

Attitudes, Knowledge, and Evaluations of Nurses Working in Training and Research Hospital Regarding Nutritional Care

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Cite this article as: Er Döngel H, Öztoprak Kol E, Gönderen K. Attitudes, knowledge, and evaluations of nurses working in training and research hospital regarding nutritional care. *Clin Sci Nutr.* 2023;4(3):80-87.

ABSTRACT

Objective: Nurses take an active role in determining the nutritional status of the patient, detecting nutritional changes, and informing the nutritional support team when necessary. This study was conducted to evaluate the attitudes of nurses about nutritional care, to measure their knowledge levels, and to determine their opinions.

Methods: A total of 118 nurses working in inpatient services and intensive care units of Kutahya Health Sciences University Evliya Çelebi Training and Research Hospital, who agreed to participate in the study, were included in the study. The participant information form, the scale for evaluating the importance of nutritional assessment, the level of knowledge about nutritional care, and the perceived nutritional quality of care in nurses were filled, and the data were analyzed with the Statistical Program for Social Sciences package program. Descriptive statistics were given as numbers, percentages, and averages. In addition, an independent sample t-test and a one-way analysis of variance test were used. A *P* value of $<.05$ was considered statistically significant in all evaluations.

Results: Of the participants, 60.2% ($n=71$) were female, 45.8% ($n=54$) had 6-10 years of professional experience, and 85.6% ($n=101$) received training on nutritional support. The nurses scored 21.36 ± 4.09 points for the importance of nutritional assessment, 25.33 ± 4.46 points for the level of knowledge about nutritional care, and 33.25 ± 6.33 points for the perceived quality of care related to nutritional care. It was found that there was a significant relationship between the mean scores for the importance of nutritional assessment and gender and education about nutritional support ($P < .05$). A significant correlation was found between the mean score of the perceived quality of care regarding nutritional care and gender ($P < .05$).

Conclusions: Evaluation and monitoring of the patient's nutritional status is a part of nursing care. Although most of the nurses are aware of the importance of nutritional assessment, their knowledge levels and perceived quality of care about nutritional care are not at the desired level.

Keywords: Nursing care, nutrition, nutritional therapy

INTRODUCTION

Malnutrition is a common problem among hospitalized patients. Although it is associated with increased morbidity and mortality, malnutrition is often missed and its treatment is overlooked.¹ Malnutrition screening and appropriate nutritional therapy are essential to ensure a healthy diet, prevent malnutrition, and improve patient outcomes.² All healthcare professionals must have basic nutritional knowledge and skills in order to effectively evaluate the patient's nutrition and provide appropriate counseling and treatment to the patient. Thus, patient care will also be positively affected.³

Nurses take an active role in meeting the nutritional needs of patients, as they have the most contact with patients and generally perform nutritional screening at the patient's first hospitalization.² Nurses should know the symptoms and risk factors of malnutrition and should provide the necessary nursing care to stop the occurrence and progression of malnutrition.⁴ In addition, within the scope of nutritional care, nurses are responsible for evaluating the nutritional status of patients, providing the nutritional therapy they need, and monitoring their nutritional status.⁵⁻⁷ For this reason, nurses should also have sufficient nutritional knowledge.⁸ In line with this information, this study aimed to determine the nutritional attitudes, knowledge levels, and opinions of nurses.

MATERIALS AND METHODS

This is a descriptive study conducted to evaluate nurses' attitudes toward nutritional care, to measure their knowledge levels, and to determine their opinions. Ethics committee approval was received from the Kutahya Health Sciences University Non-Invasive Clinical Research Ethics Committee (Decision No. 2020/17-11; Date: 16.12.2020).

A total of 118 volunteer nurses working at Kutahya Health Sciences University Evliya Celebi Training and Research Hospital were included in the study. Nurses working in units other than inpatient services and intensive care units were not included in the study.

The data were collected through the participant information form and the scale for evaluating the importance of nutritional assessment, the level of knowledge about nutritional care, and the perceived nutritional quality of care in nurses. The participant information form consists of questions about the sociodemographic characteristics of the participants, whether they received training on nutritional support, the follow-up of the nutritional status of the patients, and the nutritional risk scoring-2002 (NRS-2002) form. The scale for evaluating the importance of nutritional assessment, the level of knowledge about nutritional care, and the perceived nutritional quality of care in nurses was developed by Theilla et al⁶ in 2016. Gürlek Kısacık et al⁹ adapted it to Turkish in 2019 and demonstrated its validity and reliability. It consists of 3 sections and a total of 26 questions on the attitudes toward the importance of nutritional assessment, the level of knowledge about nutritional care, and the perception of nutritional quality. The first part consists of 7 questions about nurses' attitudes toward the importance of nutritional assessment, and the statements are in a 4-point Likert type. The score that can be obtained from the first part is in the range of 7-28. The second part consists of 10 reverse-scored questions that measure the knowledge level of nurses about nutritional care. The answers are in a 4-point Likert type and the score that can be obtained is in the range of 10-40. The last section consists of 9 questions in which nurses evaluate the quality of nutritional

care given to patients. The statements are in a 5-point Likert type. The range of points that can be obtained from this section is 9-45. The scale has no cutoff value. As the scores obtained from the sections increase, the attitudes toward the importance of nutritional assessment, the level of knowledge about nutritional care, and the quality of nutritional care increase.^{6,9}

Statistical Analysis

Statistical Program for Social Sciences 22.0 (Armonk, NY, USA: IBM) package program was used in data analysis. Descriptive statistics are given as numbers, percentages, mean, median, standard deviation, and minimum and maximum values. Comparisons between the groups were evaluated using the independent samples *t*-test and one-way analysis of variance test. A *P* < .05 was considered statistically significant in all evaluations.

RESULTS

The data on the general characteristics of the participants are given in Table 1. It was found that the median age of the participants was 30 (21-48) years (min-max), 60.2% (n=71) were female, 44.05% (n=52) were between the ages of 21 and 29 years, 70.3% (n=83) were university graduates, the duration of professional experience of 45.8% (n=54) was 6-10 years, 53.4% (n=63) worked in the clinic, and 58.5% (n=69) were satisfied with the unit they worked in (Table 1). Of the nurses, 85.6% (n=101) stated that they received training on nutritional support, and 64.4% (n=76) stated that they filled the NRS-2002 form effectively. Of the participants, 76.2% (n=32) reported that the most common reason for not completing the NRS-2002 form effectively was lack of time. Of the participants, 78% (n=92) stated that they informed the nutrition support team if their NRS-2002 score was 3 or higher (Table 2).

The nurses' mean attitude score regarding the importance of nutritional assessment was 21.36 ± 4.09 , their mean knowledge level score on nutritional care was 25.33 ± 4.46 , and their mean perceived quality of care score on nutritional care was 33.25 ± 6.33 . When the answers given by the participants to the items in the first part of the scale were examined, it was seen that the highest score belonged to the statement "Monitoring the nutritional status of the patient is a basic element of nursing care" (3.11 ± 0.71), while the lowest attitude score was for the statement "It is important to weigh patients when hospitalized" (2.91 ± 0.68) (Table 3). When the items in the second part of the scale were examined, it was determined that the highest score was for the statement "The main reason why patients do not eat hospital food is the appearance and taste of the food" (3.21 ± 0.78), while

Main Points

- Evaluation and improvement of the patient's nutritional status and cooperation with the nutritional support team when necessary are a part of nursing care.
- The quality of patient care can be increased by increasing the knowledge level of nurses about nutritional care.
- Training on nutritional assessment and support should be planned for nurses at regular intervals.

Table 1. General Characteristics of the Participants (n = 118)

General Characteristics of the Participants	Number (n)	Percentage (%)
Gender		
Female	71	60.2
Male	47	39.8
Age (year) median (minimum-maximum)	30 (21-48)	
Age group		
21-29 years	52	44.05
30-39 years	52	44.05
40-48 years	14	11.9
Education status		
High school	31	26.3
Universty	83	70.3
Postgraduate	4	3.4
Professional experience period		
0-5 years	36	30.5
6-10 years	54	45.8
11 years and above	28	23.7
Working department		
Intensive care unit	55	46.6
Clinic	63	53.4
Satisfaction with the unit		
Satisfaction	69	58.5
Dissatisfied	49	41.5

the lowest score was for "It is inevitable for overweight cancer patients to lose weight and they do not need to be referred to a dietitian" (2.22 ± 0.70) (Table 4). In the last part of the scale, the highest mean score belonged to the statement "Our nursing team monitors the nutritional status of the patients" (3.86 ± 0.83), while the lowest mean score was for "Our doctors also evaluate the nutritional aspect of the patient" (3.23 ± 1.12) (Table 5).

Attitude scores regarding the importance of nutritional assessment and perceived quality of care scores regarding nutritional care were significantly higher in females than in males ($P < .05$). It was observed that the group who received training on nutritional support had higher

Table 2. Opinions of Participants About Nutritional Support (n = 118)

	Number (n)	Percentage (%)
Get education about nutritional support		
Yes	101	85.6
No	17	14.4
I effectively fill out the NRS-2002 form		
Yes	76	64.4
No	42	35.6
Why can't you effectively fill out the NRS-2002 form?		
I don't know how to fill	6	14.3
I don't have enough time	32	76.2
I don't think it's necessary	4	9.5
What is the score on the NRS-2002 form, which should be reported to the nutritional support team?		
1 and above	1	0.8
2 and above	5	4.2
3 and above	92	78.0
4 and above	10	8.5
5 and above	10	8.5

NRS-2002, nutritional risk scoring-2002.

attitude scores regarding the importance of nutritional assessment than in those who did not ($P < .05$). Attitudes regarding the importance of nutritional assessment, level of knowledge about nutritional care, and perceived quality of care did not show any difference according to age, education level, professional experience, and the unit they worked in (Table 6).

DISCUSSION

Nutritional therapy is an important part of the patient's medical treatment. Planned and patient-appropriate nutritional therapy strengthens the immune system, reduces complications, shortens hospital stay, accelerates recovery, and positively affects morbidity and mortality.¹⁰ The NRS-2002 form is used to evaluate the nutritional status of the patient and the need for nutritional therapy.¹¹ A

Table 3. Nurses' Evaluation of the Importance of Nutritional Assessment (1 to 4 scale) (n = 118)

	X ± SD 21.36 ± 4.09						Min-Max 7-28		
Nurses' Evaluation of the Importance of Nutritional Assessment	Strongly Agree		Agree		Disagree		Strongly Disagree		X ± SD
	n	%	n	%	n	%	n	%	
1. An initial nutritional assessment is important in patient care	1	0.8	18	15.3	69	58.5	30	25.4	3.08 ± 0.66
2. Monitoring a patient's nutritional status is a basic component of nursing care	2	1.7	24	20.3	61	51.7	31	26.3	3.11 ± 0.71
3. The nurse is responsible for notifying the attending physician if a patient does not eat a served meal	2	1.7	24	20.3	61	51.7	31	26.3	3.02 ± 0.73
4. It is important to weigh patients upon admission	3	2.5	24	20.3	71	60.2	20	16.9	2.91 ± 0.68
5. It is important to repeat the nutritional assessment every week of hospitalization	1	0.8	20	16.9	70	59.3	27	22.9	3.04 ± 0.65
6. Nutritional assessment and monitoring by the nurses improve a patient's recovery	1	0.8	16	13.6	71	60.2	30	25.4	3.10 ± 0.64
7. Nursing care has a significant impact on patients' nutritional status	1	0.8	19	16.1	68	57.6	30	25.4	3.07 ± 0.66
Min-max, minimum-maximum; SD, standard deviation; X, mean.									

significant number (35.6%) of the nurses included in this study stated that they could not fill out the NRS-2002 form effectively. In addition, some of the nurses (22%) do not know that the nutrition support team should be informed when the NRS-2002 form is 3 points or more and the appropriate nutrition plan should be created for the patient, and it is thought that all nurses should have this information in order to provide effective nutritional care.

Nurses play a very important role in ensuring that adequate nutritional care is provided to the patient in an optimal way.⁶ Nurses who receive nutrition education can provide more effective nutritional therapy to their patients, and thus the quality of nutritional care can increase.¹⁶ In this study, it was shown that some of the nurses (14.4%) did not receive training on nutritional support. This may cause possible malnutrition to be overlooked. In a study, it was shown that the nutritional education program strengthened the perceptions and knowledge of nurses about nutritional therapy.¹⁶

In order to provide the patient with proper nutrition, first of all, the patient's nutrition should be evaluated. Nurses play a key role in detecting the patient's malnutrition early, minimizing inequalities in practice, and achieving

nutritional goals.¹² In this study, although it is seen that nurses have a positive attitude toward the importance of nutritional assessment, there is a need to develop this attitude. Similar to this study, Theilla et al⁶ and Çoşğun et al⁷ also reported that nurses had positive attitudes toward the importance of nutritional assessment. Nurses who were female and who received training on nutritional support were found to have higher attitude scores regarding the importance of nutritional assessment. In the study conducted by Theilla et al.⁶ it was reported that female nurses exhibited more positive attitudes. In the study of Çoşğun et al.⁷ it was shown that the group receiving nutritional education had a more positive attitude. Although nurses considered the nutritional care of the patient as important, they stated that they had to give priority to other nursing activities due to reasons such as lack of time and having multiple tasks.¹³

When the knowledge levels of nurses about nutritional care are examined, it is seen that they are not at the desired level. The scores reported in the studies of Theilla et al⁶ and Çoşğun et al⁷ also show parallelism with our study. The thought that nutrition therapy is the duty of a dietitian may explain the reason for the low level of knowledge of nurses.⁷ On the other hand, meeting the nutritional needs

Table 4. Nurses' Knowledge About Nutrition Care (1 to 4 scale) (n=118)

Nurses' Knowledge About Nutrition Care	X ± SD 25.33 ± 4.46				Min-Max 15-36					
	Strongly Agree		Agree		Disagree		Strongly Disagree		X ± SD	
	n	%	n	%	n	%	n	%		
1. Nurses should focus on the patient's primary diagnosis rather than on nutritional aspects	7	5.9	52	44.1	36	30.5	23	19.5	2.63 ± 0.86	
2. A patient who refuses to eat should not be forced to do so	7	5.9	61	51.7	40	33.9	10	8.5	2.44 ± 0.73	
3. The main reason patients don't eat hospital food is its appearance and taste	4	3.4	14	11.9	53	44.9	47	39.8	3.21 ± 0.78	
4. Nutritional support should commence only once medical treatment has been completed	12	10.2	54	45.8	42	35.6	10	8.5	2.42 ± 0.78	
5. Nutritional support is resource-consuming and not a cost-effective investment	14	11.9	61	51.7	39	33.1	4	3.4	2.27 ± 0.71	
6. Dieticians, rather than the nursing staff, are responsible for nutritional support	3	2.5	34	28.8	52	44.1	29	24.6	2.90 ± 0.79	
7. Parenteral nutrition should be avoided due to its complications	4	3.4	70	59.3	38	32.2	6	5.1	2.38 ± 0.64	
8. Obese patients (BMI > 30) are not at risk of malnutrition and should be fed sparingly	7	5.9	65	55.1	39	33.1	7	5.9	2.38 ± 0.69	
9. A patient eating a meal should not be disturbed, even for medical treatment	6	5.1	61	51.7	45	38.1	6	5.1	2.43 ± 0.67	
10. Overweight patients with cancer will inevitably lose weight and need not be referred to a dietician	15	12.7	66	55.9	33	28.0	4	3.4	2.22 ± 0.70	

BMI, body mass index; min-max, minimum-maximum; SD, standard deviation; X, mean.

of the patient and improving the nutritional status is a part of holistic nursing care.¹⁴ Various studies have shown that the awareness of nurses on the importance of nutrition, its evaluation, and nutrition therapy should be increased through training.^{13,15} Nutritional education can help nurses and all health professionals to provide evidence-based care that meets the nutritional needs of patients.²

Effective and comprehensive nursing care is very important in preventing malnutrition, reducing the length of hospital

stay, and reducing the cost.¹⁴ In this study, it is seen that nurses' perceived quality of care scores regarding nutritional care are not at a sufficient level. The mean score of female nurses is significantly higher than that of male nurses. In the study of Çoşğun et al.⁷ it was reported that the scores of those working in the intensive care unit and those who received training on nutrition therapy were higher, which might be due to the fact that nutrition therapy is of critical importance for patients treated in the intensive care unit, and therefore, nurses pay more attention to this issue.

Table 5. Nurses' Evaluation of the Quality of Nutritional Care in Nurses' Ward (1 to 5 scale) (n=118)

	X ± SD 33.25 ± 6.33						Min-Max 18-45				
Nurses' Evaluation of the Quality of Nutritional Care in Nurses' Ward	Strongly Agree		Agree		Disagree		Strongly Disagree		Strongly Agree		X ± SD
	n	%	n	%	n	%	n	%	n	%	
1. Patients receive complete nutritional care	-	-	17	14.4	24	20.3	53	44.9	24	20.3	3.71 ± 0.95
2. Our nursing staff monitors patients' nutritional status	-	-	10	8.5	20	16.9	64	54.2	24	20.3	3.86 ± 0.83
3. The nutritional assessment is performed methodically and professionally	-	-	10	8.5	34	28.8	48	40.7	26	22.0	3.76 ± 0.89
4. Patients requiring a dietician's care receive a consultation with minimal delay	1	0.8	6	5.1	29	24.6	64	54.2	18	15.3	3.77 ± 0.79
5. Physicians address nutritional aspects of patient care	12	10.2	14	11.9	40	33.9	38	32.2	14	11.9	3.23 ± 1.12
6. Patients receive their meals in an appropriate manner as per regulations	8	6.8	6	5.1	20	16.9	64	54.2	20	16.9	3.69 ± 1.03
7. Nurses are aware whether or not a patient has completed his meal	2	1.7	13	11.0	26	22.0	55	46.6	22	18.6	3.69 ± 0.95
8. Information on patients' nutritional state is effectively transmitted among health care staff	1	0.8	10	8.5	25	21.2	61	51.7	21	17.8	3.77 ± 0.87
9. I am satisfied with the level of nutritional care in my ward	1	0.8	13	11.0	25	21.2	56	47.5	23	19.5	3.73 ± 0.92
Min-max, minimum-maximum; SD, standard deviation; X, mean.											

Nutritional assessment of nurses is not sufficient to achieve nutritional goals. It has been reported that the evaluation of body weight, food intake history, disease severity, and gastrointestinal system function is very important. Evidence-based good clinical practice in nutritional assessment and a multidisciplinary nutrition team are the most effective ways to reduce malnutrition.¹² There is a continuing need to raise awareness of the importance of multidisciplinary nutritional care in improving health outcomes for both primary and secondary care.² It is necessary to increase the knowledge, skills, and abilities of

health personnel about the nutrition problems of patients and the management of these problems.^{1,17}

The main limitations are that the study was carried out in a single center and was dependent on the person's statement.

Evaluation of the patient's nutritional status and nutritional care are an important part of nursing practice. In order to increase the knowledge of nurses on nutrition therapy, training should be planned, and nurses should

Table 6. Distribution of Scores for the Importance of Nutritional Assessment, Level of Knowledge About Nutritional Care, and Perceived Quality of Care Regarding Nutritional Care, According to General Characteristics of Nurses

	Importance of Nutritional Assessment			Knowledge of Nutritional Care			Perceived Quality of Care Related to Nutritional Care		
	X ± SD	t/F	P	X ± SD	t/F	P	X ± SD	t/F	P
Gender									
Female	23.08 ± 3.61	6.541	<.001	24.85 ± 4.70	-1.441	.152	35.76 ± 5.06	5.778	<.001
Male	18.76 ± 3.35			26.06 ± 4.00			29.46 ± 6.22		
Age									
21-29 years	21.00 ± 4.55			25.88 ± 4.43			33.98 ± 6.43		
30-39 years	21.36 ± 3.63	0.968	.383	24.63 ± 4.44	1.161	.317	31.92 ± 5.53	2.425	.093
40-48 years	22.71 ± 3.85			25.92 ± 4.63			35.50 ± 8.02		
Education status									
High school	21.67 ± 3.54			25.22 ± 4.66			32.90 ± 5.91		
University	21.24 ± 4.21	0.129	.879	25.15 ± 4.29	2.309	.104	33.51 ± 6.31	0.493	.612
Postgraduate	21.50 ± 6.35			30.00 ± 5.09			30.50 ± 10.63		
Professional experience period									
0-5 years	20.94 ± 4.73			25.00 ± 4.59			33.86 ± 6.90		
6-10 years	21.20 ± 3.86	0.834	.437	25.83 ± 4.51	0.619	.540	32.35 ± 5.77	1.034	.359
11 year and above	22.21 ± 3.61			24.82 ± 4.24			34.21 ± 6.61		
Working department									
Intensive care unit	21.36 ± 4.22	-0.002	.998	25.94 ± 4.91	1.384	.169	33.61 ± 6.06	0.581	.562
Clinic	21.36 ± 4.00			24.80 ± 3.99			32.93 ± 6.59		
Get education about nutritional support									
Yes	21.73 ± 3.79	2.434	.016	25.12 ± 1.67	-1.840	.074	33.29 ± 6.23	0.178	.859
No	19.17 ± 5.12			26.58 ± 2.64			33.00 ± 7.10		

One-way ANOVA and t-tests were performed. $P < .05$. SD, standard deviation; X, mean.

be provided with more duties and responsibilities in the nutritional support given to the patient. Thus, the quality of nutritional support given to the patient can be increased.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Kutahya Health Sciences University Non-Invasive Clinical Research Ethics Committee (Date: December 16, 2020, Number: 2020/17-11).

Informed Consent: Written informed consent was obtained from all participants who participated in this study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – H.E.D., E.Ö.K., K.G.; Design – H.E.D., E.Ö.K., K.G.; Supervision – H.E.D., E.Ö.K., K.G.; Resources – H.E.D., E.Ö.K., K.G.; Materials – H.E.D., E.Ö.K., K.G.; Data Collection and/or Processing – H.E.D., E.Ö.K., K.G.; Analysis and/or Interpretation – H.E.D., E.Ö.K., K.G.; Literature Search – H.E.D., E.Ö.K., K.G.; Writing Manuscript – H.E.D., E.Ö.K., K.G.; Critical Review – H.E.D., E.Ö.K., K.G.

Declaration of Interests: The author have no conflicts of interest to declare.

Funding: The authors declared that this study has received no financial support.

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