YOBU Sağlık Bilimleri Fakültesi Dergisi
Yıl:2023 Cilt:4 Sayı:2: 83-93

YOBU Faculty of Health Sciences Journal
Year:2023 Volume:4 Issue: 2: 83-93

ISSN:2718-0972

Araştırma Makalesi/ Research Article

NURSES' BELIEFS AND ATTITUDES TOWARDS ENTERAL/PARENTERAL NUTRITION

HEMŞİRELERİN ENTERAL/PARENTERAL BESLENMEYE YÖNELİK İNANÇ VE TUTUMLARI

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Abstract

Objective: In this study, it was aimed to examine the beliefs and attitudes of nurses towards enteral/parenteral nutrition within the framework of the Health Belief Model.

Materials and Methods: The study is of descriptive-sectional type. The sample of the study consisted of 219 nurses working in a university hospital between May and August 2020. The "Descriptive Characteristics Form" prepared by the researchers and the "Nutrition Perception Questionnaire" based on the Health Belief Model were used to collect the data.

Results: Of the nurses participating in the study, 54.8% were male, 56.2% were between the ages of 20-30, and 53.9% had received training on enteral/parenteral nutrition. In the study, nurses' perception of benefit, sensitivity and severity, health motivation, self-efficacy and action factors score based on the Health Belief Model regarding enteral/parenteral nutrition were "above average"; disability perception score was found to be “below the mean” ($p<0.05$).

Conclusion: According to the Health Belief Model, it can be said that the characteristics of nurses such as age, education level, length of work in the profession, place of work and educational status affect their perceptions of enteral/parenteral nutrition.

Keywords: Enteral Nutrition, Parenteral Nutrition, Attitude, Health Belief Model, Nurse Clinicians**.**

Özet

Amaç: Bu çalışmada hemşirelerin enteral/parenteral beslenmeye yönelik inanç ve tutumlarının Sağlık İnanç Modeli çerçevesinde incelenmesi amaçlanmıştır.

Yöntem: Araştırma tanımlayıcı-kesitsel tiptedir. Araştırmanın örneklemini Mayıs-Ağustos 2020 tarihleri arasında bir üniversite hastanesinde çalışan 219 hemşire oluşturmuştur. Verilerin toplanmasında araştırmacılar tarafından hazırlanan "Tanımlayıcı Özellikler Formu" ve Sağlık İnanç Modeli'ne dayalı "Beslenme Algısı Anketi" kullanılmıştır.

Bulgular: Araştırmaya katılan hemşirelerin %54.8'i erkek, %56.2'si 20-30 yaş arasında ve %53.9'u enteral/parenteral beslenme konusunda eğitim almıştır. Araştırmada hemşirelerin enteral/parenteral beslenmeye ilişkin Sağlık İnanç Modeli temelli yarar, duyarlılık ve ciddiyet algısı, sağlık motivasyonu, öz-etkililik ve eyleme geçirici faktörler puanı “ortalamanın üzerinde”; engel algısı puanı “ortalamanın altında” bulundu ($p<0.05$).

Sonuç: Sağlık İnanç Modeline göre hemşirelerin yaş, eğitim düzeyi, meslekte çalışma süresi, çalışma yeri ve eğitim durumu gibi özelliklerinin enteral/parenteral beslenmeye ilişkin algılarını etkilediği söylenebilir.

Anahtar Kelimeler: Enteral nütrisyon, Parenteral nütrisyon, Tutum, Sağlık inanç modeli, Hemşire klinisyenler.

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Geliş tarihi/ Date of receipt**:09.10.2022* **Kabul tarihi / Date of acceptance*: 20.07.2023

INTRODUCTION

Adequate and balanced nutrition is one of the most basic needs of humans, which ensures the continuity of the functions necessary for life. It is known that malnutrition is quite common in the hospital environment, especially among the elderly and children, and people face many problems as a result (1,2). Although malnutrition can be defined as a nutritional condition in which a lack, excess or imbalance of energy, protein or other nutrients causes measurable adverse effects on tissue, function and outcome, malnutrition is a term frequently used in the literature for insufficient nourishment (1,3). Malnutrition leads to negative consequences for patients, caregivers and the health system, including delays in wound improvements, decreased quality of life, longer hospital stays and hospital readmissions, increased care needs, high cost burden on health systems, increased morbidity and mortality rates (4,5). Enteral and parenteral nutrition is the continuous or intermittent administration of nutritional support to the patient through nasogastric or nasoenteric, gastrostomy or jejunostomy in cases such as gastrointestinal, neuromuscular or cardiovascular diseases, burns and trauma, where oral intake is not sufficient or oral intake cannot be achieved (6). Studies have reported that the prevalence of malnutrition varies between 10-60% in patients (7-10).

Clinical guidelines emphasize an individualized nutritional assessment of hospitalized patients, the collaborative nutritional support of an interdisciplinary healthcare team, and monitoring of patients' nutritional status (11-14). In Turkey, applications for providing nutritional support to patients by a professional team are accepted as a standard of patient care within the scope of Quality Standards in Health-2020 (13). It is known that an effective nutritional status assessment is associated with a decrease in the rate of malnutrition, interventions for nutritional support provide a reduction in the duration of hospital stay of patients and a reduction in health care costs (15). Nurses are responsible for the planning and implementation of the patient's nutritional care, as well as routine patient care such as monitoring and following up the patient's vital signs (16). Nurses play an important role in determining the need for nutritional therapy and following the application process by standing by the patients 24/7 (1-3,5). Within the scope of nutritional care, a nurse is expected to perform interventions such as assessing the patient's nutritional status, providing the nutritional education that patients need, providing the nutritional support they need and monitoring the nutrition, and discussing the changes in the patient's nutritional status with other team members (2,14). In line with this information, the aim of this study is to examine the beliefs and attitudes of nurses towards enteral/parenteral nutrition within the framework of the Health Belief Model (HBM). Although various studies have been carried out in the literature on this subject, no HBM-based research has been found. In this respect, it is thought that this study has a high original value and will contribute to the literature.

MATERIAL AND METHOD

Type of research

The research is of descriptive-cross-sectional type.

Population and sample of the research

The universe of the research consisted of 665 nurses working in a university hospital between 20 May-30 August 2020. The sample size of the study was calculated as 184 based on the formula n=N.t2.p.q/d.(N-1) t2.p.q with 95% confidence interval and 5% sampling error (17). Although the minimum sample size (185 people) was calculated for the representativeness of the study, the study aims to reach the entire population (665 people) and

was completed with 219 people who agreed to participate in the study.

Location and characteristics of the research

The university hospital where the research was conducted is a tertiary care diagnosis and treatment institution with 971 beds. There is a nutrition committee in the hospital to monitor the nutritional deficiencies of inpatients. Nutrition committee consists of 8 doctors, 2 dieticians, 1 pharmacist and 3 nurses. An average of 200 patients per month are followed up with a diagnosis of nutritional deficiency in the hospital and enteral/parenteral nutrition support is provided. Compliance with the recommended diet and anthropometric measurements of the patients during the treatment process are monitored by the multidisciplinary team in the committee. According to need, education on enteral/parenteral nutrition is given by the nutrition nurse to the patients and their relatives, especially to the service nurses. In addition, these trainings are included in the in-service trainings, ensuring that all nurses working in the hospital receive training.

Data collection tools

In the collection of data; The "Socio-demographic Characteristics Form" consisted of 6 questions (Age, gender, marital status, education status, years of work in the profession, working unit), the "Enteral / Parenteral Nutrition Practice Status Form" consisting of 4 questions (enteral/parenteral education status, having sufficient knowledge, enteral / parenteral nutrition application in the unit and number of patients receiving enteral /parenteral nutrition in the unit) and the "Nutrition Perception Questionnaire" consisting of 39 questions developed by the researchers were used.

Nutrition Perception Questionnaire:

The "Nutrition Perception Questionnaire" developed by the researchers is a 5-point Likert type [1-Strongly Disagree, 2-Disagree, 3-No Idea, 4-Agree, 5-Strongly Agree] and consists of 7 subscales dimensions [perceived benefit (1-8), disability (9-16), sensitivity (17-22) and severity (23-27), health motivation (28-31), self-efficacy (32-35) and action factors (36-39)] and 39 questions. The Questionnaire Form was developed based on the Health Belief Model as a result of the literature review (3,11,14,18). There are no breakpoints in the survey. As the score obtained from the questionnaire increases, the HBM-based perception score of the nurses increases. The min and max score that can be obtained from the questionnaire: perceived benefit 8-40, disability 8-40, sensitivity 6-30 and severity 5-25, health motivation 4-20, self-efficacy 4-20 and action factors 4-20. Validity analysis of the questionnaire was made with exploratory factor analysis. As a result of the exploratory factor analysis, the KMO value was 0.942, Bartlet's Test X^2=7440.970, df=741 and p=0.000. Factor loads were 0.468-0.699 for sensitivity perception; 0.557-0.793 for the perception of severity; 0.634-0.831 for perceived benefit; 0.457-0.697 for disability perception; 0.707-0.804 for health motivation; 0.530-0.760 for self-efficacy; It was found between 0.515-0.687 for the action factors. The reliability of the questionnaire was evaluated with the Cronbach Alpha coefficient and it was found to be 0.899 for the perception of sensitivity, 0.935 for the perception of severity, 0.938 for the perception of benefit, 0.827 for the perception of disability, 0.890 for the health motivation, 0.807 for the self-efficacy, 0.788 for the action factors.

The research data were prepared via Google Drive and were collected from nurses working at the university hospital during the research process, using whatsapp or e-mail, and agreeing to participate in the study. The average response time to survey questions is 5 minutes.

Evaluation of data

Data were evaluated using SPSS 22.0 (Statistical Package of Social Sciences for Windows) software. In the analysis of the data, the percentage of descriptive statistics, min.-max. Shaphiro Wilk test was used to examine value, mean, frequency, standard deviation and normal distribution. For those with normal distribution in statistical calculations,

Independent Sample T-Test was used to compare two independent variables, and ANOVA test was used to compare three or more independent variables. For those who did not show normal distribution in statistical calculations, Mann Whitney U Test was used to compare two independent variables and Kruskall Wallis Test was used to compare three or more independent variables. Pearson correlation analysis was performed for those who were normally distributed among the mean scores of the sub-dimensions of the questionnaire, and Spearman correlation analysis for those who were not normally distributed. Internal consistency was calculated with the Cronbach alpha value. Data were analyzed at 95% confidence interval and $p<0.05$ was considered statistically significant.

The ethical aspect of the research

Ethical permission was obtained from Mersin University Clinical Research Ethics Committee (Ethical Date of Approval: 29.04.2020, Decision No: 2020/326), institutional permission was obtained from the institution where the study was conducted, and "Informed Consent" was obtained from the participants.

RESULT

56.2% of the nurses participating in the research were between the ages of 20-30, 54.8% were male, 54.8% were single, 85.4% had bachelor's degree, 67.2% had a professional working period of 0-10 years and 67.1% were working in the service (Table 1).

Among the nurses participating in the study; the perception of disability in the age range of 20-30 and the health motivation subscale mean score in the age range of 41-50 were significantly higher. The mean score of the perception of disability of the bachelor's degree nurses were found to be significantly higher. The mean health motivation score of those who participated in the study with a working period of 31 years or more was found to be significantly higher. Among the nurses participating in the study, the mean scores of the perception of sensitivity and severity (34.8±4.0) of those working in the intensive care unit were found to be significantly higher (Table 1) ($p<0.05$).

53.9% of the nurses received an education on enteral/parenteral nutrition, 57% think that they do not have enough knowledge on this subject, 76.7% work in a unit where enteral/parenteral nutrition is applied and 52.5% work in a unit where the number of patients who receive enteral / parenteral nutrition is between 1-5 (Table 2). The perception of benefit, perception of sensitivity, perception of severity, health motivation, self-efficacy and action factors subscale mean scores of nurses who received training on enteral/parenteral nutrition was found to be significantly higher. The perception of disability subscale mean score of nurses for those who think that they do not have enough knowledge about enteral/parenteral nutrition and self-efficacy subscale mean score of nurses for those who think they have enough information were found to be significantly higher. Among the nurses participating in the study; working in a unit where 12 or more patients receiving enteral/parenteral nutrition, the subscale mean scores of the perception of severity and self-efficacy were found to be significantly higher. (Table 2) ($p<0.05$). In the study, the mean score of the nurses' perception of disability subscale (14.7 ± 4.5) was "below the average"; perception of benefit (29.3 ± 4.1), perception of sensitivity (29.1 ± 3.9), perception of severity (33.8 ± 4.3), health motivation (17.0 ± 2.1), self-efficacy (16.5 ± 2.2), and action factors (16.5 ± 2.2) subscale mean scores were found to be "above the average" (Table 2).

Table 1. Comparison of nurses' socio-demographic characteristics and Nutrition Perception Questionnaire Subscale Score averages

Socio-demographic characteristics		n	%	Perception of Benefit	Perception of Disability	Perception of Sensitivity	Perception of Severity	Health Motivation	Self-Efficacy	Action Factors
				Mean Rank	X±SD	Mean Rank	Mean Rank	Mean Rank	X±SD	Mean Rank
Age	20-30 age	123	56.2	106.45	15.4±4.6	105.04	106.57	101.50	15.8±2.3	105.64
	31-40 age	74	33.8	108.14	13.7±4.2	114.84	109.95	113.54	15.8±2.4	112.42
	41 -50 age	22	10	136.14	14.1±4.1	121.41	129.39	145.64	16.2±2.6	126.23
				Kw=4.522	F=3.327	Kw=1.936	Kw=2.513	Kw=10.638	F=0.351	Kw=2.283
				p=0.104	**p=0.038**	p=0.380	p=0.285	**p=0.005**	p=0.704	p=0.319
Gender	Female	158	45.2	107.95	14.5±3.9	107.22	108.52	110.73	15.8±2.1	110.68
	Male	61	54.8	115.31	15.2±5.7	117.19	113.84	108.11	15.8±2.8	108.23
				U=4495.0	t=0.865	U=4380.5	U=4585.0	U=4703.5	t=0.068	U=4711.0
				p=0.423	p=0.390	p=0.292	p=0.571	p=0.770	p=0.946	p=0.790
Marital status	Married	99	45.2	113.06	14.2±4.1	116.86	113.40	113.40	15.9±2.2	114.86
	Single	120	54.8	107.48	15.1±4.7	104.34	107.24	107.20	15.7±2.4	105.99
				U=5637.0	t=1.514	U=5261.0	U=5608.5	U=5603.5	t=0.687	U=5458.5
				p=0.500	p=0.132	p=0.142	p=0.469	p=0.443	p=0.493	p=0.286
Education status	Highschool	15	6.8	108.57	14.4±3.8	103.23	92.63	90.77	16.2±1.7	116.07
	Bachelor's	187	85.4	109.13	15.0±4.5	108.10	108.43	109.92	15.7±2.3	108.40
	degree	17	7.8	120.88	11.0±2.9	136.82	142.59	127.85	16.6±2.9	122.21
	Master			Kw=3.473	F=6.538	Kw=3.453	Kw=5.956	Kw=3.090	F=1.205	Kw=0.950
				p=0.746	**p=0.002**	p=0.178	p=0.051	p=0.213	p=0.302	p=0.622
Years of work in the profession	0-10 year	147	67.2	105.62	15.0±4.6	106.98	107.18	103.72	15.7±2.3	106.67
	11-20 year	57	26	116.01	14.2±4.1	114.45	112.95	112.85	16.0±2.2	111.44
	21-30 year	11	5	123.23	13.6±4.5	117.05	124.27	148.0	16.1±3.0	136.23
	≤31 year	4	1.8	149.13	12.5±6.4	138.25	132.50	195.5	17.0±3.8	139.88
				Kw=3.84	F=0.940	Kw=1.577	Kw=1.534	Kw=14.474	F=0.609	Kw=3.437
				p=0.279	p=0.422	p=0.665	p=0.675	**p=0.002**	p=0.610	p=0.329
Working unit	Service	147	67.1	104.44	15.0±4.4	103.28	102.5	107.15	15.6±2.3	104.51
	Intensive care	72	32.9	121.35	14.1±4.6	123.73	125.32	115.83	16.3±2.3	121.20
				U=4475.0	t=1.260	U=4303.5	U=4189.0	U=4872.5	t=2.217	U=4485.5
				p=0.054	p=0,209	**p=0.023**	**p=0.011**	p=0.311	**p=0.028**	p=0.058

U=Mann Whitney U-Test, Kw= Kruskal Wallis Test, t= Independent Samples T-Test, F=ANOVA, p<0.05, X=Mean, SS=Standad Deviation

Table 2. Comparison of nurses' enteral / parenteral nutrition practice status and subscale mean scores of the Nutrition Perception Questionnaire

Enteral / Parenteral Nutrition Practice Status		n	%	Perception of Benefit	Perception of Disability	Perception of Sensitivity	Perception of Severity	Health Motivation	Self-Efficacy	Action Factors
				Mean Rank	**X±SD**	**Mean Rank**	**Mean Rank**	**Mean Rank**	**X±SD**	**Mean Rank**
Enteral/parenteral education status	Yes	118	53.9	120.19	14.4±4.7	119.33	119.53	122.38	16.3±2.2	124.25
	No	101	46.1	98.09	15.0±4.2	99.1	98.87	93.35	15.3±2.3	93.35
				U=4756.5	t=0.874	U=4858.0	U=4834.5	U=4498.0	t=3.220	U=4277.5
				p=0.008	p=0.383	**p=0.017**	**p=0.014**	**p=0.001**	**p=0.001**	**p<0.001**
Having sufficient knowledge	Yes	57	26	123.02	13.5±4.6	118.96	124.11	124.59	16.7±2.7	126.02
	No	35	16	106.84	16.6±4.6	92.57	99.99	101.40	15.7±2.2	108.26
	Partially	127	58	105.03	14.7±4.2	110.78	106.43	105.82	15.5±2.1	103.29
				Kw=3.531	F=5.330	Kw=3.885	Kw=4.262	Kw=4.771	F=5.429	Kw=5.453
				p=0.171	**p=0.006**	p=0.143	p=0.119	p=0.092	**p=0.005**	p=0.065
Enteral / parenteral nutrition application in the unit	Yes	168	76.7	109.15	14.5±4.3	109.01	109.85	109.86	15.8±2.5	110.33
	No	51	23.3	112.79	15.2±5.0	113.27	110.48	110.46	15.9±1.9	108.90
				U=4141.5	t=0.979	U=4117.0	U=4259.5	U=4260.5	t=0.134	U=4228.0
				p=0.709	p=0.328	p=0.670	p=0.950	p=0.950	p=0.894	p=0.884
Number of patients receiving enteral /parenteral nutrition in the unit	None	87	39.8	99.38	14.6±4.8	103.30	101.06	102.74	15.4±2.5	99.10
	1-5	115	52.5	114.08	15.0±4.3	110.57	110.81	111.17	15.9±2.2	115.89
	6-11	15	6.8	137.97	13.0±3.5	135.20	148.60	136.0	17.0±1.7	117.83
	12 and more	2	0.9	127.50	10.0±2.8	179.50	162.75	163.75	18.5±2.1	187.0
				Kw=6.466	F=1.704	Kw=5.877	Kw=9.035	Kw=5.820	F=2.936	Kw=7.229
				p=0,091	p=0.167	p=0.118	**p=0.029**	p=0.121	**p=0.034**	p=0.065
Expected Min-Max Value				7 - 35	5 - 25	7 - 35	8 - 40	4 - 20	4 - 20	4 - 20
Observed Min-Max Value				7 - 35	5 - 25	7- 35	8 - 40	6 - 20	4 - 20	4 - 20
Mean Value (X±Sd)				29.3 ± 4.1	14.7 ± 4.5	29.1 ± 3.9	33.8 ± 4.3	17.0 ± 2.1	16.5± 2.2	16.5 ± 2.2

U=Mann Whitney U-Test, Kw= Kruskal Wallis Test, t= Independent Samples T-Test, F=ANOVA, p<0.05, X=Mean, SS=Standad Deviation

In the study, a negative way relationship was found between the perception of disability and health motivation (r=-0.135,p=0.046), self-efficacy (r=-0.244, p<0.001) and action factors (r=-0.198, p=0.003). A positive way relationship was found between the perception of benefit and the perception of sensitivity (r=0.720, p<0.001), the perception of severity (r=0.808, p<0.001), health motivation (r=0.687, p<0.001) and action factors (r=0.610, p<0.001). A positive way relationship was found between the perception of sensitivity and the perception of severity (r=0.718, p<0.001), health motivation (r=0.548, p<0.001) and action factors (r=0.479, p<0.001). A positive way relationship was found between the perception of severity and health motivation (r=0.630, p<0.001) and action factors (r=0.528, p<0.001). A negative way relationship was found between health motivation and self-efficacy (r=-0.135, p=0.046); a positive way relationship was found between health motivation and action factors (r=0.693, p<0.001); A positive way relationship was found between health motivation and action factors (r=0.690, p<0.001) (Table 3).

Table 3. Correlation of the Nutrition Perception Questionnaire Subscale mean scores

	Perception of Disability	**Perception of Sensitivity**	**Perception of Severity**	**Health Motivation**	**Self-Efficacy**	**Action Factors**
Perception of Benefit	r=-0.080 p=0.237**	r=0.720 **p<0.001****	r=0.808 **p<0.001****	r=0.687 **p<0.001****	r=-0.080 p=0.237**	r=0.610 **p<0.001****
Perception of Disability	-	r=-0.071 p=0.294**	r=-0.086 p=0.202**	r=-0.135 **p=0.046****	r=-0.244 **p<0.001***	r=-0.198 **p=0.003****
Perception of Sensitivity		-	r=0.718 **p<0.001****	r=0.548 **p<0.001****	r=-0.071 p=0.294**	r=0.479 **p<0.001****
Perception of Severity			-	r=0.630 **p<0.001****	r=-0.086 p=0.202**	r=0.528 **p<0.001****
Health Motivation				-	r=-0.135 **p=0.046****	r=0.693 **p<0.001****
Self-Efficacy					-	r=0.690 **p<0.001****

* Pearson Correlation, **Spearman Correlation

DISCUSSION

Malnutrition is a widespread public health problem affecting all segments of the general population and affecting all aspects of health care worldwide (18). It is emphasized in the literature that nurses can provide the most appropriate level of nutritional support with their evidence-based practices and knowledge (19). Nurses have important roles and responsibilities in the evaluation of nutritional status, implementation of the nutrition protocol, initiation of nutrition, ensuring its continuity, management of nutrition-related complications and drug administration in patients receiving nutritional support (19).

When the literature was examined, it was found that there were mostly studies examining the knowledge levels of nurses on enteral/parenteral nutrition and that the knowledge levels were not sufficient in these studies (20-22). However, there has been no study examining nurses' perceptions of HBM-based benefits, disabilities, sensitivity and severity related to enteral/parenteral nutrition, as well as health motivations, self-efficacy and action factors. Therefore, this study will contribute to the literature and present strategies that can increase nurses' perceptions of enteral/parenteral nutrition.

In the study, the perception of disability of nurses between the ages of 20-30 and the health motivation of the nurses who are between the ages of 41-50 and whose working period is 41 years or more were found to be significantly higher. In a study conducted with Yemeni intensive care nurses, the knowledge level of nurses was found to be insufficient, and

this was attributed to the fact that nurses had never attended training courses, the majority had a three-year nursing degree and had five years or less of work experience. However, in the study, no significant relationship was found between lack of knowledge and age (21). Studies by Al-Qalah TAH and Alrubaiee GG (2022) (21) and Bhosale MYM, Dani P (2021) (23) revealed that nurses have low knowledge and practice scores, and there is a significant relationship between years of experience in parenteral nutrition and their knowledge and practice levels (21,23). In a study by Abdullah et al. stated that working experiences are the main source that increases the knowledge level of nurses about enteral nutrition management (23). In another study, no statistically significant relationship was found between work experience and knowledge level (8). In this context, it is thought that the results obtained from the study, the low work experience related to age increases the perception of disability, while the high work experience increases the health motivation. There is a "Nutrition Committee" in the hospital where the study was conducted. It is known that the nutrition nurse works actively in this committee, monitors the malnutrition status of the patients, and gives individual or group trainings to the patient's relatives and nurses. It is thought that the increased motivation for health, along with working time and experience, is also due to the active work of this committee.

Depending on the frequency of parenteral nutrition practices in the unit where nurses work, it is stated that the knowledge level of those with more experience in practice is higher than those with less experience (23,24). In this study, it is seen that nurses working in intensive care units are significantly better in the Perception of Sensitivity, Perception of Severity and self-efficacy sub-fields of the questionnaire. In the study of Hamel OL and Ahmed SA (2020) (24), it is seen that there is a statistically high level of significance in terms of p. value between the total knowledge and practices of the nurses participating in the study regarding the nursing management of patients with chest tubes. In this study it was observed that the mean scores of the perception of severity and self-efficacy of nurses working in a unit where 12 or more patients receiving enteral/parenteral nutrition were significantly high. This is thought to be due to the result of the active work of the nutrition nurse and the high exposure of nurses to enteral/parenteral nutrition practice.

Among the nurses participating in the study, the perception of sensitivity, severity and self-efficacy regarding enteral/parenteral nutrition practices of those working in intensive care was found to be higher. In a study, it was stated that the level of knowledge about enteral/parenteral nutrition practices of nurses working in the surgical unit was lower than that of internal medicine and intensive care nurses (8). It is tought that nurses working in the intensive care unit are more exposed to enteral/parenteral nutrition practices compared to other units, which increases the level of knowledge in nurses, and depending on this situation, nurses' perception of severity, sensitivity and self-efficacy also increases.

In this study the mean score of the perception of disability of the bachelor's degree nurses were found to be significantly higher, disability of master degree nurses were found to be lower. It is thought that the high number of undergraduate nurses in the study may affect this result. In a study, a positive correlation was found between the knowledge levels of intensive care nurses about enteral nutrition management and their education level (20). In the study of Koçhan and Akın (2018) (8), there was no statistically significant difference between the knowledge levels of nurses about enteral nutrition according to education level. However, the knowledge level of associate degree nurses about parenteral nutrition was found to be statistically significantly lower than the knowledge level of bachelor's degree nurses. In this study, nurses who received training on enteral/parenteral nutrition were found to have significantly high mean subscale scores for the perception of benefit, perception of sensitivity, perception of severity, health

motivation, self-efficacy and action factors. In the studies conducted, it is noted that nurses do not have sufficient knowledge in enteral/parenteral nutrition practices and should be supported by in-service trainings (8,20). In a study, it was stated that intensive care nurses who had previously received training about parenteral nutrition from in-service training, congress course and medical team had a higher level of knowledge than those who had not received training (25). It is thought that the active work of the nutrition committee in the hospital where the study was conducted, and especially the in-service and individual training given by the nutrition nurse, increase the perception of benefit, sensitivity and severity in nurses, provide health motivation, reinforce their self-efficacy and these trainings create an action effect. In support of this idea, it was found that nurses who think that they do not have enough information about enteral/parenteral nutrition have a significantly higher perception of disability and nurses who think that they have enough information have a significantly higher mean self-efficacy score. It is thought that this situation, that is, being involved in the process and having sufficient knowledge reduces the perception of disability, and increases the willingness of nurses to practice by creating a self-efficacy and triggering action on enteral/parenteral nutrition practice. In a study, newborn nurses reported that they would not feed babies if they did not feel self-confident and competent due to the fear of aspiration and death that may develop due to insufficient knowledge and skills. This finding reveals the need for specialized training, especially for nurses, and the vital importance of this training (26).

In the study of Komen D (2020) (27), which aimed to reveal the awareness of the staff about the presence of enteral nutrition protocol, it was stated that nursing awareness should be increased in the evaluation of nutrition through training programs and supervision of clinical performance (27). It is considered important to evaluate the benefit, disability, severity and sensitivity perception, health motivation, self-efficacy and action factors components of HBM together with the level of knowledge of nurses about the practice and theory of enteral/parenteral nutrition. It can be said that these components are needed at the stage of creating effective strategies.

CONCLUSION

In this study, nurses' perception of HBM-based benefit, sensitivity and severity, health motivation, self-efficacy and action factors regarding enteral/parenteral nutrition were "above the mean"; obstacle perception was found to be “below the mean”.

In accordance with these results;

- Evaluation of nurses' beliefs and attitudes regarding enteral/parenteral nutrition within the framework of HBM and dissemination of malnutrition screenings,
- Establishment of Nutrition Committees in hospitals and especially the active involvement of nurses in these committees,
- Development of actionable strategies to increase nurses' perception of benefit, severity and sensitivity, health motivation and self-efficacy, especially in-service trainings on enteral/parenteral nutrition,
- It is recommended to develop strategies to increase nurses' participation in postgraduate courses, seminars and congresses on enteral/parenteral nutrition and to encourage nurses.

- It is important that nurses have adequate knowledge and skills about nutrition practices. It is necessary to determine the current evidence-based knowledge of nurses about parenteral nutrition, to eliminate the knowledge deficiencies with the trainings to be planned and to integrate evidence-based practice knowledge into the clinic.

Limitations

Since the study was conducted in a single hospital, the results can only be generalized to this hospital. This constitutes the limitation of this study.

Conflicts of interest

The authors declare that they have no conflict of interest.

Acknowledgments

We thank our nurse colleagues who contributed to the study.

Declarations

This study was published as an oral presentation at The 1st International Eurasian Health Sciences Congress, 2021.

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