<0.05).

Although there are no experimental studies on this subject in Turkey, in descriptive studies, it was found that the mean EBNAS scores ranged from 46.36±3.95 to 59.48±7.69 (Dastan and Hintistan, 2018; Karakoc-Kumsar et al., 2020) and were similar to the pre-test attitude scores obtained in this study. PCCCS scores were found to be 71.20±5.61 in the study by Bakır and Demir (2020), and when we look at the previous studies with nurses working according to the medical model, the PCCCS scores of the nurses were similar to the pre-test scores of this study, after the training given to the nurses, the PCCCS appears to increase the score. Looking at the literature on NCSS; Akcan et al.'s (2006) scale score was found to be 55.0±0.72. Akcan et al.'s (2006) study found that the counseling skills scale score was higher than both the pre-test (43.12±7.70) and post-test (46.45±3.80) results of this study. This study can be explained by the fact that it was conducted in a tertiary health institution. In order for nurses to work more efficiently, their motivation is high (Yapicioglu, 2019). Therefore, factors related to work motivation are a issue that are frequently addressed by nurses. In this study, while the NJMS score of the nurses was 30.03±4.21, the lack of self-care increased to 47.06±10.10 after practice training based on nursing theory. The aim of education given in the study is to increase the power of nurses in social, interpersonal and professional-technological dimensions, and it is stated in Orem's theory that nurses are motivated as an indicator of nursing agency (Orem, 2001).

4.3. Awareness of Nursing Actions Aimed at Supporting Patients' Individuality

Individualized care includes respecting the individuality of the patient, providing care by evaluating the patient holistically, determining the care needs of individuals and focusing on their needs, supporting the patient's independence, including the patient in their care, and an equal and fair approach to every patient (Ceylan, 2014).

In this study, the pre-test score for patients' awareness of nursing practices aimed at supporting their individuality increased from 3.24±1.05 to 3.84±0.94 post-test, and the difference between the pre-test and post-test scores was found to be significant. In two descriptive studies, awareness scores of nursing practices aimed at supporting patients' individuality were determined as 3.76±0.90 (Altinisik, 2019) and 3.34±1.03 (Keskin, 2019). In the study, the pre-test score was lower than the scores of the previous two studies, this score increased after the training and result was higher than the other studies; According to Orem's theory, it is noticed by the patients that the work, thus supporting the individuality of the patients.

4.4. Patients' Perception of Individuality in Self-Care

Individualized nursing care, known as the main element of quality nursing care,

directs nursing actions within the framework of the unique of the patient (Yildiz et. al., 2018). In order for nurses to provide individual care to patients, individualized care should be perceived by both patients and nurses, and they should provide feedback to each other (Acaroglu and Sendir, 2012).

In the descriptive study by Altinisik (2019), the score for patients' perception of their individuality in self-care was determined as 3.72±0.87. In the study conducted, the pre-test score of patients' perception of their individuality in self-care was lower than the previous study's score (3.32±1.07), while the post-test score increased to 3.93±0.89. Because of the nurses working according to Orem's theory after the training, the increase in the score of patients' perception of their individuality in self-care shows the effectiveness of the study based on Orem's theory.

5. Conclusion

The practice training was based on the nursing theory of self-care deficiency given to nurses working in the internal medicine clinic; it was determined that the increase in the time spent by nurses in the care of patients was effective on the attitude toward evidence-based nursing, patient-centered care competence, counseling skills, job motivation, awareness of the nursing actions that support the individuality of the patients, and the perception of the individuality of the patients in their self-care. In line with these results; It can be suggested that the nurses working in internal medicine clinics should be taught the nursing theory of self-deficiency, that nurses should support their studies based on the nursing theory of self-deficiency.

Declaration of Author Contributions

The authors declare that they have contributed equally to the article. All authors declare that they have seen/read and approved the final version of the article ready for publication.

Declaration of Conflicts of Interest

All authors declare that there is no conflict of interest related to this article.

References

Acaroglu, R., Sendir, M., 2012. Bireyselleştirilmiş bakımı değerlendirme skalaları. *İstanbul Üniversitesi Florence Nightingale Hemşirelik Dergisi,* 20(1):10-16.

Acaroglu, R., Suhonen, R., Sendir, M., Kaya, H., 2010. Reliability and validity of Turkish version of the Individualised Care Scale. *Journal of Clinical Nursing,* 20(1-2):136-145.

Afrasiabifar, A., Mehri, Z., Javad Sadat, S., Ghaffarian Shirazi, H. R. G., 2016. The effect of Orem's self-care model on fatigue in patients with multiple sclerosis: A single blind randomized clinical trial study. *Iranian Red Crescent Medical Journal,* 18(8):1-9.

Afrasiabifar, A., Mehri, Z., Shirazi, H. R. G., 2020. Orem's self-care model with multiple sclerosis patients' balance and motor function. *Nursing Science Quarterly,* 33(1):46-54.

Aish, A. E., Isenberg, M., 1996. Effects of Orem-based nursing intervention on nutritional self-care of myocardial infarction patients. *International Journal of Nursing Studies,* 33(3):259-270.

Akcan, F., Ozsoy, S., Ergul, S., 2006. Birinci basamak sağlık hizmetlerinde çalışan ebe ve hemşirelerin danışmanlık becerilerinin incelenmesi. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 9(4):10-21.

Altay, N., Cavusoglu, H., 2013. Using Orem's self-care model for asthmatic adolescents. *Journal for Specialists in Pediatric Nursing,* 18(3):233-242.

Altinisik, M., 2019. Onkoloji kliniğinde hasta ve hemşire bakış açısıyla bireyselleştirilmiş bakım algısı. Master's thesis. Sağlık Bilimleri Enstitüsü Hemşirelik Anabilim Dalı, Akdeniz Üniversitesi.

Arslanoglu, A., Kirilmaz, H., 2019. Hasta merkezli bakım yetkinliği (HMBY) ölçeğinin Türkçe'ye uyarlanması. *Sağlık Akademisyenleri Dergisi,* 6(2):158-166.

Avci, I.A., Kumcagiz, H., 2019. Hemşirelerde Danışmanlık Becerileri Ölçeği'ni (HDBÖ) geliştirilmesi: Geçerlik ve güvenirlik çalışması. *Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Dergisi*, 20(Özel sayı):873-884.

Ayhan, Y., Kocaman, G., Bektas, M., 2015. Kanıta Dayalı Hemşireliğe Yönelik Tutum Ölçeği"nin Türkçe'ye uyarlanması: Geçerlik ve güvenirlik çalışması. *Hemşirelikte Araştırma Geliştirme Dergisi,* 17(2-3):21-35.

Bakir, N., Demir, C., 2020. Hemşirelerin hasta merkezli bakım yetkinliği ve bütüncül hemşirelik yeterliliği. *Cumhuriyet Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi,* 5(3):109-117.

Bal Ozkaptan, B., Kapucu, S., 2016. Home nursing care with the self-care model improves self-efficacy of patients with chronic obstructive pulmonary disease. *Japan Journal of Nursing Science,* 13(3): 365-377.

Biggs, A., 2008. Orem's Self-Care Deficit Nursing Theory: Update on the state of the art and science. *Nursing Science Quarterly,* 21:200-206.

Ceylan, B., 2014. Hemşirelikte bireyselleştirilmiş bakım. *Ege Üniversitesi Hemşirelik Fakültesi Dergisi,* 30(3):59-67.

Dastan, B., Hintistan, S., 2018. Dahiliye kliniklerinde çalışan hemşirelerin kanıta dayalı hemşireliğe yönelik tutumlarının belirlenmesi: kırsal bölge örneği. *Ordu Üniversitesi Hemşirelik Çalışmaları Dergisi,* 1(1):1-9.

Deng, Q., Kang, L., Zhu, S., Luo, W., Qing, J., Zhong, S.. et. al., 2021. Effects of nursing based on Orem's self-care model on self-care efficacy, quality of life and adverse emotions in patients with advanced lung cancer. *American Journal of Translational Research,* 13(4):2983-2989.

Engin, E., Cam, O., 2009. Validity and reliability study of the Turkish psychiatric nurses of job motivation scale. *Journal of Psychiatric and Mental Health Nursing,* 16(5):462-472.

Gocmen Baykara, Z., Caliskan, N., Ozturk, D., Karadag, A., 2019. Hemşirelikte teori ve model kullanımı: Nitel bir çalışma. *Cukurova Medical Journal,* 44:281-289.

Hemati, Z., Mosaviasl, F. S., Abasi, S., Ghazavi, Z., Kiani, D., 2015. Effect of Orem's Self-Care Model on self-esteem of adolescents with asthma referred to an asthma and allergy clinic in Isfahan. *Tanaffos,* 14(4):232-7.

Hwang, J. N., 2015. Development and testing of a patient-centred care competency scale for hospital nurses. *International Journal of Nursing Practice,* 21(1):43-51.

Jaarsma, T., Abu-Saad, H. H., Dracup, K., Halfens, R., 2000. Self-care behaviour of patients with heart failure. *Scandinavian Journal of Caring Sciences,* 14(2):112-9.

Karahan, I., Aydin, C., 2018. Bir üniversite hastanesi iç hastalıkları kliniğinde yatan hastaların özellikleri ve yatış sebeplerine genel bakış. *Sağlık Bilimleri ve Tıp Dergisi,* 1(13):59-61.

Karakoc-Kumsar, A., Polat, S., Afsar-Dogrusoz, L., 2020. Determining attitudes of nurses toward evidence-based nursing in a university hospital sample. *Florence Nightingale Journal of Nursing*, 28(3):268-275.

Keskin, A., 2019. Yetişkin hastaların bireyselleştirilmiş bakım algılarının hastane taburculuğuna hazır oluşluklarına etkisi. Master's thesis. Afyonkarahisar Sağlık Bilimleri Üniversitesi.

Khademian, Z., Ara, F. K., Gholamzadeh, S., 2020. The effect of Self Care Education Based on Orem's Nursing Theory on quality of life and self-efficacy in patients with hypertension: A quasi-experimental study. *Uluslararası Toplum Temelli Hemşirelik ve Ebelik Dergisi,* 8(2): 140-149.

Kirigo, G. G., 2017. Quality of nursing care through patient participation: An integration of Orem's theory to the nursing process in Kiambu and Thika Hospitals. PhD thesis.

Michel, O., Garcia Manjon, A. J., Pasquier, J., Ortoleva Bucher, C., 2021. How do nurses spend their time? A time and motion analysis of nursing activities in an internal medicine unit. *Journal of Advanced Nursing*, 77(11):4459–4470.

Miller, W. R., Moyers, T. B., 2007. Eight stages in learning motivational interviewing. *Journal of Teaching in the Addictions,* 5(1):3-17.

Mohammadpour, A., Sharghi, N. R., Khosravan, S., Alami, A., Akhond, M., 2015. The effect of a supportive educational intervention developed based on the Orem's self-care theory on the self-care ability of patients with myocardial infarction: a randomised controlled trial. *Journal of Clinical Nursing,* 24:1686–1692.

Morgan, S., Yoder, L. H., 2012. A concept analysis of person-centered care. *Journal of Holistic Nursing,* 30(1):6-15.

Nasresabetghadam, S., Jahanshahi, M., Hajiahmadi, M., 2021. The Effects of Orem's Self-care Theory on self-care behaviors among older women with hypertension: A randomized controlled trial. *Nursing and Midwifery Studies,* 10(2):9-106.

Ogel, K., 2009. Motivasyonel görüşme tekniği. *Türkiye Klinikleri Journal of Psychiatry-Special Topics,* 2(2):41-4

Orem, D. E., 2001. Self-care deficit theory of nursing: concepts and applications (7 ed. pp.99-135). USA: Dennis C. M. Mosby-Year Book Inc.

Ruzafa-Martínez, M., López-Iborra, L., Madrigal-Torres, M., 2011. Attitude towards Evidence-Based Nursing Questionnaire: development and psychometric testing in Spanish community nurses. *Journal of Evaluation in Clinical Practice,* 17(4):664-70.

Saeedifar, E. S., Memarian, R., Fatahi, S., Ghelichkhani, F., 2018. Use of the Orem self-care model on pain relief in women with rheumatoid arthritis: A randomized trial. *Electronic Physician,* 10(6):6884-6891.

Suhonen, R., Leino-Kilpi, H., Valimaki, M., 2005. Development and psyhometric properties of the Individualized Care Scale. *Journal of Evaluation in Clinical Practice,* 11(1):7-10.

Suhonen, R., Schmıdt, L., Radwın, L., 2007. Measuring individualized nursing care: Assessment of reliability and validity of three scales. *Journal of Advanced Nursing*, 59(1):77–85.

Suhonen, R., Välimäki, M., Katajisto, J., 2000. Developing and testing an instrument for the measurement of individual care. *Journal of Advanced Nursing*, 32(5):1253-63.

Tok Yildiz, F., Kasikci, M., 2020. Impact of training based on Orem's Theory on Self-Care Agency and quality of life in patients with coronary artery disease. *Journal of Nursing Research,* 28(6):1-10. e125.

Tuna, H. I., Alparslan, G. B., 2021. Effects of Orem's Self-Care Model of nursing on hand symptoms and life activities in geriatric ındividuals diagnosed with rheumatoid arthritis: A pilot study. *Research and Theory For Nursing Practice,* 35(3):207-221

Yapicioglu, G., 2019. Sağlık Çalışanlarında Motivasyonla Bağlantılı İş Verimliliği Düzeyinin Ölçülmesi ve Motivasyonu Etkileyen Faktörler. Master's thesis. Sağlık Bilimleri Enstitüsü, Kırklareli Üniversitesi.

Yildiz, F. T., Cingo, N., Yildiz, I., Kasikci, M., 2018. Nurses' Perceptions of Individualized Care: A Sample from Turkey. *International Journal of Caring Sciences,* 11(1):246-53.

Zhang, L., Pan, W., 2021. Effect of a nursing intervention strategy oriented by Orem's self-care theory on the recovery of gastrointestinal function in patients after colon cancer surgery. *American Journal of Translational Research,* 13(7):8010-8020.

Zhu, T., Liu, H., Han, A., Gu, H., Li, X., 2021. Orem's self-care to treat acute coronary syndrome after PCI helps improve rehabilitation efficacy and quality of life. *American Journal of Translational Research,* 13(4):2752-2762.