

Factors Predicting Cultural Competence among Nursing Personnel in the Eastern Economic Corridor of Thailand: A Cross-Sectional Study

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Abstract: The Eastern Economic Corridor of Thailand has experienced rapid economic growth and significant immigration, which has led to greater cultural diversity and poses a challenge for healthcare. Nursing personnel require strong cultural competence to meet the diverse health needs of this population. This cross-sectional study aimed to examine the level of cultural competence and its predicting factors among nursing personnel in the Eastern Economic Corridor. The sample consisted of 353 nursing personnel, including nursing students, nursing instructors, and professional nurses, selected using simple random sampling from universities and tertiary hospitals in the Eastern region. Data were collected between March and June 2024 using four instruments: a Personal Information Form, the Nurse Cultural Competence Scale, the Cultural Health Values Questionnaire, and the Perceived Organizational Policies Regarding Cultural Care Questionnaire. Descriptive statistics and multiple regression analysis were employed to analyze the data.

The results showed that most participants (94.13%) demonstrated a relatively high level of cultural competence. Five factors significantly predicted cultural competence: cultural health values, perceived organizational policies related to cultural care, participation in cultural care meetings/training, work experience, and ability to communicate in other languages, with cultural health values being the strongest predictor. Together, these factors explained 36% of the variance in cultural competence. Since cultural competency levels are relatively high, these should be reinforced and maintained. Additionally, nurse administrators and educators should emphasize cultural health values, develop clear organizational policies, and implement structured cultural care training to strengthen nurses' ability to provide culturally responsive care to diverse client populations in the Eastern Economic Corridor.

Keywords: Cultural competence, Cultural health values, Eastern Economic Corridor, Nursing personnel, Organizational policy, Thailand

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Introduction

Social changes in the age of globalization, increasing international migration, and economic liberalization have significantly impacted Thailand,

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particularly the Eastern Economic Corridor (EEC), which comprises three provinces.¹ This region has undergone rapid economic and industrial development, accompanied by a substantial influx of foreign labor and rising numbers of foreign residents. As of December 2022, the eastern region recorded 314,576 legally registered foreign workers.² Many of these migrants originate from Cambodia, Laos, and Myanmar, contributing to unprecedented cultural diversity in the area.

This growing diversity presents important challenges for healthcare systems, especially in nursing, where practitioners must engage with clients from various ethnic, religious, and sociocultural backgrounds, each with distinct health beliefs and expectations. When care does not account for these differences, it may lead to communication breakdowns, patient dissatisfaction, non-adherence to care plans, and poor health outcomes.^{3,4} A lack of cultural knowledge, limited language skills, and insufficient understanding of differing lifestyles can compromise care quality and diminish patient trust.⁴ Consequently, cultural competence has become essential for nursing personnel—including students, instructors, and professional nurses—to provide care that is safe, respectful, and person-centered.⁵

Multiple factors influence nurses' cultural competence, including participation in structured cultural training, language proficiency, clinical experience, organizational support, and personal values.⁶⁻¹⁰ These elements strengthen nurses' capacity to respond to diverse patient needs, reduce cultural barriers, and deliver culturally responsive care.

Although the EEC is undergoing significant demographic shifts, few empirical studies have investigated cultural competence among nursing personnel in this context.¹¹⁻¹³ Research in Thailand has primarily focused on measuring overall competence levels without analyzing predictive factors that may influence culturally appropriate care.⁶⁻⁷ This gap hinders the development of targeted educational strategies

and workforce planning for multicultural health services. To address this, the present study examined five factors previously identified as predictors of cultural competence: work experience, cultural care training, language proficiency, cultural health values, and perceived organizational policies.^{8,10-13} Understanding their influence within the EEC context will inform future strategies to strengthen culturally competent nursing practice.

Conceptual Framework and Literature Review

This study adopted an integrated conceptual framework that combines Papadopoulos, Tilki, and Taylor's¹⁴ Model of cultural competence with Leininger's¹⁵ Culture Care Diversity and Universality Theory to guide the exploration of factors associated with cultural competence among nursing personnel in Thailand's EEC. These models were selected to capture both the individual and systemic dimensions of cultural competence development. Papadopoulos et al.'s model outlines a developmental process comprising cultural awareness, knowledge, sensitivity, and skills, emphasizing self-reflection, intercultural empathy, and the application of culturally appropriate care.¹⁴ This aligns with the study's focus on individual-level factors, including work experience, participation in cultural care training, language proficiency, and cultural health values. Complementing this perspective, Leininger's¹⁵ theory underscores the influence of broader contextual and organizational elements. The Sunrise Model identifies how social structures, policies, technologies, and institutional values shape health beliefs and practices.¹⁵ This study incorporates these insights through the inclusion of perceived organizational policies as a factor influencing nurses' cultural competence. Integrating both models offers a comprehensive lens to examine how personal and systemic factors interact in shaping culturally competent nursing care in the EEC.

Cultural competence is increasingly recognized as a core nursing competency, ensuring that care is responsive to clients' cultural backgrounds. Nurses with strong cultural competence enhance communication, reduce disparities, and improve satisfaction and outcomes.^{7,11,16} In diverse healthcare settings, strengthening predictors of cultural competence has become a strategic focus for workforce development and nursing education.⁷ Zeleke et al.⁶ conceptualize cultural competence as an ongoing process requiring the development of awareness, knowledge, sensitivity, and clinical skills. Nurses with these competencies are better equipped to understand client needs, engage in individualized care, and respond to sociocultural differences across clinical encounters.¹⁷ This capability enhances care quality, facilitates effective communication, and ensures services that align with clients' values and expectations.³ Cultural competence supports a holistic approach to caring for culturally diverse populations by addressing their physical, psychological, social, and spiritual needs.^{18,19}

Several factors have been identified as predictors of nurses' cultural competence. Work experience is an influential factor, though findings are mixed. Some studies suggest that longer clinical experience improves competence through exposure to diverse patients and intercultural communication,^{6,10} while others indicate that experience alone is insufficient without continuing education and institutional support.⁸ Participation in structured training programs has consistently been associated with enhanced cultural knowledge, awareness, sensitivity, and communication skills.⁷⁻⁸ These programs foster critical reflection and empathy and are foundational to nurses' confidence in delivering culturally responsive care. Language proficiency, particularly the ability to communicate in multiple languages, reduces communication barriers and facilitates person-centered care.⁸⁻⁹ Nurses who possess these skills are better positioned to build trust and avoid misunderstandings. Personal values—such as openness to diversity and respect for cultural beliefs—are

also significant. These attributes correlate with higher competence and reinforce the importance of promoting inclusive, reflective attitudes in nursing education.^{7,10} Lastly, organizational support plays a crucial role. Clear policies, leadership commitment, and a supportive climate for cultural care are associated with increased cultural competence.^{6,10-11} Nurses who perceive strong institutional backing are more likely to access training, resources, and expectations that reinforce culturally safe care.

Taken together, these findings highlight the interplay between individual and organizational factors, supporting the use of a dual-theory framework in this study. This approach allows for a nuanced analysis of how various predictors contribute to cultural competence among nursing personnel in the EEC context.

Aim and Hypothesis

This study aimed to examine the level of cultural competence among nursing personnel and to determine whether work experience, participation in cultural care meeting/training, language proficiency, cultural health values, and perceived organizational policies can predict nurses' cultural competence in the EEC of Thailand.

Methods

Design: This cross-sectional predictive study examined the level of cultural competence and its predictors among nursing personnel in the EEC of Thailand, and followed the STROBE statement for reporting cross-sectional studies.

Sample and Setting: The sample consisted of nursing personnel divided into three groups: 1) nursing students from one university and one nursing college; 2) nursing instructors from the same two institutions; and 3) professional nurses from three tertiary care hospitals in the EEC. Participants were recruited using

simple random sampling based on the following inclusion criteria: 1) nursing students who were in their third or fourth year of study; 2) nursing instructors with at least one year of experience teaching both theory and practice, in the EEC region and holding a first-class nursing and midwifery license; and 3) professional nurses with a minimum of one year of work experience in the EEC region and a first-class nursing and midwifery license. Exclusion criteria included diagnosed mental health problems such as depression.

The sample size was calculated using Krejcie and Morgan's table,²⁰ resulting in a minimum required number of 341 participants. To account for possible data loss or incomplete responses, the sample size was increased by 10%, resulting in a total sample of 375 participants. The participants were distributed based on proportional representation as follows: 1) nursing students (n = 150): 75 from one university and 75 from one nursing college; 2) nursing instructors (n = 75): 40 from same university and 35 from same nursing college; and 3) professional nurses (n = 150): 50 each from three tertiary care hospitals in the EEC.

Ethical Considerations: This study was approved by the ethics committees of Burapha University (IRB1-097/2567) and three studied hospitals (40/2567, BSH-IRB 22/2567, RYS 12/2567). One nursing college was able to obtain ethical approval from Burapha University without additional review. The research assistants met with the potential participants, introduced themselves, explained the aims of the study and the data collection procedures, and clarified that acceptance or refusal of participation would have no effect on medical treatment and that withdrawal was possible at any time. The data would remain anonymous and be presented in a summarized form for educational purposes. The questionnaires would be destroyed without conflict after the research presentation. All potential participants who agreed to take part in the study were asked to sign a consent form.

Instruments: There were four instruments used for data collection as described below:

A personal information form: This section included demographic data regarding age, gender, religion, place of origin, educational institution/workplace, year of study/work experience, foreign language communication abilities, and cultural care training.

The Nurse Cultural Competence Scale (NCCS): The principal investigator (PI) obtained permission to use and conduct back-translation of the NCCS developed by Perng and Watson.²¹ This instrument was developed based on extensive literature review and has been widely used internationally for studying cultural competence with reliability coefficients ranging from 0.78–0.96.²¹ The scale comprises four domains: 1) cultural awareness (for example, "One's belief and behavior are influenced by one's cultural background"), 2) cultural knowledge (for example, "I understand the social and cultural factors that influence health and illness"), 3) cultural sensitivity (for example, "I very much appreciate the diversities among different cultures"), and 4) cultural skills (for example, "I can use communication skills with clients of different cultural backgrounds"). The instrument comprised 41 items measured on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Overall scores could range from 41 to 205. To interpret scores, the total mean score was divided by the number of items, yielding a single average score per respondent. Scores were categorized as low (1.00–2.33), moderate (2.34–3.67), or high (3.68–5.00) based on this value.²² This classification applied to both overall and subscale scores. For regression analysis, cultural competence was treated as a continuous variable, where higher scores reflect higher levels of cultural competence. The content validity index (CVI) was validated by five experts in transcultural nursing, including three nursing instructors, one expert professional nurse, and one foreign English language instructor. The instrument demonstrated strong psychometric properties, with a CVI of 0.95 and Cronbach's alpha values of 0.94 in the pilot study (n = 30) and 0.92 in the main study.

The Cultural Health Values Questionnaire:

This questionnaire was modified from the cultural competence factors questionnaire regarding lifestyle and cultural values by Jarasratphaibun et al.²³ It contains four items (for example, “I prioritize providing equal care to all clients without discrimination”; “I understand and respect the cultural differences of each client”). Responses were rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), yielding total scores between 4 and 20. Higher scores indicated greater cultural health values. The CVI was validated by three experts in transcultural nursing, including two nursing instructors and one expert professional nurse. The instrument demonstrated acceptable validity (CVI = 0.87) and reliability, with Cronbach’s alpha coefficients of 0.85 in the pilot study (n = 30) and 0.77 in the main study.

The Perceived Organizational Policies Regarding Cultural Care Questionnaire: This questionnaire was modified from the Cultural Competence Factors Questionnaire regarding political and legal aspects and environmental context by Jaradrattanapaiboon et al.²³ It contains eight items, (for example, “My organization/hospital has policies or guidelines for caring for service recipients with cultural differences”; “My organization/hospital organizes meetings/training or provides funding support to attend meetings/training about transcultural nursing”). Responses are measured using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The total possible scores range from 8 to 40, with higher scores indicating greater perceived organizational support for culturally competent care. The CVI was validated by three experts in transcultural nursing, including two nursing instructors and one expert professional nurse. The CVI was 0.87, and the Cronbach’s alpha coefficient for reliability was 0.81 in the pilot study (n = 30), increasing to 0.83 in the main study.

Data Collection: After the IRB committee approved the research proposal and permission from the director of two institutions and three hospitals was

granted, the researchers coordinated the research departments of the institutions and the nursing departments of the hospitals, and requested one research assistant per institution. The research assistants were trained on the study’s objectives, procedures, sample selection criteria, and questionnaire administration to ensure that they could assist participants as needed. The assistants then selected eligible caregivers from the complete staff lists, created name labels for potential participants, placed them in opaque containers, and conducted simple random sampling without replacement. The selected participants were invited to a meeting at their institutions/hospitals at a convenient time. The research assistants distributed questionnaires in sealed envelopes to the participating nursing personnel and asked them to complete and return them within two weeks. If the questionnaires were not returned within the specified timeframe, the research assistants reminded participants and asked for their return within a further 1–2 weeks. The total time required to complete the questionnaires was approximately 40–50 minutes.

Data Analysis: All statistical analyses were performed using SPSS version 27 with a significance level of 0.05. Participant demographics and study variables were summarized using descriptive statistics. Simultaneous multiple regression analysis (Enter method) was used to examine factors predicting cultural competence among nursing personnel. Prior to multiple regression analysis, statistical assumptions were assessed and met.²⁴ Linearity was confirmed through scatterplots of variables. Normality of residuals was verified using the Kolmogorov-Smirnov test (p = 0.053). Independence of residuals was supported by a Durbin-Watson statistic of 1.774, which falls within the acceptable range of 1.5–2.5. Homoscedasticity was confirmed through residual plots showing no discernible pattern. Multicollinearity diagnostics indicated no concern, with variance inflation factor (VIF) values ranging from 1.042 to 1.175, all below the threshold of 4.0.

Results

The data collection was conducted from March to June 2024. The original sample comprised 375 nursing personnel from the EEC. However, 12 participants had incomplete questionnaires, and nine did not meet the inclusion criteria, so they were excluded. This left 354 participants (response rate of 94.40%). During testing of the statistical assumptions for the multiple regression analysis, one outlier was identified and removed, resulting in a final sample of 353 participants (94.13%).

Characteristics of participants: The study included 353 participants comprising nursing students (41.9%), nursing instructors (17.6%), and professional nurses (40.5%). Most participants were female, Buddhist,

and single. Nursing students were the youngest group, whereas instructors and professional nurses had higher mean ages and significantly more years of work experience. The majority of students were currently enrolled in a bachelor's degree program, while instructors and nurses had already attained bachelor's or higher degrees. Participation in cultural care training was generally low, particularly among students. Although most participants reported the ability to communicate in foreign languages—most commonly English—professional nurses demonstrated the highest exposure to foreign clients. They most frequently cared for Cambodian, Myanmar, and Laotian clients, and did so more regularly than participants in the other two groups (see **Table 1**).

Table 1. Key demographic characteristics of 3 groups of nursing personnel (n = 353)

Variables	Nursing students (n = 148)		Nursing instructors (n = 62)		Professional nurses (n = 143)		Total (n = 353)	
Age (years)	Range = 20–24 M = 21.59 SD = 0.82		Range = 25–63 M = 47.14 SD = 9.98		Range = 23–59 M = 37.26 SD = 10.62		Range = 20–63 M = 32.43 SD = 12.64	
Work experience (years)	Range = 0 M = 0 SD = 0		Range = 1–40 M = 20.74 SD = 11.20		Range = 1–39 M = 14.70 SD = 10.76		Range = 0–40 M = 9.60 SD = 11.81	
Cultural care training	n	%	n	%	n	%	n	%
Yes	3	0.8	21	5.9	5	3.5	29	8.2
No	145	41.1	41	11.6	138	39.1	324	91.8
Foreign language communication abilities	n	%	n	%	n	%	n	%
Yes	111	31.4	53	15.0	89	25.2	253	71.7
No	37	10.5	9	2.5	54	15.3	100	28.3

Nursing personnel in the EEC demonstrated a high level of cultural competence, with total scores ranging from 111 to 197 and a mean of 157.43 (SD = 14.85). Subscale scores also indicated high levels across all domains: cultural awareness (Mean = 4.20), cultural knowledge (Mean = 3.75), cultural sensitivity (Mean = 3.68), and cultural skills (Mean = 3.74) (see **Table 2**). Additional analysis revealed that nursing instructors had the highest mean cultural

competence score (Mean = 162.72, SD = 12.93), followed closely by nursing students (Mean = 162.22, SD = 13.55), while professional nurses had the lowest (Mean = 150.17, SD = 13.98). The mean score for cultural health values was 18.48 (SD = 1.70), indicating strong adherence to culturally grounded health beliefs. The perceived organizational policy score averaged 28.29 (SD = 5.05), reflecting moderate to high institutional support for cultural care.

Table 2. Ranges, means, standard deviations, and interpretation of overall and domain of cultural competence among nursing personnel in the EEC (n = 353)

Factors	Range		Mean (SD)		Interpretation
	Possible	Actual	Scale scores	Subscale scores divided by number of items	
Overall cultural competence	41–205	111–197	157.43 (14.85)	3.84 (0.36)	High
Cultural awareness	10–50	23–50	41.96 (4.37)	4.20 (0.44)	High
Cultural knowledge	9–45	19–45	33.76 (4.34)	3.75 (0.48)	High
Cultural sensitivity	8–40	14–39	29.41 (3.87)	3.68 (0.46)	High
Cultural skills	14–70	32–70	52.29 (6.41)	3.74 (0.27)	High

Correlation matrix of study variables showed that the factors related to the cultural competence in nursing are statistically significant at the 0.01 level, including cultural health values, perceived organizational policies regarding cultural care, work experience, ability to communicate in other languages, and meetings/training on cultural care, respectively (see **Table 3**).

Table 3. Correlation matrix of study variables (n = 353)

Variable	1	2	3	4	5
1. Work experience (r)	–				
2. Participation in cultural care meeting/training (r_{pb})	0.191***	–			
3. Ability to communicate in other languages (r_{pb})	-0.063	0.097	–		
4. Cultural health values (r)	-0.246***	0.006	0.030	–	
5. Perceived organizational policies regarding cultural care (r)	-0.273***	-0.030	0.175***	0.145**	–
6. Cultural competence (r)	-0.275***	0.151**	0.217***	0.436***	0.407***

Note. **p < 0.01, ***p < 0.001; r = Pearson's correlation coefficient, r_{pb} = Point biserial correlation coefficient

Multiple regression analysis revealed five significant predictors of cultural competence among nursing personnel (p < 0.001). Cultural health values emerged as the strongest predictor, followed by perceived organizational policies on cultural care, participation in cultural care meetings or training, and ability to communicate in other languages. Work experience had the least predictive strength. Collectively, these factors accounted for 36% of the variance in cultural competence scores (see **Table 4**).

Table 4. Multiple regression analysis with the Enter method of factors predicting in cultural competence among nursing personnel among nursing personnel in the EEC (n = 353)

Predictors	B	S.E.	β	t	p-value
1. Work experience (years)	-3.887	1.393	-0.129	-2.791	0.006
2. Participation in cultural care meeting/training	9.437	2.364	0.175	3.993	< 0.001
3. Ability to communicate in other languages	4.237	1.434	0.129	2.954	0.003
4. Cultural health values	3.128	.387	0.357	8.087	< 0.001
5. Perceived organizational policies regarding cultural care	0.889	0.132	0.302	6.708	< 0.001
Constant	72.926	8.094		9.009	< 0.001

Note. R = 0.607, R^2 = 0.369, Adjusted R^2 = 0.360, $F_{5,347}$ = 40.557, p < 0.001

Discussion

Level of cultural competence: Findings revealed a relatively high level of cultural competence among participants, suggesting that EEC nursing personnel have some level of preparedness to care for clients from culturally diverse backgrounds. These findings are consistent with both national and international studies.^{7,11,23,25} One possible explanation is the impact of ongoing economic liberalization in the region, which has led to increased migration of foreign workers and greater cultural diversity in the EEC. This has given nursing personnel more opportunities to care for clients from different cultural backgrounds. In the present study, a significant proportion of participants (96.0%) reported having experience caring for clients from neighboring countries such as Cambodia, Myanmar, and Laos. This experience likely enhances their cultural awareness and willingness to learn, helping to ensure that care is respectful of cultural differences and meets professional standards of care.

Similar findings have been reported in previous studies. For example, Apichaijaroen et al.¹¹ found that many professional nurses working in hospitals in eastern Bangkok (91.1%) had experience in caring for culturally diverse clients, resulting in high or relatively high levels of transcultural nursing competence. Experience in caring for culturally diverse clients was also identified as an important factor for cultural competence in other studies.^{6,9-10} In addition, 41.9% of the participants in this study were third- and fourth-year nursing students, while 12.5% of the participants were recently graduated nurses with approximately one to five years of experience. These groups may have benefited from nursing curricula that emphasize transcultural nursing, thereby supporting the development of relatively high levels of cultural competence among participants.

Factors predicting cultural competence among nursing personnel: This study identified five key factors that significantly predict the cultural competence of

nursing personnel in the EEC. These findings are consistent with the conceptual framework by Papadopoulos et al., which defines cultural competence as a dynamic and developmental process encompassing cultural awareness, knowledge, sensitivity, and skills.¹⁴ Additionally, Leininger's Culture Care Diversity and Universality Theory underscores the importance of understanding diverse cultural values, beliefs, and social systems to deliver culturally congruent and person-centered care.²⁶ Together, these theoretical frameworks support the interpretation that both individual attributes and organizational contexts play crucial roles in shaping the cultural competence of nurses within multicultural healthcare environments.

Cultural health values emerged as the strongest predictor of cultural competence. Nurses with high cultural health scores are likely to demonstrate greater openness to cultural differences, greater sensitivity to different health beliefs, and a greater willingness to adapt care to clients' needs. This finding supports Leininger's theory which emphasizes the appreciation of cultural care as fundamental to quality of care. Previous Thai research has found similar relationships. Chonjaroen et al.²⁷ reported that cultural values were positively correlated with transcultural nursing competence among community nurses caring for Muslim clients, while Treethipwanich et al.²⁵ demonstrated that cultural values significantly predicted cultural competence among nurses in private hospitals in Bangkok. These findings emphasize that promoting positive cultural health values during nursing education and training can directly support culturally competent practice.

Perceived organizational policy regarding cultural care was also a significant predictor. Nurses who perceived that their organization supported culturally diverse care reported higher levels of cultural competence. This finding is consistent with other findings²³ that organizational cultural policies encourage nurses to align their practice with institutional expectations. It is also consistent with another study²⁸ emphasizing the role of institutional support in improving the quality of

nursing care in Thailand. International evidence also shows that systematic organizational change, clear policies, and supportive leadership structures are critical to fostering a culturally competent healthcare environment.²⁹ These results suggest that effective policy-level interventions in hospitals and educational institutions in the EEC could further strengthen nurses' cultural competence.

Participation in cultural care meetings/trainings was another significant predictor emphasizing the value of structured educational interventions. This finding is consistent with Papadopoulos' model, which advocates targeted knowledge building to move from cultural awareness to applied competence. Another study⁷ found that training in cultural care promotes self-reflection, communication skills, respect for cultural differences, and confidence in applying culturally competent care. Similarly, other studies^{6,8} demonstrated that participation in training was a strong predictor of cultural competence among nurses in Europe and Africa, respectively. These findings underline the importance of systematically integrating cultural competence training into nursing curricula and continuing professional development in the EEC.

Work experience was found to be a negative predictor of cultural competence in this study, which is in contrast to some previous research that showed a positive correlation between years of experience and cultural competence.^{6,30} A likely explanation lies in the characteristics of the participants: almost half of the sample were third- and fourth-year nursing students, and about 20% were recently graduated nurses with 2–3 years of experience. These groups may have received updated curricula that emphasize transcultural care, whereas more experienced personnel may have been educated at a time when these topics were less prominent. In addition, over 90% of participants reported that they had never attended training on culturally diverse care. This finding indicates that experience by itself may be insufficient to ensure cultural competence without continuous training and

organizational support, a pattern similarly noted in other settings.³¹

The ability to communicate in other languages was also a significant predictor, supporting previous evidence that language skills reduce communication barriers and improve understanding with culturally diverse customers. This is consistent with Leininger's emphasis on communication as a core element of culturally congruent care. Almutairi et al.³² found that language barriers often undermine culturally competent practice. Nurses who speak additional languages can build trust and provide tailored care. This finding is consistent with studies in Thailand,²⁵ China,⁹ Ethiopia,^{10,33} Saudi Arabia³¹ and Israeli.³⁴ These results underline the value of promoting multilingual skills in nursing education and practice in the EEC context, where the number of clients with a migrant background continues to increase. Overall, these results support the use of integrated models such as Papadopoulos and Leininger's theories to understand the development of cultural competence. They underscore the importance of individual values and skills, formal education, organizational support, and policy frameworks in nurses' readiness to provide culturally appropriate care. This study highlights the need for comprehensive strategies in Thailand's EEC that include training programs, policy development, and curriculum integration to promote and maintain nurses' cultural competence.

Limitations

This study used a validated instrument to measure cultural competence with a sufficient sample size to enable a meaningful analysis. However, some limitations should be noted. First, the data collection was based on self-report questionnaires, which may lead to response bias or social desirability. Second, the sample was drawn only from nursing students, educators, and professional nurses in tertiary care hospitals and nursing schools in the EEC. This may limit the transferability of the findings to primary care

settings, private hospitals, or other regions of Thailand. Third, the cross-sectional design does not allow for causal inferences about the relationships between predictors and cultural competence. Finally, although several significant predictors were identified, other potentially important individual and organizational factors were not examined and should be explored in future research.

Conclusion and Implications for Nursing Practice

This study identified five key factors predicting cultural competence among nursing personnel in Thailand's EEC: cultural health values, perceived organizational policies, participation in cultural care training, professional experience, and multilingual communication ability. These findings advance transcultural nursing knowledge by providing empirical evidence on individual and institutional influences shaping cultural competence. Given the increasing diversity of healthcare workforces globally, these findings hold important implications for nursing practice. Nurses should be encouraged to engage in cultural care training to enhance their ability to deliver safe, respectful, and person-centered care. Healthcare administrators play a crucial role by establishing clear policies, allocating resources, and fostering inclusive organizational climates that support culturally responsive care. In addition, nursing education programs should integrate cultural competence into curricula, emphasizing cultural awareness, sensitivity, practical skills, and language proficiency to prepare nurses for diverse care environments. Future research should focus on developing specialized nursing models and comprehensive training interventions, incorporating variables such as cultural self-efficacy, reflective practice, and feedback mechanisms. Longitudinal and mixed-methods studies are recommended to examine changes in cultural competence over time and explore how training and institutional policies influence clinical behaviors and outcomes.

Author Contributions

Conceptualization, Method and design: S.S., P.I., P.T., S.C.

Developed tools: S.S.

Validate tools: P.I., S.C.

Collected data: S.S., P.T.

Data analysis and interpretation: S.S., S.C.

First draft the manuscript: S.S., S.C.

Assisted with revisions and approved the final manuscript: S.S., P.I., P.T., S.C.

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References

1. Office of the Eastern Economic Corridor Policy Committee. Manual for establishing or modifying special economic zones. 2nd rev. ed. Bangkok: Office of the Eastern Economic Corridor Policy Committee, 2021 (in Thai).
2. Eastern Labor Market Data Management Center. Basic labor data, Eastern region 2022. Labor Market Data Management Division, Department of Employment, Ministry of Labor; 2023 (in Thai).
3. Songwathana P, Chunuan S, Balthip K, Purinthrapaibal S, Hui T, Ibrahim K, et al. Cultural competence perspectives from nurses in four Asian countries: a qualitative descriptive study. *J Health Sci Med Res.* 2021;39(1):57–66. doi: 10.31584/jhsmr.2020767.
4. Wesolowska K, Hietapakka L, Elovainio M, Aalto AM, Kaihlanen AM, Heponiemi T. The association between cross-cultural competence and well-being among registered native and foreign-born nurses in Finland. *PLOS One.* 2018;13(12):e0208761. doi: 10.1371/journal.pone.0208761.

5. Williams B. Accomplishing cross cultural competence in youth development programs. *J Ext.* 2001;39(6):16. Available from: <https://commons.joe.org/joe/vol39/iss6/16>
6. Zeleke TS, Wudu MA, Bekalu YE, Wondifraw EB, Birhanu TA, Bazie GW. Cultural competence and associated factors among nurses working in public hospitals of South Wollo zone, Northeast Ethiopia: a multi-center cross-sectional study. *BMC Nurs.* 2024;23(1):487. doi: 10.1186/s12912-024-02162-x.
7. Kaihlanen AM, Hietapakka L, Heponiemi T. Increasing cultural awareness: qualitative study of nurses' perceptions about cultural competence training. *BMC Nurs.* 2019;18:38. doi: 10.1186/s12912-019-0363-x.
8. Osmancevic S, Großschädl F, Lohrmann C. Cultural competence among nursing students and nurses working in acute care settings: cross-sectional study. *BMC Health Serv Res.* 2023;23(1):105. doi: 10.1186/s12913-023-09103-5.
9. Lin HL, Guo JL, Chen HJ, Liao LL, Chang LC. Cultural competence among pre-graduate nursing students, new graduate nurses, nurse mentors, and registered nurses: a comparative descriptive study. *Nurse Educ Today.* 2021;97:104701. doi: 10.1016/j.nedt.2020.104701.
10. Berie KM, Salih MH, Abate HK. Cultural competence nursing care and its associated factors among nurses in Northern Ethiopia: a mixed method study design. *Nurs Res Rev.* 2021;11:55-67. doi: 10.2147/NRR.S342426.
11. Apichaijaroen N, Khumyu A, Deoisres W. Transcultural nursing competency among professional nurses in Bangkok Hospital, Eastern Region. *J Prapaklao Nurs Coll.* 2020;31(1):72-80. Available from: <https://he01.tci-thaijo.org/index.php/pnc/article/view/241094/165345> (in Thai).
12. Satarak P, Disapirom T, Prachasaisoradej K. Cultural competence of the third year nursing students in Maternal and Newborn Nursing and Midwifery Practicum 1 of Boromarajonani College of Nursing, Chon Buri. *RHPC9 Journal.* 2025;19(2):587-99. Available at: <https://he02.tci-thaijo.org/index.php/RHPC9Journal/article/view/273197> (in Thai).
13. Truong M, Gibbs L, Pradel V, Morris M, Gwatirisa P, Tadic M, et al. A cultural competence organizational review for community health services: insights from a participatory approach. *Health Promot Pract.* 2017;18(3):466-75. doi: 10.1177/1524839916689546.
14. Papadopoulos R, Tilki M, Lees S. Promoting cultural competence in health care through a research based intervention in the UK. *Divers Health Soc Care.* 2004;1(2):107-15.
15. McFarland MR, Wehbe-Alamah HB, Leininger's Theory of Culture Care Diversity and Universality: an overview with a historical retrospective and a view toward the future. *J Transcult Nurs.* 2019;30(6):540-57. doi: 10.1177/1043659619867134.
16. Songwathana P, Siriphan S. Thai nurses' cultural competency in caring for clients living in a multicultural setting. *Pacific Rim Int J Nurs Res.* 2015;19(1):19-31. Available from: <https://he02.tci-thaijo.org/index.php/PRIJNR/article/view/18965>
17. Bjarnason D, Mick J, Thompson JA, Cloyd E. Perspectives on transcultural care. *Nurs Clin North Am.* 2009;44(4):495-503. doi: 10.1016/j.cnur.2009.07.009.
18. Campinha-Bacote J. Promoting health equity among marginalized and vulnerable populations. *Nurs Clin North Am.* 2024;59(1):109-20. doi: 10.1016/j.cnur.2023.11.009.
19. Hirunchunha S, Sangchan H, Songwathana P, Petpichetchian W. Perception of Thai nursing students and faculty's competence toward caring for culturally diverse clients. *Thai J Nurs Counc.* 2009;24(1):99-111 (in Thai).
20. Bukhari SAR. Sample size determination using Krejcie and Morgan table. ResearchGate [Internet]. 2021 Feb [cited 2025 Oct 18]. Available from: <https://www.researchgate.net/publication/349118299>
21. Perng SJ, Watson R. Construct validation of the Nurse Cultural Competence Scale: a hierarchy of abilities. *J Clin Nurs.* 2012;21(11-12):1678-84. doi: 10.1111/j.1365-2702.2011.03933.x.
22. Alkharusi H. A descriptive analysis and interpretation of data from Likert scales in educational and psychological research. *Indian J Psychol Educ.* 2022;12(2):13-6. Available from: <https://www.researchgate.net/publication/373096780>
23. Jaradrattanapaiboon Y, Daengthern L, Siripornpibul T. Factors influencing cultural competence of professional nurses at Phrae Hospital. *BCNUT J Nurs.* 2020;12(1):180-94. Available from: <https://he01.tci-thaijo.org/index.php/unc/article/view/193205/165422> (in Thai).
24. Field A. *Discovering statistics using IBM SPSS Statistics.* 5th ed. London: SAGE Publications; 2018.

25. Treethipwanich O, Moonsart S, Kaewpan W. Factors predicting cultural competency of registered nurses: a case study at a private hospital in Bangkok. *J Royal Thai Army Nurs.* 2019;20(3):185–9. Available from: <https://he01.tci-thaijo.org/index.php/JRTAN/article/view/233263> (in Thai).
26. McFarland MR, Wehbe-Alamah HB, editors. Leininger's transcultural nursing: concepts, theories, research & practice. 4th ed. New York: McGraw-Hill Education; 2018.
27. Chonjaroen H, Kongvattananon P, Thongbi W. Factors related to transcultural nursing competence of nurse practitioners working with Muslim clients. *JFONUBUU.* 2018;26(1):69–78. Available from: <https://he02.tci-thaijo.org/index.php/Nubuu/article/view/153343> (in Thai).
28. Wichaikhum OA, Abhichartitbutra K, Nantsupawat A. Factors influencing Thai health workers' attitudes toward providing health services to migrants. *Pacific Rim Int J Nurs Res.* 2024;28(2):296–307. doi: 10.60099/prijnr.2024.265360.
29. Weech-Maldonado R, Dreachslin JL, Epané JP, Gail J, Gupta S, Wainio JA. Hospital cultural competency as a systematic organizational intervention: key findings from the national center for healthcare leadership diversity demonstration project. *Health Care Manage Rev.* 2018; 43(1):30–41. doi: 10.1097/HMR.0000000000000128.
30. Liu TT, Chen MY, Chang YM, Lin MH. A preliminary study on the cultural competence of nurse practitioners and its affecting factors. *Healthcare (Basel).* 2022;10(4):678. doi: 10.3390/healthcare10040678.
31. Kaihlanen AM, Hietapakka L, Heponiemi T. Increasing cultural awareness: qualitative study of nurses' perceptions about cultural competence training. *BMC Nurs.* 2019;18:38. doi: 10.1186/s12912-019-0363-x.
32. Almutairi AF, McCarthy A, Gardner GE. Understanding cultural competence in a multicultural nursing workforce: registered nurses' experience in Saudi Arabia. *J Transcult Nurs.* 2015;26(1):16–23. doi: 10.1177/1043659614523992.
33. Geleta BA, Radie YT, Areri HA. Exploring cultural competence of nurses and associated barriers in Ethiopian tertiary hospitals: a qualitative study. *Appl Nurs Res.* 2021;62:151511. doi: 10.1016/j.apnr.2021.151511.
34. Grinberg K, Nissim S. Cultural competence among nursing students: exploring differences across academic stages. *BMC Nurs.* 2025;24(1):640. doi: 10.1186/s12912-025-03246-y.

ปัจจัยทำนายสมรรถนะทางวัฒนธรรมของบุคลากรทางการแพทย์ในเขตพัฒนาพิเศษภาคตะวันออกของประเทศไทย : การศึกษาแบบภาคตัดขวาง

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บทคัดย่อ: เขตพัฒนาพิเศษภาคตะวันออก (Eastern Economic Corridor: EEC) ของประเทศไทย มีการเติบโตทางเศรษฐกิจอย่างรวดเร็ว และการย้ายถิ่นของแรงงานจำนวนมาก ส่งผลให้เกิดความหลากหลายทางวัฒนธรรมมากขึ้น และเป็นความท้าทายต่อการให้บริการสุขภาพ บุคลากรทางการแพทย์จำเป็นต้องมีสมรรถนะทางวัฒนธรรมที่เข้มแข็งเพื่อตอบสนองความต้องการด้านสุขภาพที่หลากหลายของประชากร การศึกษาภาคตัดขวางนี้มีวัตถุประสงค์เพื่อศึกษาระดับสมรรถนะทางวัฒนธรรม และปัจจัยทำนายสมรรถนะทางวัฒนธรรมของบุคลากรทางการแพทย์ในเขต EEC กลุ่มตัวอย่างประกอบด้วยบุคลากรทางการแพทย์จำนวน 353 คน ได้แก่ นักศึกษาพยาบาล อาจารย์พยาบาล และพยาบาลวิชาชีพ ซึ่งคัดเลือกโดยการสุ่มอย่างง่ายจากมหาวิทยาลัยและโรงพยาบาลตติยภูมิในพื้นที่ เก็บรวบรวมข้อมูลระหว่างเดือนมีนาคมถึงมิถุนายน พ.ศ. 2567 โดยใช้แบบสอบถามข้อมูลส่วนบุคคล แบบวัดสมรรถนะทางวัฒนธรรมทางการแพทย์ แบบสอบถามค่านิยมเชิงวัฒนธรรมด้านสุขภาพ และแบบสอบถามการรับรู้นโยบายองค์กรเกี่ยวกับการดูแลเชิงวัฒนธรรม การวิเคราะห์ข้อมูลได้ดำเนินการโดยใช้สถิติเชิงพรรณนาและการวิเคราะห์ถดถอยพหุคูณ

ผลการวิจัยพบว่า กลุ่มตัวอย่างส่วนใหญ่ (ร้อยละ 94.13) มีสมรรถนะทางวัฒนธรรมในระดับค่อนข้างสูง โดยพบว่าปัจจัยที่ทำนายสมรรถนะทางวัฒนธรรมได้อย่างมีนัยสำคัญ 5 ปัจจัย ได้แก่ ค่านิยมเชิงวัฒนธรรมด้านสุขภาพ การรับรู้นโยบายขององค์กรเกี่ยวกับการดูแลเชิงวัฒนธรรม การเข้าร่วมประชุม/การฝึกอบรมด้านการดูแลเชิงวัฒนธรรม ประสบการณ์การทำงาน และความสามารถในการสื่อสารภาษาอื่น โดยค่านิยมเชิงวัฒนธรรมด้านสุขภาพเป็นตัวทำนายที่มีอิทธิพลมากที่สุด ปัจจัยเหล่านี้สามารถร่วมกันอธิบายความแปรปรวนของสมรรถนะทางวัฒนธรรมได้ร้อยละ 36 เนื่องจากสมรรถนะทางวัฒนธรรมของบุคลากรอยู่ในระดับค่อนข้างสูง จึงควรส่งเสริมและรักษาระดับนี้ไว้ นอกจากนี้ผู้บริหารและผู้สอนทางการแพทย์ควรให้ความสำคัญกับการส่งเสริมค่านิยมเชิงวัฒนธรรมด้านสุขภาพ กำหนดนโยบายองค์กรที่ชัดเจน และพัฒนาโปรแกรมฝึกอบรมด้านการดูแลเชิงวัฒนธรรมอย่างเป็นระบบ เพื่อเสริมสร้างความสามารถของพยาบาลในการให้บริการดูแลที่ตอบสนองต่อวัฒนธรรมแก่ผู้รับบริการหลากหลายกลุ่มประชากรในพื้นที่เขตพัฒนาพิเศษภาคตะวันออก

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คำสำคัญ : สมรรถนะทางวัฒนธรรม ค่านิยมเชิงวัฒนธรรมด้านสุขภาพ เขตพัฒนาพิเศษภาคตะวันออก บุคลากรทางการแพทย์ นโยบายองค์กร ประเทศไทย

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