Investigation of the Cultural Competence Levels of Diabetes Nurses

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ABSTRACT

Objective: It is important for nurses to have cultural competence in order to keep up with the cultural diversity brought by globalization. In this study, we aim to examine the cultural competence levels of diabetes nurses in diabetes education and care in accordance with the cultural characteristics of individuals with diabetes.

Methods: This study was conducted in a cross-sectional descriptive type with 183 diabetes nurses between September 15 and December 15, 2020 in Turkey. The data were collected using the Introductory Information Form and the Nurse Cultural Competence Scale.

Results: We determine that almost all of the diabetes nurses had cultural competence above the average. We find that having a postgraduate degree from diabetes nurses, receiving cultural education before, and having a diabetes nurse experience of 6 years or more affected the cultural competence levels (p<0.05).

Conclusion: This research shows that diabetes nurses in Turkey have cultural competence in providing care to individuals with diabetes from different cultures, and that education and experience affect this situation. It is predicted that diabetes nurses will contribute to the self-management of individuals with diabetes by implementing strategies to improve their cultural competence.

Keywords: Diabetes, nursing, cultural competence

1. INTRODUCTION

In the historical process, the phenomenon of migration has gained a different speed and dimension with globalization (1,2). According to the 2020 World Migration Report 2020 of the International Organization for Migration (IOM), it has been reported that the global international migrant population reached 272 million in 2019. This rate is approximately 6 million in Turkey and the majority of the immigrants come from countries such as Syria, Iraq, Afghanistan, Iran, and Somalia (3,4). The coming together of different cultures has led to an increase in cultural diversity (1,2). It has been reported that cultural diversity is a factor affecting the incidence of the disease (2). In the United States, the incidence of coronary heart disease, stroke, diabetes, asthma, and cancer has been reported to be higher in the minority population (5). In this respect, it has become important to consider cultural diversity in health care. In the context of health care, appreciating, accepting, and respecting the values, beliefs, and preferences of different cultures is defined as cultural competence (2). Cultural competence requires an understanding of producing solutions to reduce cultural differences and providing culturally competent care (2,5). Individuals' cultural norms and values significantly affect their understanding of health and illness, lifestyle, and behavior (6). The literature suggests that among the difficulties that health professionals face in culture-specific care, patients experience communication barriers related to their linguistic and cultural backgrounds (7-9). The cultural competence of health care professionals reduces racial and ethnic differences and improves patient care quality, patient satisfaction, and patient care outcomes (10).

In this context, nurses should develop cultural competence skills to have cultural sensitivity and competence (1,11,12). Studies conducted predicted that with the increase in cultural diversity, patient expectations will also increase, and therefore, the cultural competence levels of nurses should be increased. For this purpose, it is recommended to plan training programs that will improve cultural competence during the nursing education process and post-graduate in-service training. These studies suggest that the training given

about cultural competence is an effective strategy, and the level of cultural competence increases in the training groups (10,13,14).

Diabetes is one of the urgent public health problems of the last century and has become a pandemic due to its global effects (15). It has been reported that type 2 diabetes is more common in individuals of Asian and African American descent, and the incidence of retinopathy, one of the microvascular complications of diabetes, is higher in African Americans (55.7%) (6). In a study conducted in Mexican Americans, it was shown that culturally competent diabetes self-management education decreased the HbA1c and fasting blood glucose levels of individuals with diabetes and increased their knowledge about diabetes (16).

As far as is known, although studies are examining the cultural competence of nurses and nursing students in the literature, no studies are examining the cultural competence levels of diabetes nurses (2,5,10,17,18). Due to the increasing cultural diversity with globalization, it is obvious that there is a need for data on the cultural competence of diabetes nurses who care for individuals with diabetes from different cultures. In this context, our research is the first and original study examining the cultural competence of diabetes nurses in Turkey. The aim of this study is to determine the cultural competence levels of diabetes nurses who care for individuals with diabetes.

2. METHODS

2.1. Study Design, Setting, and Sample

This is a cross-sectional descriptive study conducted with diabetes nurses in Turkey between September 15 and December 15, 2020. The population of the study consisted of 724 nurses working as diabetes nurses in Turkey and actively registered with the Diabetes Nursing Association. Diabetes Nursing Association is the only organization in Turkey where diabetes nurses are actively registered. A convenience sampling was used, and 183 (25.3%) diabetes nurses who answered the questionnaire and responded to the inclusion criteria constituted the sample of the study. Caring for individuals with diabetes, being 18 years of age and older, being actively registered with the Diabetes Nursing Association, and volunteering to participate in the research were determined as the inclusion criteria of the research.

2.2. Ethical Considerations

The non-interventional research ethics committee of a state university in Turkey was approved by the ethics committee (decision no: 2021/61) and was conducted following the Declaration of Helsinki. Written permission was obtained from the Diabetes Nursing Association, where diabetes nurses are registered in Turkey, for data collection. Before answering the online questionnaire, the participants were provided to read and approve the informed consent text explaining the purpose and rationale of the study.

2.3. Data Collection

The data were collected by sharing the online questionnaire form created with Google Forms by the researchers through the Diabetes Nursing Association between September 15 and December 15, 2020, to diabetes nurses via mail and SMS. The data of the study were obtained by using the Introductory Information Form and the Nurse Cultural Competence Scale (NCCS-T).

2.4. Instruments

Introductory Information Form: This is an electronic form consisting of 17 questions developed by researchers in line with the literature (1,2,11,17-19). The form consists of questions that include some socio-demographic characteristics of the participants (age, gender, education level, working year) and introductory information about cultural care (such as having previously received cultural education, caring for people with diabetes from different cultures, difficulties in providing care).

Nurse Cultural Competence Scale (NCCS-T): The scale was developed by Perng and Watson in 2012 (20). The Turkish adaptation of the scale (NCCS-T) was done by Gözüm et al. (2016) (11). The scale, consisting of a total of 20 items, was designed to evaluate the cultural competence level of nurses. The scale consists of three sub-dimensions: cultural knowledge (7-35 points), cultural skills (11-55 points), and cultural sensitivity (2-10 points). The lowest score that can be obtained from the scale is 20 and the highest score is 100. A high total score indicates that the individual has a high level of cultural competence. The Cronbach's alpha coefficient of the NCCS-T, which was adapted into Turkish, was found to be 0.96 (20). In this study, the Cronbach's alpha coefficient of the NCCS-T was calculated as 0.93.

2.5. Statistical Analysis

Statistical analyzes were reported using the SPSS 26.0 statistical software. In descriptive analyses, number (n), percent (%), mean±standard deviation, and median (minimum-maximum) values are presented. In comparative group analysis; Student's t-test and Mann-Whitney U test were used in paired groups. By checking the conformity of the continuous variables to the normal distribution in the groups, analyzes were performed using the Parametric Student's t-test in cases where the normal distribution was provided, and the Mann Whitney U test, which is a nonparametric test, in cases where it was not. Multiple linear regression analysis was performed to determine the effect of various independent variables on the cultural competence level score of diabetes nurses. All statistics were evaluated at the $p < 0.05$ significance level.

2.6. Limitations of The Study

In this study, the presence of participants from geographically different regions of Turkey increased the possibility of representing different regions. The fact that only 25% of the diabetes nurses actively working in Turkey constituted the sample of the study shows that the research findings cannot be generalized to the population. The other limitations of this study are that nurses were not questioned about the rate of individuals with diabetes from different cultures they care for and their ability to speak a language other than Turkish.

This study shows that diabetes nurses in Turkey have cultural competence in caring for people with diabetes from different cultures and that education and experience affect this situation. Cultural competencies of diabetes nurses will contribute to diabetes management.

3. RESULTS

3.1. Sociodemographic Characteristics of Diabetes Nurses

Data including some introductory characteristics and cultural care-related characteristics of diabetes nurses are shown in Table 1. When the sociodemographic characteristics of the diabetes nurses included in the study were examined; it was determined that 99.5% were women, 50.3% were between the ages of 25-41, 76.5% were married and 48.6% were living in western Turkey. According to the professional characteristics of the nurses, 67.2% of them have vocational education at the undergraduate level, 53.0% have less than 20 years of professional experience, 53.5% have worked as a diabetes nurse for 6 years or more, and 89.6% have diabetes nurse certification determined.

When the characteristics of the participants regarding cultural care are examined; they reported that 29.5% of them had previously received a cultural education, 100% of them stated that the culture-specific care would affect the adherence of the diabetic individual to treatment, they routinely evaluated the health/disease perception of individuals with diabetes, they observed their traditional and ethnic practices, and they always encountered individuals from different cultures. Diabetes nurses stated that 63.9% of them had language problems and 60.1% of them had communication problems, in the order of frequency as the difficulties they encountered while giving care to individuals from different cultures. It was determined that the participants learned information about the cultural structures of individuals from different cultures, respectively, from family/friends and relatives by 85.8%, and by information sources such as social media and internet by 78.7%. When the participants were asked whether they felt competent while providing cultural care while providing education and care to individuals with diabetes and their families from different cultures; 88.5% reported that they thought they had cultural competence (Table 1).

Table 1. *Some introductory characteristics of diabetes nurses and information about culture-specific care (n=183).*

Variables	X̄ ±SD	Median (Min-Max)
Age (year)	40.77±6.69	41 (25-59)
Working duration as a nurse (year)	19.13±8.16	20 (1-40)
Working duration as a diabetes nurse (year)	7.36±5.49	6 (1-25)
	n	**%**
Cultural education status		
Yes	54	29.5
No	129	70.5
Willingness to receive cultural education		
Yes	175	95.6
No	8	4.4
The effect of culture-specific care on patient compliance		
Yes	183	100
No	-	-
Evaluation of the patient's perception of health/illness		
Yes	183	100
No	-	-
Evaluation of the traditional/ethnic practices of the person with diabetes		
Yes	183	100
No	-	-
Encounter with patients from different cultures		
Yes	183	100
No	-	-
The state of feeling culturally competent in oneself		
Yes	162	88.5
No	21	11.5
Challenges they face in culture-specific care*		
Expectations of physiological care needs	57	31.1
Expectations of psychological care needs	73	39.9
Their expectations regarding their spiritual needs	24	13.1
Culture-specific expectations	66	36.1
Communication problem	110	60.1
Language problem	117	63.9
Information sources where patients from different cultures learn about their cultural structures		
Family/relative/friend	157	85.8
Pre/post graduation trainings	54	29.5
individual experiences	78	42.6
Travel experiences	58	31.7
Social media/internet	144	78.7
Other	6	3.3
Thinking that you have cultural competence		
Yes	162	88.5
No	21	11.5

* Multiple options are marked.

3.2. Some İntroductory Characteristics of Diabetes Nurses and Their Status Towards Cultural Care, and the Mean Scores of NCCS-T

It was determined that 89.6% of the diabetes nurses had a cultural competence level above the average (60 points and above). It was determined that 100% of the participants had cultural knowledge (14 points and above), cultural skills (27 points and above), and cultural sensitivity (4 points and above) levels above the average. When the total and sub-dimension scores of NCCS-T were examined; a total score of 71.65±9.86 points in NCCS-T, cultural knowledge was calculated as 24.34±3.92 points, the cultural skill was calculated as 40.01±5.63 points, and cultural sensitivity was calculated as 7.29±1.17 points (Table 2).

Table 2. Distribution of diabetes nurses' total score and sub-dimension score averages of NCCS-T (n=183).

NCCS-T	X̄ ±SD	Median (Min-Max)
Cultural knowledge	24.34±**3**.92	25 (14-35)
Cultural skills	40.01±5.63	41 (27-55)
Cultural sensitivity	7.29±1.17	8 (4-10)
NCCS-T Total point	71.65±9.86	72 (47-100)

It was determined that diabetes nurses with a graduate degree had a significantly higher mean score in the total score of the NCCS-T, cultural knowledge, and cultural skills sub-dimension than the nurses with a bachelor's degree (p<0.05). Nurses with 6 or more years of experience as diabetes nurses were found to have a significantly higher mean score in the NCCS-T total score, cultural knowledge, and cultural skills sub-dimension than nurses with less than 6 years of experience (p<0.05). The diabetes nurses' total score, cultural knowledge, and cultural skill sub-dimension mean scores were significantly higher than the nurses who received previous training on cultural care (p<0.05). Those who think that they have cultural competence while providing education and care to individuals with diabetes and their families from different cultures have a significantly higher mean score of NCCS-T total score, cultural knowledge, cultural skills, and cultural sensitivity sub-dimensions than the nurses who think that they do not have cultural competence (p<0.05). (Table 3).

In the multiple regression model, among the factors that significantly affect the diabetes nurses' total and sub-dimension scores of NCCS-T; having a graduate degree, having 6 or more years of working experience as a diabetes nurse, no previous cultural education, and having 20 years or more professional experience. These variables explain 9% of the cultural competence level of diabetes nurses (Table 4).

Table 3. Distribution of some introductory characteristics of diabetes nurses and their total score and sub-dimension score averages in NCCS-T (n=183).

Variables	NCCS-T Total X̄ ± SD	Cultural knowledge X̄ ± SD	Cultural skills X̄ ± SD	Cultural sensitivity X̄ ± SD
Age groups				
25-41 years	72.03±9.48	24.57± 3.84	40.15±5.40	7.30±1.24
42 years and older	71.27±10.27	24.12±4.01	39.87±5.87	7.28±1.10
	t=.519 p=0.605	t=.783 p=0.435	t=.327 p=0.744	t=.107 p=0.915
Education status				
Undergraduate	70.18±9.15	23.74±3.65	39.12±5.29	7.32±1.09
Graduate	74.66±10.63	25.58±4.20	41.85±5.90	7.23±1.34
	t=-2.944 **p=0.004**	t=-3.033 **p=0.003**	t=-3.149 **p=0.002**	t=.495 p=0.621
Professional experience period				
1-19 years	72.20±9.53	24.63±3.93	40.22±5.44	7.36±1.26
20 years and above	71.16±10.16	24.09±3.92	39.83±5.81	7.23±1.09
	t=.714 p=0.476	t=.939 p=0.349	t=.461 p=0.645	t=.707 p=0.481
Working duration as a diabetes nurse				
Under 6 years	70.04±8.92	23.81±3.72	39.08±5.06	7.16±1.01
6 years and above	73.05±10.45	24.81±4.05	40.82±5.98	7.40±1.29
	t=-2.073 **p=0.040**	t=-1.734 p=0.085	t=-2.108 **p=0.036**	t=-1.399 p=0.163
Prior cultural education				
Yes	74.55±10.19	25.55±3.73	41.53±5.79	7.46±1.17
No	70.44±9.49	23.84±3.91	39.37±5.46	7.22±1.17
	t=2.614 **p=0.010**	t=2.733 **p=0.007**	t=2.393 **p=0.018**	t=1250 p=0.213
Thinking that you have cultural competence				
Yes	72.64±9.48	24.72±3.77	40.56±5.44	7.36±1.17
No	64.04±9.58	21.47±4.02	35.80±5.40	6.76±1.04
	t=3.901 **p=0.000**	t=3.683 **p=0.000**	t=3.766 **p=0.000**	t=2.231 **p=0.027**

t= Independent Samples t test; p<0.05

Table 4. The effect of some introductory characteristics of diabetes nurses on the total and sub-dimension scores of NCCS-T (n=183).

Variables	B	SE	Beta	t	p
NCCS-T Total					
Costant	70.633	4.429		15.946	0.000
Education status	4.525	1.494	0.216	3.028	0.003
Working experience as a diabetes nurse	3.220	1.518	0.163	2.121	0.035
Prior education status	-4.045	1.544	-0.188	-2.620	0.010
Professional experience period	-1.983	1.512	-0.101	-1.311	0.191
Cultural knowledge					
Costant	24.438	1.762		13.866	0.000
Education status	1.853	0.595	0.222	3.116	0.002
Working experience as a diabetes nurse	1.100	0.604	0.140	1.820	0.070
Prior education status	-1.720	0.614	-0.200	-2.800	0.006
Professional experience period	-0.853	0.602	-0.109	-1.417	0.158
Cultural skill					
Costant	38.535	2.533		15.216	0.000
Education status	2.772	0.854	0.232	3.244	0.001
Working experience as a diabetes nurse	1.797	0.868	0.160	2.071	0.040
Prior education status	-2.122	0.883	-0.172	-2.404	0.017
Professional experience period	-0.877	0.865	-0.078	-1.014	0.312
Cultural sensitivity					
Costant	7.693	0.553		13.915	0.000
Education status	-0.109	0.186	-0.044	-0.584	0.560
Working experience as a diabetes nurse	0.315	0.189	0.134	1.665	0.098
Prior education status	-0.196	0.193	-0.076	-1.020	0.309
Professional experience period	-0.263	0.189	-0.112	-1.394	0.165

NCCS-T total: F=5.620, p=0.000, R2=0.112, Adjusted R2=0.092
Cultural knowledge: F=5.733, p=0.000, R2=0.114, Adjusted R2=0.094
Cultural skill: F=5.518, p=0.000, R2=0.110, Adjusted R2=0.090
Cultural sensitivity: F=1.301, p=0.271, R2=0.28, Adjusted R2=0.0076

4. DISCUSSION

It is an inevitable fact that more people with diabetes will need care in the future due to the increase in the incidence rate of diabetes all over the world and Turkey. Nurses need to have cultural competence in order to keep up with the cultural diversity brought by globalization. According to the research findings, it was determined that the majority of diabetes nurses (89.6%) had a cultural competence level above the average. In addition, it was determined that the cultural knowledge, cultural skills, and cultural sensitivity levels of all participants (100%) were above the average. These results are promising and show that diabetes nurses have developed cultural competencies in the care of individuals with diabetes. It is thought that Turkey's becoming a preferred country for health tourism for Asian, European, and Arab countries, the number of tourists receiving health care services of half a million (551,747) and the immigrant population exceeding 6 million may be effective in the development of the cultural competencies of diabetes nurses (4,21).

There is no study in the literature examining the cultural competence levels of diabetes nurses. In the literature, it has been stated that nurses' competence to understand different cultures, recognize and respect different beliefs and cultural differences, and provide care in accordance with the patient's culture and expectations will improve patient care outcomes (22). It is predicted that diabetes nurses have cultural awareness and sensitivity, and the development of cultural knowledge and skill competencies will contribute to the care of individuals with diabetes.

It has been emphasized that the insufficient level of cultural knowledge, skills, and sensitivity of nurses may cause a decrease in the quality of patient care and inequalities in health services (10). However, considering the increasing cultural diversity, it is a fact that it is not possible for nurses to recognize and have knowledge of all existing different ethnic, cultural, religions, and beliefs [19]. For this reason, it is thought that there is a need for evidence-based interventions to improve cultural competence, to develop institutional procedures, and to develop objective strategies that will enable the identification of the cultural values of patients receiving care.

In our study, nurses' educational status, diabetes nursing experience time, receiving the status of cultural education and professional experience time affected cultural competence level of diabetes nurses. It was found that the cultural competence levels of those who worked as diabetes nurses for 6 years or more were higher than those who had less than 6 years of experience (p<0.05). Diabetes is a disease that requires individual approaches according to individual needs and preferences. For effective and effective diabetes care, it is important for diabetes nurses to consider the cultural differences of individuals and to be culturally competent (6). In this direction, during the care and education of individuals with diabetes, all of the nurses participating in our study; it is predicted that they reach cultural competence with their awareness that culture-specific care affects patient compliance and their experience of routinely evaluating the patient's health/illness perception and traditional/ethnic practices. It is thought that as the experience of caring for the person with diabetes increases, the cultural competence levels also increase.

According to the findings of the study, it was determined that the cultural competence levels of the participants with postgraduate education were higher than the nurses with a bachelor's degree (p<0.05). It is seen that as the education level of nurses increases, their cultural competence levels also increase. In addition, it was determined that approximately one-third of the nurses (29.5%) had previous education about culture, which increased their cultural competence levels. Similar to our study findings, one-third of the participants (33%) (7) in a study and a small number of participants (15%) [8] in another study did not receive any training on cultural issues, and nurses were more willing to receive training than

physicians. reported (8). In our study, it was determined that the majority of nurses (95.6%) were willing to receive training on cultural care. These results show that nurses have experiences of caring for patients from different cultures, demands for cultural care, and educational needs related to cultural competence.

In the literature, it has been determined that those who have educational experience in improving the cultural competence of nurses have a higher level of cultural competence (10). Studies with nurses and nursing students have shown that the educational initiative increases the level of cultural competence (8,10,17,22-24). Skill-based courses given to health professionals via the internet to improve cultural competence and simulation-based training in the nursing and medical education curriculum are among the educational strategies that are frequently applied (14). It is emphasized that cultural competence training given to nurses will increase their cultural knowledge, skills, awareness, and sensitivity (10,19).

The fact that Turkey has a wide range in terms of cultural diversity causes nurses to meet and care for individuals from different cultures (1,25). It was determined that all of the diabetes nurses included in our study encountered and gave care to individuals from different cultures. Participants stated that they encountered language and communication problems most frequently when caring for individuals with diabetes from different cultures. Studies have reported that the majority of health professionals have difficulties in communicating with individuals from different cultures (7-9,26). It has been stated that this situation may be caused by the lack of a common language with the patients, the lack of written materials in different languages, the lack of a sufficient number of translators, the lack of information about the health-disease perception and living conditions of individuals from different cultures (8). In addition to providing intercultural communication training to health professionals in overcoming communication barriers, cultural competence measures such as the availability of professional translators in clinical settings and the preparation of information brochures translated into different languages are recommended (7-10).

The majority of diabetes nurses (88.5%) stated that they have cultural competence in the care of individuals with diabetes and their families from different cultures. In some studies, it has been reported that nurses and nursing students do not consider themselves competent in providing care to individuals from different cultures and they think that their competencies about different cultures are at a low level (9,22). These results, which differed from our study findings, suggested that this may be due to differences between the study sample population and the patient groups receiving cultural care.

5. CONCLUSIONS

This study shows that diabetes nurses in Turkey have cultural competence in caring for people with diabetes from different cultures and that education and experience affect this situation. Cultural competencies of diabetes nurses will contribute to diabetes management.

Conflict of interest statement

The authors declared no conflict of interest.

REFERENCES

[1] Tanrıverdi G. Approachs of nurses towards standards of practice for culturally competent care. EGEHFD 2015;31(3):37–52.

[2] Lin CJ, Lee CK, Huang MC. Cultural competence of healthcare providers: a systematic review of assessment instruments. J Nurs Res 2017;25(3):174-186.

[3] M. McAuliffe, B. Khadria. World Migration Report 2020. International Organization for Migration, Geneva, 2019. Available from: https://publications.iom.int/books/world-migration-report-2020.

[4] Çakır B, Çevik C. Globalization, migration and woman's health. HP 2021;3(1):225–243.

[5] Loftin C, Hartin V, Branson M, Reyes H. Measures of cultural competence in nurses: an integrative review. Sci. World J 2013;289101:1-10.

[6] International Diabetes Federation. IDF Diabetes Atlas, 9th edn. Brussels, Belgium: 2019. Available from: https://www.diabetesatlas.org

[7] Weber O, Semlali I, Gamondi C, Singy P. Cultural competency and sensitivity in the curriculum for palliative care professionals: a survey in Switzerland. BMC Med Educ 2021;21(1):1-10.

[8] Weber O, Sulstarova B, Singy P. Cross-cultural communication in oncology: challenges and training ınterests. Oncol Nurs Forum 2016;43(1):24-33.

[9] Karakuş Z, Babadağ B, Abay H, Akyar İ, Çelik SŞ. Nurses' views related to transcultural nursing in Turkey. Int. J. Caring Sci 2013;6(2):201–207.

[10] Majda A, Zalewska-Puchała J, Bodys-Cupak I, Kurowska A, Barzykowski K. Evaluating the effectiveness of cultural education training: cultural competence and cultural ıntelligence development among nursing students. Int J Environ Res Public Health 2021;18(8):1-10

[11] Gözüm S, Tuzcu A, Kirca N. Validity and reliability of the Turkish version of the nurse cultural competence scale. J Transcult Nurs 2016;27(5):487-495.

[12] Sivrikaya S, Çınar D. Diabetes and cultural approach. DOHH 2017;8(1): 30–37.

[13] Bernhard G, Knibbe RA, von Wolff A, Dingoyan D, Schulz H, Mösko M. Development and psychometric evaluation of an ınstrument to assess cross-cultural competence of healthcare professionals (CCCHP). PLoS One 2015;7;10(12):e0144049:1-22.

[14] Kutob RM, Senf JH, Harris JM Jr. Teaching culturally effective diabetes care: results of a randomized controlled trial. Fam Med 2009;41(3):167-174.

[15] TEMD, Turkish Society of Endocrinology and Metabolism Diseases. Clinical Practice Guideline for Diagnosis, Treatment and Follow-up of Diabetes Mellitus and Its Complications. English Version of the 12th Edition. Ankara: Bayt Press; 2019

[16] Brown SA, Garcia AA, Kouzekanani K, Hanis CL. Culturally competent diabetes self-management education for Mexican Americans: the Starr County border health initiative. Diabetes Care 2002;25(2):259-268.

[17] Peek EH, Park CS. Effects of a multicultural education program on the cultural competence, empathy and self-efficacy of nursing students. J Korean Acad Nurs 2013;43(5):690-696.

[18] Zarzycka D, Chrzan-Rodak A, Bąk J, Niedorys-Karczmarczyk B, Ślusarska B. Nurse cultural competence-cultural adaptation and validation of the Polish version of the nurse cultural competence scale and preliminary research results. PLoS One 2020; 16;15(10):e0240884:1-21.

[19] Jongen C, McCalman J, Bainbridge R. Health workforce cultural competency interventions: a systematic scoping review. BMC Health Serv Res 2018;2;18(1):1-15.

[20] Perng SJ, Watson R. Construct validation of the Nurse Cultural Competence Scale: a hierarchy of abilities. J Clin Nurs 2012;21(11-12):1678-1684.

[21] Ağaoğlu FO, Karagöz N, Zabun S. An evaluation of health tourism applications and their income to Turkey. CU J Eco Adm Sci 2019;20 (2):1–23.

[22] Lee SE, Lee MH, Peters AB, Gwon SH. Assessment of patient safety and cultural competencies among senior baccalaureate nursing students. Int J Environ Res Public Health. 2020;13;17(12):1-10.

[23] Creech C, Filter M, Wehbe-Alamah H, McFarland MR, Andrews M, Pryor G. An intervention to ımprove cultural competence in graduate nursing education. Nurs Educ Perspect 2017;38(6):333-336.

[24] Liu W, Stone TE, McMaster R. Increasing undergraduate nursing students' cultural competence: an evaluation study. Glob Health Res Policy 2018;3 (7):1-10.

[25] Tanrıverdi G. Suggestion of a new nursing model: Environment focused cultural competency model. J Hum Sci 2017;14(4):4658–4670.

[26] Sevinç S. Nurses' Experiences in a Turkish internal medicine clinic with Syrian refugees. J Transcult Nurs 2018;29(3):258-264.