

Knowledge, Attitudes, and Practice of Patient Teaching among Nurses in Primary Health Care, United Arab Emirates

Shimaa Said Alsalm

Emirates Health Service, Sharjah, United Arab Emirates
Email: shaima.alsalm@ehs.gov.ae

How to cite this paper: Alsalm, S.S. (2023) Knowledge, Attitudes, and Practice of Patient Teaching among Nurses in Primary Health Care, United Arab Emirates. *Open Journal of Nursing*, 13, 890-901. <https://doi.org/10.4236/ojn.2023.1312059>

Received: November 9, 2023

Accepted: December 24, 2023

Published: December 27, 2023

Copyright © 2023 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

Patient education is defined as the process of influencing a patient's behavior and helping them make the necessary changes to their knowledge, attitudes, and skills to maintain or improve their health. It is a crucial part of patient care, and the EHS ambulatory care healthcare system is giving patient education more importance. Many experts claim that nurses still have difficulties providing patient education because of a range of factors, which include a lack of expertise and numerous other obstacles. Moreover, there isn't any published research that studies nurses' attitudes, knowledge, and patient-teaching practices in primary healthcare in the United Arab Emirates. The research project aims to investigate the knowledge, attitude, and practice of patient teaching among nurses in primary health care centers to better understand how nurse knowledge and attitudes may affect nurse-performed patient education. The target population is nurses working in primary healthcare centers in Sharjah, Ajman, Dubai, Ras Al-Khaimah, Fujairah, and Umm Al Quwain. However, the sample size is 300 using a random cluster sampling technique. The participants were encouraged to take part in the study (KAPPTNQ) through an online survey. The study concludes that the majority of nurses are knowledgeable about patient education; a large proportion of the nurses have a positive attitude toward patient education; and the majority of the nurses have a positive practice of patient education. However, the major challenges nurses encounter with patients' health teaching include language barriers, inadequate communication, ineffective time management, and cultural impacts on patient health education.

Keywords

Challenges of Patient Education, Knowledge, Attitudes, and Practice of Patient Teaching, Barriers of Patient Education

1. Introduction

Health education is a combination of learning experiences intended to assist people and communities in improving their health by gaining knowledge or changing attitudes [1].

Patient education is described as the process of influencing patient behavior and making the required changes in knowledge, attitudes, and skills to maintain or enhance health. Patient education is an essential component of patient care. It involves all education programs to support patients and their families in making appropriate decisions about the condition and learning self-care skills [2].

Providing sufficient patients with information is an important factor in patient-centered care and impacts the quality of care. It may enhance patients' satisfaction and adaptation to their diseases, as well as reduce their anxieties [3].

In ambulatory health care, patient education and empowerment are a patient's right and a health care provider's responsibility and should be part of the patient's care and treatment. The key to the success of the treatment is providing appropriate education to patients and attracting their cooperation and efforts to achieve health [3].

In EHS ambulatory health care, patient education is an essential responsibility of healthcare professionals in a variety of healthcare settings, such as schools, community groups, workplaces, etc. It is the responsibility of the healthcare professional to identify patients' health education needs and take appropriate steps to ensure that correct information is transferred to patients.

Nursing is the major healthcare profession in EHS ambulatory care, with direct responsibility for patient care and an essential part of patient education. Nonetheless, patient education is becoming an increasing priority for the EHS ambulatory care healthcare system. For a variety of reasons, many researchers say that nurses still have challenges in performing patient education due to a lack of knowledge and many other barriers [3] [4]. Unfortunately, to the best of our knowledge, no published research is available to explore nurses' knowledge, attitudes, and practice of patient teaching among nurses in primary health care in the UAE.

The research project aims to investigate the knowledge, attitude, and practice of patient teaching among nurses in primary health care centers to better understand how the Nurses' knowledge, attitude, and practice of patient teaching may affect nurse-performed patient education.

2. Objectives

The objective of the study is to identify nurses' level of knowledge, attitude, and practice regarding patient teaching and to determine the barriers associated with patient teaching'. However, poor knowledge, attitude, and practice are challenges associated with patient education.

3. Research Questions

- What are the challenges that nurses face while providing patient health edu-

cation in EHS ambulatory care?

- What is the association between nursing demographic data and reported health education challenges?

4. Literature Review

Patient education is an important part of patient care and is recognized as an essential responsibility and one of the main requirements for nursing practice [1].

It is seen as a dynamic and ongoing process involving both formal and informal interaction to enhance patients' knowledge and behaviors and to provide better outcomes for their medical treatment [4].

An essential part of health treatment is patient education. It encompasses all educational initiatives aimed at educating patients and their families about the illness and teaching them how to take care of themselves. Enough information is given to patients, which plays a significant role in patient-centered care, establishes the standard of treatment, and may improve patients' satisfaction, help them adjust to their conditions, and lessen their fear [5].

Patient education leads to increased patient knowledge, self-care, and quality of life, as well as fewer hospital readmissions and better medication compliance. Patients who receive insufficient patient education increase the risk of miscommunication and unfavorable outcomes [5].

On the other hand, nurses have expressed that there are many challenges ahead of the successful implementation of patient education, such as a lack of a structured approach, inadequate educational preparation in teaching methods, insufficient time, the absence of managerial support, a lack of teaching materials, interruptions, inadequate privacy, poor interprofessional collaboration, and heavy workloads [6].

Another study states that several factors are affecting the nursing workforce and providers' ability to deliver consistent patient-centered care, which includes staffing shortages, complex decision-making and problem-solving needs, health literacy, and ineffective communication and collaboration [7].

Health literacy is one of the ideas connected to patient education. The ability of a patient to access, absorb, and comprehend fundamental medical information and make informed medical decisions is known as health literacy [7].

One research study states that patient health literacy is a major effect of patient education. According to that, the nursing interventions that can be used to influence patient health literacy include paying attention to the patient's language, improving the patient's comprehension, and enticing the patient to engage in the healing process [8].

Patient education is essential for healthcare professionals in EHS Primary Health Care, and it is the healthcare professional's responsibility to assess patients' health education needs and to make necessary efforts to ensure that relevant information is provided to patients.

Nursing is the most important healthcare profession in EHS ambulatory care, with direct patient care responsibilities and an important role in patient educa-

tion. Nonetheless, the EHS ambulatory care healthcare system is making patient education a higher priority. However, there is no research done on EHS to assess nurses' knowledge, attitude, and practice of patient teaching in primary healthcare facilities.

The research project aims to assess nurses' knowledge, attitude, and practice of patient teaching in primary healthcare facilities to better understand how some of these factors may impact nurse-performed patient education. The study's findings will assist stakeholders in identifying the main challenges of nursing patient education and developing strategies to solve the problems.

5. Methodology

Research Design: To achieve the objectives of this study, a descriptive survey design was used, and a Data Hub online survey was used to gather data and send it to EHS ambulatory nurses via email.

Sample and Setting: The population consisted of all nurses in primary health centers during the period of study. The study population was selected using stratification and then a simple random sampling technique. The accessible population from the selected strata of units was 500 nurses employed at EHS primary healthcare facilities in Sharjah, Ajman, Dubai, Ras Al-Khaimah, Fujairah, and Umm Al Quwain. However, only 300 were sampled using a random cluster sampling technique.

The sample size was obtained using [9] the Simple Size Formula:

$$n = \frac{p(1-P)}{\frac{A^2}{z^2} + \frac{P(1-p)}{N/R}}$$

where n = sample size; N = accessible population; p = estimated variance in population as a decimal (0.5); A = precision desired expressed in decimal (0.05); Z = based on confidence level 1.6449 for 90%; and R = estimated response rate expressed in decimal (0.75 for 75%). Given $N = 500$

$$\frac{0.5(1-0.5)}{\frac{0.05^2}{1.6449^2} + \frac{0.5(1-0.5)}{500/0.75}} = \frac{0.5}{0.00167396} = 299$$

When distributing the questionnaire, a proportional sample from each stratum was selected.

The questionnaire gathered data at random. Participants had the option to accept or decline participation in the study, and we provided the participant with a consent form that described everything about the investigation to protect participant rights.

Through a link to an online survey, participants were encouraged to take part in the study. Participants can access the participant information document, which outlines the research's purpose and objectives, inclusion and exclusion criteria, and the survey link, through the link.

Inclusion Criteria: those who have more than one year of experience, are in-

terested in taking part, and have worked in patient care.

Exclusion Criteria: newly graduated nurses, temporary contract nurses (less than one year's contract), dental assistants, non-English speakers, outsourced nurses, and nurses who are not interested in taking part in this study.

Dental assistants, outsourced nurses, and non-English-speaking employees are also excluded because they cannot accurately express or document the information.

6. Study Instrument

A survey was used to gather data for this project, Knowledge, Attitude, and Practice of Patient Teaching among Nurses Questionnaire (KAPPTNQ) [10].

The questionnaire was developed by Aminaho and Maynard in 2019, and we obtained agreement from the researchers to adapt and use the questionnaire in this project.

The instrument was divided into two sections (A and B); Section A featured items on the respondents' sociodemographic data, while Section B contained items representing the knowledge, attitude, and practice of patient teaching among nurses.

Section B is an item reflecting the study variables. It highlighted the extent to which nurses in primary health care centers are knowledgeable about patient education, the attitude of nurses towards patient education, the practice of patient teaching among nurses in primary health care centers, and the challenges nurses in primary health care centers encounter during patient education.

7. Ethical Consideration

Confidentiality was affirmed using code names for participants, and this was to assure participants in the consent form that they felt safe to participate. Data is collected and stored securely until all dissemination is complete.

Concerning privacy, the survey questionnaire was collected at random. The participants have the right to accept or refuse to participate in the study. A consent form describes everything about the investigation to protect participant rights.

This research has undergone an institutional review board for the ethical approval process from the MOHAP research ethics committee, which has approved the study protocol to be conducted. Reference NO. MPHAP/REC/2023/30-2023-F-N.

8. Data Analyses

The data was downloaded, cleaned, and analyzed using SPSS. Data analysis was done using simple frequencies, percentages, average percentages, and p values.

Demographic data were examined using descriptive percentages and the outcome variables knowledge (poor knowledge and good knowledge), attitude (negative attitude and positive attitude), and practice (poor practice and good practice) were divided. Then, these outcome variables were coded as knowledge (poor knowledge = 2 and good knowledge = 1), attitude (negative attitude = 2 and

positive attitude = 1), and practice (poor practice = 2 and good practice = 1). Descriptive statistics were summarized by using simple frequencies, percentages, and average percentages of outcome variables.

For the analysis of the challenges nurses encounter in primary health centers during patient teaching, we used the average percentage and the outcome variables coded as positive responses and negative responses. A positive response reflected the average percentage of respondents who rarely encounter challenges during patient education.

The negative response reflected the average percentage of people who answered sometimes or always encountered challenges during patient education.

Associations between demographic factors and nurses' challenges with patient education were conducted using the chi-square tests.

9. Results Respondent: Demographics Data

In total, 300 nurses participated in the study from primary health care centers that were distributed in the UAE region (Sharjah, Dubai, Ajman, Umm Al Quwain, Ras Al Khaimah, and Fujairah). The majority (45%) of the nurses were aged between 36 and 45 years old; 88.7% were female; and more than half (72.3%) had a bachelor's degree in nursing.

Regarding nationality, more than half of nurses are non-Arabic (61.5%). For nurses with years of experience in the Emirates Health Services ambulatory area, half of the nurses have between 6 and 20 years of experience. The demographic characteristics of the nurses are represented in **Table 1**.

Results Respondent: Challenges that nurses face while providing patient health education

Table 2 shows the extent to which nurses in primary health care centers are knowledgeable about patient teaching. The results show that the average percentage for good knowledge is 91.4% and 8.6% for poor knowledge, indicating that the majority of the nurses are knowledgeable about patient education.

In addition to that, responses to each of the items were analyzed, and the results show that the highest percentage score of good knowledge is related to evaluation and determining learning outcomes (97.3%), and the lowest percentage score of good knowledge is related to identifying and prioritizing patient education (70%).

Table 3 shows the attitude of nurses towards patient education. The results show that the average percentage for positive attitude is 71.32% and 28.68% for negative attitude, indicating that the majority have a positive attitude about the practice of patient teaching among nurses in primary health care centers.

Moreover, responses to each of the items were analyzed, and the results show that the highest percentage score of positive attitudes is related to including patient education in nurse healthcare procedures (89%), and the lowest percentage score of positive attitudes is that patient education does not result in improvements to an individual's health (45%) and this was a critique question in the survey; maybe the nurses didn't notice that the sentence included not.

Table 1. Represents descriptive statistics of demographics data.

Facility/Region	Frequency	Percent
Ajman	54	17.90%
Dubai	16	5.30%
Fujairah	25	8.30%
Ras al khaimah	7	2.30%
Sharjah	162	53.80%
Umm al Quwain	36	12%
Gender		
Female	267	88.70%
Male	33	11%
Highest Degree		
Bachelor's	217	72.30%
Diploma (3 years)	59	19.60%
Master's	24	8%
Age group		
25 - 35.	80	26.60%
36 - 45.	137	45.50%
46 - 55	74	24.60%
56 and above	9	3%
Experience PHC		
1 - 5 years	103	43.30%
6 - 10 years.	80	26.60%
11 - 20 years.	89	29.60%
More than 20 years	28	9.30%
Country		
Arab	115	38.20%
Non-Arab	185	61.50%

Table 2. Knowledge of patient teaching among nurses in primary health care centers.

SN	Items	Good Knowledge		Poor Knowledge	
		F	%	F	%
1	Assessment of the learning needs	291	97%	9	3%
2	Identifying and prioritizing patient education	210	70%	90	30%
3	Educating individuals about the disease	288	96%	12	4%
4	Patient education and Interventions	291	97%	9	3%
5	Evaluation to determine learning outcomes.	292	97.3%	8	2.6%
Percentage Average		91.4%		8.6%	

Table 3. Attitude of nurses in primary health care centers.

SN	Items	Positive Attitude		Negative Attitude	
		F	%	F	%
1	Patient education is essential for achieving successful healthcare results.	241	80.3%	59	19.6%
2	Nurse healthcare procedures include patient education.	294	89%	51	2%
3	Patient education does not result in improvements to an individual's health.	135	45%	165	55%
4	Patient teaching is time-consuming.	175	58.3%	125	41.6%
5	Patient education integrated into health care promotion initiatives.	252	84%	48	16%
Percentage Average		71.32%		28.68%	

The second-lowest percentage score of positive attitudes is related to patient teaching, which is time-consuming (58.3%).

Table 4 shows the practice of patient teaching among nurses in primary health care centers. Out of the six facilities of primary health care studied, the average percentage of good practice of patient teaching among nurses in primary health care centers is 95.6% and 4.4% for poor practice, indicating that the majority of the nurses are good practitioners of patient teaching among nurses in primary health care centers.

Figure 1 shows the major challenges that affect nurses' practice of patient teaching, including language barriers (82.3%), poor communication (81.3%), poor time management (80.6%), and cultural influences on patient health education (80.3%).

Results Respondent: Associations between demographic factors and nurses' challenges of patient education

The research result showed no relationship between demographic variables, the attitude of nurses in primary health care centers, or the practice of patient teaching among nurses in primary health care centers.

However, the results show that a significant association was observed between nationality (Arabic and non-Arab) and the knowledge of patient teaching among nurses in primary health care (P = 0.003) and the challenges nurses in primary health centers encounter during patient teaching (P = 0.019) (**Table 5**).

Another demographic variable, such as age, was significantly associated with knowledge of patient teaching among nurses in primary health care (P = 0.026) (**Table 5**).

10. Discussion of Finding

The purpose of this study was to evaluate nurses' knowledge, attitude, and practice of patient teaching in primary healthcare facilities to better understand how these factors may affect patient education provided by nurses.

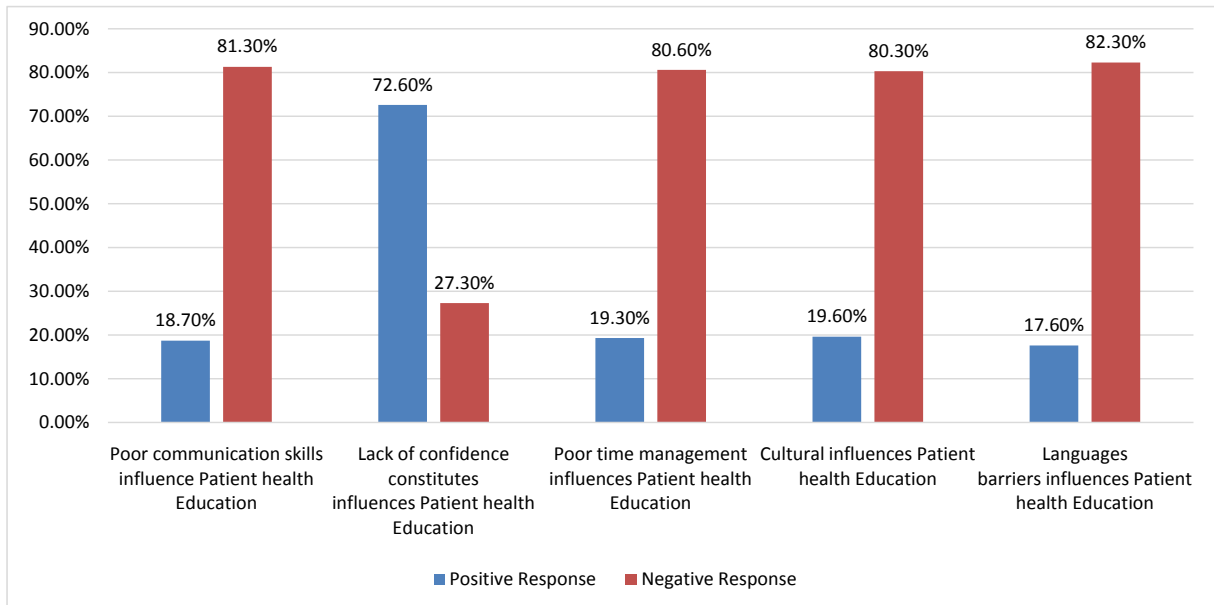


Figure 1. Challenges nurses in primary health centers encounter during patient teaching.

Table 4. Practice of patient teaching among nurses in primary health care centers.

SN	Items	Good Practice		Poor Practice	
		F	%	F	%
1	Teach patients about their condition	291	97%	9	3%
2	Teach patients about their treatment process	287	95%	13	4.3%
3	Teach patients about their self-care	288	96%	12	4%
4	Teach patients about their treatment outcomes	285	95%	15	5%
5	Involve family in patient’s education	284	94.6%	16	5.3%
Percentage Average		95.6%		4.4%	

Table 5. The association between demographic variables and knowledge of patient teaching among nurses in primary health care.

AGE GROUP	F	%	Knowledge Score		P-value
			Good Knowledge	Poor Knowledge	
25 - 35	80	26.60%	91.4%	8.6%	0.026
36 - 45	137	45.50%			
46 - 55	74	24.60%			
56 AND ABOVE	9	3%			
COUNTRY	F	%	Good Knowledge	Poor Knowledge	P-value
ARAB	115	38.20%	91.4%	8.6%	0.003
NON-ARAB	185	61.50%			

According to our findings, the majority of nurses are knowledgeable about patient education (average percentage = 91.4%). This result supports the argument made by Oyetunde MO and Akinmeye AJ [11], which was conducted at the University College Hospital, Ibadan concluded that nurses at the University

College Hospital have good knowledge and a positive attitude toward patient education but could not practice effectively.

The study's findings demonstrated that a significant number of the nurses who were examined had a positive attitude and practice toward educating patients. This result agrees with the results of research by Kotronoulas G., Papadopoulou C., and Patrick E. [12] that showed most nurses had a good attitude toward health education.

The argument by Kotronoulas G, Papadopoulou C, Patrick E, Lin YS, Chang JC, Chang TH, and Lou MF [10] [13] that a significant number of nurses have a negative attitude and practice toward patient education is approved by another research conclusion. The variations in the study results might be attributed to the nurses' characteristics, including their rank, years of work experience, and location of residency.

The study showed that language barriers, inadequate communication, ineffective time management, and cultural impacts on patient health education are the main challenges nurses face while teaching patients. Similar factors stated in other studies that influence the practice of patient education include adequate time and workplace culture, language barriers, and poor communication [13].

This study reveals that demographic factors such as age and nationality (Arab and non-Arab) were statistically significant variables associated with the knowledge of nurses.

The demographic data (nationality: Arab and non-Arab) was found to be significantly associated with the challenges of patient education among Nurses. Nationality diversity can lead to inappropriate communication skills, and it is one of the major elements that can have an impact on organizational culture.

11. Conclusions

The study concludes that the majority of nurses are knowledgeable about patients teaching; a large proportion of the nurses have a positive attitude towards health teaching; the majority of the nurses practice health teaching; and the major challenges nurses encounter with patients' health teaching includes language barriers, inadequate communication, ineffective time management, and cultural impacts on patient health education. Our key recommendations to enhance patient teaching were: supporting the staff nurse's educational role and providing essential resources, such as a phone or tablet to access the health education material, including videos, to enhance multicultural patient teaching.

The researcher also recommended that further in-depth qualitative study of the experience of nursing perspectives regarding the challenges of patient education in primary health care in the United Arab Emirates will be needed to enrich the understanding of such a patient education activity in clinical practice.

Limitations

This study has some limitations. This study focuses only on nurses and nursing

assistants, while other healthcare providers are excluded. Secondly, the conclusions can only be generalized to nurses working in primary health Care.

Acknowledgements

We are thankful to all the nurses at primary health centers who took the time to participate in the study. We also thank the nurse leaders and clinical resource nurses who helped distribute the survey, and we extend special thanks to the Emirates Health Services Statistical Department for their support.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- [1] Hou, S. (2014) Health Education. *Health Promotion Practice*, **15**, 619-621. <https://doi.org/10.1177/1524839914538045>
- [2] Kalantari, S., Najafi, M.K., Abbaszadeh, A., Sanagoo, A. and Borhani, F. (2012) Nurses' Perception of Performance of Patient Education. *Jentashapir Journal of Health Research*, **2**, Article e94233.
- [3] Bergh, A.-L., Karlsson, J., Persson, E. and Friberg, F. (2012) Registered Nurses' Perceptions of Conditions for Patient Education—Focusing on Organizational, Environmental, and Professional Cooperation Aspects. *Journal of Nursing Management*, **20**, 758-770. <https://doi.org/10.1111/j.1365-2834.2012.01460.x>
- [4] Ghorbani, R., Soleimani, M., Zeinali, M.-R. and Davaji, M. (2014) Iranian Nurses and Nursing Students' Attitudes on Barriers and Facilitators to Patient Education: A Survey Study. *Nurse Education in Practice*, **14**, 551-556. <https://doi.org/10.1016/j.nepr.2014.06.003>
- [5] Dehghani, A., Orang, M., Abdollahyfar, S., Parviniyannasab, A.M. and Vejdani, M.A. (2014) Barriers to Patient Education in Clinical Care Viewpoints of Nurses. *Iranian Journal of Medical Education*, **14**, 332-341. https://ijme.mui.ac.ir/browse.php?a_id=3124&sid=1&slc_lang=en
- [6] Kashani, F., Moghimian, M., Salarvand, S. and Kashani, P. (2015) Nurses' Knowledge, Attitude, and Practice about Effective Communication Skills in Patient Education. *Journal of Research Development in Nursing and Midwifery*, **12**, 59-67. <https://nmj.goums.ac.ir/article-1-779-en.html>
- [7] (2021) Nursing Education Challenges in the 21st Century. <https://online.uri.edu/articles/21st-century-nursing-education-challenges.aspx>
- [8] Scheckel, M., Emery, N. and Nosek, C. (2010) Addressing Health Literacy: The Experiences of Undergraduate Nursing Students. *Journal of Clinical Nursing*, **19**, 794-802. <https://doi.org/10.1111/j.1365-2702.2009.02991.x>
- [9] Aminaho and Maynard, E. (2019) Knowledge, Attitude, and Practice of Patient Teaching among Nurses in Primary Health Care Centers in Degema Local Government Area of Rivers State. *Research & Review: Journal of Geriatric Nursing and Health Sciences*, **1**, 24-29.
- [10] Oyetunde, M.O. and Akinmeye, A.J. (2015) Factors Influencing the Practice of Patient Education among Nurses at the University College Hospital, Ibadan. *Open Journal of Nursing*, **5**, 500-507. <https://doi.org/10.4236/ojn.2015.55053>

-
- [11] Kotronoulas, G., Papadopoulou, C. and Patiraki, E. (2009) Nurses' Knowledge, Attitudes, and Practices Regarding Provision of Sexual Health Care in Patients with Cancer: A Critical Review of the Evidence. *Supportive Care in Cancer: Official Journal of the Multinational Association of Supportive Care in Cancer*, **17**, 479-501. <https://doi.org/10.1007/s00520-008-0563-5>
- [12] Lin, Y.-S., Chang, J.-C., Chang, T.-H. and Lou, M.-F. (2011) Critical Care Nurses' Knowledge, Attitudes and Practices of Oral Care for Patients with Oral Endotracheal Intubation: A Questionnaire Survey. *Journal of Clinical Nursing*, **20**, 3204-3214. <https://doi.org/10.1111/j.1365-2702.2011.03819.x>
- [13] Červený, M., Siaki, L., Prosen, M. and Nagórska, M. (2022) Challenges Experienced by Nurses Caring for Patients from Different Cultures: A Scoping Review of the Literature, 2010-2020. *Central European Journal of Nursing and Midwifery*, **13**, 783-792. <https://doi.org/10.15452/cejnm.2022.13.0024>

List of Abbreviations

WHO	World Health Organization
EHS	Emirate Health Service
PE	Patient Education
EMR	Electronic Medical Record
KAPPTNQ	Knowledge, Attitude, and Practice of Patient Teaching among Nurses Questionnaire
