

Relationship between Cultural Value and Critical Thinking Dispositions and their Difference among Nursing Students in Thailand and United States

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Abstract: Developing strong critical thinking dispositions is important to the development of effective critical thinking skills. However, increasing cultural diversity in the classroom and clinical settings may challenge the development of critical thinking dispositions among nursing students. This study aimed to compare and investigate the relationship between, cultural values and critical thinking dispositions among nursing students in Thailand and the United States. The sample comprised 200 nursing students from two distinct accredited nursing programs. The World Value Survey Longitudinal Data files (1981-2014) were used as the source of the cultural values data. The critical thinking dispositions data were gathered using the California Critical Thinking Disposition Inventory and analyzed utilizing descriptive statistics and Pearson's product-moment correlation coefficients.

The results showed no statistically significant relationship between cultural values and critical thinking dispositions. However, nursing students in the United States had a significantly higher mean score on the total cultural values and subscale of autonomy, secular, and emancipative values than nursing students in Thailand. In addition, nursing students in the United States had a significantly higher mean score than nursing students in Thailand on the total critical thinking dispositions and subscale scores of truth-seeking, open-mindedness, analyticity, systematicity, confidence in reasoning, and maturity of judgment. These results suggest nurse educators from these two countries, especially Thailand, could develop teaching strategies that enhance the development of students' critical thinking, especially in areas where specific scales on the critical thinking dispositions support the need for improvement to increase patient safety and healthcare quality.

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Introduction

The current healthcare system is complex.¹ The World Health Organization² emphasized high-quality care involves delivering impartial, effective, timely, safe, and patient-centred care. The Agency for Healthcare Research and Quality (AHRQ)³ specified

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that quality health care involves doing the right thing in the right technique at the right moment for the right patient or person to accomplish the best possible results. Globally, there is also a need to improve the quality of healthcare to achieve and sustain healthy populations and improve patient outcomes.

Preparing nursing students to think critically is essential and has been a major goal of nursing education.^{4,5} Critical thinking is important to decision making and resolving issues.⁶ The improvement of critical thinking skills and dispositions among nursing students is essential for nursing education, practice, and knowledge.⁷ Facione⁸ purported that critical thinking dispositions are necessary for the improvement of sound critical thinking skills. Critical thinking disposition is the internal inclination to employ critical thinking skills to select the best answer or approach.⁸ Therefore, developing strong critical thinking dispositions is imperative for nursing students to improve both the quality of healthcare and patient safety.

In the 21st century, nurse educators must recognize that cultural differences may prevail among students in both the classroom and clinical settings. There is no known research assessing directly how differences between Thai and American cultural values influence critical thinking dispositions of students in higher education. More broadly, however, some researchers did specify that the differences in the disposition to think critically among nursing students in Asian and non-Asian countries may be due to their culture.^{9,10} Asian culture including that of Thailand is commonly described as a high-power distance society, whereas Western culture including American illustrates lower power distance values.¹¹ Cultures with higher power distance are focused on teacher-centred education and learners are passive recipients.¹¹ Cultures with lower power distance are focused on student-centred learning and allow students to express their opinions and thoughts freely.¹¹ This could account for the differences in students' tendency to think critically. Even though most of the research indicated that

culture is a crucial factor influencing students' critical thinking in higher education,^{9,12} little research has been conducted to understand if critical thinking dispositions of nursing students differ between cultural groups, and how cultural values relate to critical thinking dispositions. Understanding the influence of cultural values on critical thinking dispositions is necessary for nurse educators to optimize student performance in the classroom and clinical setting.

Review of Literature

Critical thinking is a meaningful indicator for the evaluation and accreditation of baccalaureate and higher degree nursing programs.¹³ Both Thailand and the United States (U.S.) value critical thinking as the main goal and expected outcome of nursing education.^{13,14} The consensus definition of critical thinking in nursing, defined by experts from many countries, including Thailand and the U.S., indicates critical thinking is a key factor of quality nursing care and nurses' professional responsibility.¹⁵ Critical thinking in nursing is described as applying knowledge and experience to detect patients' needs and guide clinical judgments and practices that lead to better patient outcomes.¹⁶ The principles of the nursing process involving assessment, diagnosis, planning, implementation, and evaluation represent a critical thinking model that improves the quality of nursing care.¹⁷ Being a critical thinker in nursing requires integration between affective habits of the mind and skills.⁸ Additionally, creativity and intuition are included as affective parts of critical thinking in nursing.¹⁵

Affective inclinations in critical thinking reflect the willingness and ability of an individual to effectively use critical thinking skills in the decision-making process.¹⁸ Critical thinking dispositions are a requisite for and positively associated with improving critical thinking skills.¹⁹ The core components of critical thinking dispositions involve truth-seeking, open-mindedness, analyticity, systematicity, critical

thinking self-confidence, inquisitiveness, and maturity of judgment.⁸ These seven critical thinking dispositions are necessary for improving sound critical thinking skills among learners.

From the literature, three key factors appear to influence the critical thinking skills and inclinations of undergraduate nursing students: the student or individual, teaching and learning, and faculty factors.⁴ Another important factor that may influence critical thinking but has received less attention, is the influence of culture.¹² Culture is an important factor that may influence students or individuals, teaching and learning, and faculty.²⁰ When educators and students come from different cultural backgrounds, conflicts or misunderstandings may occur,²¹ which may reduce the student's ability to manage complex health problems or situations effectively. These cultural differences may also influence critical thinking.

Numerous scholars have specified that critical thinking could be influenced by cultural factors.^{9, 10, 12, 22, 23} However, culture does not have to be a barrier to the educational practice of critical thinking. Tiwari, Avery, and Lai¹⁰ compared the critical thinking dispositions between Asian (Hong Kong Chinese) and non-Asian (Australian) nursing students. Their findings illustrated significant differences between the two groups of nursing students for the California Critical Thinking Disposition Inventory (CCTDI) subscale scores of truth-seeking, open-mindedness, systematicity, and maturity of judgment. Comparing critical thinking dispositions between Asian (Chinese) and non-Asian (American) undergraduate and graduate students and showed significant differences between the critical thinking dispositions of Chinese and American students, when comparing the scale of confidence in reasoning and discipline.¹² Another study²⁴ compared the critical thinking dispositions of undergraduate nursing students between Taiwan and the United States and found significant differences in critical thinking dispositions between the overall scores for the two groups of students.

According to non-Asian students, they are confident in their decision-making ability, responsible for decisions, and prefer active strategies for conflict resolution.²⁵ In contrast, Asian students are sensitive to social contexts of judgment and place a high value on passive, collaborative strategies that avoid conflict.²⁵ Culture affects not only the way people do things, but also how they think. As Hofstede²⁵ highlighted, collectivism/interdependence exists in less developed and Eastern countries (i.e. Thailand), while autonomy/individualism exists in developed and Western countries (i.e. U.S.). Ultimately, this may affect a student's ability to discuss their knowledge or perceptions in the classroom and becomes a barrier to the development of critical thinking dispositions.

Although previous studies have reported that culture is a key factor influencing critical thinking, they are some limitations. First, many interventions designed to develop critical thinking in nursing students were grounded in critical thinking skills' definitions and rarely emphasized critical thinking dispositions.^{1,4,5} Second, few studies examined differences in critical thinking dispositions between undergraduate students in Asian and non-Asian countries,^{10,12} and rarely did they examine the relationship between cultural values and critical thinking dispositions. Finally, with a lack of research comparing critical thinking dispositions between pre-licensure baccalaureate nursing students in Thailand and the United States, this study was designed to provide greater insights into how critical thinking dispositions vary across cultures and provide more pedagogically valuable perspectives for international and multicultural education.

Study Aim

To explore the relationship between, and compare, cultural values and critical thinking dispositions in pre-licensure baccalaureate nursing students in Thailand and the U.S.

Method

Study design: A cross-sectional study

Study Settings and Participants: This study was conducted among students in the faculty of nursing in a university in Bangkok, Thailand, and a department of nursing in the U.S. The sample size was calculated utilizing the G*Power Program. Power analysis indicated that a minimum of 178 participants was necessary to achieve a power of 0.80 with a medium effect size of 0.15 with an alpha of 0.05.²⁶ In this study, a convenience sample included 100 third and fourth-year full-time pre-licensure baccalaureate nursing students each in Thailand and the U.S., for a total sample size of 200 participants.

Ethical Considerations: This study was approved by the Institutional Review Board (IRB) of the Faculty of Nursing, Mahidol University (Protocol number IRB-NS2018/78.1412RS1) and The Sage Colleges (Protocol number 761-2018-2019). The project was explained to all study participants including study aim, research methodology, inclusion and exclusion criteria, benefits, risks, and information about how to contact the primary investigator (PI) with questions. Participating in the study was voluntary and students were asked to sign an informed consent form before the onset of the study. Participants were free to withdraw from the study at any time without penalty and on their own volition. To protect individual student confidentiality, each student who agreed to participate received a unique identification number on their survey, rather than using their given name. The researcher did not influence student grades or assessment of clinical performance in either program. Although the PI is one of the faculty members in the research setting in Thailand, the PI introduced herself to students in both Thailand and the U.S. as a doctoral student and students never knew or had studied with the PI before. Thus, this study was conducted without researcher coercion. Study results were reported in aggregate, not individual-level format.

Measures: Instruments used to collect data included a demographic questionnaire and the California Critical Thinking Disposition Inventory (CCTDI). The 2013 Thailand and 2011 United States datasets from the World Values Survey (WVS) Longitudinal Data File (1981–2014) were selected as the source of the cultural values data for this study.

The demographic questionnaire, consisted of 13 items including year in nursing school, gender, age, country of birth, age a student first came to either of the two countries of interest (if not born there), current country of residence, length of time a student lived in their current country, primary language, religion, current overall grade point average (GPA), social class, highest educational level a student expects to complete, and email address for receiving their survey assessment.

The California Critical Thinking Disposition Inventory (CCTDI). This is a reliable and valid instrument that contains 75 items with seven subscales including truth-seeking, open-mindedness, analyticity, systematicity, confidence in reasoning, inquisitiveness, and maturity of judgment.¹⁸ The Delphi Report's consensus definition of critical thinking was utilized as the theoretical basis to measure critical thinking disposition. The questions in the CCTDI were rated using a six-point Likert scale ranging from 1–6 (strongly disagree to strongly agree) with scores ranging from 70 to 209 showing a negative critical thinking disposition; a score in the range of 210 to 279 showed the ambivalent disposition of critical thinking, and a score in the range of 280 to 420 indicated a positive critical thinking disposition.¹⁸ The Thai and English versions of the CCTDI were utilized to measure critical thinking dispositions among nursing students in Thailand and the U.S. Rigorous translation methods were employed to confirm validity, reliability and cultural competence of the CCTDI.¹⁸ In the initial pilot sample, factor analysis was performed on the CCTDI items. This process supported the construct validity of each of the seven CCTDI subscales. The

mean loading for the seven factors ranged from .387 to .528. Cronbach's alpha for the overall CCTDI was 0.91 and for the seven subscales ranged from .71 to .80 in the initial pilot sample.¹⁸

Cultural Values. The 2013 Thailand and 2011 U.S. datasets from the WVS Longitudinal Data File (1981–2014) were chosen as the source of the cultural values data for this study. WVS is a cross-national, time-series survey that investigates human beliefs and cultural values throughout the world.²⁷ Theory of Modernization and Cultural Variation was used as the theoretical basis to measure cultural values.²⁸ The sample from the 2013 Thailand and 2011 U.S. datasets of the WVS Longitudinal Data File (1981–2014) consisted of 1,200 adults from 43 provinces in Thailand and 2,232 adults from 50 states in the U.S., for a combined total of 3,432 adults. All of the surveys were conducted on the population aged 18 years and older through face-to-face interviews.²⁸

From this data, the researchers created a single Cultural Values Index from three relevant indices (Autonomy, Secular, and Emancipative values) included in the WVS Longitudinal Data File (1981–2014). This allowed for exploration of differences in cultural values between Thailand and the U.S. The Autonomy index (4 items) was computed from various qualities of children including independence, determination, religious faith, and obedience (e.g., “Obedience can encourage children to learn at home”). The response options ranged from 1 (not mentioned) to 2 (important). The Secular values index (12 items) measures a culture's secular distance from sacred authority (e.g., “One of my main goals in life has been to make my parents proud”). The response measures are 3-point Likert scales (good thing = 1 to bad thing = 3), 4-point Likert scales (agree strongly = 1 to strongly disagree = 4), 8-point Likert scales (more than once a week = 1 to practically never = 8) or 10-point Likert scales (never justifiable = 1 to always justifiable = 10) and not mentioned/important (not mentioned = 1

and important = 2). The Emancipative values index (10 items) focus on universal freedom (e.g., “University is more important for a boy than for a girl”). The response measures are 4-point Likert scales (agree strongly = 1 to strongly disagree = 4) or 10-point Likert scales (never justifiable = 1 to always justifiable = 10) and not mentioned/important (not mentioned = 1 and important = 2). An overall score can be in the 26–130 range. In this study, higher scores reflect greater levels of Autonomy, Secular or Emancipative values.

Cronbach's alpha for the Autonomy Index was 0.69 from the 2013 Thailand data, and 0.70 from the 2011 U.S. data. Cronbach's alpha for the Secular Values Index was 0.65 from the 2013 Thailand data, and 0.67 from the 2011 U.S. data. Cronbach's Alpha for the Emancipative Values Index was 0.64 from the 2013 Thailand data, and 0.64 from the 2011 U.S. data. Additionally, Cronbach's alpha for the Cultural Values Index was 0.70 from the 2013 Thailand data, and 0.75 from the 2011 U.S. data.

Data Collection: After IRB approval, the research was introduced to the Dean or Chair at the respective academic institutions. Before collecting data, the PI distributed flyers to nursing students inviting them to attend a session describing the study and encouraging participation. At this session, a brief overview of the study was presented to students after class or during their free time as described above in ethical considerations. Student questions were addressed and if students decided to participate in the survey, they signed an informed consent form and completed the survey.

A single coding sheet was developed to match individual CCTDI scores with unique identification codes, which were also included in each survey. Participants completed the demographic questionnaire and the CCTDI within approximately 30–45 minutes using paper and pencil. As Insight Assessment developed the original CCTDI instrument, they required all completed surveys to be scored by them.

Data Analysis: Data was analyzed with SPSS version 24.0. The demographic data were analyzed using appropriate descriptive statistics. The 2013 Thai and 2011 U.S. datasets of the WVS Longitudinal Data File (1981–2014) and CCTDI data were investigated utilizing descriptive and inferential statistics. Pearson correlation coefficients were used to examine the relationships between cultural values and critical thinking dispositions. The independent t-test was utilized to compare the mean Cultural Values Index score and CCTDI scores between the two countries. A statistical significance level of 0.05 was set for this study.

Results

A convenience sample of 100 nursing students in both Thailand and the U.S. participated in the study. **Table 1** demonstrates a summary of their demographic data. The Thai participants comprised 50 (50%) third- and 50 (50%) fourth-year nursing students, while the US participants comprised 61 (61%) third- and 39 (39%) fourth-year nursing students. The majority of the study participants were female in Thailand (92%) and the U.S. (90%). The ages of Thai students ranged from 20–36 years, whilst those of the U.S. students ranged 19–42 years.

Table 1 Summary of demographic data for participants from Thailand and U.S.

Characteristic	Thailand			U.S.		
	n	%	Mean (SD)	n	%	Mean (SD)
College students						
Junior	50	50.0		61	61.0	
Senior	50	50.0		39	39.0	
Gender						
Male	8	8.0		10	10.0	
Female	92	92.0		90	90.0	
Age (years)	100	100.0	21.45 (1.69)	100	100.0	24.11 (4.32)
Country of birth						
Thailand/U.S.	100	100.0		89	89.0	
		(Thailand)			(U.S.)	
Other	–	–		11	11.0	
Age student first came to country (years)	–	–		11	11.0	11.64 (6.47)
Current country of residence						
Thailand/U.S.	100	100.0		100	100.0	
		(Thailand)			(U.S.)	
Other	–	–		–	–	
Length of time student had lived in Thailand/U.S. (years)						
Thailand	100	100.0	21.45 (1.69)	–	–	–
U.S.	–	–	–	100	100.0	22.83 (5.46)
Primary language						
Thai/English	100	100.0		95	95.0	
		(Thai)			(English)	
Other	–	–		5	5.0	
Religion						
Buddhist	97	97.0		2	2.0	
Christian	–	–		75	75.0	
Muslim	2	2.0		2	2.0	
Other	1	1.0		21	21.0	
Current overall GPA						
2.0–2.5 GPA	8	8.0		–	–	
2.6–3.0 GPA	55	55.0		2	2.0	
3.1–3.5 GPA	34	34.0		33	33.0	
3.6–4.0 GPA	3	3.0		65	65.0	

Table 1 Summary of demographic data for participants from Thailand and U.S. (Cont.)

Characteristic	Thailand			U.S.		
	n	%	Mean (SD)	n	%	Mean (SD)
Social class						
Upper class	-	-		1	1.0	
Upper middle class	44	44.0		45	45.0	
Lower middle class	52	52.0		39	39.0	
Working class	3	3.0		13	13.0	
Lower class	1	1.0		2	2.0	
Highest educational level students expected to complete						
University/college-level education, with degree	100	100.0		100	100.0	

Regarding the association between cultural values and critical thinking dispositions, no statistically significant relationship was found with both subscale and total scores among nursing students in both groups ($p > .05$) (**Table 2**).

Table 2 Correlations between cultural values and critical thinking dispositions (total and seven subscale mean scores) among pre-licensure baccalaureate nursing students in Thailand and US

Critical Thinking Dispositions	Autonomy Values	Secular Values	Emancipative Values	Cultural Values
Truth-seeking				
Thailand	.014	-.011	.092	.096
US	-.143	.005	.174	.043
Open-mindedness				
Thailand	.036	.046	-.018	-.022
US	.008	-.009	.002	-.009
Analyticity				
Thailand	.017	-.025	.157	.164
US	.057	-.062	.092	-.055
Systematicity				
Thailand	.001	-.016	.061	.064
US	-.140	.000	.149	.034
Confidence				
Thailand	-.087	-.113	.051	.062
US	.075	-.107	-.078	-.114
Inquisitiveness				
Thailand	.124	.136	.017	.006
US	-.051	-.012	-.009	-.004
Maturity				
Thailand	.012	.015	-.006	-.077
US	-.025	-.056	.129	-.034
California Critical Thinking Disposition Inventory (CCTDI) total scores				
Thailand	.015	-.004	.074	.076
US	-.049	-.048	.088	-.027

* $p < .05$, ** $p < .01$

Relationship between Cultural Value and Critical Thinking Dispositions

Specific to cultural values (including autonomy, secular and emancipative values), the U.S. reported a significantly higher cultural values mean score ($M = 66.43$) than Thailand ($M = 54.10$) ($p < .05$).

The U.S. also had a higher mean score on autonomy, secular, and emancipative values than Thailand ($p < .05$). (See **Table 3**).

Table 3 Independent samples T-Test: comparison of cultural values index mean score between samples

Cultural Values Sub-Index	Country	n	Mean	SD	t-value	df	p-value
1. Autonomy Index ^a	Thailand	1,200	6.07	1.03	-2.87	2694.56	.004
	U.S.	2,232	6.18	1.15			
2. Secular Values Index	Thailand	1,024	23.44	6.39	-9.51	2411.70	.000
	U.S.	2,006	25.94	7.66			
3. Emancipative Values Index	Thailand	1,069	24.60	6.09	-36.18	2836.43	.000
	U.S.	2,083	34.16	8.56			
4. Total Cultural Values Index	Thailand	946	54.10	10.73	-26.14	2362.76	.000
	U.S.	1,923	66.43	13.92			

Note. a = equal variances not assumed

Table 4 shows the t-test analyses for the CCTDI subscale and total scores between nursing students in both countries, six of the seven CCTDI subscale mean scores (open-mindedness, analyticity, systematicity, confidence in reasoning, inquisitiveness, and maturity of judgment) were above 40, indicating that the students had a positive critical thinking disposition. In contrast,

Thai students indicated a positive disposition (mean scores above 40) toward four of the seven CCTDI subscale (open-mindedness, analyticity, confidence in reasoning, and inquisitiveness). Nursing students in both countries had the highest mean score for inquisitiveness and the lowest mean score for truth-seeking.

Table 4 Independent samples T-Test: comparison of California Critical Thinking Disposition Inventory (CCTDI) subscale and total scores between Thailand and U.S. (n=200)

CCTDI	Group	n	Mean	SD	t-value	df	p-value
Truth-seeking ^a	Thailand	100	36.90	7.39	-2.56	186.62	.011
	US	100	39.30	5.75			
Open-mindedness ^a	Thailand	100	40.35	3.74	-6.47	164.80	< .001
	US	100	44.96	6.06			
Analyticity	Thailand	100	41.34	5.12	-5.07	198	< .001
	US	100	45.10	5.37			
Systematicity	Thailand	100	39.26	6.30	-3.00	198	.003
	US	100	42.12	7.15			
Confidence	Thailand	100	43.52	5.84	-2.49	198	.014
	US	100	45.65	6.28			
Inquisitiveness ^a	Thailand	100	48.54	5.38	-.76	183.53	.449
	US	100	49.22	7.17			
Maturity	Thailand	100	38.19	6.47	-6.90	198	< .001
	US	100	44.50	6.47			
CCTDI total ^a	Thailand	100	288.10	26.77	-5.54	198	< .000
	US	100	310.85	31.11			

Note. a = equal variances not assumed

The findings indicated that Thai students scored significantly lower than the US students on the total CCTDI score and subscale scores of truth-seeking, open-mindedness, analyticity, systematicity, confidence in reasoning, and maturity of judgment. However, there was no statistically significant difference in the CCTDI subscale scores for inquisitiveness between students in both countries.

Discussion

This study revealed no relationship between cultural values and critical thinking dispositions among nursing students in Thailand and the United States. The difference in students' critical thinking skills and dispositions are explained by English language ability rather than cultural factors.²⁹ Further, the differences in the disposition to think critically among nursing students in Asian and non-Asian countries may be due to the environment and educational approaches.⁹ However, the results of this study are not consistent with some previous studies.

Critical thinking dispositions of university students could be influenced by cultural values^{10, 12, 24} for culture is an important factor in critical thinking development that may affect students or individuals, teaching and learning, and faculty. In the educational realm, a culture that encourages classroom discussions and provides freedom of expression and thoughts may promote the positive disposition of critical thinking. Asian culture illustrates higher power distance value, whereas Western culture exhibits lower power distance value.²⁵ In high power distance society, teachers are highly respected by students and the educational process is teacher-centred.³⁰ Students in high power distance cultures speak up only when invited by the educator.¹¹ As a result, Asian students' learning styles and behaviours influenced by cultural values may impede the development of critical thinking dispositions.

The inconsistency between the results of our study and those of previous studies raises the question

about the influences of cultural values on critical thinking dispositions. Therefore, future research should explore the relationship between cultural values and critical thinking dispositions of nursing students to confirm the findings of this study.

More specifically, the findings illustrated a significant difference in cultural values between Thailand and the U.S., since the U.S. students reported significantly higher cultural values mean scores on autonomy, secular, and emancipative values than the Thais. For autonomy values, the finding is consistent with statements from the literature that Western cultures, especially in the U.S., normally value autonomy, self-determination, and individualism, whereas Eastern cultures (Asian countries), promote interdependence, cohesiveness, group harmony, and connection with others.³¹ Thailand's culture is a collectivist society that focuses on group membership (i.e., extended family or extended relationships), whereas the U.S. is identified as individualistic societies that focus on human rights, freedom of expression and equality.¹¹

Secular-rational values are comprised of defiance, disbelief, relativism and scepticism sub-indexes that measure a culture's secular distance from sacred authority.³² A person who has high secular-rational values is reflected to be low in religious-traditional values.³³ Thailand is a collectivist society and Buddhism serves as part of the foundation of Thailand's identity and culture.³⁴ The U.S. is a society of cultural diversity and freedom of religion, equality, and individuality are the core American cultural values.³⁵ The finding in this study is consistent with the findings from the WVS in the 5th and 6th Waves that Thailand, as a Buddhist country, had high traditional values.³⁶

Emancipative values index in this study includes equality, voice, and choice sub-indexes which focus on universal freedom. Thailand and the U.S. are democratic countries and legitimately recognize the equal rights of people. However, Thailand, as a Buddhist country, does not allow females to enter into monkhood³⁴ and believes that being transgender is a punishment for

sins committed in a past life.³⁷ Same-sex marriages are currently not legally recognized in Thailand, whilst they are in the U.S. The finding in this study is consistent with the finding from the World Values Survey in the 5th Waves that the U.S. is a society with stronger emancipative values (Emancipative Values Index (EVI) score above 0.48), whereas Thailand is a society with weaker emancipative values (EVI score below 0.37).³²

Findings in this study showed that third and fourth-year pre-licensure baccalaureate nursing students in the U.S. reported significantly higher CCTDI total mean score than the third- and fourth-year pre-licensure baccalaureate nursing students in Thailand. Additionally, six subscale scores including truth-seeking, open-mindedness, analyticity, systematicity, confidence in reasoning, and maturity of judgment of nursing students in Thailand were significantly lower than nursing students in the U.S. The reasons for the differences in the disposition to think critically of nursing students in Asian and non-Asian countries might be due to educational systems, culture, or environmental differences.^{9,10} Raymond and Choon³⁰ emphasized that Asian students are seen as passive learners because they are not confident to speak out for fear of being wrong and seldom express their opinions in classroom discussions, which tend to limit the improvement of students' critical thinking. For Thai students, they are taught to obey and honour their teachers, and teachers are highly respected and regarded as authoritative, experienced, and knowledgeable.^{22,38} The role of Thai students is to listen and avoid confrontation, disagreement, and conflict with their teachers and friends.^{22,39} A Thai student may feel uncomfortable to ask questions and disagree with the teacher during class because they are taught not to argue with teachers. Thus, they are generally quiet and seldom ask questions in the classroom.²²

In contrast, non-Asian students such as Westerners tend to be active learners that are

confident in expressing their opinions and ideas with teachers and other learners in the classroom,³⁰ which may relate to the development of critical thinking. The U.S. is classified as an individualistic society that focuses on freedom of expression and fairness. Confrontations and open discussion of conflicts can be valuable in the individualist classroom.¹¹ U.S. students are also encouraged to freely discuss, ask questions, work in groups, and express opinions in the classroom, rather than focus on memorization. When freedom of expression and student-led discussions are encouraged, critical thinking dispositions and skills could be promoted.

Interestingly, nursing students in Thailand and the U.S. had the lowest on the truth-seeking subscale, which indicates that they are less inclined to develop their ability to ask challenging questions, seek the truth/best knowledge, and follow the reasons and evidence. Lower or ambivalent scores for truth-seeking might be due to passive pedagogical strategies (lecturing) that the broader information was provided by the educator.⁴⁰ Some nurse educators do not create a positive classroom environment where students feel free to communicate with the teacher.⁴⁰ Discussions and interaction between the educator and students are very important to develop truth-seeking in nursing students. Therefore, instructors should integrate active learning into both academic and clinical settings that encourage students to pursue a deeper understanding of information and to prevent bias, prejudice, or preconception on knowledge and fact. The differences in critical thinking dispositions of nursing students in Thailand and the U.S. might be viewed as cultural or educational, rather than intellectual acumen.

Limitations

Limitations of this study primarily resulted from the small sample size (n=200) which precluded the generalizability of the study to a larger population of pre-licensure baccalaureate nursing students in

both countries. The participants were pre-licensure baccalaureate nursing students from a single setting in each country, which may not allow the findings to be generalized to other settings in both countries. Using secondary data analysis (the WVS) to investigate the difference in cultural values between Thailand and the United States was a limitation in that the data was not designed to answer the researcher's specific study aims and hypotheses, nor was the data collected on the unique population of interest.

Conclusions and Implication for Nursing Practice

Findings from this study will increase the understanding of leaders in academic settings and nurse educators regarding critical thinking dispositions across nursing students from different cultures and countries (Thailand and the U.S.). Understanding the influence of cultural values on critical thinking dispositions is essential for nurse educators to achieve an optimum level of teaching and learning. According to our findings, Thailand showed lower cultural values on autonomy, secular, and emancipative values than the U.S. students, while in Thailand they value cohesiveness, group harmony, and equality, whereas nursing students in the U.S. value autonomy, individualism, and freedom.

Although the findings showed that the cultural values and critical thinking dispositions of nursing students are not related, they do suggest similarities and differences in critical thinking dispositions between nursing students in Thailand and the United States. Due to societies and classrooms becoming more diverse with students from different countries, cultural backgrounds, and language skills, educators must be aware of the impact of these factors upon teaching/learning and students' critical thinking dispositions and skills. Improving critical thinking skills and dispositions in nursing students is recognized as an effective venue to promote future enhanced healthcare quality and patient safety.

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ความสัมพันธ์ระหว่างค่านิยมทางวัฒนธรรมและคุณลักษณะการคิดอย่างมี วิจารณญาณและความแตกต่างของนักศึกษาพยาบาลในประเทศไทยและ สหรัฐอเมริกา

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บทคัดย่อ: การคิดอย่างมีวิจารณญาณนับเป็นทักษะที่สำคัญในการศึกษาทางการพยาบาลและการปฏิบัติทางคลินิก การส่งเสริมคุณลักษณะการคิดอย่างมีวิจารณญาณที่ดีเป็นพื้นฐานที่จำเป็นต่อการพัฒนาทักษะการคิดอย่างมีวิจารณญาณที่มีประสิทธิภาพ อย่างไรก็ตาม ความหลากหลายทางวัฒนธรรมที่เพิ่มขึ้นทั้งในห้องเรียนและการฝึกปฏิบัติงานของผู้ป่วยอาจส่งผลกระทบต่อพัฒนาคุณลักษณะการคิดอย่างมีวิจารณญาณของนักศึกษาพยาบาล การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างค่านิยมทางวัฒนธรรมและคุณลักษณะการคิดอย่างมีวิจารณญาณของนักศึกษาพยาบาลในประเทศไทยและสหรัฐอเมริกา เปรียบเทียบค่านิยมทางวัฒนธรรมระหว่างประเทศไทยและสหรัฐอเมริกา และเปรียบเทียบคุณลักษณะการคิดอย่างมีวิจารณญาณของนักศึกษาพยาบาลในประเทศไทยและสหรัฐอเมริกา กลุ่มตัวอย่างในการศึกษานี้ คือนักศึกษาพยาบาล จำนวน 200 คน จากหลักสูตรพยาบาลศาสตรบัณฑิต จำนวน 2 หลักสูตรในประเทศไทยและสหรัฐอเมริกาที่ได้รับการรับรองมาตรฐานคุณภาพการศึกษา ข้อมูลเกี่ยวกับค่านิยมทางวัฒนธรรมในการศึกษานี้ได้จากการวิเคราะห์ข้อมูลงานวิจัยแบบระยะยาวของ World Value Survey (พ.ศ. 2524-2557) เก็บรวบรวมข้อมูลคุณลักษณะการคิดอย่างมีวิจารณญาณโดยใช้แบบสอบถาม California Critical Thinking Disposition Inventory และวิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนาและสัมประสิทธิ์สหสัมพันธ์เพียร์สัน ผลการวิจัยพบว่า ค่านิยมทางวัฒนธรรมไม่มีความสัมพันธ์กับคุณลักษณะการคิดอย่างมีวิจารณญาณ อย่างไรก็ตาม นักศึกษาพยาบาลของประเทศไทยและสหรัฐอเมริกามีคะแนนเฉลี่ยของค่านิยมทางวัฒนธรรม ค่านิยมความเป็นอิสระ ค่านิยมทางโลก และค่านิยมแห่งการปลดปล่อยสูงกว่านักศึกษาพยาบาลของประเทศไทย นอกจากนี้ นักศึกษาพยาบาลในประเทศไทยและสหรัฐอเมริกามีคะแนนรวมคุณลักษณะการคิดอย่างมีวิจารณญาณ และคะแนนองค์ประกอบด้านการขอค้นหาความจริง การเปิดใจกว้าง การคิดอย่างวิเคราะห์ การคิดอย่างเป็นระบบ ความมั่นใจในตนเองและความมีวุฒิภาวะสูงกว่านักศึกษาพยาบาลในประเทศไทยอย่างมีนัยสำคัญทางสถิติ อาจารย์พยาบาลจากทั้งสองประเทศโดยเฉพาะประเทศไทยสามารถนำผลการวิจัยที่ได้ไปพัฒนาหลักสูตรการสอนเพื่อส่งเสริมการคิดอย่างมีวิจารณญาณของนักศึกษาในด้านที่จำเป็นต้องได้รับการพัฒนา การพัฒนาคุณลักษณะการคิดอย่างมีวิจารณญาณในนักศึกษาพยาบาลเป็นสิ่งที่สำคัญอย่างมากในการส่งเสริมความปลอดภัยและคุณภาพการดูแลผู้ป่วย

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