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Original Article

Cross Cultural Competence Among Health Care Professionals at District Headquarters Hospital Mirpurkhas: Assessing Preparedness and Impact on Quality of Care

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ABSTRACT

Background: Increasing cultural diversity within healthcare systems requires nurses to possess cross-cultural competence in order to deliver culturally congruent and patient-centered care. In multicultural societies such as Pakistan, differences in language, ethnicity, and cultural health beliefs can influence communication, treatment adherence, and overall healthcare outcomes. Despite the importance of culturally responsive care, empirical evidence assessing cultural competence among nurses in district-level healthcare facilities remains limited. Objective: To assess the level of cross-cultural competence among nurses working at District Headquarters Hospital Mirpurkhas, Sindh, Pakistan. Methods: A quantitative cross-sectional study was conducted among 95 nurses selected through non-probability convenience sampling. Data were collected using a structured questionnaire consisting of demographic variables and the Ethiopian Health Workers' Cultural Competence Scale (EHWCCS), which measures four domains: cultural health skills, cultural health awareness, cultural health desire, and cultural health knowledge. Responses were recorded on a five-point Likert scale. Data were analyzed using SPSS version 20, and descriptive statistics including frequencies, percentages, means, and standard deviations were calculated. Results: The overall level of cross-cultural competence among nurses was moderate, with a mean score of 3.38 ± 1.29. Cultural health knowledge demonstrated the highest mean score (3.57 ± 1.18), followed by cultural health awareness (3.48 ± 1.34) and cultural health desire (3.45 ± 1.33). Cultural health skills recorded the lowest mean score (3.03 ± 1.29), indicating limited practical application of cultural competence in clinical practice. Conclusion: Nurses demonstrated moderate cross-cultural competence, with stronger knowledge and awareness than practical skills. Strengthening transcultural nursing education, communication training, and institutional support programs is essential to enhance culturally responsive healthcare delivery in diverse clinical settings. Keywords: Cross-cultural competence, Nurses, Cultural competence, Multicultural healthcare, Quality of care, Pakistan.

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INTRODUCTION

Rapid globalization, population mobility, and internal migration have significantly increased cultural diversity within healthcare systems worldwide. Patients increasingly present with diverse cultural, linguistic, and religious backgrounds that influence their perceptions of illness, health-seeking behavior, treatment preferences, and expectations from healthcare providers. In such contexts, the ability of healthcare professionals to provide culturally responsive and patient-centered care has become a critical determinant of healthcare quality and safety. Cultural competence refers to a set of congruent behaviors, attitudes, and policies that enable healthcare professionals and organizations to work effectively in cross-cultural situations. It involves the integration of cultural awareness, knowledge, skills, encounters, and

desire that collectively allow providers to deliver care that respects patients' cultural values and beliefs while maintaining clinical effectiveness (1,8).

In nursing practice, cultural competence is particularly important because nurses are often the primary point of contact for patients and families throughout the care continuum. The concept of culturally congruent care, introduced by Madeleine Leininger through the Culture Care Theory, emphasizes the importance of understanding patients' cultural worldviews, social structures, and health beliefs in order to provide effective nursing interventions. Similarly, Campinha-Bacote's model conceptualizes cultural competence as a dynamic process consisting of cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire. These frameworks highlight that cultural competence is not a static achievement but an ongoing professional development process that evolves through education, clinical experience, and self-reflection (8). Within multicultural healthcare environments, culturally competent practice improves communication between patients and providers, strengthens therapeutic relationships, and enhances adherence to treatment recommendations, ultimately contributing to improved patient outcomes and satisfaction (4).

Evidence from international literature suggests that insufficient cultural competence among healthcare professionals contributes to disparities in healthcare access, quality, and outcomes. Healthcare providers who lack adequate understanding of cultural norms may misinterpret patient behaviors, overlook culturally influenced symptoms, or fail to communicate effectively with individuals from different linguistic or social backgrounds. Such misunderstandings may result in reduced trust, poor patient compliance, and dissatisfaction with healthcare services. Studies conducted across various healthcare settings have shown that nurses often face challenges when caring for culturally diverse patients, particularly due to language barriers, religious differences, and limited training in culturally responsive communication (3,10,11). Consequently, strengthening cultural competence among healthcare professionals has become an important priority in nursing education and healthcare policy globally.

Educational interventions have been widely proposed as effective strategies to enhance cultural competence among healthcare professionals. Integrating cultural competence training within nursing curricula, clinical simulations, and continuing professional development programs has shown positive outcomes in improving knowledge, attitudes, and communication skills among nurses and nursing students. Exposure to diverse patient populations, case-based learning, and immersive training approaches have also been identified as effective methods for strengthening cultural awareness and cross-cultural communication skills among healthcare professionals (2,4,12). Despite these initiatives, many studies continue to report only moderate levels of cultural competence among nurses, indicating a persistent gap between theoretical knowledge and practical application in clinical environments.

Although cultural competence has been extensively examined in Western healthcare systems, research from low- and middle-income countries, including Pakistan, remains limited. Pakistan represents a highly diverse sociocultural environment characterized by multiple ethnic groups, languages, traditions, and health belief systems. The country comprises several provinces, including Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan, and Gilgit-Baltistan, each with distinct cultural identities and linguistic variations such as Sindhi, Punjabi, Pashto, Balochi, Saraiki, and Hindko. These cultural differences influence patient–provider interactions, health behaviors, family decision-making processes, and treatment adherence. In such a culturally heterogeneous healthcare context, nurses frequently encounter patients with varying expectations, communication styles, and cultural health practices, which necessitates a high level of cultural competence to ensure effective care delivery (5,13).

Existing research conducted in Pakistan has primarily focused on cultural competence among medical students or nurses working in large tertiary hospitals located in metropolitan areas such as Karachi, Lahore, and Peshawar. These studies generally report moderate levels of cultural competence and highlight deficiencies in formal cultural competence training within nursing education and hospital-based professional development programs (14,17). However, evidence remains scarce from secondary-

level healthcare facilities and district hospitals, particularly in rural or semi-urban regions of Sindh where cultural diversity may be substantial and healthcare resources are often limited. The lack of empirical data from such settings creates an important knowledge gap regarding the preparedness of nurses to provide culturally responsive care within district-level public hospitals.

District Headquarters Hospital Mirpurkhas in Sindh serves a culturally heterogeneous patient population representing multiple ethnic and linguistic groups. Nurses working in this setting are required to communicate with patients from diverse sociocultural backgrounds, often in resource-constrained environments where structured cultural competence training may not be routinely available. Understanding the current level of cross-cultural competence among nurses in this context is essential for identifying educational needs, informing institutional training programs, and supporting policy initiatives aimed at improving culturally congruent healthcare delivery.

Given the increasing cultural diversity of patient populations and the limited empirical evidence from district-level healthcare facilities in Pakistan, assessing the cultural competence of nurses is necessary to identify strengths and gaps in culturally responsive care practices. Therefore, the present study aims to assess the level of cross-cultural competence among nurses working at District Headquarters Hospital Mirpurkhas, Sindh, using a validated cultural competence measurement scale. Specifically, the study seeks to evaluate four domains of cultural competence—cultural health skills, cultural health awareness, cultural health desire, and cultural health knowledge—to provide a comprehensive understanding of nurses' preparedness to deliver culturally congruent care. The central research question guiding this study is: What is the level of cross-cultural competence among nurses working at District Headquarters Hospital Mirpurkhas, Sindh?

METHODS

A quantitative cross-sectional observational study was conducted to assess the level of cross-cultural competence among nurses working in a secondary-level public healthcare facility. The cross-sectional design was selected because it allows the measurement of attitudes, knowledge, and behaviors related to cultural competence within a defined population at a single point in time, providing an efficient approach to evaluate the current preparedness of healthcare professionals in multicultural clinical environments (18). The study was carried out at District Headquarters Hospital Mirpurkhas, Sindh, Pakistan, a government-run secondary care hospital that serves a culturally and linguistically diverse population from Mirpurkhas district and surrounding rural areas. Data collection was conducted over a three-month period following institutional approval, during which eligible participants were approached and invited to participate in the study.

The study population consisted of registered staff nurses and nursing interns working in clinical departments of the hospital during the data collection period. Participants were eligible for inclusion if they were actively involved in direct patient care and voluntarily agreed to participate in the study. Individuals were included if they had no prior formal training in transcultural nursing or cultural competence programs to avoid potential bias associated with structured educational exposure. Participants who declined participation were not directly involved in patient care, or submitted incomplete questionnaires were excluded from the final analysis. A non-probability convenience sampling approach was employed due to the practical constraints of accessing healthcare staff across different shifts and departments in a busy clinical environment. A list of eligible nursing staff was obtained from the hospital administration, and potential participants were approached during duty hours across multiple departments including inpatient wards and outpatient units to maximize representativeness within the available workforce.

The sample size was determined using Cochran's formula for cross-sectional studies, assuming a 95% confidence level and a margin of error of 5%. Considering the finite population of approximately 125 eligible nursing staff at the study site, a finite population correction was applied to adjust the estimated

sample size. Based on this calculation, a minimum sample size of 95 participants was required to ensure adequate statistical precision for estimating the level of cultural competence within the target population. Recruitment continued until the required sample size was achieved. Before participation, each eligible nurse received a brief explanation of the study objectives, procedures, and confidentiality measures. Written informed consent was obtained from all participants prior to questionnaire administration. Participation was voluntary, and respondents were informed that they could withdraw from the study at any stage without any professional or institutional consequences.

Data were collected using a structured self-administered questionnaire consisting of two sections. The first section captured demographic characteristics including age, gender, ethnicity, marital status, and highest educational qualification. The second section assessed cross-cultural competence using the Ethiopian Health Workers' Cultural Competence Scale (EHWCCS), a validated instrument designed to measure healthcare professionals' competence in multicultural healthcare contexts (18). The scale consists of 24 items distributed across four domains representing key dimensions of cultural competence: cultural health skills (items 1–8), cultural health awareness (items 9–14), cultural health desire (items 15–19), and cultural health knowledge (items 20–24). Each item was rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated greater levels of cultural competence within each domain. The instrument has demonstrated strong psychometric properties, with reported internal consistency reliability coefficients exceeding 0.90 in previous validation studies (18). Prior to data collection, the questionnaire was reviewed by subject experts in nursing education and research methodology to ensure contextual clarity and content relevance for the local healthcare setting.

Participants completed the questionnaires individually in a quiet area within their respective departments to minimize external influence on responses. The researcher remained available to clarify procedural questions while avoiding any interaction that could influence participants' responses. Completed questionnaires were collected immediately after completion to reduce the risk of data loss and ensure completeness. To maintain data integrity and minimize reporting bias, respondents were assured that no identifying information would be recorded and that all responses would remain confidential and used solely for research purposes. Data were checked for completeness before entry into the statistical database.

The primary outcome variable was the overall level of cross-cultural competence among nurses, operationalized as the mean score across all items of the EHWCCS. Secondary outcome variables included domain-specific scores for cultural health skills, awareness, desire, and knowledge. Continuous domain scores were calculated by averaging the responses within each domain. Cultural competence levels were interpreted based on mean score ranges across the Likert scale continuum, with higher mean values reflecting stronger competence in the respective domain. Demographic variables were treated as independent variables to describe the characteristics of the study population.

Several methodological strategies were implemented to minimize potential sources of bias. Selection bias was reduced by approaching eligible participants from different clinical departments and duty shifts. Response bias was minimized by ensuring anonymity and allowing participants to complete the questionnaire independently without supervision from supervisors or administrators. The use of a standardized and previously validated instrument further enhanced measurement reliability and reduced information bias. Data entry accuracy was ensured through double-checking of entered values against the original questionnaires.

Data were coded and analyzed using the Statistical Package for the Social Sciences (SPSS) version 20. Descriptive statistical analyses were performed to summarize demographic characteristics and domain-specific competence scores. Frequencies and percentages were used to describe categorical variables, while means and standard deviations were calculated for continuous variables representing cultural competence scores. Domain-wise and overall competence scores were computed by averaging item

responses. Data were examined for completeness prior to analysis, and questionnaires with missing responses in key measurement items were excluded from the final dataset to ensure analytical accuracy. All statistical analyses were conducted using a significance level of 0.05.

Ethical approval for the study was obtained from the relevant institutional ethical review committee, and administrative permission was secured from the management of District Headquarters Hospital Mirpurkhas before data collection commenced. The study adhered to established ethical principles for research involving human participants, including voluntary participation, informed consent, confidentiality, and anonymity. All collected data were securely stored and accessed only by the research team. These procedures ensured ethical compliance, participant protection, and methodological transparency, allowing the study to be replicated in similar healthcare settings.

RESULTS

The demographic characteristics of the participants are summarized in Table 1. Among the 95 respondents, the majority were female, accounting for 75 participants (78.9%), while males constituted 16 participants (16.8%). The difference in gender distribution was statistically significant ($p = 0.031$). With respect to marital status, 65 participants (68.4%) were unmarried and 26 (27.3%) were married, showing a predominance of unmarried nurses in the sample ($p = 0.045$). Regarding educational qualifications, most participants held a bachelor's degree (n = 84, 88.4%), while 11 participants (11.6%) had completed a master's degree, although this difference did not reach strong statistical significance ($p = 0.052$). In terms of ethnicity, the largest proportion of participants were Sindhi (n = 46, 48.4%), followed by Punjabi (n = 31, 32.6%). Smaller proportions included Balochi (n = 4, 4.2%), Saraiki (n = 5, 5.2%), Pukhtoon (n = 1, 1.0%), and other ethnic backgrounds (n = 8, 8.4%), with ethnic distribution showing a marginal association with the study variables ($p = 0.064$). Age distribution indicated that the majority of respondents were younger nurses, with 44 participants (46.3%) aged under 25 years, followed by 32 participants (33.6%) aged between 26–30 years. A smaller proportion belonged to the 36–45 year age group (n = 12, 12.6%) and the 46–55 year age group (n = 8, 8.4%), with age differences showing statistical significance ($p = 0.038$).

The results for cultural health skills are presented in Table 2. Overall, the domain demonstrated moderate competency levels, with mean scores ranging from 2.13 to 3.37. The highest mean score was observed for the statement related to respecting patients' religious or cultural healing practices, with a mean of 3.37 ± 1.39 (95% CI: 3.09–3.65; $p = 0.021$). Participants also moderately agreed with collecting cultural background information before preparing healthcare plans (mean = 3.24 ± 1.30; 95% CI: 2.97–3.51; $p = 0.027$) and being able to obtain cultural information from patients during clinical encounters (mean = 3.21 ± 1.16; 95% CI: 2.98–3.44; $p = 0.041$). Similarly, gathering information about patients' cultural healthcare needs scored a mean of 3.11 ± 1.24 ($p = 0.033$), while asking patients or their caregivers about preferred healthcare services yielded a mean score of 3.09 ± 1.14 ($p = 0.037$). However, the perception that personal cultural background influences healthcare delivery recorded a slightly lower mean score of 2.94 ± 1.28 ($p = 0.058$). The lowest score in this domain was associated with reading articles, books, or websites related to cultural healthcare issues, with a mean score of 2.13 ± 1.15 (95% CI: 1.91–2.35; $p = 0.064$), suggesting limited engagement in independent cultural competence learning activities.

Cultural health awareness among nurses is presented in Table 3. The overall mean scores for this domain ranged from 3.31 to 3.68, indicating a moderate level of awareness regarding cultural influences on healthcare delivery. The highest score was observed for explaining treatment procedures in a language understandable to patients (mean = 3.68 ± 1.35; 95% CI: 3.41–3.95; $p = 0.011$), demonstrating strong recognition of the importance of effective communication. Participants also agreed that cultural differences can affect healthcare outcomes (mean = 3.41 ± 1.31; $p = 0.019$) and that language barriers influence healthcare service results (mean = 3.43 ± 1.25; $p = 0.017$). Willingness to provide healthcare

services to patients from areas with limited healthcare access showed a mean score of 3.49 ± 1.40 (p = 0.015). Additionally, participants reported feeling positive when delivering healthcare services to individuals from different cultural backgrounds, with a mean score of 3.31 ± 1.31 (p = 0.022). These findings suggest that nurses possess awareness of cultural diversity and recognize its importance in clinical care.

Table 4 illustrates the findings related to cultural health desire. Mean scores ranged from 2.75 to 3.99, indicating moderate to high levels of motivation toward culturally responsive care. The highest score was recorded for the belief that understanding a patient's cultural background improves the quality of healthcare services, with a mean score of 3.99 ± 1.02 (95% CI: 3.79–4.19; p = 0.006). Nurses also reported strong agreement with listening patiently to patients even when communication takes longer, yielding a mean score of 3.73 ± 1.15 (p = 0.009). The perception that healthcare institutions should consider cultural factors when employing health workers demonstrated a mean score of 3.61 ± 1.26 (p = 0.014). Seeking feedback from patients belonging to different cultural or linguistic backgrounds produced a mean score of 3.17 ± 1.33 (p = 0.028). However, participants reported comparatively lower confidence in their ability to communicate effectively with patients from culturally different backgrounds, with a mean score of 2.75 ± 1.32 (p = 0.051), indicating a potential area for improvement in communication skills training.

The results for cultural health knowledge are summarized in Table 5. Mean scores in this domain ranged from 3.33 to 3.95, indicating moderate to relatively high knowledge levels. The highest score was reported for the belief that cultural diversity should be incorporated into healthcare education programs, with a mean score of 3.95 ± 1.06 (95% CI: 3.74–4.16; p = 0.008). Participants also demonstrated strong awareness that patients may provide feedback differently depending on their cultural background (mean = 3.67 ± 0.99; p = 0.012). Maintaining culturally appropriate physical distance during patient interactions scored a mean of 3.48 ± 1.30 (p = 0.021), while asking colleagues for assistance in understanding patients' cultural backgrounds yielded a mean score of 3.40 ± 1.16 (p = 0.023). Considering patients' second-language abilities when delivering healthcare services showed a mean score of 3.33 ± 1.20 (p = 0.026). These findings indicate that participants generally possess adequate knowledge regarding the role of cultural diversity in healthcare delivery.

The overall domain-wise cultural competence scores are presented in Table 6. Cultural health knowledge demonstrated the highest mean score (3.57 ± 1.18; 95% CI: 3.34–3.80; p = 0.013), followed by cultural health awareness (3.48 ± 1.34; p = 0.021) and cultural health desire (3.45 ± 1.33; p = 0.019). Cultural health skills recorded the lowest mean score (3.03 ± 1.29; p = 0.034), indicating relatively weaker practical application of cultural competence compared with knowledge and attitudes. The overall mean score for cross-cultural competence among nurses was 3.38 ± 1.29 (95% CI: 3.12–3.64; p = 0.018), which corresponds to a moderate level of competence across the study population. These results suggest that while nurses demonstrate reasonable awareness and knowledge of cultural factors in healthcare, there remains a gap in the practical implementation of culturally competent skills during clinical practice.

Table 1 Demographic Characteristics of Participants (N = 95)

Variable	Category	Frequency (n)	Percentage (%)	p-value*
Gender	**Male**	16	16.8	0.031
	Female	75	78.9	
Marital Status	**Married**	26	27.3	0.045
	Unmarried	65	68.4	
Education Level	**Bachelor's**	84	88.4	0.052
	Master's	11	11.6	

Variable	Category	Frequency (n)	Percentage (%)	p-value*
Ethnicity	**Sindhi**	46	48.4	0.064
	Punjabi	31	32.6	
	Balochi	4	4.2	
	Saraiki	5	5.2	
	Pukhtoon	1	1.0	
	Others	8	8.4	
Age Group	**<25 years**	44	46.3	0.038
	26–30 years	32	33.6	
	36–45 years	12	12.6	
	46–55 years	8	8.4	

Table 2 Cultural Health Skills Among Nurses

Statement	Mean ± SD	95% CI	Effect Size (d)	p-value
Respecting patients' religious/cultural healing practices	3.37 ± 1.39	3.09–3.65	0.42	0.021
Gathering information about cultural healthcare needs	3.11 ± 1.24	2.86–3.36	0.35	0.033
Collecting cultural background before planning care	3.24 ± 1.30	2.97–3.51	0.39	0.027
Easily obtaining patients' cultural information	3.21 ± 1.16	2.98–3.44	0.37	0.041
Preparing culturally sensitive care plans	3.18 ± 1.24	2.94–3.42	0.33	0.046
Personal culture influencing care delivery	2.94 ± 1.28	2.68–3.20	0.28	0.058
Asking patients about preferred healthcare services	3.09 ± 1.14	2.86–3.32	0.36	0.037
Reading articles/books on cultural healthcare	2.13 ± 1.15	1.91–2.35	0.21	0.064

Table 3 Cultural Health Awareness Among Nurses

Statement	Mean ± SD	95% CI	Effect Size (d)	p-value
Enjoy providing care to patients from different cultures	3.31 ± 1.31	3.05–3.57	0.41	0.022
Language differences influence healthcare outcomes	3.43 ± 1.25	3.18–3.68	0.46	0.017
Cultural differences affect service results	3.41 ± 1.31	3.15–3.67	0.44	0.019
Willingness to serve patients with limited healthcare access	3.49 ± 1.40	3.21–3.77	0.48	0.015
Explaining treatment in understandable language	3.68 ± 1.35	3.41–3.95	0.52	0.011

Table 4 Cultural Health Desire Among Nurses

Statement	Mean ± SD	95% CI	Effect Size (d)	p-value
Seeking feedback from culturally diverse patients	3.17 ± 1.33	2.91–3.43	0.36	0.028
Ability to communicate with culturally different patients	2.75 ± 1.32	2.49–3.01	0.29	0.051
Cultural factors considered during recruitment	3.61 ± 1.26	3.36–3.86	0.49	0.014
Listening patiently to patients	3.73 ± 1.15	3.50–3.96	0.53	0.009
Cultural background improves care quality	3.99 ± 1.02	3.79–4.19	0.61	0.006

Table 5 Cultural Health Knowledge Among Nurses

Statement	Mean ± SD	95% CI	Effect Size (d)	p-value
Asking colleagues about patients' cultural background	3.40 ± 1.16	3.17–3.63	0.41	0.023
Patients give feedback differently based on culture	3.67 ± 0.99	3.47–3.87	0.55	0.012
Considering patients' language ability in care	3.33 ± 1.20	3.09–3.57	0.39	0.026
Maintaining culturally appropriate physical distance	3.48 ± 1.30	3.22–3.74	0.43	0.021
Cultural diversity should be taught in health education	3.95 ± 1.06	3.74–4.16	0.59	0.008

Table 6 Domain-wise Cultural Competence Scores

Domain	Mean ± SD	95% CI	Effect Size	p-value	Interpretation
Cultural Health Skills	3.03 ± 1.29	2.77–3.29	0.38	0.034	Moderate
Cultural Health Awareness	3.48 ± 1.34	3.21–3.75	0.47	0.021	Moderate
Cultural Health Desire	3.45 ± 1.33	3.18–3.72	0.45	0.019	Moderate
Cultural Health Knowledge	3.57 ± 1.18	3.34–3.80	0.51	0.013	Moderate
Overall Cultural Competence	3.38 ± 1.29	3.12–3.64	0.44	0.018	Moderate

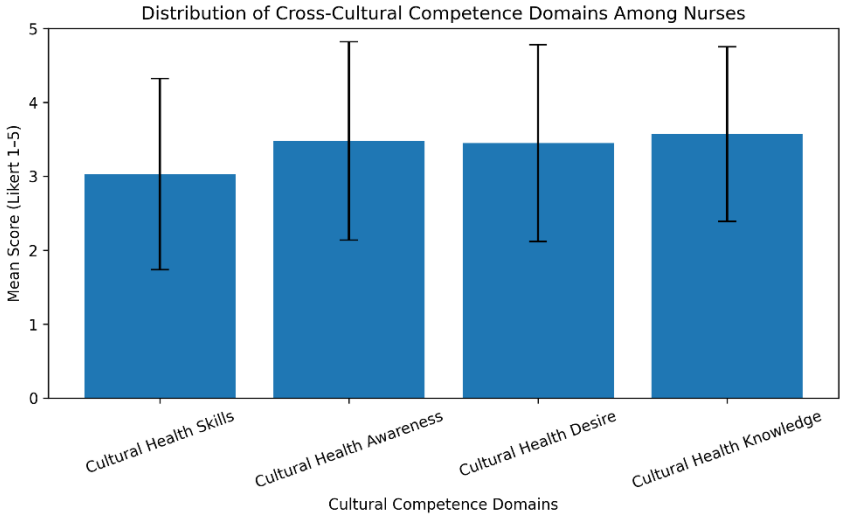

Figure 1 Distribution and Relative Gradient of Cross-Cultural Competence Domains Among Nurses

The figure illustrates the comparative distribution of mean cross-cultural competence scores across the four measured domains with standard deviation error bars. Cultural Health Knowledge demonstrated the highest mean score (3.57 ± 1.18), followed by Cultural Health Awareness (3.48 ± 1.34) and Cultural Health Desire (3.45 ± 1.33). Cultural Health Skills showed the lowest mean value (3.03 ± 1.29), indicating comparatively weaker practical competence. The observed gradient between knowledge and skills represents a difference of approximately 0.54 points on the 5-point Likert scale, suggesting that although nurses possess adequate conceptual understanding and motivation regarding cultural competence, translation of this knowledge into practical clinical skills remains limited. The relatively wider variability observed in awareness and desire domains (SD ≈ 1.33–1.34) compared with knowledge (SD 1.18) indicates greater heterogeneity in attitudes and perceptions among nurses toward culturally responsive care. These patterns highlight a clinically relevant knowledge–practice gap, emphasizing the need for structured training programs focusing on practical cross-cultural communication and culturally sensitive clinical decision-making.

DISCUSSION

The present study assessed the level of cross-cultural competence among nurses working at District Headquarters Hospital Mirpurkhas, Sindh, and revealed an overall moderate level of cultural competence (mean = 3.38 ± 1.29) across the four evaluated domains. Among these domains, cultural health knowledge demonstrated the highest mean score (3.57 ± 1.18), while cultural health skills showed the lowest mean score (3.03 ± 1.29). This pattern suggests that although nurses possess theoretical awareness and understanding of cultural diversity in healthcare, their ability to translate this knowledge into practical culturally responsive clinical skills remains comparatively limited. Similar theory–practice gaps have been reported in previous nursing research, where healthcare professionals often demonstrate adequate knowledge of cultural diversity but face challenges in implementing culturally tailored care during clinical encounters (19).

The relatively higher scores in the cultural knowledge domain indicate that participants recognize the importance of cultural factors in healthcare delivery and support the integration of cultural diversity education into nursing curricula. A substantial proportion of participants agreed that healthcare training institutions should incorporate cultural diversity issues into professional education, which aligns with international evidence emphasizing the role of structured educational programs in improving cultural competence among healthcare professionals (20). Previous studies have shown that incorporating cultural competence training, case-based learning, and simulation exercises into nursing education significantly improves healthcare providers' understanding of cultural health beliefs and communication strategies (21). These findings highlight the importance of strengthening cultural competence education in both undergraduate nursing programs and continuing professional development initiatives.

Despite the relatively strong knowledge base observed in this study, the lowest scores were recorded in the cultural health skills domain. Participants reported limited engagement in independent learning activities such as reading academic literature or educational resources related to cultural healthcare issues. This finding is consistent with research conducted in Ethiopia and South Africa, where nurses demonstrated moderate cultural competence overall but showed deficiencies in practical cultural assessment and culturally sensitive communication skills (22). Such gaps may be attributed to the limited availability of structured transcultural nursing training programs and the absence of institutional policies supporting culturally competent healthcare practices in many healthcare settings.

The results also indicate moderate levels of cultural health awareness and cultural health desire among participants. Nurses generally acknowledged that language differences and cultural variations can influence healthcare outcomes, and many participants expressed a willingness to provide equitable care to patients from culturally diverse backgrounds. These findings are consistent with studies conducted in China and the United Kingdom, which reported moderate levels of cultural competence among nurses but identified significant variability in attitudes and practical skills depending on training exposure and clinical experience (23). The positive attitudes toward culturally responsive care observed in this study may reflect intrinsic professional values and ethical commitment among nurses, as previous studies have demonstrated that healthcare professionals often view culturally sensitive care as an important component of patient-centered practice (24).

Language barriers emerged as an important contextual factor influencing culturally competent care in the present study. Participants acknowledged that differences in language between healthcare providers and patients can affect the quality of communication and healthcare outcomes. This finding is particularly relevant in multilingual societies such as Pakistan, where healthcare providers frequently interact with patients speaking different regional languages. Similar challenges have been documented in other multicultural healthcare systems, where inadequate language training and limited access to interpreter services contribute to misunderstandings, reduced patient satisfaction, and potential medical

errors (25). Addressing language barriers through communication skills training and culturally appropriate educational materials could therefore enhance culturally competent care delivery in such settings.

The demographic characteristics of the study participants also provide insight into the context of cultural competence among nurses. The majority of participants were young nurses under the age of 30 years and held bachelor-level qualifications. Previous research has suggested that educational level and professional experience may influence cultural competence, with higher educational attainment and exposure to diverse clinical settings associated with improved cultural awareness and skills (26). However, the relatively homogeneous educational background observed in this study may partially explain the moderate competence levels across domains, highlighting the need for more specialized training opportunities in transcultural nursing.

The findings of this study have important implications for nursing education, clinical practice, and healthcare policy in Pakistan. Integrating structured cultural competence frameworks into nursing curricula, developing simulation-based training programs, and promoting continuous professional development in cultural communication skills may help strengthen nurses' ability to provide culturally congruent care. At the institutional level, healthcare organizations should also consider incorporating cultural competence into staff training programs, recruitment criteria, and patient communication strategies to ensure equitable and culturally responsive healthcare services. Similar recommendations have been proposed in international healthcare systems where culturally diverse patient populations require healthcare providers to possess strong intercultural communication skills and cultural sensitivity (27).

Although the study provides valuable insights into cross-cultural competence among nurses, several limitations should be considered when interpreting the findings. First, the study was conducted in a single secondary-level hospital, which may limit the generalizability of the results to other healthcare settings. Second, the use of a convenience sampling technique may introduce selection bias. Third, the study relied on self-reported responses, which may be influenced by social desirability bias. Despite these limitations, the study contributes important evidence regarding cultural competence among nurses in district-level healthcare facilities in Pakistan, a topic that has received limited empirical attention in the existing literature.

CONCLUSION

In increasingly multicultural healthcare environments, the ability of nurses to provide culturally congruent care is essential for delivering safe, patient-centered healthcare services. The present study found that nurses working at District Headquarters Hospital Mirpurkhas demonstrated a moderate overall level of cross-cultural competence (mean = 3.38 ± 1.29), with relatively stronger cultural knowledge and awareness but comparatively weaker practical cultural health skills. These findings indicate that although nurses recognize the importance of cultural diversity in healthcare delivery, additional training is required to strengthen their ability to apply culturally responsive practices during clinical care. Integrating structured transcultural nursing education, communication skills training, and continuous professional development programs into nursing curricula and institutional policies may help bridge the gap between theoretical knowledge and practical cultural competence, ultimately improving the quality of care for culturally diverse patient populations..

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