Abstract

With the changing demographic landscape, cancer hospitals throughout the United States have seen an increase in the number of adults with cancer who are considered Limited English Proficient (LEP). This population will need culturally responsive care provided to them by frontline health care professionals such as nurses. Cultural awareness enables nurses to understand the needs of patients and employ unconditional positive regard despite differences in race, language, or culture. Culturally aware nurses are mindful of their unconscious biases and are able to provide high quality and equitable care even when cultural differences exist or a language barrier is present, thus ensuring positive health outcomes. The purpose of this study is to assess cultural awareness among oncology nurses and identify areas in need of cross-cultural training and educational development. A cross-sectional study design was conducted in the form of an online survey containing rating scale and open-ended questions. The sample was 44 oncology nurses from an oncology adult inpatient unit in a large medical center. In addition to evaluating cultural awareness on the unit, nurses were asked about challenges when providing care to LEP Latinx adult patients with cancer. The results of the cross-sectional study showed a moderate to high level of cultural awareness among participants. Despite having a moderate to high level of cultural awareness, participants expressed the urgent need for tools and resources that would allow them to provide equitable and safe care to LEP Latinx adult patients with cancer. According to participants, tools and resources such as an assigned unit interpreter, an increase in bilingual nursing staff, and free Spanish lessons offered to unit staff would aid in the ability to provide culturally responsive care.

Keywords: cultural awareness, Limited English Proficiency, LEP, Latinx, Latino, Hispanic, oncology, nursing, adult, cancer, communication

Nursing Care of Limited English Proficient (LEP) Adults with Cancer: Cultural Awareness Among Oncology Nurses

Personal Journey

I was raised by a father who did not speak English and as a result, I was tasked with the role of interpreter and translator at an early age. Like most children of Limited English Proficient (LEP) parents, I grew up with a strong sense of responsibility to be my father's voice. I could manage most of the interpreting and translating but it was healthcare related interpretation that always presented a challenge. I struggled with the complexity of the language of medicine, information overload during appointments, and Spanish words such as kidney and liver were difficult to keep straight in my head. I often faced the challenge of interpreting and explaining cultural ways of thinking to medical providers who knew little about our culture. Nonetheless, I tried my best to relay clear and complete messages both ways in an effort to bridge the language gap. Having experienced firsthand the difficulties that result from being culturally diverse with Limited English Proficiency (LEP) has encouraged me to explore cultural awareness among oncology nurses who care for LEP adults with cancer (Definition for Limited English Proficiency/Limited English Proficient (LEP) under relevant terminology in Appendix G).

Introduction

Language barriers are a challenge often faced by nurses when attempting to communicate with LEP patients. In the clinical setting, nurses see firsthand the health disparities that affect patients across cultural lines and that arise as consequence of linguistic barriers to communication (Mullins, Blatt, Gbarayor, Hui-Wen, & Baquet, 2005). Immigrants in the United States are projected to reach 88% of the country's total population by 2065, considering this, it is safe to predict that hospitals will see a steady increase in LEP patients in the next decades

(Lopez, Bialik, & Radford, 2018). As of 2016, 49% of immigrants age 5 and older were LEP (Lopez, Bialik, & Radford, 2018). Given the statistics, the nursing workforce must adapt and develop the necessary skills to provide effective care for an increasing LEP population in the years to come.

One of those skills includes having cultural awareness. Oncology nurses must rely on their cultural awareness to recognize the needs of LEP patients and provide patient-centered care. Cultural awareness enhances nurses' ability to embrace the cultural beliefs, lifestyle, and traditions of another individual's culture, allowing for a comprehensive understanding of LEP patients (Campinha-Bacote, 1999). Another important aspect of cultural awareness is understanding one's cultural background and how it influences our perspective, behavior, and decisions (Campinha-Bacote, 1999).

Oncology nursing care is very complex and when a limiting factor, such as a language barrier is present, providing adequate care is difficult. Oncology nurses have a heavy workload because they care for high-acuity patients; these patients demand frequent direct patient care, as their needs are significant and often unpredictable. It is critical to evaluate cultural awareness among oncology nurses caring for LEP patients and identify areas in need of cross-cultural training and educational development.

Supporting nurses through cross-cultural training will give them the necessary tools to provide high quality and effective care. Training and educational development of cultural awareness can yield confidence among nurses caring for culturally diverse LEP patients, can heighten job satisfaction among healthcare professionals, and has the potential to reduce health disparities.

Background

Over the past few decades, the United States has seen, and continues to see, an increase in the cultural and racial/ethnic diversity of its population (Chappell, 2017). Consequently, cultural awareness has become a critical skill that allows effective communication when interacting with people who think, feel, and behave in ways that are not congruent with one's own culture, especially in the healthcare setting (Tate, 2003).

Cultural awareness is a process of the mind in which an individual must develop the ability to recognize, comprehend, and value cultural differences. The cultural awareness process also requires the individual to recognize internal prejudices that affect how they see or treat others (Campinha-Bacote, 1999). Cultural awareness allows nurses to recognize the patient's limitations and needs in order to access the necessary resources to provide high quality and equitable care.

The literature on cultural awareness is limited, especially as it relates to oncology nursing and LEP patients. Language is a significant barrier of communication between patients and hospital staff. There is an urgent need for culturally and linguistically responsive care, which is key to providing high quality care, improving health outcomes, and decreasing the number of adverse events in the hospital setting (Montie, 2016). When hospital staff offers cultural and linguistically responsive care, LEP patients feel supported, respected, and valued (Fernandez, 2011).

Active participation in the shared decision-making process in cancer care is imperative. However, with LEP patients who are unable to communicate, shared decision-making has become a challenge. In a study conducted by Enard (2016), researchers examined social disadvantages that affected the ability of cancer patients to participate in shared decision-making

and use of patient decision aids. Both shared decision-making and the use of patient decision aids were identified as critical components of high-quality cancer care. The results concluded that LEP was a contributing factor in pushing patients toward fully relying on the medical provider's recommendations instead of being an active participant in the decision-making process. Therefore, the results suggest that LEP affects quality of care and increases the risk for poor health outcomes in cancer patients (Enard, 2016). Culturally aware nurses have the ability to empower LEP patients to be an active participant in their health care by offering the necessary resources for full understanding of their diagnosis, treatment, and care plan (Hsieh, 2013).

A good predictor of cultural responsiveness and comfort when caring for LEP patients is exposure to other cultures, languages, and people through different activities and experiences. It is important for nurses to be receptive to the opportunities to interact with patients from diverse backgrounds. A study conducted by Mayo (2014), found that exposure to individuals from other cultures increases cultural knowledge and the ability to care for a diverse population (Mayo, 2014).

In a study conducted by Coleman (2017), researchers recorded the experiences of bedside nurses caring for LEP patients/families in an acute-care setting. The results from this study show the importance of the bedside nurses' experience in determining the challenges in direct patient care of LEP patients. Nurses' voices are critical in finding solutions to the challenges and obstacles that impede providing safe and responsive care for LEP patients (Coleman, 2017).

Methods

Participants

This study was reviewed and approved by the Nursing Research Council (NRC) and the Institutional Review Board (IRB). This study has been determined to be exempt from further

review from the IRB. A cross-sectional study design was used to assess cultural awareness among oncology registered nurses working in an oncology adult inpatient unit in a cancer hospital in the Southeastern part of the United States.

Exclusion Criteria

An exclusion criterion was used to select the study participants, which consisted of four questions (Appendix B). The four questions were: (1) Are you 18 years of age or older? (2) Have you been employed as a nurse for at least 6 months by the hospital? (3) Have you worked as a nurse for at least 6 months on the oncology unit? (4) Have you cared for patients with Limited English Proficiency (LEP)? An answer of 'no' to any of the above questions automatically disqualified participants from participating in the study. Participants who answer 'no' to any of the exclusion criteria questions were redirected to a screen that thanked them for replying and stated that they were not eligible for the study. Answers of 'yes' allowed participants to continue and complete the survey in its entirety.

Data Collection Instruments

Data was collected using a Qualtrics survey that included demographic questions, rating scale questions, and open-ended questions. Eleven demographic questions were used to collect characteristics of the sample (Appendix C). In order to evaluate cultural awareness among oncology nurses, permission was requested and obtained from the original author to use and modify the *Cultural Awareness Scale* (Rew, 2003). The same *Cultural Awareness Scale* had previously been modified into a second version to be used in a hospital setting with experienced nursing staff in a study conducted in the Southeastern United States (Smith-Miller, McElroy, Madigan, & Li, 2016). Dr. Rew was contacted and permission was granted to use and modify the second version of the scale. The second version of the scale was modified to evaluate cultural

awareness in an oncology unit (Appendix D). Four open-ended questions were asked at the end of the survey to gain insight into the challenges that impact the care oncology nurses provide to patients with LEP, more specifically, the Latinx adult population (Appendix E).

Procedures

An email listserv containing information about the study and a survey link was sent to all oncology registered nurses on the oncology unit selected for the study via the secure hospital email server (Appendix F). Participation in the study was voluntary and participants had the option to withdraw at any time without penalty. The survey link was active for two weeks in February 2019. Participation was encouraged through a second email reminder that was sent one week into the study. Once participants completed the survey, they received a $10 Starbucks gift card for their participation. The procedure involved completing an online survey that took approximately 10-15 minutes. The survey responses were kept anonymous and strictly confidential. The survey did not contain personal information that could be used to identify participants. Once participants completed the survey, they were redirected to a second unlinked Qualtrics survey that was not tied to participant responses. On the second Qualtrics survey, participants were asked for their full name. The list of participant names was used to distribute the incentive gift cards on the oncology unit. All survey responses were stored on the Qualtrics website that is password protected and behind a firewall.

Results

Sample

The sample included 44 oncology registered nurses with the age range of 18-60 years and a mean range of 31-40 years. Of the 44 participants, 4 participants did not complete the four open-ended questions at the end of the survey. The majority of participants (97%) were female,

and 2% were male. The majority of participants (80%) were White/Caucasian, 11% were Black/African American, 7% were Latinx, and 2% were Asian Pacific Islander. Over half of the participants (59%) were CN II, 20% CN I, 14% CN III, and 7% CN IV (Definition for CN I, II, III, and IV under relevant terminology in Appendix G). Most participants (76%) had a bachelor's degree, 17% had an associate's degree, 4% a master's degree, and 2% selected 'other'. The majority of participants (61%) had 6 months to 5 years of experience as a registered nurse, 23% had 6-10 years of experience, 9% had 11-15 years of experience, 2% had 16-20 years of experience, 2% had 21-25 years of experience, and 2% had 31+ years of experience. Most participants (77%) had between 6 months to 5 years of experience as an oncology nurse, 14% had 6-10 years of oncology experience, 7% had 11-15 years of oncology experience, and 2% had 16-20 years of oncology experience. When asked if they had lived in countries outside the United States, most participants (80%) responded 'no' and 20% responded 'yes'. For those who responded 'yes', the countries included Tanzania (20 years), Africa (20 years), Colombia (20 years), Nigeria (18 years), Scotland (16 years), Germany (5 years), Ireland (3 years), South Korea (35 years), France (18 years), and El Salvador (2 years). When asked if they spoke a language other than English, the majority of participants (66%) responded 'no' and 34% responded 'yes'. For those who responded 'yes', the languages included Swahili, Spanish, American Sign Language, Igbo, German, and Korean. When asked to indicate language fluency for those who speak Spanish, almost all participants (82%) selected 'low' meaning they can communicate short messages, 11% selected 'moderate' meaning they can ask simple questions and form complete sentences, and 7% selected 'high" meaning they can engage in conversation without difficulty (Table 1).

Cultural Awareness

A 1-sample *t* test was conducted to determine whether the mean of the 4 subscales and the mean of the total score were significantly different from a mean of neutral (3; neither agree nor disagree); an α level of .05 was used for all tests. The 4 subscales were 1) *Hospital and Unit Environment*, 2) *Behavior/Comfort*, 3) *Clinical Issues*, and 4) *Cognitive Awareness* (Table 2a and 2b).

Hospital and Unit Environment. The sample mean (SD) result, 3.91 (0.33), was significantly different from neutral (3) ($t_{43} = 18.30$, $P < .0001$; with a 95% confidence interval of 3.81 to 4.01). These results indicate that the study sample had a moderate to high level of cultural awareness as it relates to the hospital and unit environments.

Behavior/Comfort. The sample mean (SD) result, 4.01 (0.56), was significantly different from neutral (3) ($t_{43} = 11.87$, $P < .0001$; with a 95% confidence interval of 3.84 to 4.18). These results indicate that the study sample had a moderate to high level of cultural awareness as it relates to behaviors or comfort when interacting with LEP patients.

Clinical Issues. The sample mean (SD) result, 3.80 (0.54), was significantly different from neutral (3) ($t_{43} = 9.72$, $P < .0001$; with a 95% confidence interval of 3.63 to 3.96). These results indicate that the study sample had a moderate to high level of cultural awareness as it relates to patient care or clinical issues.

Cognitive Awareness. The sample mean (SD) result, 3.49 (0.44), was significantly different from neutral (3) ($t_{43} = 7.40$, $P < .0001$; with a 95% confidence interval of 3.36 to 3.63). These results indicate that the study sample had a moderate to high level of cognitive awareness.

Total Score. The sample mean (SD) result, 3.82 (0.27), was significantly different from neutral (3) ($t_{43} = 19.82$, $P < .0001$; with a 95% confidence interval of 3.74 to 3.90). These results indicate that the study sample had a moderate to high level of overall cultural awareness.

Cumulative Results for Individual Items. Most participants (n = 44) agreed (61%) or were neutral (20%) with the statement that culture influences their beliefs and attitudes (item 4). The majority of participants strongly disagreed (52%) and disagreed (32%) with the statement that assistance is offered less frequently to individuals of certain cultural backgrounds (item 7). Most participants strongly disagreed (45%) or disagreed (43%) with the statement that their level of patience is lower with individuals of certain cultural backgrounds (item 8). When asked if they felt uncomfortable in the company of people from cultural or ethnic backgrounds different from their own (item 11), majority of participants strongly disagreed (39%) or disagreed (39%). Most participants disagreed (41%) or strongly disagreed (27%) when asked if they felt uncomfortable working with the families of patients from cultural backgrounds different than their own (item 21). The majority of participants agreed (70%) or strongly agreed (25%) with respecting the decision of their patients when influenced by culture, even if the participant disagreed (item 23) (Table 3).

Exploratory Factor Analysis. A maximum likelihood factor analysis using varimax rotation was performed on a *Cultural Awareness Scale* (likert) dataset with a Cronbach's α coefficient of 0.91 indicating good internal consistency and reliability of the data. The statistical test of the hypothesis that 6 factors are sufficient resulted in a p-value of 0.06 indicating that this is a reasonable conclusion despite the 5th and 6th factors explaining less than 10% of the variance in the dataset. The factor loadings are depicted in Table 4 as well as the sum of squared loadings for each factor and the percentage of data variance they represent. The sufficiency of 6 factors was also confirmed by constructing a scree plot of the eigenvalues of the correlation matrix (Figure 1) and noting that, the Kaiser rule indicated the first 6 eigenvectors reflect a sufficient amount of variance in the dataset (Table 4 and Figure 1).

Open-Ended Questions

There were four open-ended questions that aimed to uncover challenges faced by the bedside oncology nurses that care for LEP Latinx adult patients with cancer. The following questions were used in the survey:

(1) What do you think are the main challenges when providing care to limited-English language proficient Latino/Hispanic adults with cancer? The main challenges that emerged were communication due to a language barrier, inability to educate patients on diagnosis and plan of care, inability to access interpreter services in a timely manner, lack of time to address all the needs of LEP patients, hesitance of LEP patients to ask questions or request services, and inability to provide emotional support. The following participant responses derived from the survey data collected and are used to support the stated results for this question:

"The main challenge is definitely communication. It is helpful to have an interpreter present in person or via Vocera, but the interpreter does not stay with you throughout your entire shift. It is impossible to address everything that will occur in a 12 hour time period and obtaining an interpreter quickly is not always easy"	"Since you cannot have an interpreter the entire time you are with a patient, I think that impacts the ability to have meaningful conversations with my patients. Especially in oncology, I am not able to talk as much with them throughout the day and understand how they are coping, if they are scared, etc."
	"I feel like the patients (more often than not) don't have a true understanding of their disease/treatment. In general, it seems like this patient population is hesitant to ask questions and quick to agree to understanding information even if they really don't"

(2) How does working with limited-English language proficient Latino/Hispanic adults with cancer change/impact your work? Participants reported that the following aspects impacted their work when caring for LEP Latinx patients: requirement to access a lot more resources to ensure patient understanding slows workflow, inability to keep patients informed relating to care plan changes in a timely manner, adjust shift schedule based on interpreter availability, and planning and clustering patient care during interpreter visit. The following participant responses derived from the survey data collected and are used to support the stated results for this question:

"It takes more time to ensure they are getting the proper care they need since language barrier entails an extra layer of nursing care. It also makes me aware that I need to double and triple check that all my patients understand their care plans correctly"	"I feel I am unable to provide the best care to the patient. I want the patients to know that I care about them as a whole and not just there to give medications or tell them what to do. I want to be able to talk to them about their families and hobbies and let them know I know they are human and more then 'just a patient'"
	"Unfortunately, I admit that it makes my work more challenging. I wish I spoke Spanish and could communicate as effectively as with my English speaking patients, but unfortunately I can't. It takes thoughtful planning and coordinating to ensure an interpreter is present for your assessment, to provide an overview of the day, and when any education is involved. I try my best to not think about the added coordination because these patients, of course, deserve the exact same care as English speaking patients and it is my job to ensure they receive it. I do my best effort to make sure they understand what is going on and have all the resources I give my English speaking patients (such as handouts, educational pamphlets, etc.)"

(3) How would you go about building rapport with a patient who does not speak English? Participants reported building rapport with LEP patients through the following methods: use of an interpreter to get to know patients, using positive non-verbal cues, employing friendly universal gestures and caring actions, attempting to speak Spanish, and including family in discussions. The following participant responses derived from the survey data collected and are used to support the stated results for this question:

"I ask them about their background and share my own. I feel this helps them feel comfortable especially if we have similarities"	"First, use an interpreter and let the patient know that an interpreter can always be called to address any concerns or issues. Also, I try to make myself present as much as possible. I let them know I'm available for their care/needs. Lastly, I try to provide written materials in their native language (usually Spanish) to bridge the education gap"

(4) If we take only one thing back to the research team, what is your recommendation for how we can provide better care to limited-English language proficient Latino/Hispanic adults with cancer? Participants recommendations for providing better care to LEP Latinx patients is as follow: assign an interpreter to the oncology unit, increase number of bilingual nursing staff, empower patients to ask questions, and offer free Spanish lessons to unit staff. The following

participant responses derived from the survey data collected and are used to support the stated results for this question:

"Better access to oncology specific dual language teaching materials and more readily accessible interpreters. It's an act of congress to get an interpreter up here and they are so slammed that you feel like you have to use them in a hurry then let them go"	"Making sure they know they never have to be afraid or ashamed to ask a question, I will always find a way to communicate with them"
	"Provide Spanish-speaking practice groups, lessons and incentives for providers to learn a second language. Need more resources for medical and nursing terminology specifically"

Discussion

To our knowledge, this is the first study to assess and evaluate cultural awareness in oncology nurses as it relates to LEP. Overall, participants had moderate to high level of cultural awareness as it relates to hospital and unit environments, behaviors or comfort with interactions with LEP patients with cancer, patient care or clinical issues, and cognitive awareness. The open-ended responses offer additional information on providing the best care to LEP Latinx adults with cancer. The responses provide recommendations for training and educational development that will be shared with nursing leadership.

Strengths and Limitations

There are several strengths of the study including the sample size (n = 44) to evaluate cultural awareness among oncology nurses in the selected oncology unit. Our goal was a sample size of 50 participants. We had 44 participants out of which 40 completed the survey in full. 4 of the incomplete surveys did not have responses to the open-ended questions section. This may have occurred because participants may have been interrupted or ran out of time to complete the last four items.

The survey was conducted in one oncology unit in a large medical center, which limits the ability to draw broad conclusions from the findings in this study to other oncology units and

oncology nursing populations. Our study should be replicated in geographically diverse oncology units throughout different facilities with a larger sample for generalizability of findings.

Conclusion

The cross-sectional study conducted among oncology nurses who care for LEP patients showed a moderate to high level of cultural awareness among participants. In the responses collected from the open-ended questions, the main challenge that emerged was communication. The main impact of caring for LEP patients according to the majority of answers from participants was the significant increase in the amount of the time required to provide care. Participants felt that there was a need for an assigned interpreter to the unit, more bilingual nursing staff, and that free Spanish lessons be offered to current unit staff. Besides having an adequate understanding of cultural awareness, oncology nurses must count on the resources and tools provided to them by management in order to provide safe, equitable, and high-quality care to LEP adult patients with cancer.

Acknowledgement

A special thank you to my advisor, Dr. Ashley Leak Bryant, for her guidance and encouragement through the arduous work of this yearlong honors thesis project. I also wish to express my gratitude to Dr. Christopher Wiesen, a Social Science Researcher at the UNC-CH ODUM Institute, for his expertise and assistance with one of the most essential parts of this project—the statistical analysis. A warm thank you to all the oncology nurses who invested their time to participate in the study as well as the nurse managers, Crista Creedle RN, BSN, OCN and Summer Cheek, RN, BSN, OCN who supported and welcomed the study to be conducted on their unit. Lastly, I would like to thank the Sarah Steele Danhoff Undergraduate Research Fund

administered by Honors Carolina and the Sigma Theta Tau International, Alpha Alpha Chapter Research Grant program for awarding me the grants that financially supported this study.

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Table 1. Descriptive Analysis of Sample Characteristics (n = 44)

	n (%)
Age	
18-25 years	9 (20.45)
26-30 years	9 (20.45)
31-40 years	13 (29.55)
41-50 years	8 (18.18)
51-60 years	5 (11.36)
Race/Ethnicity	
White/Caucasian	35 (79.55)
Black/African American	5 (11.36)
Hispanic/Latino	3 (6.82)
Asian Pacific Islander	1 (2.27)
Education	
ADN/ASN	8 (18.18)
BSN	24 (54.55)
Second Degree BSN	9 (20.45)
MSN	2 (4.55)
Other	1 (2.27)
Clinical experience	
0-5 years	27 (61.36)
6-10 years	10 (22.73)
11-15 years	4 (9.09)
16-20 years	1 (2.27)
21-25 years	1 (2.27)
31+ years	1 (2.27)
Speak a language other than English?	
Yes	15 (34.09)
No	29 (65.91)
Other language	
Spanish	8 (61.54)
Other	5 (38.46)
Spanish Proficiency	
Low	2 (25.00)
Moderate	3 (37.50)
High	3 (37.50)

Table 2a. Cultural Awareness Subscales—Differences in Mean Scores

	Mean (95% CI)
Hospital and Unit Environment	3.91 (3.81, 4.01)
Behavior/Comfort	4.01 (3.84, 4.18)
Clinical Issues	3.80 (3.63, 3.96)
Cognitive Awareness	3.49 (3.36, 3.63)
Total	3.82 (3.74, 3.90)

Table 2b. Cultural Awareness Subscales—Hypothesis Test (1-sample *t* test)

	mean	sd	df	t	probt
Hospital and Unit Environment	3.91	0.33	43	18.30	<.0001
Behavior/Comfort	4.01	0.56	43	11.87	<.0001
Clinical Issues	3.80	0.54	43	9.72	<.0001
Cognitive Awareness	3.49	0.44	43	7.40	<.0001
Total	3.82	0.27	43	19.82	<.0001

Table 3. Modified Cultural Awareness Scale Items and Responses (n = 44)

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. This oncology unit provides opportunities for educational activities related to multicultural issues in nursing.	1 (2.27)	17 (38.64)	12 (27.27)	13 (29.55)	1 (2.27)
2. Since joining this oncology unit, my understanding of multicultural issues has increased.	1 (2.27)	9 (20.45)	10 (22.73)	22 (50.00)	2 (4.55)
3. My experiences on this oncology unit have helped me become knowledgeable about the health problems associated with various racial and cultural groups.	2 (4.55)	3 (6.82)	11 (25.00)	26 (59.09)	2 (4.55)
4. I think my beliefs and attitudes are influenced by my culture.	0 (0.00)	5 (11.36)	9 (20.45)	27 (61.36)	3 (6.82)
5. I think my behaviors are influenced by my culture.	0 (0.00)	5 (11.36)	6 (13.64)	32 (72.73)	1 (2.27)
6. I often reflect on how culture affects beliefs, attitudes, and behaviors.	0 (0.00)	2 (4.55)	5 (11.36)	33 (75.00)	4 (9.09)
7. When I have an opportunity to help someone, I offer assistance less frequently to individuals of certain cultural backgrounds.	23 (52.27)	14 (31.82)	4 (9.09)	1 (2.27)	2 (4.55)
8. I am less patient with individuals of certain cultural backgrounds.	20 (45.45)	19 (43.18)	4 (9.09)	0 (0.00)	1 (2.27)
9. I feel comfortable working with patients of all ethnic groups.	0 (0.00)	1 (2.27)	7 (15.91)	21 (47.73)	15 (34.09)
10. I believe individuals' own cultural beliefs influence their nursing care decisions.	0 (0.00)	9 (20.45)	5 (11.36)	25 (56.82)	5 (11.36)
11. I typically feel somewhat uncomfortable when I am in the company of people from cultural or ethnic backgrounds different from my own.	17 (38.64)	17 (38.64)	1 (2.27)	7 (15.91)	2 (4.55)
12. During group discussions or exercises on the oncology unit or in educational sessions, I have noticed the session leaders make efforts to ensure no individual is excluded.	1 (2.27)	1 (2.27)	14 (31.82)	23 (52.27)	5 (11.36)
13. I feel comfortable discussing cultural issues with nursing colleagues on my oncology unit.	0 (0.00)	0 (0.00)	5 (11.36)	31 (70.45)	8 (18.18)
14. I think individuals' cultural values influence their interactions with others (e.g., asking questions, participating in groups, offering comments).	0 (0.00)	1 (2.27)	6 (13.64)	28 (63.64)	9 (20.45)
15. The nursing staff on my oncology unit seems comfortable discussing cultural issues.	1 (2.27)	1 (2.27)	5 (11.36)	36 (81.82)	1 (2.27)

Table 3. Modified Cultural Awareness Scale Items and Responses (n = 44)

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
16. I think the cultural values communicated at this hospital influences nursing staff's behaviors in the clinical setting.	1 (2.27)	1 (2.27)	12 (27.27)	29 (65.91)	1 (2.27)
17. I believe the patient care experiences on this unit help nursing staff become more comfortable interacting with people from different cultures.	1 (2.27)	1 (2.27)	5 (11.36)	36 (81.82)	1 (2.27)
18. If I need more information about a patient's culture, I would use resources available onsite (e.g., books, videotapes, internet).	0 (0.00)	4 (9.09)	8 (18.18)	26 (59.09)	6 (13.64)
19. If I need more information about a patient's culture, I would feel comfortable asking people with whom I work.	0 (0.00)	1 (2.27)	2 (4.55)	33 (75.00)	8 (18.18)
20. If I need more information about a patient's culture, I would feel comfortable asking the patient or family member.	0 (0.00)	4 (9.09)	5 (11.36)	30 (68.18)	5 (11.36)
21. I feel somewhat uncomfortable working with the families of patients from cultural backgrounds different than my own.	12 (27.27)	18 (40.91)	5 (11.36)	6 (13.64)	3 (6.82)
22. I feel that the nursing leadership on the oncology unit respect differences in individuals from diverse cultural backgrounds.	0 (0.00)	1 (2.27)	5 (11.36)	23 (52.27)	15 (34.09)
23. I respect the decision of my patients when they are influenced by their culture, even if I disagree.	0 (0.00)	0 (0.00)	2 (4.55)	31 (70.45)	11 (25.00)

Table 4. Factor Analysis

Cultural Awareness Scale Factor Analysis

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Item 1	-0.117	0.496				
Item 2		0.709		0.132		
Item 3	0.179	0.796		0.285	0.100	0.111
Item 4		0.295	0.754	-0.123	0.113	
Item 5			0.726			
Item 6	0.432	0.146	0.432	0.223	0.395	
Item 7	-0.792	0.143		-0.245	-0.343	
Item 8	-0.904			-0.192	-0.137	-0.176
Item 9	0.560	0.128	0.143	0.167	0.444	0.248
Item 10		-0.151	0.405	0.212		0.162
Item 11	-0.384	-0.201		0.107	-0.575	
Item 12	0.384	0.115	0.256	0.538	0.347	
Item 13	0.433	0.103	0.515	0.277	0.321	0.394
Item 14	0.217	-0.120	0.725	0.329		0.121
Item 15	0.276	0.520	0.181	0.523		
Item 16		0.285	0.205	0.794		
Item 17	0.281	0.389		0.739		
Item 18	0.531	0.435	0.180	-0.164	0.108	
Item 19	0.501	0.557	0.361	0.136		0.392
Item 20	0.212				0.158	0.961
Item 21	-0.160	0.113	-0.171	-0.183	-0.936	-0.132
Item 22	0.556	0.402	0.189	0.316	0.127	0.267
Item 23	0.653	0.165	0.126	0.399		0.450
Sum of squared loadings	4.031	2.844	2.655	2.622	2.033	1.710
Percentage of Variance	17.5	12.4	11.5	11.4	8.8	7.4

Figure 1. Scree Plot