

STUDY ON CULTURAL COMPETENCY OF JAPANESE NURSES

by

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DEDICATION

This is dedicated to my family who always supported my academic career. They have helped me to believe that I can accomplish my PhD study. A special thanks goes to my husband, Tomokazu Serizawa for proving his special support and encouragement. He has helped me to believe that I can do anything and has always respected my academic career.

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ABSTRACT

STUDY ON CULTURAL COMPETENCY OF JAPANESE NURSES

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George Mason University, 2008

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There is an increase in the number of immigrants and foreign residents in Japan. This social demographic change requires Japanese nurses to deliver culturally appropriate and sensitive care. It is thus necessary to expand the research addressing Japanese nurses' cultural competency. However, there are few studies addressing the issues regarding Japanese nurses' cultural competency and associated variables. Furthermore, the literature suggests that the nurses' habits of mind and attitudes regarding critical thinking dispositions (CTDs) may possibly be connected with some of the key components of cultural competence, but there are no studies examining the relationships among these variables.

In addressing this gap, the purposes of this study were: 1) to examine the level of cultural competency reported by Japanese nurses; 2) to examine the level of CTDs reported by Japanese nurses; 3) to examine the relationship between nurses' cultural competency and their CTDs; and 4) to examine the relationship between nurses' cultural

competency and selected demographic and personal factors. Cultural competency levels were measured by using the Japanese version of Campinha-Bacote's Inventory for Assessing the Process of Cultural Competency among Healthcare Professionals-Revised (IAPCC-R). The Japanese version of the California Critical Thinking Disposition Inventory (CCTDI) was employed to measure nurses' levels of CTDs.

The study included a sample of 1,035 Japanese nurses. The findings indicated that nurses mostly perceived that they were only at a "culturally aware" level according to the IAPCC-R. Nurses' cultural competency levels were lower than those reported by western studies. Clinical experience in caring for culturally diverse clients, experience in taking courses and workshops related to cultural nursing care, other learning experiences about the concept of cultural diversity, and ability to speak a foreign language were significant factors influencing cultural competency levels. The findings further indicated that sub-scales of CCTDI including inquisitiveness, open-mindedness, self-confidence, systematicity, and maturity were predictors of nurses' cultural competency. Responses by nurses to a series of more qualitative questions provided additional insights into their experiences with, and perceptions of, caring for culturally diverse clients. Those responses also provided information regarding impressions of the study, feelings towards the issue of cultural competency, and suggestions relating to the modification of the IAPCC-R. Overall, the study suggests the need for the development of better cultural competency education and practice.

I. INTRODUCTION

Background

Like other western countries such as the United States of America (U.S.A.), United Kingdom (U.K.) and Australia, Japan is growing to be a very diverse society. The population of foreign nationals and patients from diverse cultural, ethnic and linguistic backgrounds has consistently increased in Japan. One such example is the increased population of foreign residents. According to the statistics reported by the Ministry of Justice, Immigration Bureau of Japan (2007), the number of foreign residents in Japan exceeded 2.08 million by 2006. This population cohort currently comprises nearly 1.63 % of the Japanese population and it is predicted to increase markedly by mid-century. This social demographic change requires that Japanese nurses have greater skills in delivering culturally competent care.

It is generally understood that Japanese culture values homogeneity. However, given the rapid growth in the foreign resident population, healthcare organizations can no longer solely focus on meeting the needs of the majority Japanese population. Salimbene (1999) indicates that within a diverse healthcare environment, healthcare providers should discard the assumption that all participant's quality of care can be treated and evaluated based on the same criteria designed for a largely homogeneous or mainstream culture. To ensure quality of care, healthcare providers are required to increase their

cultural and linguistic awareness and sensitivity to diverse client groups (Salimbene, 1999). Her perspectives must be addressed by Japanese healthcare professionals in this rapidly increasing environment of foreign patients. Healthcare organizations must prepare culturally competent care providers who can meet the needs of minority populations which will include a high percentage of foreign and ethnic groups of patients (Hirano, 2003).

In order to promote culturally competent care among culturally diverse patients and consumers, the need for improvement of health providers' cultural competency is paramount. However, the preparation of culturally competent providers is not easy and remains a challenge today. Unlike the healthcare environments in other developed countries such as the U.S.A which promote culturally appropriate care, Japanese health care organizations are not familiar with the concept of culturally competent healthcare services. The multi-faceted concepts of culturally competent care and services are still new to both healthcare organizations and educational institutions in Japan, and have yet to be positively valued or embraced.

Cultural competency is defined as the ability to care for each individual or group, with sensitivity, respect and empathy for the associated values, beliefs, attitudes and behaviors (Smith, 2001). Within nursing practice, cultural nursing care is defined as those cognitively based decision making processes that respect an individual, group or institution's cultural values, beliefs, and life-ways (Leininger, 1991) in order to sustain a high quality of health care outcomes (Duffy, Harju, Huittinen, & Trayner, 1999; Leininger, 1995). To become culturally competent, nurses must be aware of their own biases and

presumptions and open-minded when applying alternative services to meet the specific care needs from individuals and group members.

Recent broad concepts of cultural competency in nursing further address a nurse's ability to respect for and understand individual differences such as religion, gender, occupation, sexual orientation and geographic location within subcultures of society (Campinha-Bacote, 2003a). Cultural competence therefore emphasizes the respect for individuals from not just different ethnic backgrounds but also individuals with varying cultural backgrounds within a subculture of society.

Several nursing theorists within western countries (Campinha-Bacote, 1998, 1999, 2002, 2003a, b; Giger & Davidhizar, 2002; Jacqueline & Rosenjack, 2002; Leininger, 1991, 2002; Purnell, 2002) have expanded the broad concepts of culturally competent nursing through the development of cultural competency models. One such example is Campinha-Bacote's model of cultural competency (Campinha-Bacote, 1998, 1999, 2002, 2003a, b). In her model, she defines cultural competency as five constructs including cultural desire, cultural awareness, cultural knowledge, cultural skill and cultural encounters. Based on her model, she further develops the instrument that can examine the healthcare providers such as nurses' cultural competency. Campinha-Bacote's model and instrument address the current broad sense of cultural competency and they have been applied in a number of nursing studies within western countries.

The recent broad concepts of cultural competency have not been addressed by previous research study in Japan. There are no studies measuring cultural competency of Japanese nurses which is focused on care of foreign patients, of patients from other ethnic

origins, or individuals of subcultures of Japan. Furthermore, there are no instruments which can measure broad concepts of cultural competency for Japanese nurses.

The current healthcare practices in Japan have not promoted cultural competent care. Today's healthcare organizations and providers in Japan appear not to deliver culturally competent care. The issue of limited cultural competency is often identified in the studies which examine the care for foreign patients. Previous reports (Hirano, 2003; Miyaji, 1994, 1997; Omori & Kido, 1999; Report of the perceptions and concurrent condition of foreign residents who lived in Kyoto, n.d.; Special Non Profit Corporation Foreigner Medical Center, 2003) indicate that foreign patients are concerned and dissatisfied with Japanese healthcare services. Their concerns primarily reflect on the issues related to providers' limited clinical expertise with diverse populations, language and communication barriers, and lack of respect for the healthcare needs of foreign patients. These issues reflect the nature of Japanese society concerning the homogenous culture and the routine practices, stereotypical attitudes and prejudiced reactions of healthcare providers. This discourages the creation of alternative thinking and care provision that reflects understanding and acceptance of diverse health beliefs and practices of foreign patients (Kawashima, 2006, July).

These issues are generally related to health delivery contexts for foreign patients, but not with patients from other cultural and ethnic orientations. For example, individuals who may have grown up in Japan but have different ethnic backgrounds and Japanese who may have come from other areas of Japan also have different cultural orientations. Furthermore, these issues mostly reflect practice issues among all health care providers

including physicians and nurses. There has been no focus on addressing the issues regarding the Japanese nurses' cultural competency. Nurses spend more time with patients than other health care providers (American Institutes for Research, 2004) and it is necessary to expand research addressing Japanese nurses' cultural competency in caring for patients from diverse ethnic and cultural backgrounds.

While there are only a few studies (Hasegawa, Takeda, Tsukida, & Shirakawa, 2002; Sugiura, 2003; Yamaguchi, 1999) that have focused on cultural competency of Japanese nurses, however, they address a very limited sense of cultural competency. Sugiura (2003) examined the Japanese nurses' cultural competency levels and found that a majority of nurses were not confident in caring for foreign patients. The study found Japanese nurses had limited knowledge and skills when attempting to perform culturally competent care for foreign patients. The findings of her study reveal a need for the improvement of nurses' cultural competency through the development of education modules as well as further research to address this issue. Conversely there are no studies have expanded Sugiura's findings to add to the body of knowledge relating to nurse' cultural competency in Japan.

Although Sugiura's (2003) study is the first knowledgeable contribution about Japanese nurses' cultural competency, it is very limited in its examination of the broad sense of cultural competency. Indeed, the instrument used for her study only focuses on measuring a nurse's cultural competency in caring for foreign patients but ignores patients from other cultural and ethnic backgrounds. General minority ethnic groups in Japan include not only foreign residents but also other groups such as Resident Korean,

Chinese, Brazilian and Ainu, as well as those who may have grown up in Japan but often have different cultural and ethnic background. Thus Sugiura's study does not address Japanese nurses' cultural competency for these minority ethnic groups. Furthermore, recent concepts of cultural competency in nursing address a nurse's ability to respect and understand individual differences such as religion, gender, occupation, sexual orientation and geographic location within subcultures of society. Cultural competence emphasizes the respect for individuals from not just different ethnic backgrounds but also individuals with varying cultural backgrounds within a subculture of society. This broad sense of cultural competency was not addressed by Sugiura's study or by other studies of cultural competency in nursing. Thus, there is a need for further studies measuring cultural competency of Japanese nurses which is not just focused on foreign patients but for patients from other ethnic origins as well as individuals of subcultures of Japan. In order to address this challenge, there is a need for an instrument which can measure broad concepts of cultural competency for Japanese nurses. Such an instrument must be qualified and culturally sensitive to measure Japanese nurse's cultural competency. However, no studies developing such a tool have been identified.

Furthermore, Sugiura's (2003) study provides new information for determining demographic and personal factors that influence Japanese nurses' cultural competency such as overseas living experience, having a chance to meet foreign patients off duty, the ability to speak a foreign language, the difficulty experienced when caring for foreign patients, the number of foreign patients nurses have cared for, learning experiences in the area of anthropology, learning experiences in the concepts of cultural diversity, and

participation in cultural competency training. However, her study was not extended to examine how Japanese nurses' habits of mind and attitudes that are fostered in prior educational and professional backgrounds are impacting culturally competent care. One way to look at the characteristic of Japanese nurses' attitudes and habits of mind would be an examination of their critical thinking dispositions (CTDs).

CTDs are an essential components of professional accountability and is a cognitive thinking process to identify a patient's care needs based upon clinical judgment (Fesler-Birch, 2005). The key components of CTDs refer to the providers' attributes, attitudes and habits of mind, as those are the required dispositions to become critical thinkers. It often includes reflection, open-mindedness, questioning, inquisitiveness and evaluation, and self-confidence to consider whether common practice is appropriate and respectable for the patients' and their families' unique care needs (Profetto-McGrath, 2003). Such core components of critical thinking (CT) are often influenced by the practitioners' prior educational and professional nursing practice. Supporting this argument, previous studies (Kawashima, 2003; Kawashima & Petrini, 2004) determined that Japanese nurses' previous practices and education were potentially affecting their CTDs. The examination of CTDs, therefore, would provide some unique characteristics of habits of mind and attitudes that are influenced by prior educational and professional experiences. Subsequently CTDs as a possible variable associated with Japanese nurses' ability to provide culturally competent care would provide further unique aspects relating to cognitive thinking, behavior and attitudes.

A further argument for the need to include CTDs as possible influential variable is

the review of key components of CTDs and cultural competency indicates that these are harmonious components. For instance, the CTDs of reflection, open-mindedness, questioning and inquisitiveness appear to be connected with several core aspects of cultural competency. In relation to this perspective, western literature reveals that CTDs such as the open-mindedness and inquisitiveness are significantly correlated with cultural knowledge, skills and attitudes (Doutrich & Storey, 2004). However, CTDs as variables have drawn little attention and very limited understanding in order to demonstrate this assumption within nursing studies. No studies have attempted to examine CTDs as a possible factor correlated with the Japanese nurses' cultural competency in caring for foreign patients. It is therefore of significant interest to include CTDs as a possible variable.

Purpose of the Study

The purposes of this study include: 1) to examine the level of cultural competency reported by Japanese nurses; 2) to examine the levels of CTDs reported by Japanese nurses; 3) to examine the relationship between Japanese nurses' cultural competency and their CTDs; and 4) to examine the relationship between Japanese nurses' cultural competency and selected demographic and personal factors.

Significance of the Study

This study seeks to address factors, concerns, and perspectives relating to Japanese nurses' cultural competency. The results of this study could be used to identify the challenge for nurses as well as encourage nurses to improve their cultural care competency. The study will reveal information that could be used to assess and revise

existing nursing curriculum, teaching strategies, continue professional education in order to foster culturally competent nursing students and nurses.

The exploration of the relationship between Japanese nurses' cultural competency and demographic and personal factors and CTDs, is one avenue that may contribute to a new body of knowledge for Japanese nurses' cultural competency. The findings from this examination of the association between CTDs and cultural competency can be further used to inform educational strategies relating to culturally appropriate care and CT that nurse educators could incorporate into nursing curriculum and clinical practice.

The study will provide further challenging areas for developing valid and reliable assessment tools that can measure Japanese nurses' cultural competency. Information gained from this study will improve culturally competent skills that are sensitive to Japanese culture.

The results of the study may be used to identify issues relating to the rights of minority peoples to access culturally and linguistically appropriate care. Lastly, the study can increase in the awareness of policy makers in nursing education and practice settings for the need to prepare culturally competent professional nurses.

Conceptual Framework

The conceptual framework for this study is based on the Campinha-Bacote's model of the Process of Cultural Competence in the Delivery of Healthcare Service. Campinha-Bacote's model (1998, 1999, 2002, 2003a, b) describes cultural competency as a process of practice development rather than as practice outcomes (Campinha-Bacote, 1998, 1999, 2002, 2003a, b). Becoming culturally competent is a process of development

that requires major changes in the attitudes, beliefs, behaviors and communication styles to effectively work within cultural environments of clients (Campinha-Bacote, 2003b).

The model describes the processes as the integration of cultural awareness, desire, knowledge, skill and encounters.

Cultural Desire

To begin this process, nurses need the desire to learn about culture.

Campinha-Bacote (1999, 2002, 2003a, b) indicates cultural desire as the motivation of healthcare providers to want to engage in the process of cultural competency. This process emphasizes a nurse's willingness and passion to be open-minded and flexible to learn about different cultures (Campinha-Bacote, 2003a, b). Cultural desire also requires the nurse's commitment to work with and care for all clients from culturally and ethnically diverse backgrounds. Campinha-Bacote emphasizes that to involve the development process for cultural competency, nurses must first be motivated in caring for culturally diverse clients. This type of desire requires nurses to commit to a life-long learning approach to their professional practice (Campinha-Bacote, 2003a,b). Exploring this view, in her later revision of her model, she depicts the process of cultural competence as a volcano. The volcano erupts when nurses have cultural desire to become culturally competent nurses (Campinha-Bacote, 2003a, b). When the volcano erupts (having cultural desire), nurses will start to seek cultural awareness, cultural encounter, and obtaining cultural knowledge and skill (Campinha-Bacote, 2003a, b) (Figure 1).

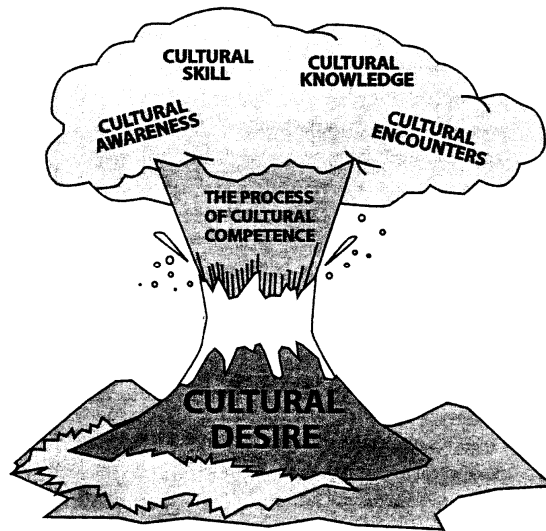


Figure 1. The Process of Cultural Competence in the Delivery of Healthcare Services

From *The Process of Cultural Competence in the Delivery of Healthcare Services: A Culturally Competent Model of Care* (4th ed.) by J. Campinha-Bacote, 2003. Copyrighted by Campinha-Bacote (2002). Printed with Permission from Transcultural C.A.R.E. Associates.

Cultural Awareness

Culturally competent nurses start by exploring their own culture. Cultural awareness emphasizes nurses' self-reflection and examination to be aware of their own attitudes, beliefs, expectation, assumptions, biases and prejudices towards patients whose cultural backgrounds differ from theirs (Campinha-Bacote, 1999, 2002, 2003a, b). Without reflection, there is a tendency to emphasize one's own views and values on care interventions (Campinha-Bacote, 1999, 2002, 2003a, b). Through this self-reflection, they are not only aware of their own culture but can begin to accept and integrate cultural differences among patients and thus avoid stereotypical attitudes.

Cultural Knowledge

Cultural knowledge is a learning process that encourages the nurses to become knowledgeable in health related beliefs, values, disease, prevalence, and treatment efficacy, including ethnic pharmacology among diverse groups (Campinha-Bacote, 1999, 2002, 2003b). A learning process for obtaining cultural knowledge further requires nurses to be knowledgeable about specific physical, biological and physiological variations (Campinha-Bacote, 1999, 2002, 2003b). Nurses need to gain further cultural knowledge to understand a patient's unique culture, life-style and practices in a specific ethnic and cultural group that would influence their views of illness and treatment. The nurse who obtains such cultural knowledge of clients' worldviews can interpret the patient's unique perceptions of nursing services needs.

Cultural Skill

To apply cultural knowledge, nurses must develop their skill to collect the data regarding health issues among diverse patients (Campinha-Bacote, 2002, 2003b) and assess them for creative care approaches (Shen, 2004). Cultural skill requires nurses to develop nursing skills such as cultural assessment, physical assessment interviewing and communication to collect relevant data from the patients (Campinha-Bacote, 2002, 2003b). There are several cultural assessment tools developed by nursing researchers (Campinha-Bacote, 1999, 2002; Giger & Davidhizar, 1995, 2002; Purnell, 2002). These assessment tools are useful tools for collecting and assessing data from diverse client groups. The nurse must remember however, that these tools may not be totally applicable for assessing all patients. When conducting the assessment, nurses must know how

clients' physical, biological and physiological variations and worldview influence their health, disease, and effectiveness of the treatment. Thus the nurse's approach must be in a culturally sensitive manner (Campinha-Bacote, 2003b). Recent work by Campinha-Bacote (2003b) further states that culturally sensitive language and communication to enable appropriate interacting with diverse patients are an important component of cultural skills.

Cultural Encounters

Cultural encounters are a learning process which encourages nurses to interact with patients from culturally diverse backgrounds (Campinha-Bacote, 2003b). Interacting with culturally diverse patients will modify one's existing beliefs and presumptions towards diverse groups (Campinha-Bacote, 2003b) thus promoting a nurse's new understanding about cultural differences and similarities. However, it is important to remember that interacting with just three or four members may not present the cultural values, beliefs and life practice among specific groups (Campinha-Bacote, 2002, 2003a, b). This is due to the key concept of cultural competency that there are often more cultural differences and variations within cultural groups than across cultural groups (Campinha-Bacote, 2002, 2003a, b). Therefore nurses must be passionate to interact with various cultural and ethnic groups.

Campinha-Bacote has continually examined and revised this model. The key components of Campinha-Bacote's cultural competency model have been often integrated into a number of other cultural competency models (Burchum, 2002; Salimbene, 1999) as conceptual maps to the development of cultural competency. They

have also been used by several nursing studies as guideline in examining nurse's cultural competency. Such model will provide a concept map to examine Japanese nurses' cultural competency.

Theoretical and Operational Definitions

For the purpose of this study, the following theoretical and operational definitions are used

Cultural Competency

Theoretical definition

Cultural competency is defined as the process of cultural competency in which nurse strives to achieve the ability and availability to work within cultural context of a client individual, family or community (Campinha-Bacote, 2003b, p3). This process requires nurses to become cultural competent rather than being cultural competent (Campinha-Bacote, 2003b, p3). The process of cultural competency is defined as the five constructs of cultural competency including Cultural desire, Cultural awareness, Cultural knowledge, Cultural skill and Cultural encounters as these are defined in Campinha-Bacote's Model of Cultural Competency (Campinha-Bacote, 1999, 2002, 2003a, b).

Operational definition

Five constructs of cultural competency including cultural desire, cultural awareness, cultural knowledge, cultural skill and cultural encounters are defined by measuring Campinha-Bacote's instrument: Inventory for Assessing the Process of Cultural Competency among Health Professionals-Revised (IAPCC-R) (2003a). It is

defined as the overall scores on IAPCC-R and subscale scores of cultural desire, cultural awareness, cultural knowledge, cultural skill and cultural encounters.

Clients from Different Ethnic and Cultural Backgrounds

Theoretical definition

The clients from different cultural and ethnic backgrounds are not just the groups of individuals from different ethnic origins but also reflect other factors such as sexual preference, gender, life stage, religious, social, political, economic categories, age, educational backgrounds, occupational status, geographic location, language and communication ability (Campinha-Bacote, 2003a, b).

Operational definition

The clients from different ethnic and cultural backgrounds will be defined as; foreign patients/residents who grew up and came from another country and those who may have grown up in Japan but have different ethnic backgrounds (such as residents from Korea, China, Brazil and the Philippines). It also includes patients/individuals who are Japanese but come from other geographic areas and/or different cultural backgrounds based on religion, gender, occupation and sexual orientation and other variables within subcultures of Japan.

Japanese Nurses

Theoretical definition

Nurses in Japan include public health nurses, midwives, registered nurses and those who are defined as following the Public Health Nurse, Midwife and Nurse Law (1948) (amended in 2006).

Operational definition

Those persons working as Registered Nurses, Midwives, Public Health Nurses, those who are working at general hospitals.

Critical Thinking Dispositions (CTDs)

Theoretical definition

CTDs refer to the attributes and habits of mind as key components to become effective critical thinkers (Facione, 1997; Facione, Facione & Sanchez, 1994). CTDs is defined as including seven dispositions: Inquisitiveness, Systematicity, Analyticity, Truth-seeking, Open-mindedness, Self-confidence and Maturity as defined by Facione (1997) and Facione et al.(1994).

Operational definition

The seven dispositions of inquisitiveness, systematicity, analyticity, truth-seeking, open-mindedness, self-confidence and maturity are defined as the total score and subscale scores of inquisitiveness, systematicity, analyticity, truth-seeking, open-mindedness, self-confidence and maturity as measured by the California Critical Thinking Disposition Inventory (CCTDI).

II. LITERATURE REVIEW

This literature review focuses on the following four major areas: (1) Theoretical Definitions of Cultural Competency; (2) Trends and Challenges of Cultural Competency in Western Countries, (3) Challenges of Cultural Competency for Japanese Healthcare and Nursing practice, and (4) Critical Thinking Dispositions (CTDs).

The first section will review the current theoretical definitions of cultural competency. This will provide the current definitions and key components of cultural competency in healthcare and nursing practice.

The second section reviews the trends and challenges of cultural competency in western countries and will be divided into three parts: government and healthcare organizational initiatives; culturally competent education; and nursing research on cultural competency. This will provide an initial informational background regarding contemporary issues and trends in areas of cultural competency within western countries.

The third section considers the challenges of cultural competency for Japanese healthcare and nursing practice and includes four parts: the limited knowledge and experience in caring foreign patients; communication and language barriers; lack of emphasis on culturally competent education; and cultural competent nursing research in Japan. This will provide a review of the current status of culturally competency care, culturally competent nursing education, and related nursing research in Japan.

The fourth section will focus on a review of CTDs. It will describe key components of CTDs and discuss CTDs as possible factors associated with Japanese nurses' cultural competency.

Theoretical Definitions of Cultural Competency

Culture is generally defined as a shared system of values, beliefs, traditions, behaviors, and verbal and nonverbal patterns of communication that hold a group of people together and distinguish them from other groups (Salimbene, 1999). There is a direct association between culture and health practice (Campinha-Bacote, 2003a). Culture determines how patients, their families and health providers define health and illness. It is further associated with other variables related to health and illness such as values, beliefs and attitudes to birth, death, age, family supports, kinship structure, communication language, time and ethnicity, education, religion, technology, economic factors and others (Salimbene, 1999). Understanding of the impact of culture on health is a fundamental step to implement culturally competent care.

The definitions of cultural competency have been developed well within healthcare and nursing practice. The U.S. Department of Health and Human Services Office of Minority Health (OMH) (2001) defines cultural and linguistic competence as one in which culturally congruent behaviors, attitudes and policies foster effective approaches to address cross-cultural, ethical and legal conflicts in the delivery of healthcare. Matus (2004) further defines cultural competency for healthcare organizations as the ability to effectively treat any patient from any cultural background. The term – “cultural background differences” often refers to groups of individuals from differing

racial and ethnic origins but it is much broader (OMH, 2001). It incorporates beliefs, attitudes, behaviors and customs that are situated in many varying contexts including sexual preference, gender, life stage, religious, social, political, economic categories, age, educational experience, occupational status, geographical location, physical size, language and disability (both physical and mental) (Campinha-Bacote, 2003a, b). Therefore a key aspect of cultural competency is the ability to understand the multiple contexts in the lived experiences of consumers, their families and their communities.

As part of cultural competency in nursing, there is the need to consider alternative services to meet the specific care needs of individuals and groups. Culturally competent care should not emphasize stereotypes but respect individual variations within cultures (American Institutes for Research, 2004). Nurses must reflect on their own biases and presumptions that underpin their routine practices. Nurses need to be open-minded and flexible when considering alternative services that may be required to meet the specific care needs from individuals and group members. This core component of cultural competency is congruent with a fundamental theory of caring. Nursing theories have defined caring as a fundamental value for nursing practice (Dingman, Williams, Fosbinder, & Warnick, 1999). Pacquiao, Archeval and Shelley (1999) define caring by merging four themes; respect for valued personal lifeways; perceived needs and attentive to the unique needs of individual patients; promotion of trust; and transformation to make a difference in people's lives. Caring is further defined as patient centered with respect for individual differences (Lauver et al., 2002). A core component of caring together with a patient-centered focus embraces the key components of cultural competency. The recent

literature further expands the component of cultural competency as it requires providers' culturally sensitive language skills as well as general communication skills.

Language abilities and culturally sensitive communication skills are important components of cultural competency (Howard, Andrade, & Byrd, 2001). Communication between individuals is flavored by their cultural understanding of the act of communication. Communication behaviors, verbal and non verbal, are often not determined by what is said but indicated or interpreted through the person's cultural values and perspectives (Salimbene, 1999). Within patient-nurse communication, this phenomenon occurs when communication pattern and language styles differ due to the cultural backgrounds. Without a nurse being culturally sensitive and aware of the patient's culture in communication and language, nurses could misunderstand the patient's message (Salimbene, 1999). In addition, recent nursing literature (Campinha-Bacote, 2003a,b; Leuning, Swiggum, Wiegert, & McCullough-Zander, 2002) further emphasizes a need for nurses to improve their skills to work with trained interpreters effectively. This linguistic and culturally appropriate care is now suggested in federal and state government guidelines for culturally competent care (OMH, 2001). It is essential, therefore to train nurses to expand and improve their cultural awareness and knowledge of a patient's culture including language and communication patterns.

Cultural competency can be further defined in terms of culturally safe practices. Culturally and linguistically competent care can contribute to ensuring patient safety and, ultimately, improved health outcomes. When care lacks cultural and linguistic competence results can include misunderstanding and mistrust of treatment procedures

which can potentially cause misdiagnosis and harm to the patient (American Institutes for Research, 2004). Patients may avoid accessing needed healthcare services if they expect to face a language barrier, if they feel disrespected; this miscommunication can compromise patient safety. This is particularly true for patients from marginalized populations such as immigrant and foreign patients (OMH, 2001). It is important for healthcare organizations to ensure that practitioners are prepared to function with cultural and linguistic competence and to provide patient centered care that takes patient preferences into account (Institute of Medicine, 2001). The recent U.S federal government guidelines emphasize organizational responsibility and support in order to prepare culturally and linguistically competent nurses.

Trends and Challenges of Cultural Competency in Western Countries

Government and Healthcare Organization Initiatives

Although the need for cultural competency and the key components of cultural competency have been well established within most healthcare settings, they have not always been successfully integrated into the current healthcare environment (Taylor, 2005). Healthcare professionals have often failed to modify their approaches to meet the healthcare needs of culturally diverse patients (Taylor, 2005). Western literature has indicated several obstacles when promoting cultural competency. Healthcare providers' lack of awareness of cultural differences, compounded by individual biases or prejudices and limited access to language and communication services have caused miscommunication and treatment barriers (Baldwin, 2003). The result of this lack of cultural competency has caused low satisfaction, mistrust of the healthcare system and

refusal of necessary treatment by many patients. Smedley, Stith and Nelson (2002) indicate that racial and ethnic minorities experience a lower quality of health service and are less likely to receive routine medical treatment than white Americans. These issues have contributed to health disparities between health outcomes of minority groups and that of the majority white population (Taylor, 2005).

In response to these health disparities among minority populations, the U.S state and federal governments as well as professional healthcare organizations have implemented a number of major initiatives and created national guidelines, policies and practices (American Institutes for Research, 2004). One such example is the National Standards for Culturally and Linguistically Appropriate Services issued by OMH (2001). This National Standard provides 14 guidelines to healthcare organizations and providers to ensure cultural and linguistic competence when delivering healthcare to minority patients. The standards emphasize the development of ongoing education and training so that a provider will be able to respond to health-related beliefs and cultural values among diverse patients. Culturally appropriate language access services including interpreter services and translation of materials to every patient, is also emphasized in the standards. Organizational support in promoting and supporting cultural knowledge, skills and behaviors through ongoing staff training is a further key component in the development of culturally competent care. The standards additionally emphasize the need for organizational self-assessments and information gathering to assess the health issues and care needs for diverse patients. Other professional organization such as the Joint Commission on Accreditation of Healthcare Organizations has also established several

standards in areas of culturally competent care. Within nursing practice, Leuning et al. (2002) propose that the provision of criteria for evaluation of culturally competent nursing practice and tools for teaching and learning are essential if there is to be improvement of the nurses' cultural competency.

Cultural Competency Education

Educating nurses about culturally competent care through applying proposed standards is a key step to promote culturally competent care in eliminating the health disparities. Other research (Foley & Wurmser, 2004; Frusti, Niesen, & Campion, 2003; Matus, 2004; Yee & Tursi, 2002) emphasizes that in order to foster a nurses' cultural competency, training needs to be supported through healthcare organizational supports and commitments. Previous studies (Alpers & Zoucha, 1996; Amerson, 2001; Chevannes, 2002; Majumdar, Browne, Roberts, & Carpio, 2004; Smith, 2001) all indicate that culturally competent training and education are a crucial factor in the improvement of nurses' cultural competency.

In response to the need for educating nurses, contemporary nursing education curricula and teaching philosophies have also focused on producing nursing students with cultural competency skills (American Association of Colleges of Nursing, 1997). Nursing faculties are challenged to modify and develop nursing curricula and teaching strategies that will enhance the students' cultural competency. A variety of approaches to enhance culturally competency have also been discussed in the western literature, ranging from the integration of an academic interchange program with a foreign nursing school (Brandi, Lockhart, & Hara, 2003; Colling & Wilson, 1998; Heuer & Bengiamin, 2001; St. Clair &

McKenry, 1999) to the incorporation of a transcultural or international nursing course into the curriculum (Cook & Cullen, 2000; Duffy et al., 1999; Jeffreys, 2002). In order to implement such approaches, a more passive learning style and dissemination of information through a teacher centered approach would not be effective. Active learning through an adult learning method has a greater impact (Amerson, 2001).

With the increase recognition of cultural competency education through healthcare organizational initiatives, numerous nursing studies have emphasized examining nurses' cultural competency as key to the ongoing development of their cultural competency.

Nursing Research on Cultural Competency

Several instruments have been developed to assist providers in measuring cultural competency. A few examples of these instruments include: Inventory for Assessing the Process of Cultural Competency among Healthcare Professionals Revised (IAPCC-R) (Campinha-Bacote, 2003a); Cultural Self-Efficacy Scale (CSES) (Bernal & Froman, 1987, 1993); Cultural Fitness Survey (CFS) (Rooda, 1992). Various researchers have utilized these instruments to measure nurses', students' and nursing faculties' cultural competency. Some studies have focused on investigating basic knowledge, attitudes and skills regarding nurses and students cultural competency. Several studies have examined basic cultural competency through measuring self-efficacy levels in performing care for culturally diverse patients.

Bernal and Froman (1987) developed the CSES to measure nurses' self-efficacy in caring in three culturally diverse settings (Black, Puerto Rican and Southeast Asian).

Thirty items were categorized into three sections; knowledge of cultural concepts; cultural patterns; and skills in performing transcultural functions. Alpha internal consistency coefficients for 30 items were reported at .097 giving credibility to the strength of the tools reliability. The items were reviewed to strengthen the validity of the questionnaire by five expert public health nurses with diverse cultural experiences. Community health nurses (N=190) responded to the CSES to measure their degree of confidence in caring for three different diverse groups. The study found that the respondents did not have a strong sense of confidence for providing care in culturally diverse groups. The highest confidence score for caring was in relation to Black Americans, while a lack of confidence for caring for Southeast Asian was revealed. The study further reported that educational preparation, age, years of practicing nursing and specialties were not powerful predictors of nurses' self-efficacy levels. However, in Bernal and Froman's (1993) later study including modified cluster samples of 206 community nurses, they replicated the original study and found that the ability to speak a foreign language, having transcultural experience in working with different cultural groups and having lived outside the U.S were positively correlated with nurses' self-efficacy levels for providing care to culturally diverse patients. These findings supported a curriculum revision to transcultural nursing contents in the school of nursing as well as emphasizing continuing education programs related to transcultural nursing. Further study of a wider sample was required to emphasize the generalizability.

Rooda (1992) developed the CFS to examine the knowledge and attitudes of nurses towards patients from three diverse cultural backgrounds. The study includes 274

randomly assigned nurses (RNs) who worked in these areas. The first section of CFS is designed to examine the knowledge of the three cultural specific groups (Black American, Hispanic, and Asian American). The question items were reviewed by expert nurses. It was first pilot-tested with 32 nurses and the reliability was reported at .71. The second section is developed to examine the attitudes towards four culturally specific groups (Hispanic, Black American, Asian American, and Anglo-American). Thirty-four items for Vignettes describing four ethnic individuals (Hispanic, Black American, Asian American, and Anglo-American) were included. The coefficient alpha for items was ranging from .87 to .92. The findings indicated that there were significant differences in the nurses' knowledge of different cultural groups. Knowledge about Asian American cultural contents was significantly higher than for Black and Hispanic. Multiple regressions indicated that only educational preparation was a significant predictor. Diploma and Associate nursing degree (AD) educational preparation were significant predictors of knowledge of Black culture but Bachelor (BSN) and Master nursing degrees (MSN) were not significant predictors. Other demographic factors such as age, year of graduation, experiences as RN, percent of patient cares for whose cultural backgrounds differ from that of the nurse, and absence or presence of previous studies with cultural diversity content were not significant predictors. Within the findings on cultural attitude, it was found nurses were most negatively biased towards Hispanic peoples and least towards White peoples. Similar to the findings on knowledge, educational preparation was the only predictor. AD preparation was less negatively biased toward Hispanic than non-AN. The study proves that basic nurses' knowledge and attitudes towards specific

ethnic groups is present, but further study is needed to determine the predictors.

A number of nursing researchers (Jones, Cason, & Bond, 2004; Kardong-Edgren et al., 2005; Smith, 2001) have used Rooda's (1992) and Bernal and Froman's (1987) tools to examining basic knowledge, attitudes and performance skills of nurses, students and educators in caring for culturally diverse patients. In one example, Smith (2001) conducts on experimental research using CSES and knowledge based questions from CFS to determine if RNs who participated in culturally competent education improved their levels of confidence and knowledge in caring for three diverse patients (African American, Hispanic, Asian American) than RNs who attended nursing informatics class. The study found that there was a statistically significant difference in self-efficacy levels and knowledge between the intervention groups who attended the intensive program and control groups who did not participate in the program. The study demonstrated the effectiveness of cultural training and the improvement of nurses' cultural competency. While the study collected the participants' demographic characteristics including gender, age, nursing educational preparation, service areas, clinical experiences, percent of caring for culturally diverse patient, the inclusion or absence of cultural diversity in basic education and reason for attendance of this present program, these demographic variables were not tested as variables associated with nurses' cultural knowledge and confidence levels.

Campinha-Bacote (1998) developed the Inventory to Assess Cultural Competence among Health Care Professionals (IAPCC) to measure cultural competence for health care providers based on her model of cultural competency. IAPCC only measured four of

the five constructs of this model (cultural awareness, cultural knowledge, cultural skill and cultural encounters) but not measured the fifth construct of cultural desire. With modifications, IAPCC-R is developed by adding additional questions to measure cultural desire. IAPCC-R include twenty-five items with a 4 point Likert scale to measure five constructs of cultural competency. The satisfactory reliability and validity of IAPCC-R was established through previous studies (Cooper-Brathwaite, 2005; Koempel, 2003; Spencer & Cooper-Brathwaite, 2003). IAPCC-R is recognized as one useful tool to measure cultural competency and has been widely used by nursing researchers (Cooper-Brathwaite, 2005, 2006; Doutrich & Storey, 2004; Kardong-Edgren, 2004; Koempel, 2003; Mahabeer, 2006; Spencer & Cooper-Brathwaite, 2003).

Koempel (2003) used IAPCC-R to study 275 nurse practitioners in Minnesota and found that the majority of respondents reported average scores of cultural aware levels, while less than 30 % achieved a high score. Experience interacting with ethnic groups, participation in a cultural diversity course, continuing education and foreign travel were identified as factors enhancing the practitioner's cultural competency. Spencer and Cooper-Brathwaite (2003) also used IAPCC-R to examine 50 public health nurses' cultural competency. The study found that the majority of nurses were a cultural aware level which is not high level. The scores reported by both Koempel (2003) and Spencer and Cooper-Brathwaite (2003) were lower than those reported by Kardong-Edgren's (2004) study examining nursing and healthcare education faculties' cultural competency.

Two studies (Cooper-Brathwaite, 2005; Doutrich & Storey, 2004) used IAPCC-R and IAPCC to assess the effectiveness of culturally competency courses on the

improvements in nurses' abilities in this area. Cooper-Brathwaite (2005) used IAPCC-R to identify the improvement of 66 public health nurses' (PHNs) cultural competency before and after participation in a cultural competence education course. The findings indicated that there was significant improvement in the participants' cultural competency levels after the completion of the course. The result of the study demonstrates the need for promoting cultural competency training courses which emphasize active learning-teaching methods for clinical nurses. It further suggests that the integration of cultural competency courses into undergraduate and graduate nursing programs is imperative. Additionally the study demonstrates the quality of Campinha-Bacote's models and measurement tools. However, the limitation of the study was that it did not examine other possible variables such as participant's personal, professional and educational factors which could influence the improvement in cultural competency. This study did not conduct further examination to determine what other possible factors influenced the increase in participants' cultural competency.

Doutrich and Storey's (2004) study included new variables associated with cultural competency in nursing not previously included in studies in other cultural competency studies. They examined the relationship between nurses' CTDs and cultural competency. The study used the CCTDI to measure CTDs. The findings indicated that there were significant correlations between the CCTDI on open-mindedness, inquisitiveness and cultural competency on IAPCC.

The previous sections have indicated that the challenge for ensuring quality of culturally competent care in western society is through participating in ongoing cultural

competency education and nursing research. This challenge must be addressed by Japanese healthcare professionals as the population of minority groups increases. The following section will review the current status and issues of culturally competent care in Japanese healthcare and nursing practices, education and research.

Challenges of Cultural Competency for Japanese Healthcare and Nursing Practice

Limited Knowledge and Experience in Caring Foreign Clients

Current healthcare organizations in Japan appear to have failed in the preparation of culturally competent care providers who can meet the health needs of minority patients. Such issues have often been identified when caring foreign patients. Previous reports (Hirano, 2003; Miyaji, 1994, 1997; Omori & Kido, 1999; Report of the perceptions and concurrent condition of foreign residents who lived in Kyoto, n.d.; Special Non Profit Corporation Foreigner Medical Center, 2003) indicate that foreign patients are concerned and dissatisfied with Japanese healthcare professionals practices. Their concerns primarily relate to Japanese healthcare providers' limited experiences in caring for foreign patients and limited language and communication skills and resources. These variables reflect the nature of Japanese society which is relatively homogenous.

Although minority populations are increasing, Japan still has a markedly homogenous population. Unlike healthcare providers in western countries such as the United Kingdom (U.K), Australia and the United States, the majority of Japan's health care providers have had limited opportunity to care for patients who are from a different ethnic origin. Indeed, Sugiura's (2003) study of Japanese nurses' cultural competency skills revealed that many nurses who were working in general hospitals had limited

experience meeting foreign patients. This limited exposure to international patients in practice ultimately creates a lack of recognition necessary to develop culturally congruent care.

The characteristics of Japanese society further impact the way in which Japanese healthcare providers perceive and treat the minority populace. Historically the Japanese have remained a strongly insular people (Furuta, Petrini, & Davis, 2003) as reflected in the tradition of *mura-shakai* (Hisama, 2000) or *miuchi-ishiki*. The tradition of *mura-shakai* or *miuchi-ishiki* refers to the Japanese practice of highly valued group harmony, or *wa* (Hisama, 2000). Given these cultural characteristics, foreigners or minority populations were perceived as outsiders, (*gaijin*), visitors or marginal people (Jandt, 2004). Furuta, Petrini and Davis's research on American nurse educators' perceptions of their professional and personal experiences in Japan supports this observation. Their findings revealed that American nurse educators perceived that they were treated as Westerners and they experienced isolation as they attempted to integrate themselves into the education domain. These experiences are also reflected in foreign patients' self-reported experiences when they receive healthcare services in Japan. Hirano's (2003) study indicates that foreign patients felt isolated and experienced discrimination as they sought healthcare services in Japan. Participants in the study reported that they were specifically concerned with such issues as the use of healthcare insurance. In addition, nurses' and physicians' behaviors and attitudes were of concern. They perceived these professionals to be too narrow in their healthcare perspective (Hirano, 2003). This perceived lack of sensitivity and the feelings of discrimination were

evident throughout the reported data.

Communication and Language Barriers

The limited experience and narrow comprehension of the healthcare needs of minority populations are further reflected in the limited communication and language skills of nurses and physicians in Japan. Communication barriers are reflected in both limitations of language and dissonance between patients and healthcare providers (OMH, 2003). Results of this include impaired exchange of information, loss of language cues that aid in diagnosis, incomplete patient education, lack of informed consent, reduced access to services, and a sense of distrust by minority patients towards healthcare providers (OMH, 2001). These language barriers are common experiences of Japanese nurses and physicians.

Within the existing homogenous society only a small percentage of Japanese speak a different language. This problem can be observed in today's healthcare environment. Sugiura (2003) has found that a majority of Japanese nurses are not confident in speaking a foreign language. Their lack of confidence is associated with negative attitudes toward as well as limited knowledge and skills for performing culturally competent care(Sugiura, 2003).

Given the limited communication and language skills among Japanese healthcare providers, it is critical to provide linguistic services for foreign patients. However, KDDI-Soken's (2004) report revealed that only 10 % of healthcare institutions provide linguistic services such as interpreters and translation services and hire healthcare providers who speak another language. In addition, most of these institutions are focused

only on providing English based language and communication services (KDDI-Soken, 2004). Considering that over 50 % of foreign patients come from other Asian countries such as Korea, China and Philippines (Ministry of Justice, Immigration Bureau of Japan, 2007) where English is not the primary language, this does not seem to be an appropriate response.

The lack of linguistically appropriate services and limited language proficiency are reflected in the evidence that a majority of foreigners perceive the language barrier to be overwhelming when they attempt to access and receive healthcare services. This is particularly problematic since healthcare needs are often experienced within a context of stress and anxiety. This has created a situation in which many foreign patients are not likely to access needed healthcare services (Hirano, 1998; Kawashima, 2006, July; Omori & Kido, 1999). The western literature (Jacobs et al., 2001; Lee & Pope, 2001) demonstrates that communication with patients in their own language through the use of qualified interpreters improves patients' understanding of their diseases and treatment processes as well as generating trust in providers. Furthermore, physicians who participate in language instruction enhance their communication ability with patients and increased the patients' satisfaction with services (Mazor, Hampers, Chande, & Krug, 2002). The provision of linguistic support services, including regular availability qualified interpreters/translators as well as language training for providers, is therefore a critically important component in improving culturally diverse healthcare organizations.

Linguistic support services should be further extended to provide adequate information regarding Japanese healthcare services which are available for foreign

patients and clear instructions on how to negotiate these systems. The majority of foreigners experienced difficulty in accessing information regarding Japanese healthcare systems due to inadequate linguistic services and eventually discouraged their attempts to obtain necessary health services (Hirano et al., 1999). Written materials provided by Japanese healthcare systems in various languages are needed. Even more importantly, nurses and physicians should have basic knowledge and skills in providing Japanese healthcare services that are appropriate for foreign patients.

Effective communication is far more complex than the issue of whether patients and providers can or cannot speak the same language (Howard et al., 2001). Limitations in health literacy mean that when health concepts are communicated by healthcare providers, they may be unclear to patients who are unfamiliar with the concepts being conveyed. This can create an additional dimension to the language barrier. This is a common communication difficulty between patients and providers, and can reduce the development of trust between doctors and nurses and their patients (Ohtaki, Ohtaki, & Fetters, 2003). The lack of trust between Japanese health providers and foreign patients is highlighted in the literature. Anders (2000) provides the example of informed consent. Although informed consent has begun to be discussed in Japan, it is still not a common practice among Japanese healthcare providers. For instance, in some cases it is often common for physicians or nurses not to tell patients that they have cancer (Anders, 2000). Ohtaki et al. (2003) found additional characteristics of physician-patient communication in Japan. For example, they observed that Japanese physicians are spending more time on medical diagnosis and physical examination and less time on the explanation of a

treatment procedure to the patient. These communication practices may be unfamiliar to foreign patients, particularly Westerners, and lead to dissatisfaction with and mistrust towards Japanese healthcare services. Indeed, Miyaji (1994, 1997) found that foreign patients expressed their specific dissatisfaction with the lack of explanation regarding treatment procedures and medical diagnosis.

This insensitivity to foreigners' concerns and reports of their dissatisfaction reflect the limited services provided and the domination of Japanese traditions and practices. These phenomena have also been reflected in healthcare providers' own comments. Special Non Profit Corporation Foreigner Medical Center's (2003) study indicated that some providers felt annoyed when foreign patients asked questions about their care, such as treatment procedures. This underscores the providers' limited willingness to adopt modifications in practice that are respectful of the needs of foreign patients. Patients' dissatisfaction and concerns eventually discourage their pursuing routine or even acute care. Kawashima (2006, July) indicated that foreign patients from western countries are unlikely to obtain regular clinical services and that they try to schedule all regular medical examinations when they return to their own countries.

Limited preparation for culturally competent care, narrow perspectives of the needs of foreign patients, lack of culturally competent communication and language skills have all been identified through the Japanese literature as being contributors to this problem. However, most of these studies only focus on cultural competency issues concerning caring for foreign patients but not for patients from other different ethnic backgrounds. Most also ignore the needs of Japanese individuals with various cultural

backgrounds who may hail from other parts of Japan or have different cultural values. This limited perspective in addressing cultural competency is further identified in the contemporary approaches to cultural competent nursing education in Japan.

Lack of Emphasis on Cultural Competency Education

To develop a culturally competent healthcare workforce, the development of relevant education programs is essential. Although some healthcare institutions have started to focus on the development of a culturally competent workforce, there have been only limited attempts to expand culturally competent training and education programs among the majority of healthcare facilities in Japan. In addition, there are no national government initiatives and little attention in healthcare organization initiatives in proposing standards or requirement in areas of culturally competent care for diverse populations. Within the nursing education environment, the Commission of Nursing Education and Research (1994) has proposed criteria for baccalaureate nursing education programs and the preparation of the Japanese nursing students' cultural competency was emphasized. Responding to this initiative, some schools have endeavored to integrate culturally competent/transcultural education into their programs. The approaches to teaching cultural competency have started to be introduced in some Japanese nursing publications, ranging from the integration of academic interchange programs with foreign nursing schools (Brandi et al., 2003), to the incorporation of transcultural or international nursing courses (Yoshino & Hiraoka, 2004).

However, the effectiveness of the teaching and the courses is questionable. Several authors (Kardong-Edgren et al., 2005; Leininger, 1995) are concerned that many

faculties are unprepared in the field of cultural nursing. The unpreparedness of faculties in the transcultural nursing field is considered a primary hindrance in the production of culturally competent graduate nurses (Yoshino & Hiraoka, 2004). Therefore, the preparation of faculty staff in the field of cultural care/education is critical.

This challenge would benefit from improvement in experienced/practice-based learning (Cook & Cullen, 2000; Hadwiger, 1999). Leininger (1995, 1997) suggests the need for provision of a variety of clinical or field experiences in culturally and ethnically diverse populations in order to adequately prepare culturally competent students. Unfortunately clinical and field experiences in relation to cultural care practices are very limited in most nursing schools in Japan. Schools often rely on didactic teaching on campus thus the integration of culturally competent knowledge and skills into the clinical field is discouraged. In addition, some schools attempt to expand an academic interchange program with a foreign nursing school as part of the field experience for transcultural nursing (Yoshino & Hiraoka, 2004). However, a review of such programs in most schools indicates that the length of this program is usually very short due to inflexible curriculum structures as well as a limited budget. The effectiveness of such programs is therefore questionable, while other programs appear to very much rely on such academic exchange programs to develop the student's cultural competency. However it is important to remember that exchange programs are not the only method. There are other teaching strategies that will foster a students' cultural competency. As Leininger (1995, 1997) suggests, one such possibility is clinical practice and field experience. Clinical practice and field experience should provide learning opportunities

to meet these diverse ethnic groups such as foreign patients/residents who have come from one's own country or individuals (Yoshino & Hiraoka, 2004) or groups who may have grown up in Japan but have different ethnic and cultural backgrounds, such as Koreans, Chinese and Brazilians. Meeting with people from different cultural and ethnic backgrounds even rural village areas within Japan, would be a useful learning experience for the students. The challenge for the nursing educators is therefore to create new and innovative curricula/programs for effective academic cultural nursing education that can address the broad meanings of cultural competency. The challenges for the development of cultural competent nurses are still formidable in the contemporary nursing research in Japan. There is thus still a need for nursing studies addressing the broad concepts of cultural competency for Japanese nurses.

Nursing Research on Cultural Competency in Japan

Very few studies (Hasegawa et al., 2002; Sugiura, 2003) focus on addressing issues related to Japanese nurses' cultural competency. Only one empirical study (Sugiura, 2003) seriously investigates Japanese nurses' cultural competency and determining possible variables associated with their cultural competency. Furthermore Sugiura's study and other nursing studies have only emphasized nurses' cultural competency for foreign patients but not addressed culturally indicated care needs for patients from other cultural and ethnic backgrounds.

Sugiura's (2003) study addressed Japanese nurses' cultural competency. Her study developed and evaluated an instrument of Cultural Competence in a Nursing Survey (CCNS) for measuring Japanese nurses' cultural competency for foreign patients. She

further examined the difference in cultural competency between nurses who were involved in Japan's Overseas Cooperation Volunteers (JOCVNs) and nurses working at municipal hospital (MHNs) and determined the predictors by using CCNS. The original CCNS includes 54 items based on content analysis by expert review. Factor analysis was conducted to ensure the validity of CCNS. A factor loading of $> .30$ per items was considered significant. As the result of factor analysis, CCNS included five constructs of cultural competency including awareness of own culture; general cultural knowledge in nursing care; specific cultural knowledge in nursing care; cultural skills; and cultural approach-avoidance with 46 items on a 4 point Likert scale. Adequate reliability scores were identified on Cronbach's α for all items = .97 and Pearson's correlation score = .95. Convenience samples consisted of two groups, 213 JOCVNs and 671 MHNs who were working at two municipal hospitals in a local city with a high percentage of foreign patients. Demographic characteristics included overseas living experience, having a chance to meet foreign patients off duty, the ability to speak a foreign language, the difficulty experienced when caring for foreign patients, the number of foreign patients nurses have cared for, learning experiences in the area of anthropology, learning experiences in the concepts of cultural diversity, and participation in cultural competency training. The findings indicated that in total and all sub-scales scores on the CCN, the JOCVNs' average scores were significantly higher than those reported by the MHNs. These significant differences were identified in the construct of specific cultural knowledge and general cultural knowledge. Multiple regressions indicated that enhancing factors of the nurses' cultural competency are overseas living experiences, speaking

foreign languages and experience in meeting foreigners off duty, while the negative factor is limited experience in caring for foreign patients.

Sugiura's (2003) study discusses Japanese social characteristics concerning the homogenous society and the lack of recognition for the need of cultural competency education as obstacles to enhancing the nurses' cultural competency. Her study provides a recommendation for the integration of the concepts of cultural competency and experience based in clinical practice that would encourage students to interact with culturally diverse patients. Furthermore, she indicates the need for further research to add to the body of knowledge related to nurses' cultural competency in caring for foreign patients. However this literature review has identified no studies that have expanded on Sugiura's study and addressed Japanese nurses' cultural competency.

Sugiura's (2003) study was the first study to address the issues of Japanese nurses' cultural competency through developing an instrument to measure nurses' cultural competency. However a number of limitations of her study need to be discussed. One such limitation is the narrow perspective in the measuring of cultural competency. Her study was only interested in measuring nurses' cultural competency for caring for foreign patients. Due to this limited interest, the CCNS is design to only measure Japanese nurses' cultural competency for this particular group of minority patients. Like other Japanese studies in cultural competency, her study was very limited in its examination of nurses' cultural competency for individuals and groups of peoples from diverse cultural and ethnic backgrounds both across and within cultures of a society. Therefore, Sugiura's study does not measure a nurses' cultural competency by addressing the general concepts

of cultural competency. Further efforts to examine Japanese nurses' cultural competency addressing the broad meanings of cultural competency are therefore needed. However there is no Japanese version's cultural competent tool which can measure the broad concepts of cultural competency for Japanese nurses.

Another limitation is the absence of variables associated with cultural competency in nursing. Sugiura's (2003) study discussed some aspects of Japanese society as well as nurses' previous educational experiences in areas of cultural competency as important factors. However, it was still limited in its exploration of the uniqueness of Japanese nurses' habits of mind and attitudes in relation to cultural competency. Her study was not extended to examine how Japanese nurses' habits of mind and attitudes which are related to prior educational and nursing background could be associated with perceptions about cultural competency.

The examination of Japanese nurses' habits of mind and attitudes in CT would be a possible approach to investigate unique aspects of their professional attitudes. They could be useful potential variables associated with Japanese nurses' perceptions and their level of cultural competency.

Critical Thinking Dispositions (CTDs)

CT has been defined by many authors (Duchscher, 2003; Fesler-Birch, 2005; Profetto-McGrath, 2005) and there are many components of CT described throughout their works. Profetto-McGrath (2005) defines CT in nursing practice as the strong cognitive knowledge and skills which integrate reflection, openmindedness, analysis, evaluation and inference for nursing clinical judgment. Such knowledge and skills would

allow nurses to reflect and analyze their daily practices and provide them with the ability to consider alternative interventions to provide the best nursing intervention in response to the individual's needs.

To become critical thinkers, nurses must have the necessary dispositions of CT. CTDs refer to nurse's attributes and habits of mind. Several conceptual frameworks of CTDs have been developed. One such comprehensive definition of CTDs was developed by the American Philosophical Association (1990) under Facione's (1990) Delphi project. The Delphi consensus statement (APA, 1990, p3) is: *The ideal critical thinker is habitually, well informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in selection of criteria, focused in inquiry, and persistent in seeking results and the circumstance of inquiry permit.*

Facione (1997) and Facione et al. (1994) further developed the CTDs based on APA Delphi descriptions of an ideal critical thinker. They include six dispositions: Truth-seeking; Open-mindedness; Analyticity; Systematicity; Self-confidence; Inquisitiveness; and Maturity. The descriptions of these dispositions are as follows:

- Truth-seeking sub-scale: being eager to seek the truth and courageous about asking questions.
- Open-mindedness sub-scale: being tolerant of divergent views with sensitivity to the possibility of one's own bias. The open-minded person respects the rights of others to hold differing opinions.

- Analyticity sub-scale: valuing the application of reason and use of evidence to resolve the problem even if the problem at hand turns out to be challenging or difficult.
- Systematicity sub-scale: being organized, orderly focused and diligent process in the inquiry stage.
- Self-confidence sub-scale: trusting one places in one's own reasoning processes.
- Inquisitiveness sub-scale: measuring one's intellectual curiosity and one's desire for learning.
- Maturity sub-scale: making reflective judgment based on standards, contexts and evidence.

CTDs often permeate in a nurses' previous learning and professional experiences. This argument is supported through previous studies (Kawashima, 2003; Kawashima & Petrini, 2004). Kawashima and Petrini (2004) measured the CTDs of undergraduate nursing students and nurses in Japan and found that their scores on several CTDs were lower than the nursing students in the U.S.A. reported by Facione (1997). They also found that nurses' scores were lower than those for undergraduate students. The nurses' prior educational and professional backgrounds were discussed as a possible factor discouraging their CTDs.

The development of CTDs requires the nursing faculties to change conventional teaching approaches to alternative methods which encourage a centered learning-teaching approach with problem-solving constructs (McAllister, 2001a, b). Furthermore, CTDs for nursing students cannot be produced without integration of theory into the clinical setting

through the use of reflection (Benner, 1984; Ironside, 2001; McAllister, 2001a,b).

Without reflection on clinical practice, there is little learning opportunity to improve CTDs (Kawashima & Petrini, 2004). Therefore CTDs for nursing students should be enhanced through reflection on clinical practice and the learners' self-directed education (Myrick, 2002; Myrick & Yonge, 2004; Twibell, Ryan, & Hermiz, 2005). However, Kawashima and Petrini's (2004) study indicates that the nurses' prior learning experiences have been very limited in undertaking these types of learning approaches as there has been an emphasis on rote-learning and the dominating teacher-student relationship.

Nurses' CTDs are often associated with their ways of professional practice. Stockhausen and Kawashima (2003) indicated that the existing traditional values placed on Japanese nurses and the influences of the physician's control are still inhibiting autonomy, self-determination and professional judgment. Kawashima and Petrini (2004) support this argument. Their study indicates that traditional professional practices are possible obstacles to improved CTDs among Japanese nurses.

Thus the mature of CTDs among Japanese nurses would be very limited as they are influenced by prior educational and professional backgrounds. The examination of CTDs as a possible factor correlated with their cultural competency would therefore provide insight into Japanese nurses' cultural competency.

Further argument for the need to include CTDs as variables associated with cultural competency can be established from a theoretical perspective. In the review of cultural competency as defined by Campinha-Bacote and CTDs defined by Facione

(1994) and Facione et al. (1994), there is a connection in some of the core components. For example, inquisitiveness is defined as curiosity and desire to learn by acquiring knowledge and questioning in order to address issues and explore alternative strategies. Open-mindedness is concerned with tolerance and respect for the opinions of others. The characteristics of these two components within CTDs are congruent with cultural desire which is defined as the desire to learn about culturally diverse patients and to be open-minded in accepting cultural differences/alternatives. Truth-seeking is defined as the attitude and desire to be honest in reflection and willing to reconsider and revise one's presumptions. This characteristic is likely to be connected with cultural awareness described as self-reflection of nurse on their beliefs and values. It is also congruent with cultural desire and cultural knowledge because it includes the willingness or desire to pursue new knowledge in order to understand a patient's care needs.

CTDs and cultural competency are thus both focused on patient-centered caring, being attentive to the unique needs of culturally diverse individuals or groups of patients. Patient-centered care can be achieved through the promotion of a nurses' self-reflection upon their own biases and presumptions that are supported by routine practices. It can be established through the creation of open-mindedness and willingness to seek new cultural knowledge. Flexibility for considering alternative services to meet the specific care needs from diverse patients will also be a product of this skill. Supporting this argument, Doutrich and Storey's (2004) study indicated that there is an association between CTDs and cultural competency among nurses. However due to the very small sample size the study can not determine the association between CTDs and cultural competency. To

demonstrate the connective line between CTDs and cultural competency, further studies are needed.

Summary

This literature review has shown that as the diversity of populations grows, there is strong need to improve the quality of culturally competent patient care. This must be achieved through the establishment of empirically based nursing research on the issues of Japanese nurses' cultural competency. The literature review has indicated that nursing research in relation to this subject is available within western countries. However, very limited research exists concerning cultural competency of Japanese nurses. There are no culturally sensitive instruments that can address the broad meanings of cultural competency for Japanese nurse. Furthermore, the literature review did not reveal studies that focused on Japanese nurses' perceptions of their levels of cultural competency through the examination of the impact of their habits of mind and attitudes. The literature review suggests the examination of CTDs as variables associated with Japanese nurses' cultural competency (Dutrich & Storey, 2004). However there are no studies implementing this perspective. The following research questions attempt to fill this gap.

Research Questions

1. What is the level of cultural competency reported by Japanese nurses?
2. What is the level of CTDs reported by Japanese nurses?
3. What is the relationship between cultural competency of Japanese nurses and their CTDs?

4. What is the relationship between the cultural competency of Japanese nurses and selected demographic and personal factors (gender; age; professional qualifications; basic nursing education; length of clinical experience; overseas living experience; length of overseas living experience; ability to speak a foreign languages; types of prior learning; learning experience about the concepts of cultural diversity; educational programs to learn about the concepts of cultural diversity; experience in taking courses related to cultural nursing care; educational programs to take courses related to cultural nursing care; experience in taking workshops/classes related to cultural nursing care; experience in caring for clients from culturally and ethnically diverse groups; and frequency there of; difficulty in caring for clients from culturally and ethnically diverse groups)?

III. RESEARCH METHODOLOGY

This chapter describes the methodology of the research including research design.

Research Design

This study used a non-experimental, descriptive, cross-sectional survey research design. Descriptive, correlational, and comparative statistics were used to measure the level of cultural competency reported by Japanese nurses and its relation with selected demographic and personal factors and CTDs.

Sampling Method

Nonprobability sampling was used for this study. In this study, the target population was Japanese nurses who were recruited from seven general or university hospitals which are located in the western and middle part of Japan. Each of these hospitals has between 150 and 370 nurses.

Sample Criteria

Japanese nurses include registered nurses, midwives, and public health nurses, but not licensed practical nurses. The length of clinical experience as a professional nurse and areas of specialty were not considered as sample criteria. Thus Japanese nurses with a variety of clinical experiences were incorporated in the study.

Sample Size

Power analysis was initially conducted based on Cohen's (1988) criteria to

identify the desired sample size. Data analysis techniques for this study included descriptive, frequency statistics, correlation and regression analysis, and one-way analysis of variance. Regression analysis requires the highest number of subjects. Cohen's (1988) table indicates that the effect size index (Value of L) is 18.8 when small effect size $[R^2] = .02$, power equal= .80, and alpha of .05 were selected. According to Cohen's formula for determining sample size for multiple regression, a total of 714 subjects were needed for this study.

To obtain the required sample size, as well as considering the response rate issue in order to obtain accessible and meaningful personal and demographic variables that would be needed for the examination of its relationship with the dependent variable of cultural competency, a total of 1980 Japanese nurses would be the target population initially invited to participate the study.

Instrument

There are three parts of the self-reported written questionnaires for this study. Part A is the Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals-Revised (IAPCC-R) which measures the Japanese nurses' cultural competency levels (Appendix A), Part B is the California Critical Thinking Dispositions Inventory (CCTDI) which measures the Japanese nurses' CTDs, and Part C is a demographic and personal questionnaire sheet (Appendix B).

Part A: The Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals-Revised (IAPCC-R)

The instrument for measuring Japanese nurses' cultural competency was

IAPCC-R developed by Campinha-Bacote (2003a). The IAPCC-R was translated from English to Japanese for this study. According to the test results of the quality of the translated IAPCC-R, some items were modified. The processes of translation will be described later. Permission for use, translation and modification of the IAPCC-R had been obtained from the author.

IAPCC-R was developed to measure the level of cultural competency among healthcare professionals such as physicians, nurses, nursing and medical students and clinical pharmacists. It was developed to measure five sub-constructs (sub-scales) of Campinha-Bacote's cultural competency model including cultural knowledge, cultural skill, cultural awareness, cultural desire, and cultural encounters (Campinha-Bacote, 2003a). There are 25 items on 4 point Likert scale using positive and negative measurement for each construct. The scale reflects the response categories of: strongly agree, agree, disagree, strongly disagree; very aware, aware, somewhat aware, not aware; very knowledgeable, knowledgeable, somewhat knowledgeable, not knowledgeable; very comfortable, comfortable, somewhat comfortable, not comfortable; and very involved, involved, somewhat involved, not involved. There are five items to measure each construct. A high score represents a higher level of cultural competency. The scores on the IAPCC-R are described by categories: culturally proficient (91-100), culturally competent (75-90), culturally aware (51-74), and culturally incompetent (25-50).

Pett, Lackey and Sullivan (2003, p.43) indicate that an even number in a scale such as two, four, or six forces the subjects to answer as either agree or disagree, while an odd number allows the subject to choose a neutral or indifferent point. Addressing this

perspective, 4 point Likert scale can be revised to an odd number such as five or seven point scale. However, the study used 4 point scale. Using the same scale was considered to be better for consistency with the study statement reporting scores as categories (culturally proficient (91-100), culturally competent (75-90), culturally aware (51-74), and culturally incompetent (25-50)) and for the data analysis and comparison of the findings reported by other previous studies.

The reliability and validity of the IAPCC-R have been tested by a number of studies. Koempel's study (2003) examining the cultural competency of certified nurse practitioners indicates that the reliability coefficient Cronbach's alpha was .85 with Guttman Split-half of .83. Spencer and Cooper-Brathwaite's (2003) study measuring public health registered nurses' cultural competency calculated a Cronbach's alpha of .90. Kardong-Edgren's (2004) study measuring the cultural competency of nursing and health education faculty members indicated a Cronbach's alpha of .80. These findings meet the accepted standard of .80 and thus demonstrated the adequate reliability of this tool.

The content validity of the IAPCC-R was established by a panel of experts who were involved in the area of transcultural healthcare (Campinha-Bacote, 2003a). Polit and Beck (2004) indicate that the importance of construct validity is linked with theoretical factors. The IAPCC-R is designed based on Campinha-Bacote's conceptual model of cultural competency, thus construct validity of the APCC-R was addressed by this linking with a conceptual model (Campinha-Bacote, 2003a).

The IAPCC-R is a measurement tool that has been used by many nursing researchers to investigate and determine nurses' cultural competency and has been widely

acknowledged as useful measurement tool to examine nurses' cultural competency. Therefore the IAPCC-R is an appropriate measurement for achieving this study's purposes. However to gain qualitative findings, five additional questions were added to the Japanese version of IAPCC-R to explore Japanese nurses' perceptions of their experiences in caring for clients from culturally and ethnically diverse backgrounds, as well as to elicit any concerns and comments regarding the study (Appendix A).

Part B: The California Critical Thinking Dispositions Inventory (CCTDI)

This study intends to examine the relationship between Japanese nurses' CTDs and their cultural competency. For this examination, the CCTDI developed by Facione (1997) was employed. In this study a Japanese version of CCTDI was used for the participants. Language translation experts in Japan have previously checked the accuracy of translation employing reverse-translation to English to validate the translations and check for clarity.

The CCTDI consists of 75 items on a 6-point Likert scale that measures seven sub-scales: truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness, and maturity (Facione, Facione, & Giancarlo, 2001). The descriptions of the sub-scales have already been provided in the literature review.

Scoring of the full scale covers a range from 70 to 420. Scores above 280 indicate a positive overall CTDs (Facione et al., 2001). A total score between 210 and 280 indicates ambivalence towards CT and below 210 indicates opposition towards CT (Facione et al., 2001). Sub-scale scores ranging from 30 down to 10 indicate a negative disposition. Scores between 40 and 30 indicate an ambivalent disposition towards CT

(Facione et al., 2001). Scores on the sub-scales at 40 or above are considered as a positive disposition, while scores ranging from 50 to 60 indicating strong positive disposition towards CT (Facione et al. 2001).

Respondents selecting responses in negative dispositions towards CT earn 1, 2 or 3 points each item. While respondents choosing responses in positive dispositions towards CT deserve 4, 5 or 6 points per item.

The quality of CCTDI was established by reliability and validity tests. Cronbach's Alpha reliability for seven subscales ranged from .71 to .80 and that for the overall items was .91(Facione et al., 2001). The content validity of the CCTDI was tested by college level CT educators. The construct validity was also established by factor analysis techniques (Facione et al., 2001).

The CCTDI has been used in a variety of nursing education and practice areas and the quality of the CCTDI was indicated by previous nursing studies (Giddens, & Gloeckner, 2005; Shin, Jung, Shin, & Kim, 2006). Thus the CCTDI was considered as an appropriate tool to measure Japanese nurses' CTDs as variables associated with their cultural competency.

Part C: Demographic and Personal Questionnaire Sheet

The study questionnaire also included a demographic and personal information sheet which includes:

- gender;
- age;
- professional qualifications;

- basic nursing education;
- length of clinical experience;
- overseas living experience;
- length of overseas living experience;
- ability to speak a foreign language;
- types of prior learning;
- learning experience about the concepts of cultural diversity in previous nursing education programs;
- educational programs to learn about the concepts of cultural diversity in previous nursing education programs;
- experience in taking courses related to cultural nursing care in previous nursing education programs;
- educational programs to take courses related to cultural nursing care in previous nursing education programs;
- experience in taking workshops/classes related to cultural nursing care in continuing education;
- experience in caring for clients from culturally and ethnically diverse groups; and the frequency there of;
- difficulty in caring for clients culturally and ethnically diverse groups; and
- the details of difficulty in caring for clients from culturally and ethnically diverse groups

Data Collection Procedures

The researcher initially met with the directors and vice directors of each nursing service department of the selected hospitals to obtain their permission and cooperation for the study. The purpose of the study and procedures were explained to them. Possible recruitment procedures were negotiated. As the results of this negotiation, the recruitment was achieved through a cover letter from the researcher to explain the study's purposes and procedures, including the elements of informed consent. Recruitment was also achieved through the procedure that the directors and vice directors of each nursing service department asked if the nurses would like to voluntarily participate in the study.

Upon recruitment into the study, the participants were asked to complete the three types of questionnaires: Japanese version of IAPCC-R; Japanese version of CCTDI; and demographics and personal sheet. The questionnaires were completed at the hospitals or the participants could take them into the privacy of his or her home. In all, 522 participants were asked to place the questionnaires in a preaddressed, postage-paid envelope and return them to the researcher. A total of 1458 participants were asked to place the questionnaires into collection box, which were situated into each hospital unit.

Ethical Considerations

The study participants were treated with respect for autonomy, anonymity, confidentiality of volunteers, nonmaleficence, and beneficence (Beauchamp & Childress, 2001).

Permission to conduct the study was obtained from the Human Subjects Review Board of George Mason University. Permission was also obtained from the directors of

each nursing service department and/or hospital research committee where the study would be conducted.

The study purpose and procedures were explained in a cover letter (Appendix C) along with an informed consent form also (Appendix C). The informed consent form includes the following statements emphasizing the right to self-determination, confidentiality and anonymity, benefits and risks from the study;

- reasons for the research including the aims and processes of the research regarding data collection and analysis.
- participants have the right to refuse to participate and to withdraw at any time.
- subject's name and identity will not be revealed in data collection and analysis.
- all data kept will be securely locked and then be used only for the research.
- a consent form will be obtained from participants who are willing to participate and are interested in the topic of study.
- whether no foreseeable risk or harm or discomforts including physical, psychological, or social.
- no benefit to the participants, although the outcomes of the study will provide recommendations for future nursing education and practice.

There was a need to address the potential risks to participants from fatigue and time interference since the study asks the participants to complete three questionnaires which include more than 120 items. The participants were asked to take a break if they became fatigued or given the option to answer the questionnaires at their convenience within four week times. The researcher was available by phone or email to answer any

questions related to the study.

Procedures for Assessing the Quality of Measurement

Assessing the Quality of the IAPCC-R

For this study, the IAPCC-R was translated from English to Japanese. To ensure the quality of the IAPCC-R after translation, the following translation technique was used.

Addressing translation issues

Since the IAPCC-R has never been translated from English into Japanese, it was important that all issues of translation be addressed. When a research instrument is used with people of different cultural and language, caution is needed when translating the contents of the questionnaire into the required language (Meadows, 2003). The concepts which are examined in the study and the meanings of words used in the instrument often vary across cultures (Hsieh, Cholowski, & FitzGerald, 2005; Hyrkas, Appelqvist-Schmidlechner, & Paunonen-Ilmonen, 2003; Willgerodt, Kataoka-Yahiro, Kim, & Ceria, 2005). Some concepts may not be familiar to another culture or are interpreted differently due to different cultural experiences. As a result, the semantics (the meaning) of each question are often changed after translation. This was particularly true in this study because cultural competency is still a new concept in nursing education and practice in Japan.

To address this issue, the forward-backward translation procedure was used. This procedure is commonly used in the adoption and translation process (Meadows, 2003). First a forward translation is carried out using a bilingual person who translates the

instrument from language A to language B (Meadows, 2003). The forward translation is then blind backtranslated from B to A (Willgerodt et al., 2005). A panel of experts then compares the forward and backward translations. This procedure is continued until satisfactory equivalence is achieved. It is often suggested that several independent translators need to be included to ensure the quality of translation. For this study three people were selected for determining and addressing the translation issues of the IAPCC-R.

First phase: Forward translation

Two people were included in the forward translation process. The reason for having two persons is to avoid bias (Hsieh et al., 2005). One translator was a researcher knowledgeable in areas of cultural competency, and her English ability was considered to be adequate to translate English to Japanese. Another translator is an expert in translation and interpretation who has been involved with a transcultural nursing course in a baccalaureate nursing program in Japan. This person has experience as a translator and interpreter for nursing academics from English speaking countries. Each translator translated the IAPCC-R from English to Japanese independently. These two translators then compared each translated instrument to identify differences and similarities. Of the 25 items translated, the majority of the items were identical across two translated instruments. However, some translation issues were identified. The issues were related to semantic equivalence. Issues concerning content equivalence referring to the relevance of the content of each item in two languages (Willgerodt et al., 2005) was also identified in this process.

Several items and words were exposed as semantic equivalence issues. When some words in the English version were literally translated, the explanation in Japanese became very awkward. The word “aware,” used in item 15 and item 20, was modified to “know of ,” as it is a more appropriate and natural Japanese expression in this context. With this modification, the response categories “very aware,” “aware,” “somewhat aware,” and “not aware,” used for these items needed to be modified. They were modified to the following categories; “well know,” “know,” somewhat know,” and “do not know.”

The word “commitment,” which was used in item 4, had a slightly different connotation in Japanese. This word was initially translated to “*Chokusetukanyosuru*” which would mean “directly involved” in Japanese. After careful discussion, two translators decided to modify this word in the later stage of translation to “*Kenshinteki*” which would mean the same as “commitment” in English.

More difficult issues were raised within content equivalence. Several phrases or concepts were exposed as problems. They included “cultural competence,” “clients from ethnically/culturally diverse groups,” “cultural/ethnic groups,” “different ethnic group”/ethnically diverse groups (clients),” “cultural informants,” “ethnic pharmacology,” and “cultural assessment tool.” In Japanese language, there are no common expressions for these words. The most difficult word to translate was “cultural competence.” Both translators literally translated this word to “*Bunkateki-noryoku*” which could have a similar meaning to cultural competency. This way of translation was sometimes found in ethnology and anthropology, but not often in the context of nursing

education and practice in Japan. Similar problems occurred in translating the phrases “clients from ethically/culturally diverse groups,” “cultural/ethnic groups,” and “different ethnic group/ethnically diverse clients.” These phrases are used in several items in the IAPCC-R. The phrase “clients from ethically/culturally diverse groups” was translated to “*Tayona minzokuteki/bunkatekihaikei o mottuta kuraiento*” in Japanese. The phrase “cultural/ethnic groups” was translated into “*Bunkateki/minzokuteki haikei no kotonaru shudan.*” The phrase “different ethnic group”/ethnically diverse groups (clients)” was translated to “*Minzokutekihaikei no kotonaru shudan (hitobito).*” These phrases were literally translated in Japanese and thus would have similar meanings to the English phrase. However, this translation was problematic as they are not familiar phrases used in Japanese culture. Similar to the phrase for cultural competence, two translators were concerned that it would be difficult for the respondents to interpret appropriate meanings of these translated words.

There were other phrases with which the translators experienced difficulty. The following phrases, which are not familiar in nursing practice and education in Japan were literally translated in Japanese. The phrase “ethnic pharmacology” used in item 6 was translated to “*Minzokutekiyakuriryoho,*” “Cultural informants” in item 13 was translated to “*Bunkatekina johoteikyosha,*” and “cultural assessment tool” in item 20 was translated to “*Bunkateki-asesument tu-ru.*” It was perceived that the translated phrases were problematic concepts to understand for the participants of the study.

Second phase: Back translation

One bilingual person, who is a native English language teacher and is experienced

in tool translating and interpreting, was involved in the blind back translation process of the initial Japanese version of the IAPCC-R into English. This translator did not have any difficulty in translating most of the items. However this translator experienced difficulty in translating the phrase “cultural competence.” The issues and difficulties raised in forward and backward translation processes will be further discussed and some items were modified to include more appropriate Japanese expressions through the following stage.

Third phase: Comparison between original instrument and the forward/ backward translated version

The translators involved in the forward and backward translations compared the original instrument and the forward and backward translated version to address the translation issues identified in the previous stages. They initially examined the original English version of the IAPCC-R and the backward translated version to identify any inconsistencies. They then compared the original instrument and the forward and backward translated versions to examine item equivalence between the two languages.

Most of the items were consistent in the two versions. However, item 4 “I have a personal commitment to care for clients from ethically/culturally diverse groups” was slightly different in connotation from English. In the backward translation, the word “commitment” was translated to “I am directly involved.” In the forward translation, this word was translated as “*Chokusetukanyosuru*” which means “directly involved.” After careful discussion, the word “commitment” was re-translated to “*Kenshinteki*” which means commitment in Japanese, as it is a more appropriate translation.

As discussed previously, content equivalence was the major issue in the translation process. The phrases for “ethnic pharmacology,” “cultural informants,” and “cultural assessment tool,” were identical between the forward and backward translation. However, the translators were concerned that these translated phrases may not be understood by the respondents as they are not familiar concepts within nursing practice in Japan. The translators thought that there might be a need for extra definitions or explanations for these phrases.

Similarly, phrases for “clients from ethically/culturally diverse groups,” “cultural/ethnic groups,” “different ethnic group”/“ethnically diverse groups (clients),” and “cultural competence” were problematic phrases that were difficult for the respondents to interpret without extra definitions. The two translators were concerned that it would bias the tool if the extra definitions of these phrases were added. This is particularly true for the phrase “cultural competence.” This is because some items were aimed at examining the respondents’ understanding of the current definition of cultural competence.

During this discussion, another way to translate “cultural competence” was considered. As mentioned before, this phrase was literally translated as “*Bunkateki noryoku*” through forward and backward translation. This translation is considered awkward for the context of Japanese nursing. This researcher went back to review the current Japanese literature in the areas of ethnography and nursing to identify a more appropriate Japanese expression for the context of Japanese culture and nursing. Through this process, “cultural competence” was re-translated to “*Ibunkakea-noryoku*” which means “competence to care clients with diverse cultural backgrounds.” The translators decided

to seek other bilingual and expert opinions to assess whether this translation is culturally appropriate in Japanese culture and nursing.

Fourth phase: Bilingual and expert review

Some translation issues raised in previous phases were addressed through bilingual and expert reviews. One reviewer was a bilingual Japanese nursing academic who has experience in translating tools. Another was also a bilingual academic experienced in the area of cross-cultural communication and interaction. These two reviewers received both the original IAPCC-R and the Japanese version of the IAPCC-R including an explanation of translation issues identified in the previous phases. They were invited to write down their suggestions to address the translation problems. In this process, this researcher also communicated with the original instrument developer to solicit her opinions about how to modify some of the items and/or phrases.

The two reviewers agreed that “cultural competence” should be translated as “*Ibunkakea-noryoku*” as it is a more appropriate Japanese expression and the one most easily understood by the respondents.

According to the reviewers’ suggestions, the phrases “ethnic pharmacology,” “cultural informants,” “cultural assessment tool,” and “ongoing process” were modified by including extra phrases to improve the respondents’ understanding of the items. Although the instrument developer disagreed with adding extra definitions for some of the phrases/words as it might bias the tool, the some phrases/words were modified by adding extra expression phrases in order to make them easier to understand by the Japanese nurses. For instance, the phrase “ethnic pharmacology” was modified to “*Samazamana*

minzokuni tutawaru yakuriryoho” as it includes an extra phrase expressing pharmacology. This would be back translated as “pharmacology being transmitted to diverse ethnic groups.” Similarly the phrase “cultural informants” was revised to add an extra phrase expressing cultural informants. It was translated to “*Ibunka no joho o ataetekureru hitobito.*” In the backward translation, this came out as “people who provide the information regarding diverse culture.” The phrase, “cultural assessment tool” was also modified. It was translated to “*Kuraiento no bunkahaikei o haakushi soreniojitakea o teikyosurutameno bunkateki asesumentoshudan.*” This modification includes the extra phrase expressing the phrase and would be back translated as “cultural assessment tool assessing clients’ cultural background for providing appropriate care.” The phrase for “ongoing process” used in item 2 was also revised, because it is a very English expression. If literally translated, it would be difficult to imagine the true meaning of “ongoing process.” Therefore it was modified by adding an extra phrase expressing ongoing process. It was translated as “*Keizokuteki ni nobashiteiku noryoku deari, seicho purosesu.*” The item can be back translated to “cultural competence” is an ongoing process being continually improved competence.”

Regarding other phrases of concern such as “clients from ethically/culturally diverse groups,” “cultural groups,” and “ethnic groups,” the suggestions provided by reviewers were associated with the outcomes of discussion of previous translation phases. As a result, these phrases were not modified. Possible modifications were considered after the pilot study and, in addition, several items were slightly modified to more appropriate Japanese expressions after the bilingual and expert review processes. The translated

Japanese version of the IAPCC-R was further tested through the following validity and reliability tests.

Validity Evidence for the IAPCC-R

Validity of the IAPCC-R was established through the following validity tests.

Content validity: Expert review

Content validity for this study was achieved through a panel review by two experts in the areas of cultural competency. Willgerodt et al. (2005) suggest that the researcher should not rely on expert translations or bilingual personnel alone because they may not capture the essence of the meaning of a concept within the context of interested disciplines. Following to this suggestion, the quality of the IAPCC-R was further examined through the expert review process. The experts were Japanese nursing educators who were involved in culturally competent care as well as in teaching culturally competent care in nursing. The experts received a review package including a cover letter, an explanation of the instrument development procedures, and the information on Campinha-Bacote's cultural competency model. They were asked to evaluate individual items as well as the instrument as a whole concerning how difficult this instrument would be answer or be understood. The panel reviewers were further invited to write their suggestions and concerns about the items including translation issues.

Similar concerns as those expressed in previous processes were also indicated through the expert review process. For instance, one expert suggested that there might be a need to provide definitions for phrases such as "cultural informants" and "ethic

pharmacology” rather than providing extra phrases alone. At this stage, this researcher decided to address this issue after receiving the results of the pilot study.

Two items were a major concern to both experts because they were not very clear and therefore difficult to understand. These included item 9 (“I am aware of the cultural limitations of existing assessment tools that are used with ethnic groups”) and item 21 (“It is more important to conduct a cultural assessment on ethnically diverse clients than with other clients”). The experts indicated it was difficult to see in item 9 what were the cultural limitations of the existing tool and under what circumstances these would exist. After careful consultation with experts, item 9 was re-translated as “I am aware of the cultural limitations of existing assessment tools that are used with ethnic groups when assessing clients/groups with diverse cultural backgrounds.” In item 21, the experts were concerned that it would be difficult for the respondents to interpret who were the “other clients.” After communication with the original tool developer to verify the meanings of “other clients,” the extra phrase expressing other clients was added in this item. It was modified to “it is more important to conduct a cultural assessment on ethnically diverse clients than with other clients with diverse cultural backgrounds.” In addition, for these items, both experts suggested there might be a need to provide examples or definitions for ethnic groups/ethnically diverse clients and clients with diverse cultural backgrounds to distinguish these phrases. However, at this point, the researcher had decided to postpone the decision on whether to adapt this suggestion until the results of pilot study were obtained.

One expert further suggested that there might be a need to provide definitions of

cultural competence otherwise the respondents will not be able to answer several items. However, it was perceived that giving the definitions might bias the tool because some of the items were intended to examine what the respondents really knew about contemporary broad concepts of cultural competency. Thus this suggestion was not accepted for this study.

Pilot study

A pilot study was conducted with approximately 20 Japanese nurses who were currently working at a general hospital and who volunteered to participate. The pilot study occurred at two points in time. The first pilot group involved fifteen participants. They were asked to respond to the IAPCC-R item questions and then write down their concerns and difficulties in responding. For geographical reasons, one Japanese nurse gathered all the concerns and comments, and then mailed them to this researcher.

After reviewing the results of the first pilot study, the following items were further modified. In item 8 (“I am knowledgeable about the worldviews, beliefs, practices and/or lifeways of at least two cultural groups”), as the participants reported difficulty interpreting the meanings of “cultural groups” They indicated that there is a need to provide examples of cultural groups. Following their comments, an expression of cultural groups (*Jibuntoha kotonaru bunkateki haikei o motu shudan*) was added in this item. In English, it translates to “I am knowledgeable about the worldviews, beliefs, practices and/or lifeways of cultural groups with cultural backgrounds that are different from your own”. Regarding item 9 (“I am aware of the cultural limitations of existing assessment tools that are used with ethnic groups when assessing clients/groups with diverse cultural

backgrounds”), participants expressed difficulty interpreting the meaning of “clients/groups with diverse cultural backgrounds.” They suggested need to provide an example, otherwise a majority of the respondents would not be able to answer this question. Consequently, item 9 was revised as “I am aware of the cultural limitations of existing assessment tools that are used with ethnic groups when assessing clients/groups with diverse cultural backgrounds (clients/groups with diverse cultural backgrounds based on differences in sex, age, religion, occupation etc).” In the Japanese example of “clients/groups with diverse cultural backgrounds based on differences in sex, age, religion, occupation etc” is translated as “*Bunkatekihaikei no kotonaru kojins ya shudan (seibetu, nenrei, shukyo, shokugyo nadoniyoru bunkateki haikei no chigai omotu kojins ya shudan)*”).

Similarly, item 21 (“It is more important to conduct a cultural assessment on ethnically diverse clients than with other clients with diverse cultural backgrounds”) which was previously modified, the participants expressed difficulty interpreting the meaning of “other clients with diverse cultural backgrounds.” Therefore item 21 was revised to “It is more important to conduct a cultural assessment on ethnically diverse clients than with other clients with diverse cultural backgrounds (clients/groups with diverse cultural backgrounds based on differences in sex, age, religion, occupation etc).”

The modified IAPCC-R based on the results of the first pilot study was then administered to a second group of five Japanese nurses. Similar to the first pilot study, they were asked to respond to the IAPCC-R and indicate issues in responding to each item. The researcher then communicated with these participants to discuss their

comments and concerns. All five participants indicated that they were not familiar with the concept of cultural competency and had difficulty interpreting the meaning of some of the items. They suggested that adding a definition of cultural competence would assist in answering the questions. This raised a dilemma for the researcher. As previously mentioned, giving the definition would bias the tool due to the fact that some items actually examine the respondents' understanding of the concepts of cultural competency. Therefore, the researcher decided to retain the original version of the tool and will consider that the tool which was developed based on western culture will have its limitations when applied in a different culture. Such limitations will be discussed in the limitations of the research section. In addition, it was hoped that adding qualitative questions into the IAPCC-R, which could explore the respondents' concerns and difficulties in answering the IAPCC-R, might provide recommendations to improve the instrument.

Data Analysis Method

Analysis of Quantitative Data

There were multiple steps involved in this study's data analysis. The respondent's demographic and personal information were analyzed by using descriptive and frequency statistics to define the characteristic of sample. The reliability of the IAPCC-R and CCTDI assessed by using Cronbach's alpha coefficients. This study then focused on the four research questions posed in Chapter I. The following statistical data analysis techniques were applied to answer these research questions.

Research Question #1. What is the Level of Cultural Competency Reported by Japanese Nurses?

The level of cultural competency of Japanese nurses was measured by IAPCC-R. Descriptive statistics were used for measuring Japanese nurses' IAPCC-R total scores, subscale scores and individual items scores. The IAPCC-R scores were further categorized as cultural proficient (91-100), culturally competent (75-90), culturally aware (51-74), and culturally incompetent (25-50). These were examined by frequency statistics.

Research Question #2. What is the Level of CTDs Reported by Japanese Nurses?

The level of CTDs was measured by the CCTDI. The total score, sub-scale scores and scores of individual items of the CCTDI were examined using descriptive and frequency statistics. The total score and sub-scale scores of the CCTDI were further described by several categories based on the interpretation of scoring defined by Facione et al. (2001). The total score was reported through three categories: positive disposition (above 280); ambivalent disposition (between 210 and 280); and negative disposition (below 210). The sub-scales were also described by these three categories: positive disposition (above 40); ambivalent disposition (between 30 and 40); and negative disposition (below 30). The categorized CCTDI scores were examined using frequency statistic.

Research Question #3. What is the Relationship between Cultural Competency of Japanese Nurses and Their CTDs?

To answer this research question, correlation statistics using Pearson Correlation

Coefficients were used. The variables were the cultural competency on the total IAPCC-R and five sub-scales of the IAPCC-R (cultural knowledge, cultural skill, cultural awareness, cultural desire, and cultural encounters), and seven sub-scales of the CCTDI (truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness and maturity).

To further examine the relationship between the cultural competency of Japanese nurses and their CTDs, multiple regression analysis was used. The purpose of multiple regression is to examine the correlation between a selected group of predictor variables and one dependent variable (Munro, 2001; Tabachnick & Fidell, 2001). It is designed to predict the value of dependent variables from the combination of selected independent variables (Mertler & Vannatta, 2002). For this study, the selected group of predictor variables were the seven sub-scales of the CCTDI (truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness, and maturity) and the dependent variable was the total IAPCC-R.

In this study, sequential regression was applied. The characteristic of this analysis is to enter the influential and meaningful predictor variables into an equation model in a specific order. Order of entry is determined by theoretical knowledge (Mertler & Vannatta, 2002; Tabachnick & Fidell, 2001).

Research Question #4. What is the Relationship between the Cultural Competency of Japanese Nurses and Selected Demographic and Personal Factors?

One-way analysis of variance (ANOVA) was used for answering this research question. ANOVA examines mean differences in dependent variables between two or

more groups (Mertler & Vannatta, 2002). ANOVA requires that the dependent variable be defined as one continuous variable and independent variables as two or more nominal groups (Mertler & Vannatta, 2002). In this study, the dependent variable was cultural competency on the total IAPCC-R and the sixteen independent variables were the demographic and personal variables categorized by two or more groups.

Conducting sixteen individual ANOVAs increases the potential of making a Type I error with an alpha of .05. Therefore, for this study the Bonferroni correction was applied to reduce the chance of a Type I error. The Bonferroni correction brings the acceptance alpha level to .003 (.05/number analysis =16).

Analysis of Qualitative Data

Content analysis techniques were used for analyzing qualitative data from open-ended questions. Content analysis requires the researchers to discover the meanings of narrative comments by identifying emerging themes or categories. Through this analysis, some aspects of the respondents' views from their experiences in caring for clients from culturally and ethnically diverse backgrounds were reviewed.

IV. RESULTS OF THE STUDY

This chapter presents the results of the response rate; reliability of the IAPCC-R and the CCTDI; Japanese nurses' levels of cultural competency reported by the IAPCC-R, Japanese nurses' levels of CTDs measured by the CCTDI, the relationship between cultural competency on the IAPCC- R and their CTDs measured by the CCTDI; and the relationship between the cultural competency on the IAPCC-R and the selected demographic and personal factors. In addition, this chapter also contains the qualitative results from the open-ended questions.

Response Rate

The questionnaire packets were sent out at the beginning of February 2007 and the responses were obtained during a period of four weeks. A total of 1980 participants were invited to participate in this study. Among them, 522 participants were asked to place the questionnaires in a preaddressed, postage-paid envelope to return to the researcher. A total of 146 questionnaire packets were returned. The return rate was 27.96 %. Another 1458 participants were asked to place questionnaires in the collection box located in each hospital unit. Nine hundred and seventeen questionnaire packets were returned from these participants for a return rate of 62.89 %. The overall number of returned questionnaires was 1063 (146+917) out of 1980 for a return rate of 53.68 %. Of the 53.68 % (N=1063), 28 questionnaires were unable to be used for data analysis as they

included a high number of incomplete answers (missing data) or frivolous responses on the IAPCC-R and the CCTDI. Excluding these questionnaires, the usable percent response rate was reduced to 52.27 % (N= 1035).

Results of Reliability Test

Results of Reliability Test for the IAPCC-R

An internal consistency test is needed to examine the consistency of an instrument within itself. It measures how well a group of questions are fitted into particular concepts (Meadows, 2003). The internal consistency of the five sub-scales and the overall consistency of the IAPCC-R were tested using Cronbach's alpha. The results of the internal consistency analysis are presented in Appendix D (see Table D1 and D2) and Table 1.1.

Table D1 summarizes the mean and standard deviation for each item under the five sub-scales of the IAPCC-R. The results for each item mean under the five sub-scales had considerable variations.

Table D2 reveals a summary of item-to-item correlation and item-to-total statistic under the five sub-scales of the IAPCC-R. The item-to-item correlation examines the extent to which each item correlates with each other item (Shannon & Davenport, 2001). Details of the mean for item-to-item correlation and its ranges under each sub-scale are seen in Table D2 and it indicates that, with the exception of items under cultural desire, items under all other subscales had very small correlations, including some negative value correlations. These results demonstrate that the items were not very consistent with each other.

The correlation which examines the relationship between each item and the total score is further described in Table D2. The results reveal that there were very low relationships between the total score and each item for most of the sub-scales except cultural desire. The relationship under cultural desire had a moderate correlation. In addition, except for cultural knowledge and cultural desire, negative relationships were reported. These results indicate that individual items are not consistent with the total score of the IAPCC-R.

The Square multiple correlation (R^2) describes the amount of variance shared with all other items (Shannon & Davenport, 2001). The R^2 in this study for each item indicates low variance for most of the items, which indicates low consistency among the items (see Table D2). Only cultural desire had a moderate to acceptable variance of consistency.

Table 1.1 summarizes the results of Cronbach's alpha for overall (25 items) and five sub-scales of the IAPCC-R. The Cronbach's alpha of the overall IAPCC-R was calculated to be .717, which is considered to be an acceptable range of reliability. Cronbach's alpha of the five sub-scales ranged from .047 to .692. Only cultural desire exhibited fair to moderate reliability. The other four sub-scales of cultural awareness, cultural knowledge, cultural skills, and cultural encounter all indicated low reliability.

Table 1.1

Cronbach's Alpha Reliability for Five Sub-Scales and Overall of IAPCC-R

	Cronbach's Alpha	K
Overall of IAPCC-R	.717	25
Cultural awareness	.169	5
Cultural knowledge	.427	5
Cultural skill	.101	5
Cultural encounters	.047	5
Cultural desire	.692	5

Note . K= Number of items

Results of Reliability Test for the CCTDI

The internal consistency of the seven sub-scales and the overall aspect of the CCTDI were tested using Cronbach's alpha. The results of the internal consistency analysis are presented in Appendix E (see Table E1 and E2) and Table 2.1.

Table E1 describes the mean and standard deviation for each item for the seven sub-scales of the CCTDI. Details of the means and its range for each of the sub-scales are seen in E1. It indicates that the mean for each sub-scale had considerable variation.

Table E2 summarizes item-to-item correlation and item-to-total statistic for the seven sub-scales of the CCTDI. A review of item-to-item correlations indicate that the highest correlations for the sub-scales of analyticity, systematicity, self-confidence and inquisitiveness are at least .50, while the highest correlations for the other three sub-scales of truth-seeking, open-mindedness, and maturity are less than .350. In addition, except for self-confidence, the lowest correlations for all other sub-scales included negative values. These results indicate some items of the sub-scales are not consistent with each other. The ranges for the relationship between the total score and each item of

the seven sub-scales are also described in E2. Some items for the self-confidence and inquisitiveness had moderate correlations with the total score, but, in general there was a weak relationship between the total score and most of the sub-scales thus indicating that overall, the items were not consistent with the CCTDI total score.

Table E2 further shows the Square multiple correlation (R^2). The R^2 for each item indicates that a moderate variance was identified with some items under self-confidence while low variances were reported for most of the items. This indicates that the CCTDI had a small degree of consistency among the items.

Table 2.1 summarizes the results of Cronbach's alpha for the overall aspect (75 items) and sub-scales of the CCTDI. The Cronbach's alpha of the overall aspect of the CCTDI was calculated at .798. This is a satisfactory value of reliability. Cronbach's alpha for the seven sub-scales of the CCTDI ranged from .337 to .833. With the exception of the sub-scales of open-mindedness and analyticity, the other five sub-scales showed moderate to satisfactory reliability.

Table 2.1

Cronbach's Alpha Reliability for Seven Sub-Scales and Overall of CCTDI

	Cronbach's Alpha	K
Overall of CCTDI	.798	75
Truth-seeking	.552	12
Open-mindedness	.337	12
Analyticity	.340	11
Systematicity	.568	11
Maturity	.592	10
Confidence	.833	9
Inquisitiveness	.691	10

Note . K= Number of items

Results of Demographic and Personal Data

Demographic and personal variables were examined through frequency and descriptive statistics. The results are reported in Table 3.1 and Table 3.2. Table 3.1 summarizes the results of categorical demographic and personal variables. Table 3.2 presents the results of continuous demographic and personal variables including age, and the length of clinical experience.

Gender

The respondents were almost entirely female (n=1018, 98.4 %). Only 17 respondents (1.6%) were male.

Age

The mean age of the respondents was 35.16 years (SD=10.16). The age of the respondents ranged from 63 to 21 years. 38.6% respondents (n= 400) were less than 30 years old, 28.0 % (n=290) was 30 to 39 years old, and 21.7 % (n=225) was 40 to 49 year of age. 11.0 % (n=114) was 50 or older.

Professional Qualifications

The respondents who had only a registered nurse qualification were the largest group (n=916, 88.5 %). Only few respondents had other qualifications.

Basic Nursing Education

More than 50 % of the respondents (n = 569) had completed a 3 year nursing diploma program. The respondents who completed a 2 year nursing diploma program were 17.5 % (n = 181). There were a few respondents who had other types of education. The respondents who had completed a bachelor's degree or higher were few.

Length of Clinical Experience

The range for the years of clinical practice experience for the respondents was from 10 months to 46 years with a mean of 12.37 (SD=9.86): 28 % of respondents (n=290) had less than 5 years of clinical experience; 21.2% (n=219) had 5 to 9 years experiences; 25.8 % (n=267) had 10 to 19 years of experience; and 24.9 % (n=258) had 20 or more years of experience.

Overseas Living Experience

The majority of respondents (n=1015, 98.1%) had no overseas living experience. Only 1.9 % (n=20) had lived overseas. Within the group who had overseas living experiences (N=20), thirteen respondents had less than 1 year overseas living experience, six respondents had one to four years overseas living experience. Only one respondent had five or more years overseas living experience.

Ability to Speak a Foreign Language

The majority of respondents (n=801, 77.4%) were not able to speak a foreign language. Only 0.4 % indicated that they could speak a foreign language very well (n=4) and another 0.4% said that they could speak a foreign language fairly well (n=4), and 21.7 % (n=225) indicated that they spoke a little.

Types of Prior Learning

More than half of the respondents (n=551, 53.2%) indicated that their previous learning experience in a nursing program was through a teacher-centered learning; 39.6 % (n=410) perceived that their prior learning had both teacher-centered and student centered learning; and only 5.8% reported that they were educated through a

student-centered learning.

Learning Experience about the Concepts of Cultural Diversity in Previous Nursing Programs

A majority of the respondents (n = 849, 82 %) reported that they had no experience in learning the concepts of cultural diversity in prior nursing education programs. A small percentage of respondents (n=185, 17.9 %) had such learning experiences. Within the group who had this learning experience, almost half of the respondents (n=79, 42.7 %) had them in a 3 year nursing diploma course, while 27.6 % (n=51) learned about cultural diversity in a bachelor's nursing program. A low percentage of respondents had learning experiences through other types of educational programs.

Experience in Taking Courses Related to Cultural Nursing Care in Previous Nursing Programs

A majority of respondents (n=958, 92.6%) had not taken courses related to cultural nursing care in nursing education programs. Only 7.3 % (n=76) had experience with taking such a course. Within the group who had taken a cultural nursing care course (n=76), 39. 5 % (n=30) had taken such courses in a 3 year nursing diploma program and 36.8 % (n=28) had taken them in a bachelor program. Very few respondents had taken them in other educational programs.

Experience in Taking Workshops/Classes Related to Cultural Nursing Care

Almost all nurses (n=1007, 97.3 %) had not taken any classes or workshops related to cultural nursing care as a continuing education process after graduation. Only a few nurses (n=22, 2.1 %) had taken classes or workshops.

Experience in Caring for Clients from Culturally and Ethnically Diverse Groups

More than half of the respondents (n=578, 55.8%) had experience in caring for clients from culturally and ethnically diverse groups, while 451 respondents (43.6%) had not experienced caring for clients from culturally and ethnically diverse groups.

Frequency and Difficulty in Caring for Clients from Culturally and Ethnically Diverse Groups

The questionnaire asked the group who had experience in caring for culturally and ethnically diverse people (n=578) about the frequency and difficulty in caring for these clients. The results reveal that more than half of the nurses (n=311, 53.8 %) had opportunities to care for these clients several times a year, while 37.4 % (n=216) had only occasionally cared for this type of client. For the nurses who had experience in caring for this type of client (n=484, 83.7 %), most had experienced difficulty while caring for them. Only 16.7% (n=94) of nurses reported never facing any difficulty.

Table 3.1

Categorical Demographic and Personal Variables

Variables	Frequency	Percent
Gender (N=1035)		
Male	17	1.6
Female	1018	98.4
Age (N=1035)		
Less than 30 years	400	38.6
30 - 39	290	28.0
40 - 49	225	21.7
50 and above	114	11.0
Missing	6	.6
Professional qualifications (N=1035)		
Registered nurse	916	88.5
Nurse and midwife	52	5.0
Nurse and public Health	57	5.5
Nurse, midwife and public health	10	1.0
Basic nursing education (N=1035)		
High school (2 years nursing course)	65	6.3
Nursing diploma program (2 years course)	181	17.5
Nursing diploma program (3 years course)	569	55.0
Nursing junior college (2 years course)	23	2.2
Nursing junior college (3 years course)	92	8.9
Bachelor program (nursing)	72	7.0
Bachelor program (others)	18	1.7
Master program (nursing)	3	.3
Master program (others)	4	.4
PhD program (nursing)	1	.1
PhD program (others)	-	-
Others	6	.6
Missing	1	.1
Length of clinical experience (N=1035)		
less than 5 years	290	28.0
5 to 9 years	219	21.2
10 to 19 years	267	25.8
20 and more years	258	24.9
Missing	1	.1

Table 3.1 (Continued)
Categorical Demographic and Personal Variables

Variables	Frequency	Percent
Overseas living experience (N=1035)		
Yes	20	1.9
No	1015	98.1
Length of overseas living experience (N=20)		
Less than 1 year	13	65.0
1 to 4 years	6	30.0
5 and more years	1	5.0
Ability to speak a foreign language (N=1035)		
Speak very well	4	.4
Speak fairly well	4	.4
Speak a little	225	21.7
Not speak	801	77.4
Missing	1	.1
Types of prior learning (N=1035)		
Teacher-centered learning	551	53.2
Student-centered learning	60	5.8
Both learning types	410	39.6
Others	6	.6
Missing	8	.8
Learning experience about the concepts of cultural diversity (N=1035)		
Yes	185	17.9
No	849	82.0
Missing	1	.1

Table 3.1 (Continued)
Categorical Demographic and Personal Variables

Variables	Frequency	Percent
Educational programs to learn about the concepts of cultural diversity (N=185)		
High school (2 years nursing course)	5	2.7
Nursing diploma program (2 years course)	13	7
Nursing diploma program (3 years course)	79	42.7
Nursing junior college (2 years course)	2	1.1
Nursing junior college (3 years course)	23	12.4
Bachelor program (nursing)	51	27.6
Bachelor program (others)	4	2.2
Master program (nursing)	1	.5
Master program (others)	3	1.6
PhD program (nursing)	-	-
PhD program (others)	-	-
Others	4	2.2
Experience in taking courses related to cultural nursing care (N=1035)		
Yes	76	7.3
No	958	92.6
Missing	1	.1
Educational programs to take courses related to cultural nursing care (N=76)		
High school (2 years nursing course)	3	3.9
Nursing diploma program (2 years course)	5	6.6
Nursing diploma program (3 years course)	30	39.5
Nursing junior college (2 years course)	1	1.3
Nursing junior college (3 years course)	5	6.6
Bachelor program (nursing)	28	36.8
Bachelor program (others)	-	-
Master program (nursing)	1	1.3
Master program (others)	-	-
PhD program (nursing)	-	-
PhD program (others)	-	-
Others	3	3.9

Table 3.1 (Continued)

Categorical Demographic and Personal Variables

Variables	Frequency	Percent
Experience in taking workshops/classes related to cultural nursing care (N=1035)		
Yes	22	2.1
No	1007	97.3
Missing	6	.6
Experience in caring for clients from culturally and ethnically diverse groups (N=1035)		
Yes	578	55.8
No	451	43.6
Missing	6	.6
Frequency in caring for clients from culturally and ethnically diverse groups (N=578)		
Almost everyday	13	2.2
1 or 2 times a week	22	3.8
1 or 2 times a month	16	2.8
Several times a year	311	53.8
Hardly at all	216	37.4
Difficulty in caring culturally and ethnically diverse groups (N=578)		
Yes	484	83.7
No	94	16.3

Table 3.2

Continuous Demographic and Personal Variables (N=1035)

Variables	Mean	SD
Age	35.16	10.16
Length of clinical experience	12.37	9.86

Results of Each Research Question

Research Question #1: What is the Level of Cultural Competency Reported by Japanese Nurses?

The level of cultural competency of Japanese nurses was measured by the IAPCC-R. Scale scores were created by each item of the IAPCC-R under five sub-scales with four point Likert scales using positive and negative items by computing frequency and percentage (Table F1 in Appendix F). As the previous chapter indicates, the scale reflects the following categories: strongly agree, agree, disagree, strongly disagree; very aware, aware, somewhat aware, not aware; very knowledgeable, knowledgeable, somewhat knowledgeable, not knowledgeable; very comfortable, comfortable, somewhat comfortable, not comfortable; and very involved, involved, somewhat involved, not involved.

Table F1 indicates that few respondents strongly agreed with most of the items, yet, few respondents strongly disagreed with most of the items. These results indicate that, overall, the respondents tended to be agree or disagree with each item but not strongly so. However, more than half of the respondents did strongly disagree with items 6, 8, 10, 13, 15, 20, 23.

Scale scores for each item of the IAPCC-R were further created by computing the mean and standard deviations of each item under the five sub-scales (Table F2 in Appendix F). For the purpose of analysis, a mean of less than 3 was classified as a negative response/disagreement with the items, and a mean greater than 3 was classified as a positive response/ agreement with the items. In exception to this, items 1, 3, 11, 17

and 21 are negative items which are in reverse order and therefore a mean less than 3 was classified as a positive negative response/agreement with the item and a mean of greater than 3 was categorized as negative response/disagreement with the items.

As Table F2 shows, most of the positive items had a mean less than 2 or 3 which indicates that the respondents on average had a negative response or disagreement with the items. Regarding negative items in reverse order under each of the five sub-scales, the mean for most of the negative items (with the exception of item3) was less than three which indicates that the response on average was positive on most of the negative items.

The respondents' scores for the IAPCC-R were further examined through the following data analysis. Descriptive statistics was used for measuring Japanese nurses' IAPCC-R scores total scores as well as the individual five sub-scales scores. The IAPCC-R total scores and each of the sub-scale scores by mean, per-item mean (per-item mean = mean /number of items), median, mode, and standard deviation are summarized in Table 4.1 The mean of the total score on the IAPCC-R was 53.85 (SD=5.28). The mean and standard deviation for the five sub-scales were cultural awareness (M=11.41, SD=1.38), cultural knowledge (M=8.53, SD=1.40), cultural skill (M=10.91, SD=1.36), cultural encounters (M=11.24, SD=1.47), and cultural desire (M=11.72, SD=2.09). The highest mean among the five sub-scales was cultural desire. The lowest mean was cultural knowledge, followed by cultural skill.

Per-item mean of the total score of IAPCC-R was 2.15, indicating that the respondents did not on average believe themselves to be culturally competent. Per-item mean for the sub-scales showed that cultural awareness was 2.28, indicating that the

respondents did not on average believe that they were cultural aware; cultural knowledge was 1.71, which was the lowest per-item of the sub-scale of all five, indicating that the respondents did not on average perceive themselves to be knowledgeable in the area of cultural knowledge; cultural skills was 2.18, the second lowest scoring of the five sub-scales indicating that they did not believe that they were skilled in the area of cultural skill; cultural encounters was 2.25 indicating that they were uncomfortable in interacting with clients from diverse cultural and ethnic groups, and cultural desire was 2.34, the highest score of five sub-scales, yet still indicating that they did not perceive that they had cultural desire.

Table 4.1

Descriptive Results for Total Score and Five Sub-Scale Scores of IAPCC-R (N = 1035)

Variables	N	Missing	Mean	SD	Mdn	Mode	Per-item mean	K
Total score of IAPCC-R	872	163	53.85	5.28	54	51	2.15	25
Cultural awareness	996	39	11.41	1.38	11	11	2.28	5
Cultural knowledge	1016	19	8.53	1.40	8	8	1.71	5
Cultural skill	961	74	10.91	1.36	11	11	2.18	5
Cultural encounters	966	69	11.24	1.47	11	11	2.25	5
Cultural desire	986	49	11.72	2.09	12	11	2.34	5

Note . K = Number of items for each sub-scale

Per-item mean = Mean/K

The IAPCC-R scores were further assigned to four categories: culturally proficient (91-100); culturally competent (75-90); culturally aware (51-74); and culturally incompetent (25-50) as defined by Campinha-Bacote (2003a). These scores were examined using frequency statistics. Table 4.2 shows the results of the frequencies and relative percentages of cultural competency by the four categories. The majority of respondents (n=650, 74.5%) were at a culturally aware level in terms of their self-assessment; 221 nurses (25.3%) were at a culturally incompetent level in terms of their self-assessment; and 1 nurse (0.1%) was at a culturally competent level in terms of self-assessment. There were no nurses at the culturally proficient level based on their self-assessment.

Table 4.2

Level of Cultural Competency on IAPCC-R Described by Four Categories

	<i>Freq</i>	<i>%</i>
Culturally incompetent	221	25.3
Culturally aware	650	74.5
Culturally competent	1	.1
Culturally proficient	-	-

Research Question #2: What is the Level of Critical Thinking Dispositions (CTDs) Reported by Japanese Nurses?

The level of CTDs was measured by the CCTDI and its scores were analyzed by descriptive and frequency statistics. The CCTDI used a six point forced choice Likert

scales. The Likert scale ranged from “strongly agree” to “strongly disagree” It requires the respondents to either agree or disagree with each item and no neutral option is available.

First, scale scores were created by each item of the CCTDI under the seven sub-scales with the six point Likert scales by computing frequency and percentage (Table G1 see Appendix G). It is difficult to see a trend in responses to items under each sub-scale. However, it can be seen that few respondents tended to strongly disagree or strongly agree with items. Most respondents answered at 2 to 5 on the six point Likert scale.

Scale scores for each item of the CCTDI were also examined by computing the mean of each item (Table G2 in Appendix G). Respondents choosing to respond at 1, 2 or 3 have an oppositional or negative disposition towards the CT item while respondents selecting a response in positive disposition towards CT had a 4, 5 or 6 point per item (Facione et al, 2000). An exception is that the CCTDI include a total of 41 negatively phrased items. For these items, respondents selecting the 4, 5 or 6 point had a negative disposition towards the item while respondents selecting 1, 2 or 3 had a positive disposition toward the item.

Table G2 summarizes the means of each item under the seven sub-scales, based on the six-point Likert scales. As G2 indicates, the means of items under the five sub-scales had variations. Of the total of thirty-four positive items, only 10 items had a mean of over 4. This indicates that the respondents on average had a negative disposition or were oppositional to the positive items. Of the total forty-one negative items which are in

reverse order, twenty-one items had a mean of less than 4 while twenty items had a mean of greater than 4.

Descriptive statistics were used for measuring the total CCTDI score as well as the seven individual sub-scale scores. The total score was assigned to one of three categories based on the interpretation of scoring by Facione et al (2001): positive disposition (above 280); ambivalent disposition (between 210 and 280); and negative disposition (below 210). Sub-scales were also described by three categories: positive disposition (above 40); ambivalent disposition (between 30 and 40); and negative disposition (below 30).

Table 5.1 summarizes the total score and each of the seven sub-scale scores of the CCTDI by mean, standard deviation, median, mode, and per-item mean (per-item mean = mean /number of items). The respondents had overall positive dispositions toward CT with a mean score of 284.42 (SD=22.20). While per-item mean of the total CCTDI was 3.79 which indicates that the respondents on average would be ambivalent or positive towards the total CCTDI. There were positive dispositions towards four of the sub-scale scores as well: truth-seeking (M= 42.70, SD=5.90); open-mindedness (M=48.30, SD=4.86); maturity (M=42.32, SD=5.81); and inquisitiveness (M=43.85, SD=6.11). Reflecting these results, the per-item means for these sub-scales (except for truth seeking), were over four which indicates that the respondents on average had a positive disposition towards items on these sub-scales. The mean scores on analyticity (M=39.57, SD=4.91) and systematicity (M=38.34, SD=6.03) show ambivalence towards the CTDs. The mean score on self-confidence was 28.89 (SD=6.82) which is a negative disposition. Reflecting

these scores, the per-item mean for these sub-scales were all less than four, thus indicating that the respondents on average perceived that they had a negative or ambivalent disposition towards items on these sub-scales.

Table 5.1

Descriptive Results for Total Score and Seven Sub-Scale Scores of CCTDI
(N = 1035)

Variables	N	Missing	Mean	SD	Mdn	Mode	Per-item mean	K
Total Score of CCTDI	740	295	284.42	22.20	282	270	3.79	75
Truth-seeking	962	73	42.70	5.90	43	41	3.56	12
Open-mindedness	978	57	48.30	4.86	48	49	4.03	12
Analyticity	993	42	39.57	4.91	39	39	3.60	11
Systematicity	995	40	38.34	6.03	38	36	3.49	11
Maturity	974	61	42.32	5.81	42	41	4.23	10
Confidence	993	42	28.89	6.82	29	29	3.21	9
Inquisitiveness	925	110	43.85	6.11	44	43	4.39	10

Note . K = number of items for each sub-scale

Per-item mean = Mean/K

Table 5.2 indicates the frequencies and percentages of the total score and the seven sub-scale scores on the CCTDI categorized by three categories: 46.2 % of the respondents had overall ambivalent dispositions, and 53.8 % were positive in terms of the overall CCTDI score. There were no respondents with a negative disposition towards the total CCTDI score.

For the seven sub-scales, 61.7% scored in the positive range and 30% reported ambivalence towards truth-seeking. This suggests that the majority of respondents had a

positive disposition towards truth-seeking. The majority of respondents (90.1%) also had a positive disposition towards open-mindedness while only 4.3 % scored in the ambivalent disposition sector towards open-mindedness. Regarding analyticity and systematicity, three out of ten had a positive disposition and more than fifty percent scored in the ambivalence disposition sector. On maturity, more than fifty percent (59.7 %) had a positive range and 32.5% indicated ambivalence. Few respondents scored positive towards self-confidence with, 40.9 % of the respondents having ambivalence towards self-confidence and 50.8 % being negative range. Finally, more than half of the respondents (64.4 %) scored in the positive range towards inquisitiveness, with 24.0% in the ambivalence range.

Table 5.2

Frequencies and Percentages of CCTDI by Three Categories

Variables	Frequency	Percent
Total score of CCTDI (N=740)		
Positive	398	53.8
Ambivalence	342	46.2
Negative	-	-
Truth-seeking (N=962)		
Positive	639	61.7
Ambivalence	310	30.0
Negative	13	1.3
Open-mindedness (N=978)		
Positive	933	90.1
Ambivalence	45	4.3
Negative	-	-
Analyticity (N=993)		
Positive	388	37.5
Ambivalence	595	57.5
Negative	10	1.0
Systematicity (N=995)		
Positive	351	33.9
Ambivalence	584	56.4
Negative	60	5.8
Maturity (N=974)		
Positive	618	59.7
Ambivalence	336	32.5
Negative	20	1.9
Confidence (N=993)		
Positive	44	4.3
Ambivalence	423	40.9
Negative	526	50.8
Inquisitiveness (N=925)		
Positive	667	64.4
Ambivalence	248	24.0
Negative	10	1.0

Research Question #3: What is the Relationship between Cultural Competency of Japanese Nurses and their CTDs?

To answer research question 3, bivariate correlation statistics computing Pearson Correlation Coefficients were used. Such statistics are conducted for examining the relationships among variables (Munro, 2001). The results of the correlation statistic for this study were applied to later analysis for sequential regression. In this study, the variables include dependent variables of cultural competency on the total and five sub-scales of the IAPCC-R (cultural awareness, cultural knowledge, cultural skill, cultural encounters and cultural desire). Independent variables are the seven sub-scales of the CCTDI (truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness and maturity).

Results of bivariate correlations

Bivariate correlations were conducted to examine the relationship between the total IAPCC-R and the seven sub-scales of the CCTDI. The results are presented in Table 6.1. It indicates that the total IAPCC-R was significantly correlated with most of the sub-scales, except truth-seeking, but with very weak relationships. Pearson correlation scores on the three sub-scales of open-mindedness ($r=.212$, $p<.01$), self-confidence ($r=.282$, $p<.01$), and inquisitiveness ($r=.279$, $p<.01$) were higher than other sub-scales (truth-seeking: $r=-.054$, $p>.05$; analyticity: $r=.189$, $p<.01$; systematicity: $r=.108$, $p<.01$; maturity: $r=.089$, $p<.01$) although even high values still indicate a weak relationship.

Table 6.1

Bivariate Pearson Correlations between Total IAPCC-R and Seven Sub-Scales of CCTDI
(N = 1030)

	1	2	3	4	5	6	7	8
1. Total IAPCC-R	1							
2. Truth-seeking	-.054	1						
3. Open-mindedness	.212**	.160**	1					
4. Analyticity	.189**	-.171**	.144**	1				
5. Systematicity	.108**	.181**	.227**	.247**	1			
6. Maturity	.086*	.474**	.321**	-.037	.225**	1		
7. Self-confidence	.282**	-.238**	.164**	.449**	.407**	-.115**	1	
8. Inquisitiveness	.279**	-.065*	.389**	.320**	.285**	.183**	.381**	1

Note. *. Correlation is significant at the .05 (2-tailed)

**. Correlation is significant at the .01 (2-tailed)

2~8: Sub-scales of CCTDI

Bivariate correlation analysis was then conducted to examine the relationship of the total IAPCC-R and the five sub-scales of the IAPCC-R with the seven sub-scales of the CCTDI. The findings are displayed in Table H1 (see Appendix H). Four sub-scales of open-mindedness, analyticity, self-confidence, and inquisitiveness had positive correlations with the total IAPCC-R as well as all five sub-scales. However, these correlations are small. Sub-scales of truth-seeking, systematicity, and maturity had very little correlation with the total IAPCC-R or its sub-scales.

Results of multiple regression

Multiple regression analysis was used to further answer research question #3. The purpose of multiple regression is to examine the correlation between a selected group of

predictor variables and one dependent variable (Munro, 2001; Tabachnick & Fidell, 2001). It is designed to predict the value of dependent variables from the combination of selected independent variables (Mertler & Vannatta, 2002). For this study, the selected group of predictor variables included the seven sub-scales of the CCTDI (truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness and maturity). The dependent variable was the total IAPCC-R.

There are several types of multiple regression methods. In this study, sequential multiple regression was used. A characteristic of sequential regression is that independent variables are entered into the equation in a specific order (Tabachnick & Fidell, 2001). Order of entry of independent variables is generally assigned according to logical or theoretical consideration (Tabachnick & Fidell, 2001). Independent variables noted as more influential or of a higher priority are entered into the analysis first (Mertler & Vannatta, 2002). An alternative approach is that the researcher enters the independent variable of most interest in the last step and enters other variables first (Tabachnick & Fidell, 2001). In this approach, the researcher would see a significant regression equation of the independent variable of interest while controlling for variances explained by other variables entered in the first steps. In this study, the first approach (higher priority variables entered first) was applied.

Before conducting regression analysis, data were screened by computing frequency statistics to identify missing data. There were a number of missing values on the seven sub-scales of the CCTDI and the total IAPCC-R. To replace the missing values, the method using a series mean was used. The examination of outliers was conducted by

computing Mahalanobis distance in the preliminary regression procedure. Mahalanobis distance ($p < .001$) was evaluated as a chi-square with a degree of freedom. The evaluation indicates that there were five cases identified as outliers and these were deleted from the analysis. Univariate normality was initially assessed by conducting Explore. Histogram, normal Q-Q plot, values for skewness and kurtosis, and Kolmogorov-Smirnov tests indicated non-normal distribution for some variables before evaluating multivariate linearly. Moderate to substantial positive skews were identified in the CCTDI sub-scales on analyticity, maturity, and inquisitiveness. These variables were corrected by the following transformation. Square root transformation was applied for the CCTDI sub-scales of maturity and inquisitiveness. Logarithm transformation was selected for the sub-scale of analyticity. After data transformation, the Kolmogorov-Smirnov test was still significant but the skewness and kurtosis values were much closer to zero. In addition, the histogram and normal Q-Q plots indicated distributions for these variables that are much more normal. Thus it is assumed that the transformation was successful. Multivariate linearity, normality and homoscedasticity were examined by creating a residual plot (see figure 2). The residual plot is somewhat scattered but it is not extreme. It seems to indicate a fairly consistent score throughout the residual plot with a concentration in the center. Thus an assumption of multivariate linearity and normality and homoscedasticity appears to be reasonable. The assumption of multicollinearity was further assessed by the tolerance statistic. Tolerance coefficients for all IVs were all above .1. Thus multicollinearity was not assumed.

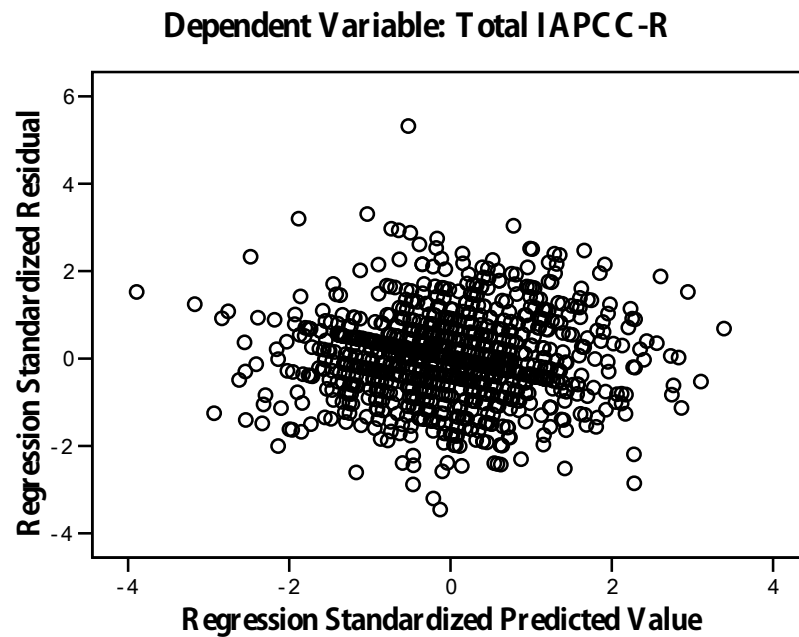


Figure 2: Residual Plot

Sequential regression analysis was then conducted to examine the relationship between the total IAPCC-R and the seven sub-scales of the CCTDI. It was used to determine the degree of variance in the total IAPCC-R that could be explained by each predictor variable for the seven sub-scales of the CCTDI.

In this study, more influential and meaningful sub-scales of the CCTDI assumed by previous literature and significance of relationships among variables as identified in the prior correlation analysis thus used for the first regression model. The previous chapter has already indicated that the sub-scales of open-mindedness and inquisitiveness

appear to be connected to cultural competency. Furthermore, a previous study by Doutrich & Storey, (2004) had found that these two sub-scales were statistically correlated with the total IAPCC-R. Supporting this, this study also found that these two sub-scales had significant relationships with the total IAPCC-R and, compared to other sub-scales, r-values are quite high. Thus these sub-scales of open-mindedness and inquisitiveness were entered into the first model. Order of entry following the first model was then determined based on higher correlation coefficients from the prior correlation analysis. Therefore, the sub-scale of self-confidence was entered into the second model; analyticity was entered into the third model; systematicity was entered into the fourth model; and maturity and truth-seeking were entered into the final model.

The results of the sequential regression are reported in Table 7.1. Only 13.4 % of the total variability of the IAPCC-R was explained by final model with 7 predictors. This final model significantly predicted the total IAPCC-R ($R^2 = .134$, $F(7, 1022) = 22.677$, $p < .001$). As β values after step 5 with all IVs in equation shown, sub-scales of inquisitiveness, open-mindedness, self-confidence, systematicity and maturity were significant predictors of the total IAPCC-R. Higher scores of inquisitiveness ($\beta = .141$, $p < .001$), open-mindedness ($\beta = .109$, $p < .001$), self-confidence ($\beta = .223$, $p < .001$), and maturity ($\beta = .083$, $p < .05$) were significant predictors for total IAPCC-R, along with lower scores of systematicity ($\beta = -.072$, $p < .05$).

Table 7.1

Sequential Regression of Impacts of Sub-scales of CCTDI on Total IAPCC-R

Variables	R ²	R ² Change	F Change	B	SE B	β	t
Model 1	.090***	.090***	50.977***				
Inquisitiveness				2.578	.360	.213	7.157***
Open-mindedness				.125	.033	.122	3.779***
Model 2	.126***	.035***	41.653***				
Inquisitiveness				1.730	.377	.155	4.589***
Open-mindedness				.121	.032	.118	3.734***
Confidence				.148	.023	.204	6.454***
Model 3	.127***	.001	1.409				
Inquisitiveness				1.656	.382	.148	4.334***
Open-mindedness				.121	.032	.118	3.714***
Confidence				.137	.025	.189	5.545***
Analyticity				3.768	3.175	.039	1.187
Model 4	.130***	.003	3.328				
Inquisitiveness				1.717	.383	.154	4.483***
Open-mindedness				.129	.033	.125	3.928***
Confidence				.151	.026	.208	5.843***
Analyticity				4.060	3.175	.042	1.279
Systematicity				-.049	.027	-.060	-1.824
Model 5	.134***	.005	2.725				
Inquisitiveness				1.572	.389	.141	4.046***
Open-mindedness				.111	.034	.109	3.279***
Confidence				.162	.027	.223	5.951***
Analyticity				4.172	3.188	.044	.191
Systematicity				-.059	.028	-.072	-2.087*
Maturity				.928	.398	.083	2.331*
Truth-seeking				-.024	.030	-.028	-.799

Note. ***p < .0001 *p < .05

Research Question #4: What is the Relationship between the Cultural Competency of Japanese Nurses and Selected Demographic and Personal Factors?

The relationships between the dependent variables of cultural competency on the total IAPCC-R and the dependent variables of each demographic and personal variable

were tested by using one-way ANOVA. ANOVA examines mean differences in dependent variables between two or more groups (Mertler & Vannatta, 2002). ANOVA requires that a dependent variable is defined as one continuous variable and independent variables are as two or more nominal groups (Mertler & Vannatta, 2002). In this study, the dependent variable was cultural competency based on the total IAPCC-R; independent variables were demographic and personal ones categorized by two or more groups. The demographic variable of gender was not included because there are very few respondents categorized in the male group.

A total of sixteen demographic and personal variables were included in the ANOVA analysis. Furthermore, previous frequency statistics for demographic and personal variables had shown that there were very few numbers of the respondents grouped in some demographic variables. For the purpose of ANOVA, such respondents were deleted or combined with other group categories.

Conducting sixteen independent ANOVA's and the Bonferroni correlation to guard against the Type I error was applied and the significant level of .003 ($.05/16 = .003$) was held.

Prior to conducting ANOVA, data were examined for missing values, outliers, and assumption of normality. There were a number of missing values on the variables of the total IAPCC-R. To replace the missing values the replacement method using a series mean was used. The univariate outliers of cultural competency on the total IAPCC-R in each categorical group of independent variables were examined by creating frequency, histogram, extreme value table, box-plot, and stem-and-leaf plot. The results indicate that

the number of outliers for each categorical group of independent variables was identified. Such outliers were altered by replacing them within a maximum and minimum value that falls within the accepted distribution. The examination of univariate normality within each independent variable of demographic and personal factors was conducted by creating histogram, normal Q-Q plot and values for skewness and kurtosis, and Kolmogorov-Smirnov tests. The results indicated some non-normal distributions. However, the distributions were not extreme, thus no transformations were undertaken. The assumption of homogeneity for cultural competency variables for each group of independent variable was also examined by Levene's test of equality of variance. The results indicated that there were no significantly different variances among groups thus acceptable homogeneity of variance could be assumed.

The following are the results of the one way ANOVA (with Bonferroni correction) examining the significant mean differences in cultural competency among demographic and personal variables. Few of these demographic and personal variables had significant statistical effects. Nevertheless, they are all described sequentially, since, the lack of effects may be of some interest. The descriptive statistics for computing mean scores, per-item mean (mean scores/number of items on IAPCC-R=25) and standard deviation of cultural competency among each demographic and personal variable were also reported.

Cultural Competency by Age

The mean scores and per-item mean scores of cultural competency on the IAPCC-R and standard deviation for each of four age groups are shown in Table 8.1. Per-item means for the total score of the IAPCC-R ranged from 2.15 to 2.18 among the

four groups, indicating that the respondents in all groups did not on average perceive that they were culturally competent. The mean of cultural competency for the age group of less than 30 years was 53.71 (SD = 4.64) and the mean for the group from 30-39 was 53.87 (SD = 4.69). The mean for the group aged 40- 49 was 53.75 (SD = 4.73) and that for the group aged 50 and above was 54.60 (SD = 4.88). A one-way ANOVA examining the difference in cultural competency on IAPCC-R by age groups (Table 8.2) indicates that there was no significant difference in the cultural competency score among age groups ($F_{3, 1025} = 1.105, p = .346 > .003, \eta^2 = .003$).

Table 8.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Age (N = 1029)

Group	N	Mean	SD	Per-item mean
Less than 30 years	400	53.71	4.64	2.15
30 - 39	290	53.87	4.69	2.15
40 - 49	225	53.75	4.73	2.15
50 and above	114	54.60	4.88	2.18

Table 8.2

Analysis of Variance: Cultural Competency on IAPCC-R by Age (N = 1029)

Groups	SS	df	MS	F	Sig.	η^2
Between groups	73.216	3	24.405	1.105	.346	.003
Within groups	22634.766	1025	22.083			
Total	22707.982	1028				

Note . The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Professional Qualifications

The mean scores and per-item means of cultural competency on the total IAPCC-R and standard deviations for the four groups of professional qualifications are displayed in Table 9.1. Per-item means for the total IAPCC-R across the four groups ranged from 2.15 to 2.23 indicating that the respondents in all groups did not on average believe that they were culturally competent. The mean for the total IAPCC-R and standard deviations were as follows: the group with a registered nurse qualifications ($M = 53.65$, $SD = 4.46$); the group with nurse and midwife qualifications ($M = 55.64$, $SD = 5.10$); the group with both nurse and public health qualifications ($M = 54.07$, $SD = 4.47$); and the group with nurse, midwife and public health qualifications ($M = 55.19$, $SD = 4.97$). The respondents who held both nurse and midwife qualifications represented the highest mean. The ANOVA (with Bonferroni correction), examining the mean differences in the IAPCC-R by these professional qualification groups (Table 9.2), indicates that there was no significant difference in the mean scores of cultural competency by professional qualification groups ($F_{3, 1031} = 3.618$, $P = .013 > .003$, $\eta^2 = .010$). In addition, the effect size indicates that a very small proportion of variance (1 %) in the IAPCC-R was explained by this factor.

Table 9.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Professional Qualifications (N = 1035)

Group	N	Mean	SD	Per-item mean
Registered nurse	916	53.65	4.46	2.15
Nurse and midwife	52	55.64	5.10	2.23
Nurse and public health	57	54.07	4.47	2.16
Nurse, midwife and public health	10	55.19	4.97	2.21

Table 9.2

Analysis of Variance: Cultural Competency on IAPCC-R by Professional Qualifications (N = 1035)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	219.816	3	120.135	3.618	.013	.010
Within groups	20877.763	1031	31.085			
Total	21097.579	1034				

Note. The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Basic Nursing Education

To conduct the ANOVA, the respondent's basic nursing education was divided into six categories. Respondents who possessed a BSN or higher degree were combined together. The summary of mean scores, per-item mean scores on the IAPCC-R and standard deviations of highest education categorized by the six groups are presented in Table 10.1.

Table 10.1 indicates that per-item means for each group ranged from 2.11 to 2.19. These scores demonstrate that respondents in all groups did not believe that they were culturally competent. The mean scores and standard deviations were as follows: a two

year nursing course at high school ($M = 52.76$, $SD = 3.65$); two year nursing diploma program ($M = 53.70$, $SD = 4.09$); three year nursing diploma program ($M = 53.96$, $SD = 4.16$); two year-nursing junior college ($M = 53.71$, $SD = 3.91$); three year-nursing junior college ($M = 54.63$, $SD = 4.21$); and bachelor's or higher degrees ($M = 54.76$, $SD = 4.12$). Mean scores increased from the group who were less formally educated to more formally educated. For instance, the mean scores increased from the group who completed a two year course to the group who completed a three year course in both diploma and junior college program. The mean for the group who completed a bachelor's or higher degree was slightly higher than other groups, while the group who completed a two year-nursing course at high school had the lowest mean score. However, an ANOVA test with Bonferroni adjustment (see Table 10.2) indicates no significant mean difference among the groups ($F_{5, 1022} = 2.481$, $p = .030 > .003$, $\eta^2 = .012$). In addition, the effect size indicates that a very small proportion of variance (1.2 %) in the IAPCC-R is associated with these factors.

Table 10.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Basic Nursing Education (N = 1028)

Group	N	Mean	SD	Per-item mean
High school (2 years nursing course)	65	52.76	3.65	2.11
Nursing diploma program (2 years course)	181	53.70	4.09	2.15
Nursing diploma program (3 years course)	569	53.96	4.16	2.16
Nursing junior college (2 years course)	23	53.71	3.91	2.15
Nursing junior college (3 years course)	92	54.63	4.21	2.19
Bachelor or higher degree	98	54.76	4.12	2.19

Table 10.2

Analysis of Variance: Cultural Competency on IAPCC-R by Basic Nursing Education
(N = 1028)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	210.683	5	42.137	2.481	.030	.012
Within groups	17358.033	1022	16.984			
Total	17568.716	1027				

Note. The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Length of Clinical Experience

The mean score, per-item mean and standard deviations by length of clinical experience (categorized into four groups) are summarized in Table 11.1. Per-item means across the groups ranged from 2.15 to 2.16 which indicate that the respondents in all groups did not on average believe that they were are culturally competent. The mean score for the group who had less than 5 years clinical experience was 53.75 (SD = 4.11) and for the group who had 5 to 9 years clinical experience was 53.88 (SD = 3.89). The group who had 10 to 19 years clinical experience had a mean score of 53.65 (SD = 4.20) and the group who had 20 or more clinical experience had a mean score of 53.88 (SD = 3.98). The mean scores of cultural competency among the four groups were thus fairly equal. The results of the ANOVA (see Table 11.2) further indicates that there were no significantly different mean scores for cultural competency among the groups ($F = .193$, $p = .901 > .003$, $\eta^2 = .0006$).

Table 11.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Length of Clinical Experience (N = 1034)

Group	N	Mean	SD	Per-item mean
Less than 5 years	290	53.75	4.11	2.15
5 to 9 years	219	53.88	3.89	2.16
10 to 19 years	267	53.65	4.20	2.15
20 and more years	258	53.88	3.98	2.16

Table 11.2

Analysis of Variance: Cultural Competency on IAPCC-R by Length of Clinical Experience (N = 1034)

Groups	SS	df	MS	F	Sig.	η^2
Between groups	9.524	3	3.175	.193	.901	.0006
Within groups	16931.735	1030	16.439			
Total	16941.259	1033				

Note. The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Overseas Living Experience

The mean scores, per-item means, and standard deviations of cultural competency by overseas living experience are shown in Table 12.1. Per-item means between the two groups ranged only from 2.15 to 2.25, indicating that the respondents in both groups did not on average believe that they were culturally competent. The group who had overseas living experiences had a higher mean ($M = 56.24$, $SD = 5.00$) than those who had no overseas living experiences ($M = 53.74$, $SD = 4.50$). However, the ANOVA with Bonferroni (see Table 12.2) indicates no significant difference between the two groups ($F_{1, 1033} = 6.009$, $p = .014 > .003$, $\eta^2 = .006$). In addition, the effect size was small (η^2

= .006), accounting for only 0.6 % of the variance in the IAPCC-R was counted as a factor.

Table 12.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Overseas Living Experience (N = 1035)

Group	N	Mean	SD	Per-item mean
Yes	20	56.24	5.00	2.25
No	1015	53.74	4.50	2.15

Table 12.2

Analysis of Variance: Cultural Competency by Overseas Living Experience (N = 1035)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	122.017	1	122.017	6.009	.014	.006
Within groups	20975.562	1033	20.305			
Total	21097.579	1034				

Note. The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Length of Overseas Living Experience

The respondent's length of overseas living experience (N=20) were categorized into two groups for the ANOVA analysis (see Table 13.1). Very few respondents belonged to the groups that had 1 to 4 years overseas living experience or had five and more years of overseas living experience. Thus these two groups were combined.

The mean scores, per-item means, and standard deviations of cultural competency by length of overseas living experience are shown in Table 13.1. Per-item means for the

two groups were 2.22 and 2.28, which indicates that the respondents in both groups did not on average believe that they were culturally competent. The mean scores and standard deviations were as follows: the group who had less than one year overseas living experience had a slightly higher mean ($M = 56.91$, $SD = 5.41$) than the group who had more than one year overseas living experience ($M = 55.55$, $SD = 5.60$). The results of the ANOVA with Bonferroni correction indicate that there was no significant mean difference between the two groups ($F_{1,18} = .218$, $p = .602 > .003$, $\eta^2 = .015$).

Table 13.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Length of Overseas Living Experience (N = 20)

Group	N	Mean	SD	Per-item mean
Less than 1 year	13	56.91	5.41	2.28
More than 1 year	7	55.55	5.60	2.22

Table 13.2

Analysis of Variance: Cultural Competency on IAPCC-R by Length of Overseas Living Experience (N = 20)

Groups	SS	df	MS	F	Sig.	η^2
Between groups	8.434	1	8.434	.281	.602	.015
Within groups	540.017	18	30.001			
Total	548.451	19				

Note . The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Ability to Speak a Foreign Language

Few respondents belonged to the groups who could speak very well or who could speak fairly well. There were thus only three groups for the ANOVA analysis. The mean scores, per-item means, and standard deviations of cultural competency by the ability to speak a foreign language are reported in Table 14.1. Per-item means across three groups ranged from 2.13 to 2.26 indicating that all groups did not on average believe that they were culturally competent. The mean scores and standard deviations were as follows: the group who spoke foreign languages well or fairly well ($M = 56.61$, $SD = 3.22$); the group who spoke a little foreign language ($M = 55.09$, $SD = 4.07$); and the group who did not speak a foreign language at all ($M = 53.18$, $SD = 3.87$). The group who spoke a foreign language well or fairly well had the highest mean score. Overall, mean scores increased with better language ability. The results of the ANOVA (Table 14.2) indicate a significant mean score difference among the groups ($F_{2, 1031} = 23.391$, $p = .000 < .003$, $\eta^2 = .043$). However, the effect size ($\eta^2 = .043$) indicates that only 4.3 % of the variance in the IAPCC-R is associated with this factor. Bonferroni post hoc test followed by ANOVA (Table 14.3) further indicates that the group who did not speak a foreign language at all had a significantly lower mean score than the group who spoke a little ($p = .000 < .003$).

Table 14.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Ability to Speak a Foreign Language (N = 1034)

Group	N	Mean	SD	Per-item mean
Speak very well or fairly well	8	56.61	3.22	2.26
Speak a little	225	55.09	4.07	2.20
Not speak	801	53.18	3.87	2.13

Table 14.2

Analysis of Variance: Cultural Competency on IAPCC-R by Ability to Speak a Foreign Language (N = 1034)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	715.168	2	357.584	23.391*	.000	.043
Within groups	15761.374	1031	15.287			
Total	16476.541	1033				

Note . * $p < .003$: The significant level was held with Bonferroni test alpha at .003.

Table 14.3

Bonferroni Post Hoc Test: Cultural Competency on IAPCC-R by Ability to Speak a Foreign Language (N = 1034)

Foreign language (I)	Foreign language (J)	Mean Difference (I-J)	Std. Error	Sig.
Speak very well or fairly well	Speak a little	1.514	1.407	.846
	Not speak	3.428	1.389	.041
Speak a little	Speak very well or fairly well	-1.514	1.407	.846
	Not speak	1.914*	.295	.000
Not speak	Speak very well or fairly well	-3.428	1.389	.041
	Speak a little	-1.914*	.295	.000

Note . * $p < .003$: The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Types of Prior Learning

As the prior frequency statistics on demographic and personal variables reported, there were very few respondents who selected “other types of prior learning.” Thus these respondents were excluded in the ANOVA analysis and types of prior learning were re-categorized into three groups.

The mean scores, per-item means, and standard deviations of cultural competency by types of prior learning are presented in Table 15.1. Per-item means for the three groups ranged from 2.14 to 2.18 indicating that the respondents in all groups did not on average believe that they were culturally competent. Mean scores and standard deviations were as follows: the group who had a teacher centered learning ($M = 53.46$, $SD = 4.56$); the group who had a student centered learning ($M = 54.46$, $SD = 4.56$); and the group who had both student centered and teacher centered learning ($M = 54.28$, $SD = 4.80$). The mean score for the group which had a student centered learning approach was slightly higher than for the other two groups. The results of the ANOVA with Bonferroni correction (see Table 15.2) indicate that there was no significant mean difference in cultural competency between the groups ($F_{2, 1018} = 4.227$, $p = .015 > .003$, $\eta^2 = .008$). In addition, the effect size ($\eta^2 = .008$) was very small, indicating with only 0.8 % of variance in the IAPCC-R accounted for by this factor.

Table 15.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Types of Prior Learning (N=1021)

Group	N	Mean	SD	Per-item mean
Teacher-centered learning	551	53.46	4.56	2.14
Student-centered learning	60	54.46	4.56	2.18
Both learning types	410	54.28	4.80	2.17

Table 15.2

Analysis of Variance: Cultural Competency on IAPCC-R by Types of Prior Learning (N=1021)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	183.547	2	91.774	4.227	.015	.008
Within groups	22099.580	1018	21.709			
Total	22283.127	1020				

Note. The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Learning Experience about the Concepts of Cultural Diversity

Mean scores and per-item means of cultural competency by learning experience about the concepts of cultural diversity in previous nursing education programs are shown in Table 16.1. Per-item means for the two groups were 2.14 to 2.21, indicating the respondents in both groups did not on average believe that they were culturally competent. The group who had learning experience about the concepts of cultural diversity had a higher mean score ($M = 55.27$, $SD = 4.71$) than the group with no learning experience ($M = 53.53$, $SD = 4.57$). The ANOVA with Bonferroni correction (Table. 16.2) further indicates a significant difference between the two groups ($F_{1, 1032} =$

21.815, $p = .000 < .003$, $\eta^2 = .021$). The group with experience had a significantly higher mean score than the group who had no learning experience. However, it is important to note that the effect size indicates that only 2.1% of the variance in the IAPCC-R was associated with this factor.

Table 16.1

Descriptive Statistical Results of Cultural Competency by Learning Experience about the Concepts of Cultural Diversity (N = 1034)

Group	N	Mean	SD	Per-item mean
Yes	185	55.27	4.71	2.21
No	849	53.53	4.57	2.14

Table 16.2

Analysis of Variance: Cultural Competency on IAPCC-R by Learning Experience about the Concepts of Cultural Diversity (N=1034)

Groups	SS	df	MS	F	Sig.	η^2
Between groups	461.467	1	461.467	21.815*	.000	.021
Within groups	21830.680	1032	21.154			
Total	22292.147	1033				

Note . * $p < .003$: The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Educational Programs to Learn about the Concepts of Cultural Diversity

For ANOVA, the respondent's educational programs to learn about the concepts of cultural diversity were re-categorized into two groups; the group who learned the concepts of cultural diversity at a BSN or other higher degree program, and those who

learned at another program such as a diploma or college course.

The mean scores, per-item means and standard deviations of cultural competency by educational experience are shown in Table 17.1. Per-item means for the two groups were 2.21 to 2.22, which indicates that the respondents in both groups did not on average believe that they were culturally competent. The mean scores and standard deviations were as follows: the group who learned the concepts of cultural diversity at a BSN or other higher degree program ($M = 55.51$, $SD = 4.80$); and the group who learned at another program such as a diploma or college course ($M = 55.27$, $SD = 3.63$). The means for the two groups were roughly similar. The results of ANOVA (Table 17.2) indicate that there was no significant difference between the two groups ($F_{1, 179} = .113$, $p = .737 > .003$, $\eta^2 = .0006$). The effect size was also extremely small.

Table 17.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Educational Programs to Learn about the Concepts of Cultural Diversity (N = 181)

Group	N	Mean	SD	Per-item mean
Learn at BSN or other higher degree programs	122	55.51	4.80	2.22
Learn at other programs	59	55.27	3.63	2.21

Table 17.2

Analysis of Variance: Cultural Competency on IAPCC-R by Educational Programs to Learn about the Concepts of Cultural Diversity (N = 181)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	2.245	1	1.992	.113	.737	.0006
Within groups	3546.567	179	35.353			
Total	3548.812	180				

Note. The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Experience in Taking Courses Related to Cultural Nursing Care

Table 18.1 shows the mean scores, per-item means, and standard deviations of cultural competency by experience in taking courses related to cultural nursing care. Per-item means for the two groups were 2.14 and 2.24 demonstrating that the respondents in both groups did not on average believe that they were culturally competent. The group who had experience in taking courses related to cultural nursing care had a higher mean score ($M = 56.07$, $SD = 4.59$) than the group who had not experienced this ($M = 53.60$, $SD = 4.46$). The results of the ANOVA with Bonferroni correction (Table 18.2), reveal that the group who had experience in taking courses related to cultural nursing care had a significantly higher mean score than the group who lacking such experience ($F_{1, 1032} = 21.450$, $p = .000 < .003$, $\eta^2 = .020$). However, only 2.0 % of the variance in the IAPCC-R was accounted for by this factor.

Table 18.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Experience in Taking Courses Related to Cultural Nursing Care (N = 1034)

Group	N	Mean	SD	Per-item mean
Yes	76	56.07	4.59	2.24
No	958	53.60	4.46	2.14

Table 18.2

Analysis of Variance: Cultural Competency on IAPCC-R by Experience in Taking Courses Related to Cultural Nursing Care (N = 1034)

Groups	SS	df	MS	F	Sig.	η^2
Between groups	429.223	1	429.223	21.450*	.000	.020
Within groups	20650.607	1032	20.010			
Total	21079.830	1033				

Note . * p<.003: The significant level was held with Bonferroni test alpha at .003

Cultural Competency by Educational Programs to Take Courses Related to Cultural Nursing Care

For the purpose of ANOVA, the respondent's educational choice to take courses related to cultural nursing care were categorized into two groups; the group who took course at BSN or other higher degree program and those learned at other programs such as a diploma or college course. The mean scores, per-item means and standard deviations of cultural competency by this demographic variable are shown in Table 19.1. Per-item means for the two groups were 2.20 and 2.24 which indicates that the respondents in both groups did not on average believe that they were culturally competent. The mean scores and standard deviations were as follows: the group who took courses at BSN or other

higher degree programs ($M = 55.90$, $SD = 4.72$); and the group who took courses at other programs such as diploma or college course ($M = 55.07$, $SD = 3.27$). The two groups were comparatively equal. The result of the ANOVA (Table 19.2) shows no significant difference between the two groups ($F_{1,71} = .669$, $p = .416 > .003$, $\eta^2 = .009$).

Table 19.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Educational Programs to Take Courses Related to Cultural Nursing Care ($N = 73$)

Group	N	Mean	SD	Per-item mean
Learn at BSN or other higher degree programs	44	55.90	4.72	2.24
Learn at other programs	29	55.07	3.27	2.20

Table 19.2

Analysis of Variance: Cultural Competency on IAPCC-R by Educational Programs to Take Courses Related to Cultural Nursing Care ($N = 73$)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	11.837	1	11.837	.669	.416	.009
Within groups	1256.764	71	17.701			
Total	1268.601	72				

Note. The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Experience in Taking Workshops/Classes Related to Cultural Nursing Care

The mean scores and standard deviations by experience in taking workshops/classes related to cultural nursing care are presented in Table 20.1. Per-item

means for the two groups were 2.14 and 2.29 which means that the respondents in both groups did not on average believe that they were culturally competent. The group who had experience in taking a workshop/classes related to cultural nursing care had a mean score at 57.21 (SD = 3.95). While the mean score for the group who had no experience in taking workshops/classes related to cultural nursing care was 53.57 (SD = 4.26). The group with experience thus had a higher score than the group without experience. The results of the ANOVA (see Table 20.2) reveal that there was a significant difference between the two groups ($F_{1, 1027} = 15.848, p = .000 < .003, \eta^2 = .015$). This indicates that the group who had experienced a workshop related to cultural nursing care had a significantly higher mean score than the group who had no experience. The effect size was small, however, with only 1.5 % of the variance in the IAPCC-R associated with this factor.

Table 20.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Experience in Taking Workshops/Classes Related to Cultural Nursing Care (N = 1029)

Group	N	Mean	SD	Per-item mean
Yes	22	57.21	3.95	2.29
No	1007	53.57	4.26	2.14

Table 20.2

Analysis of Variance: Cultural Competency on IAPCC-R by Experience in Taking Workshops/Classes Related to Cultural Nursing Care (N = 1029)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	286.418	1	286.418	15.848*	.000	.015
Within groups	18560.978	1027	18.073			
Total	18847.369	1028				

Note . * $p < .003$: The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Experience in Caring for Clients from Culturally and Ethnically Diverse Groups

Table 21.1 shows the summary of mean scores, per-item means and standard deviations of cultural competency by experience in caring for clients from culturally and ethnically diverse groups. Per-item means for the both groups were 2.08 and 2.15, revealing that the respondents did not on average believe that they were culturally competent. The group who had experience caring for clients from culturally and ethnically diverse backgrounds had a higher mean score ($M = 54.43$, $SD = 4.64$) than the group that had no experience in caring for clients from culturally and ethnically diverse groups ($M = 52.97$, $SD = 4.49$). Table 21.1 presents the results of the ANOVA which found that the group who had experience in caring for clients from culturally and ethnically diverse groups had significantly higher mean scores. ($F_{1, 1027} = 25.744$, $p = .000 < .003$, $\eta^2 = .024$). However the effect size was very small, with only 2.4 % of the variance accounted for by this factor.

Table 21.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Experience in Caring for Clients from Culturally and Ethnically Diverse Groups (N = 1029)

Group	N	Mean	SD	Per-item mean
Yes	578	54.43	4.64	2.18
No	451	52.97	4.49	2.12

Table 21.2

Analysis of Variance: Cultural Competency on IAPCC-R by Experience in Caring for Clients from Culturally and Ethnically Diverse Groups (N = 1029)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	538.739	1	538.739	25.744*	.000	.024
Within groups	21492.076	1027	20.927			
Total	22030.815	1028				

Note . * $p < .003$: The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Frequency in Caring for Clients from Culturally and Ethnically Diverse Groups

The mean scores, per-item means, and standard deviations of cultural competency by frequency in caring for clients from culturally and ethnically diverse groups are represented in Table 22.1. Per-item means for these groups ranged from 2.15 to 2.32. Respondents in all groups did not believe that they were prepared for culturally competent nursing practice. The results of mean scores among the groups were as follows: the group who cared for clients from culturally and ethnically diverse groups almost everyday ($M = 58.05$, $SD = 4.77$); the group who provided care 1 or 2 times a week ($M =$

54.65, SD = 5.40); the group who provided care 1 or 2 times a month (M = 56.55, SD = 2.74); the group who provided care several time a year (M = 54.63, SD = 4.58); and the group who provided care hardly at all (M = 53.86, SD = 4.70). The group who provided care almost every day had the highest mean score. The results of the ANOVA (see Table 22.2) however, indicated no significant differences in cultural competency among the five groups ($F_{4, 573} = 3.752, p = .005 > .003, \eta^2 = .026$). In addition, the effect size was very small, which shows with the only 2.6% of the variance in the IAPCC-R accounted for by this factor.

Table 22.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Frequency in Caring for Clients from Culturally and Ethnically Diverse Groups (N=578)

Group	N	Mean	SD	Per-item mean
Almost everyday	13	58.05	4.77	2.32
1 or 2 times a week	22	54.65	5.40	2.19
1 or 2 times a month	16	56.55	2.74	2.26
Several times a year	311	54.63	4.58	2.19
Hardly at all	216	53.86	4.70	2.15

Table 22.2

Analysis of Variance: Cultural Competency by Frequency in Caring for Clients from Culturally and Ethnically Diverse Groups (N=578)

Groups	SS	df	MS	F	Sig.	η^2
Between groups	324.826	4	81.206	3.752	.005	.026
Within groups	12401.929	573	21.644			
Total	12726.755	577				

Note . The significant level was held with Bonferroni test alpha at .003.

Cultural Competency by Difficulty in Caring for Clients from Culturally and Ethnically Diverse Groups

The mean scores, per-item means, and standard deviations of cultural competency by presence/absence of difficulty in caring for clients from culturally and ethnically diverse groups are displayed in Table 23.1. Per-item means for the two groups were 2.17 and 2.18, indicating that the respondents in both groups did not believe that they were culturally competent. The results of mean scores between the two groups were as follows: the group who had difficulty in caring for clients from culturally and ethnically diverse groups (M = 54.55, SD = 4.55), and the group who did not have difficulty in caring for clients from culturally and ethnically diverse groups (M= 54.18, SD = 5.22). The means the two groups are similar and the ANOVA (see Table 23.2) no significant differences in cultural competency between the groups ($F_{1, 576} = .488, p = .485 > .003, \eta^2 = .001$).

Table 23.1

Descriptive Statistical Results of Cultural Competency on IAPCC-R by Difficulty in Caring for Clients from Culturally and Ethnically Diverse Groups (N=578)

Group	N	Mean	SD	Per-item mean
Yes	484	54.55	4.55	2.18
No	94	54.18	5.22	2.17

Table 23.2

Analysis of Variance: Cultural Competency on IAPCC-R by Difficulty in Caring for Clients from Culturally and Ethnically Diverse Groups (N=578)

Groups	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>	η^2
Between groups	10.611	1	10.611	.488	.485	.001
Within groups	12536.454	576	21.765			
Total	12547.065	577				

Note. The significant level was held with Bonferroni test alpha at .003.

Summary of the Results for Each Research Question

Research Question #1: What is the Level of Cultural Competency Reported by Japanese Nurses?

Japanese nurses' level of cultural competency was measured by the IAPCC-R. Descriptive statistics were conducted for measuring Japanese nurses' IAPCC-R total scores, individual subscale scores and scores of individual items. The results reveal that the mean total score on the IAPCC-R was 53.85 (SD=5.28) and the mean for the sub-scales ranged from 8.53 to 11.72. The two sub-scales of cultural knowledge and cultural skill had lower mean scores than other sub-scales, while the sub-scale of cultural

desire had the highest mean score. The descriptive results further indicate that the respondents did not on average believe that they were culturally competent. They did not perceive that they possessed culturally competent aspects reflecting each sub-scale. Cultural competency scores on the IAPCC-R were further described by categories: culturally proficient (91-100), culturally competent (75-90), culturally aware (51-74), and culturally incompetent (25-55). Frequency statistics reveal that the majority of respondents were categorized as culturally “aware” while very few respondents were culturally “competent.”

Research Question #2: What is the Level of Critical Thinking Dispositions (CTDs) Reported by Japanese Nurses?

Japanese nurses’ level of critical thinking dispositions was assessed by the CCTDI. Descriptive and frequency statistics were conducted for measuring total CCTDI scores, individual subscale scores, and scores of individual items. The results reveal that the majority of respondents had a positive total CCTDI score as well as four of the sub-scale scores including truth-seeking, open-mindedness, maturity, and inquisitiveness. The majority of respondents had an ambivalent disposition towards analyticity and systematicity. The mean for self-confidence was the lowest score, suggesting that self-confidence is a different.

Research Question #3: What is the Relationship between Cultural Competency of Japanese Nurses and their CTDs?

Correlation statistics using Pearson Correlation Coefficients were used to examine the relationship between the total IAPCC-R and the seven sub-scales of the CCTDI. The

results indicated that there were generally very weak relationships among the variables. Sequential multiple regression analysis was then used to further answer this research question. The results indicated that five of the seven sub-scales (including inquisitiveness, open-mindedness, self-confidence, and systematicity, and maturity) were significant predictors of the total IAPCC-R. The R^2 however, showed that only 13.4 % of variance in the total IAPCC-R was explained by the final regression model.

Research Question #4: What is the Relationship between the Cultural Competency of Japanese Nurses and Selected Demographic and Personal Factors?

ANOVA tests were used for examining the relationship between the total IAPCC-R and various demographic and personal variables. Bonferroni correction was applied to reduce Type 1 error with a significant finding at .003. The series of ANOVA with Bonferroni indicates that, of the sixteen demographic and personal variables included in the test, there were significant mean differences in the total IAPCC-R among only the following five variables: ability to speak a foreign language; learning experience about the concepts of cultural diversity; experience taking courses related to cultural nursing care; experience taking workshops/classes related to cultural nursing care; and experience in caring for clients from culturally and ethnically diverse groups. However, the effect sizes for these five variables are very small. This means that only a small portion of variance in the total IAPCC-R was accounted for by these variables.

Results of Qualitative Data

The IAPCC-R was supplemented by five qualitative questions, to explore Japanese nurses' experiences and views in caring for clients from culturally and

ethnically diverse backgrounds, as well as any concerns and comments regarding the study (see question 26, 27, 28, 29 and 30 in Appendix A, and question 14 in Appendix B). Although not all respondents answered all qualitative questions, many respondents provided one or more narrative responses to these questions. The frequency of respondents' comments for each qualitative question is summarized in Table 24.1.

Table 24.1
Frequency of Comments to Qualitative Questions (N=1035)

Questions	Frequency
14. Did you experience any difficulties while caring for clients from culturally and ethnically diverse groups?	515
26. Please describe your most satisfying experiences when caring for clients from culturally and ethnically diverse groups.	178
27. Please describe your most frustrating experiences when caring for clients from culturally and ethnically diverse group.	306
28. What particular knowledge do you think would be helpful for caring for clients from culturally and ethnically diverse groups?	411
29. What particular skills do you think would be helpful for caring for clients from culturally and ethnically diverse groups?	247
30. Is there anything else, which is not mentioned in this questionnaire? If yes, please provide free comments in the blank.	71

Note. Question 14 was provided on the demographic and personal sheet

Qualitative data from open-ended questions were analyzed using content analysis. The content analysis procedure first identifies themes or categories that are relevant to the research purpose, and then sorts all occurrences of relevant words into these themes or

categories (Steubert Speziale & Carpenter, 2000; Tesch, 1990). In this study, qualitative data were reviewed separately for each question to reveal aspects of the respondents' comments to further understand views or experiences. The respondents' comments were then merged into several themes according to each qualitative question. After this process, it was found that the respondents' comments between questions 14 and 27 were similar and themes emerging from both questions were comparable. Therefore, these themes were combined into one category. Similarly, comments and themes emerging from questions 28 and 29 were equivalent, and those themes were also combined.

Listed in Table 24.2 to 24.5 are the themes that emerged from the qualitative questions.

Question 14: Did You Experience Any Difficulties While Caring for Clients from Culturally and Ethnically Diverse Groups?

Question 27: Please Describe Your Most Frustrating Experience When Caring for Clients from Culturally and Ethnically Diverse Groups.

Four themes emerged from the above two questions (Table 24.2). The first theme was "different lifestyles." The respondents perceived that they faced difficulty or frustration in caring for foreign clients with different and unique lifestyles which were not familiar to the respondents. Different lifestyles identified by the respondents included eating habits and parenting. For instance, the respondents indicated that due to different eating habits, they had difficulty encouraging clients to eat the hospital diet. Some nurses indicated frustrating experiences with mothers from foreign countries not following a child's care plan as suggested by nurses. The respondents indicated that these different

lifestyles/habits sometimes caused their difficulties or frustrations in caring for culturally diverse clients.

The second theme was “religious customs and values.” The respondents noted that difficulties or frustrations often occur when clients’ religious customs or values do not match their own or Japanese culture. Respondents were concerned about what kind of care would be acceptable with different religious customs or values. Some respondents said sometimes they faced difficulty when encouraging clients to accept necessary care, such as blood transfusions for Jehovah Witness clients. Some respondents also expressed frustration when clients imposed their religious beliefs, values, and customs and thereby rejected medical care perceived as necessary by the nurses.

The third theme was “different perceptions and expectations of medical and nursing service.” The respondents felt that they often had difficulty and were frustrated when they tried to encourage clients to accept nursing care or medical services which they perceived as a necessary intervention. These difficulties and frustrations often occurred when clients held unique or different expectations, values or perceptions of nursing care or medical services based on their cultural background. Different expectations, values or perceptions of nursing care or medical services were often related to issues of informed consent, rules for a patient’s stay in a hospital, treatment approaches, or policy concerning length of stay and medical insurance systems. Respondents were frustrated when foreign clients had expectations of service based on their experiences in their own countries. The respondents perceived that this is why some foreign clients do not follow hospital rules or policies concerning length of stay. Some nurses also indicated

that they faced difficulty when obtaining consent for treatment from foreign clients. The respondents suggested these differences cause difficulty in encouraging clients to accept care and also caused conflict.

The final theme emerged from question 14 and 27 was “language barrier.” The language barrier was a major challenge for the respondents. The majority of respondents felt that they faced difficulty or frustration in communicating or explaining necessary nursing care or medical treatment plans to clients who did not speak the Japanese language. The respondents also indicated difficulty understanding what the clients wanted to say. Most respondents tried to communicate with clients through using body language or a dictionary. Some respondents also indicated that the limited availability of interpreter services compounded their difficulties and frustrations. These respondents recommended providing interpreter services.

Table 24.2

Respondents' Perceptions of Difficult and Frustrating Experience in Caring for Clients from Culturally and Ethnically Diverse Groups

Themes
1. Different lifestyles
Eating habits
Parenting
2. Religious customs and values
Rejecting necessary care and medical treatments
3. Different perceptions and expectations of medical and nursing services
Informed consent
Rules for patient's stay in hospital
Length of stay
Medical insurance system
4. Language barrier
Difficulty/frustration in communicating with foreign clients
Difficulty/frustration in explaining necessary care
Limited availability of interpreter services

Question 26: Please Describe Your Most Satisfying Experience When Caring for Clients from Culturally and Ethnically Diverse Groups.

Two themes emerged from this question (Table 24.3). The first theme was “providing client-centered care.” The respondents felt that they were satisfied when they were capable of accepting or recognizing clients’ individual care needs that were influenced by clients’ cultural background. The respondents indicated that they were able to respect the clients’ unique needs of providing alternative nursing care rather than imposing their routine practices. Some respondents further felt that providing alternative care encouraged clients to understand or accept nursing care which may have been

initially rejected by them. This eventually builds rapport between the nurses and clients. The respondents were satisfied when they received appreciation from their clients. Although most of these experiences were related to caring for foreign clients, some of these respondents' experiences were involved caring for Japanese clients who were ethnically or culturally different.

The second theme was "addressing language barriers." The majority of respondents had difficulty communicating with foreign clients due to language differences. They experienced satisfaction when they were able to communicate with clients. Their efforts included using body language or a dictionary, taking time to listen to clients' requests, and studying clients' first language.

Table 24.3

Respondents' Perceptions of Satisfying Experience in Caring for Clients from Culturally and Ethnically Diverse Groups

1. Providing client-centered care
Accepting/recognizing clients' individual care needs
Providing alternative nursing care
Building rapport
Receiving clients' appreciation
2. Addressing language barriers
Using body language
Using dictionary
Taking time to listen to clients' requests
Studying clients' first language

Question 28: What Particular Knowledge Do You Think Would be Helpful for Caring for Clients from Culturally and Ethnically Diverse Groups?

Question 29: What Particular Skills Do You Think Would be Helpful for Caring for Clients from Culturally and Ethnically Diverse Groups?

Four themes emerged regarding questions 28 and 29. Table 24.4 shows these themes. The first theme was “language and communication.” A number of the respondents reflected difficulty or frustration experienced when trying to communicate with foreign clients. Through reflection, they perceived that language and communication abilities were important in caring clients from culturally and ethnically diverse groups. Some respondents specified that English language ability was most significant. Other respondents further indicated the importance of improving their ability to express special terminologies related to medicine and nursing. The respondents also noted the need to improve their skills and knowledge to work effectively with interpreters.

The second theme was “cultural knowledge and skills.” The majority of the respondents perceived that cultural knowledge or skills for understanding clients’ backgrounds is significant in order to provide effective care for clients from culturally and ethnically diverse groups. The clients’ background issues to be understood included culture, ethnicity, lifestyle, nationality, taboos, gender issues, religion, customs, eating habits, parenting, beliefs, and values. Some nurses also indicated that cultural knowledge regarding relevant medical systems is also important.

The third theme was “open-minded knowledge and skills.” In this theme, the respondents pointed out that nurses should be free from prejudice and not be judgmental.

The respondents also indicated that nurses needed to obtain knowledge and skills that would yield respect for clients, inquisitiveness about clients' culture, and acceptance of clients' unique and different needs. Some respondents also felt that nurses needed to have knowledge and skills that would encourage reflection.

The final theme emerging from this question was "fundamental nursing knowledge and skills." Some respondents indicated that fundamental nursing knowledge and skills concerning morality, ethical issues, respect for clients, assessment skills, and basic nursing skills were essential for assisting with culturally competent care. Some respondents pointed out that enhancing such basic knowledge and skills will itself improve nurses' cultural knowledge and skills.

Table 24.4

Respondents' Perceptions of Knowledge or Skills in Caring for
Clients from Culturally and Ethnically Diverse Groups

Themes
1. Language/communication
Foreign language
English
Terminology
Working with interpreters
2. Cultural knowledge and skills
Culture
Ethnic backgrounds
Lifestyles
Nationality
Taboo
Gender issues
Religion
Customs
Eating habits
Parenting
Beliefs
Values
Medical systems
3. Open-minded knowledge and skills
Freedom from prejudice
Non-judgmental
Respect
Inquisitiveness
Acceptance
Knowing self
4. Fundamental nursing knowledge and skills
Addressing ethical issues
Morality
Respect for clients as individuals
Assessment knowledge and skills
Basic nursing skills

Question 30: Is There Anything Else, Which is not Mentioned in this Questionnaire?

If Yes, Please Provide the free Comments in the Blank.

Themes emerging from question 30 are in Table 24.5. Compared to the comments from the previous five questions, the number of comments obtained from this question was quite few. However, in this question the respondents provided some useful impressions and suggestions for the improvement of questionnaires, as well as feelings and ideas about culturally competent care.

The first theme was “difficulty in answering questions.” The respondents indicated their difficulty or confusion when answering the IAPCC-R questionnaire. They were confused when trying to interpret the meanings of two phrases used in the IAPCC-R, “clients from culturally and ethnically diverse groups” and “culturally competent care” As mentioned in the previous chapter, the definitions of these concepts were not provided in the IAPCC-R for the purpose of this study. However, this had become a fundamental factor contributing to the respondents’ difficulty answering some questions. Some respondents further indicated that the concepts of cultural nursing or cultural competency were not common in their practice and thus had never been considered. This is another major reason for difficulty in answering questions. In this question, the respondents suggested the need for providing definition/meaning of words.

The second theme was “willingness to learn.” In this theme, the respondents perceived that participating in the study increased their willingness to learn about, or be involved in, cultural nursing. The respondents indicate that participating in this study was a good learning opportunity to consider cultural nursing. Some nurses further indicated

their motivation to seek additional opportunities to improve their cultural competency, and asked the researcher to provide information regarding such opportunities.

Table 24.5

Other Comments

Themes

1. Difficulty in answering questions
 - Confusion on interpreting concept of clients from culturally and ethnically diverse groups
 - Difficulty in meaning of culturally competent care
 - Need to provide definitions of cultural competent care
 - No experience with cultural aspects of nursing
2. Willingness to learn
 - Willingness to learn cultural nursing
 - Good learning opportunity to consider cultural nursing
 - Seeking further learning opportunities to improve cultural competency

Summary of Findings

Japanese nurses' cultural competency level was measured by the IAPCC-R. Japanese nurses in this study mostly perceived that they were not at a culturally competent level but at a culturally aware level, according to the IAPCC-R. The study found that Japanese nurses' cultural competency level based on the IAPCC-R was quite low. Low levels of cultural competency in the area of cultural knowledge and cultural skill were particularly obvious. These findings mean that Japanese nurses in this study mostly believed that they were not culturally competent and perceived that they did not possess cultural competency in areas of cultural knowledge and cultural skills.

Nurses' limited clinical and educational experiences in the area of cultural

competency appeared to be the most salient factors reducing the nurses' cultural competency level. An examination of the relationship between the selected demographic and personal variables indicates that nurses who did not have clinical experiences in caring for clients from culturally and ethnically diverse backgrounds had a significantly lower mean score of the IAPCC-R than those with such experience. It further indicates that nurses without learning experience about the concepts of cultural competency, those who did not have an opportunity or experience to undertake educational activities related to cultural nursing care had a significantly lower mean score than those who had undertaken or experienced such learning. The ability to speak a foreign language was a further factor influencing the nurses' cultural competency. Nurses with an ability to speak foreign languages had a significantly higher cultural competency level than those who stated that they could not speak a foreign language.

This study was further interested in examining the level of nurses' CTDs based on CCTDI and its relationship with cultural competency to explore this unique aspect of their professional attitudes and views on cultural competency. In this study, the majority of nurses had a positive disposition on the total CCTDI and the sub-scales of truth-seeking, open-mindedness, maturity, and inquisitiveness, with other sub-scales having ambivalent or negative dispositions. The study found that five of the seven sub-scales including inquisitiveness, open-mindedness, self-confidence, systematicity, and maturity were predictors of a nurses' cultural competency. The study also found that nurses who possess CTDs are likely to be culturally competent.

Responses to the qualitative questions provided specific information about nurses'

experiences with and perceptions of caring for culturally diverse clients. The study reveals that the majority of nurses perceived that they faced difficulty or frustration when needing to understand a client's different lifestyle including activities such as diet, parenting, religious customs, and the expectations, values and perceptions of nursing care services. Accepting a client's different cultural background caused nurses to become frustrated and to find delivering appropriate nursing care difficult. A majority of nurses further reported difficulty and frustration when they needed to communicate with foreign clients. Language and communication barriers were a major factor causing difficulty and frustration for nurses in the delivery of appropriate care.

Nurses reported that they had satisfactory experiences when these frustrating and difficult factors were addressed. The study further found that when nurses reflected on the frustrating and satisfying experiences, their knowledge and skills improved. These included language and communications skills, and open-mindedness to accept a client's culture. Some nurses further reported that fundamental nursing knowledge and skills were important in order to support the improvement of nurses' cultural competency.

Findings to open-ended questions further provided insight regarding impressions and suggestions for the IAPCC-R and the feeling towards cultural competency. Some nurses reported that they had difficulty interpreting the meanings of some concepts used in the IAPCC-R including "cultural competency" and "clients from culturally and ethnically diverse groups." This caused nurses difficulty in answering the IAPCC-R. Nurses' comments have implications for the further modification of the IAPCC-R to ensure the quality of the tool. Some nurses indicated positive views on participating in

the study. They indicated that the participation of this study was a good opportunity to know about and consider cultural nursing care. Some nurses were encouraged to increase their motivation to be involved in cultural nursing care because of this study.

V. DISCUSSION

This chapter discusses the results of the cultural competency level reported by Japanese nurses. The qualitative findings of nurses' perceptions on their cultural competency experiences provide useful information regarding this phenomenon. The chapter also discusses the level of nurses' CTDs and its relationship with cultural competency practice. The results also indicate the relationship between cultural competency levels and selected demographic and personal variables. Based on the discussion, implications for nursing practice, education, administration and policy are provided, along with recommendations for future research.

Cultural Competency Level

This study examined Japanese nurses' cultural competency using the IAPCC-R. Japanese nurses' cultural competency on the IAPCC-R was described by categories: culturally proficient (91-100), culturally competent (75-90), culturally aware (51-74), and culturally incompetent (25-50). The majority of Japanese nurses in this study reported being "culturally aware". These results are consistent with previous studies using IAPCC-R (Koempel, 2003; Mahabeer, 2006; Noble, 2005; Spencer & Cooper-Brathwaite, 2003). Public health nurses in the northern tier states (Spencer & Cooper-Brathwaite, 2003), nurse practitioners in Minnesota (Koempel, 2003), Israel midwives (Noble, 2005) and hemodialysis nurses in Canada (Mahabeer, 2006) all presented with similar level of

cultural competency. The findings of this study indicate that cultural knowledge and skills had lower mean scores. This finding is also consistent with previous findings in studies conducted by Koempel (2003) and Mahabber (2006). Koempel's (2003) study supports this finding and indicated that lower mean scores for both cultural knowledge and cultural skills were reported by certified nurse practitioners. Mahabeer (2006) also reported that hemodialysis nurses had a lower mean score for cultural knowledge. Campinha-Bacote (1999, 2002, 2003a, b) indicates that gaining cultural knowledge encourages nurses to be knowledgeable about a patient's unique culture, life-style and practices in a specific ethnic and cultural group. It further assists nurses to understand specific physical, biological and physiological variations as well as pharmacology ramifications among diverse groups (Campinha-Bacote, 1999, 2002, 2003b). This author also indicates that to use cultural knowledge, nurses must develop their cultural skills such as cultural assessment, physical assessment interviewing and communication in order to collect relevant data from these patient groups. The two components of cultural knowledge and skill are essential to becoming a culturally competent nurse. However, the findings demonstrate that nurses are generally not encouraged to gain such components.

One interesting finding of this study was that means for both the total score of IAPCC-R and the five sub-scales scores were lower than those reported by previous studies (Cooper-Brathwaite, 2005; Koempel, 2003; Noble, 2005; Spencer & Cooper-Brathwaite, 2003). This may have occurred because of the impact of Japanese culture and nursing education. Japanese nurses' limited practical and educational experiences in the area of cultural competency result in a limited cultural competency

level.

The Impact of Japanese Culture

Gaining cultural competency through having transcultural nursing experiences will assist in improving nurses' culturally competent care (Campinha-Bacote, 1998, 1999, 2002, 2003a, b; Cook & Cullen, 2000; Giger & Davidhizar, 2002; Leininger, 1995, 1997, 2002). Cultural competency cannot simply develop from textbooks but requires exposure to culturally competent practice (Mahabeer, 2006). However, within a homogenous society which focuses on meeting the needs of the majority of Japanese people (Furuta, Petrini, & Davis, 2003), there has been less opportunity for Japanese nurses to interact culturally with diverse clients. In fact, Sugiura's (2003) study revealed that many nurses had limited experience in meeting clients with diverse cultural backgrounds. Supporting Sugiura's findings, over 40 % of nurses in this study reported that they had not experienced caring for clients from culturally and ethnically diverse origins. This limited experience may have created a lack of practice to explore cultural competency and explain the low score of IAPCC-R. Confirming this perspective, this study indicates that nurses with cultural care experience had a significant higher mean score of IAPCC-R than those who had not experienced this type of nursing practice.

The Impact of Nursing Education

Concomitant to the importance of having cultural competency practice, learning cultural competency through education may help expand nurses' cultural competency understanding. However limited learning experience in this area would be a factor contributing to the lack of cultural competency. Previous western studies (Amerson,

2001; Chevannes, 2002; Majumdar et al., 2004; Smith, 2001) all demonstrate that culturally competent training and education are an essential activity to develop nurses' skills in this area. It is promising to note that cultural competency education has just started to be introduced into some Japanese nursing publications (Brandi et al., 2003; Yoshino & Hiraoka, 2004). Few nursing programs however, incorporate cultural competency into their curriculum. Demographic and personal data support this by revealing that only a small percent (7.3 %) of nurses had the opportunity to take courses related to cultural nursing care; 17.9 % had learned about the concepts of cultural competency; and 2.1 % had taken workshops related to cultural nursing care. These limited educational experiences would be a discouragement to nurses wanting to improve their culturally congruent care. Indeed, this study suggests that nurses who had experience in learning the concepts of cultural diversity and those who had taken a cultural competency course or workshop had significantly higher scores than those who had not had this learning experience.

The Impacts of Nurses' Interpretations about the Concepts of Cultural Competency

The limited clinical and educational experiences in the area of cultural competency might influence Japanese nurses' understanding about the concepts of culturally appropriate care and this possibly contributed to the low IAPCC-R scores. The concepts of cultural competency are still not common in nurses' practices and education, especially pertaining to the nursing education environment. The Commission of Nursing Education and Research (1994) requires nursing faculties to improve culturally competent education. However, the educational contents are still not sufficient to fully

address the broad concepts of cultural competency. Leininger (1995, 1997) demonstrates that success in improving cultural competency is gained through clinical practice and field experience. However, meeting with people or clients with various cultural backgrounds (who do not only include foreign residents/clients but also Japanese people who have different cultural backgrounds through clinical practice) is not encouraged in the contemporary nursing curriculum in most schools. Most schools rely on content taught on campus with less opportunity to learn cultural competency through clinical practice. These limited teaching concepts inhibit nurses' ability to fully understand the true meaning of concepts of cultural competency.

Cultural competence refers to a nurse's ability to not just respect clients from different ethnic and racial backgrounds, but also to understand their varying cultural backgrounds (Campinha-Bacote, 2003a, b; Matus, 2004). The IAPCC-R question items address this issue and examine the respondents' understanding of the concept of cultural competency. However, Japanese nurses may not fully interpret the key concepts of cultural competency because they are not familiar with them due to the clinical and educational environments. They may possibly interpret cultural competency as the ability to respect clients from different background such as foreign patients, but they might not perceive that the patients/individuals who are Japanese and have various cultural backgrounds. Supporting this perspective, the study indicates that the majority of nurses strongly agree or agree on item1 (Cultural Competency mainly refers to one's competency concerning different ethnic groups) (see Table F1 in Appendix F). Furthermore, the qualitative comments provided by the majority of nurses were mostly

related to care experiences for foreign clients. Many nurses in this study might therefore perceive their cultural competency level as reflecting their practices with foreign patients. With this perception, they might not be confident with their cultural competency level as they reflect on the care they have performed for foreign clients. Ultimately this might explain low scores.

In relation to this issue, the previous chapter has indicated that, like the concept of cultural competency, some concepts used in the IAPCC-R such as “ethnic pharmacology,” “cultural informants,” and “cultural assessment tool” are also unfamiliar to Japanese nursing and culture. In fact, nurses in the pilot study indicated their concerns and difficulty understanding the meanings of these concepts. The qualitative findings of this study further support this issue by indicating nurses’ difficulty and confusion when interpreting some concepts used in the instrument. These issues were also represented in Noble’s (2005) study using a translated IAPCC-R for examining Israeli midwives’ cultural competency. This interpretation problem may induce negative answers and ultimately contribute to low scores. Supporting this perspective, almost all nurses disagreed or strongly disagreed with item 6 (I am knowledgeable in the area of ethnic pharmacology) and the majority of nurses disagreed or strongly disagreed with item 20 (I am aware of at least 2 cultural assessment tools to be used when assessing clients in a healthcare setting) and item 13 (I am willing to learn from others as cultural informants) (see Table F1, in Appendix F).

One wonders if the study should have provided extra definitions or explanations for the concepts of cultural competency. As previous literature (Hsieh et al., 2005; Hyrkas

et al., 2003; Willgerodt et al., 2005) points out, some concepts are interpreted differently due to varying cultural experiences. Translation was a major limitation of this study and a factor reducing nurses' cultural competency scores. A more accurate instrument that can be sensitive to Japanese culture and nursing should be considered in order to more accurately measure nursing education and practice, and ultimately, culturally competent care itself.

Positive Attitude to Possess Cultural Competency

Although nurses in this study lacked much cultural competency, they appeared to be motivated to become more culturally competent. The results reveal that nurses had better mean scores for cultural desire, cultural awareness and cultural encounters than cultural skills and cultural knowledge constructs. These results are congruent with Koempel's study that indicated nurse practitioners had the highest mean scores for cultural desire, cultural awareness and cultural encounters.

As Campinha-Bacote (1999, 2002, 2003b) indicates, cultural desire is an initial step to becoming culturally competent and emphasizes a nurse's willingness and passion to be open-minded and to learn about different cultures (Campinha-Bacote, 1999, 2002, 2003b). Cultural awareness encourages nurses' self-reflection on their own culture as well as acceptance of differences (Campinha-Bacote, 1999, 2002, 2003b). Cultural encounters require nurses to interact with culturally diverse patients (Campinha-Bacote, 1999, 2002, 2003b). Nurses in this study appear to be sensitive to becoming culturally competent and were motivated to reflect on their own culture and accept differences. They seem to be willing to interact with culturally and ethnically diverse clients. The

reasons for these findings are not clear. However, a possible cause is related to the changing clinical milieu. Although Japanese nurses still lack expertise in caring for culturally and ethnically diverse clients, the provision of an increased quality of care for minority populations is likely to require nurses to improve their cultural competence (Hirano, 1998; Sugiura, 2003). This changing clinical environment may encourage nurses in the direction of cultural desire, cultural encounters and cultural awareness.

Perceptions of Cultural Competency

This study also includes Japanese nurses' qualitative comments regarding their experiences with and views of caring for culturally and ethnically diverse clients. It also gave the respondents' opportunity to provide comments regarding the study. These qualitative results provide more specific and meaningful insights and some of these supporting the quantitative findings.

Lack of comprehension of healthcare needs of minority populations is compounded by Japanese nurses' limited clinical practice and educational experiences in the area of cultural competency. This is reflected in how the majority of nurses expressed difficulties or frustrations about their experiences when caring for clients from diverse backgrounds. The majority of nurses who provided qualitative comments expressed such difficulties or frustrations when they tried to accept clients' various lifestyles such as eating habits, parenting, and religious customs and values. The nurses' difficult experiences were very similar to the responses found by Mackey-Padilla (2003). Their difficulties and frustrations also occurred when they were confronted with clients' expectations of healthcare services, especially concerning different approaches to

informed consent, rules for patients staying in the hospital and treatment approaches. These experiences mostly occurred when caring for foreign clients and are associated with their concerns towards healthcare services in Japan as reported by previous studies. Hirano's study (2003) indicates that foreign clients were concerned with physicians and nurses' insensitive behaviors and attitudes to their particular healthcare services needs. Ander (2000) and Miyaji (1994, 1997) point out that the issue of insufficient informed consent concerning treatment procedures and medical diagnosis is a significant problem leading to foreign clients' dissatisfaction with, and mistrust towards, Japanese healthcare. Ohtaki et al. (2003) provide an example of such an informed consent issue. For instance, Japanese physicians are spending more time on medical diagnosis and physical examination and less time on the explanation of a treatment procedure to the patient (Ohtaki et al., 2003).

Campinha-Bacote (1999, 2002, 2003b) emphasizes that nurses need to obtain cultural competency to accept a patient's unique culture, life-style, and practices. The American Institutes for Research study (2004) further emphasizes that culturally competent care should not emphasize a nurse's stereotype and routine practice but respect individual variations within cultures. However, applying these keys aspects of cultural competency causes frustration and challenges. It seems logical to assume that nurses' difficult and frustrating experiences might decrease their self-confidence with culturally competent care. This is reflected in the low score of IAPCC-R and has implications for expanding nurses' cultural competency practice and education.

Culturally competent nurses possess language ability and culturally sensitive

communication skills to effectively interact with diverse clients (Howard et al., 2001; OMH, 2001). However, homogeneity in the society results in very few nurses in Japan speaking a foreign language (Serizawa, 2006). Improvement of language and communication issues is a major challenge for Japanese nurses. A majority of nurses reported difficulty or frustration when they needed to communicate with foreign clients who could not speak Japanese. They were thus concerned with their limited language and communication skills. These findings support the quantitative finding that more than 70% of nurses reported that they did not speak a foreign language. It is also consistent with Sugiura's (2003) findings indicating that a majority of nurses did not speak a foreign language and this was a negative factor for cultural competency. Nurses in this study further suggested the need for organizational support such as providing interpreter services. This supports KDDI-Soken's (2004) findings which indicated only a few healthcare organizations provide interpreter services. These findings demonstrate the challenge for healthcare organizations and nursing curricula in trying to improve nurses' language and communication skills. It further suggests the need for healthcare organizations to provide translation or interpreter services.

The majority of nurses indicated that they had positive experiences when these difficult and frustrating experiences were addressed. Nurses reported that they were satisfied when they were able to accept or recognize a foreign client's individual needs and provide alternative care. This finding is congruent with the response represented by Mackey-Padilla (2003). Many nurses also indicated satisfactory experiences when language and communication barriers were addressed.

Nurses' frustrating and satisfying experiences are a reflection of their perceptions towards the knowledge and skills necessary to care for clients from culturally and ethnically diverse groups. Nurses indicated that their frustrating or satisfying experiences were interconnected with the knowledge and skills that they believed to be important. Almost all nurses who provided qualitative comments indicated their major challenge was to improve their language and communication skills in order to provide appropriate care to foreign clients. This finding suggests that, because most nurses in this study perceived that cultural competency mainly refers to caring for foreign clients who can not speak the Japanese language, language and communication skills are the essential components for the improvement of cultural competency. Campinha-Bacote (1999, 2002, 2003b) also suggests that nurses need to possess knowledge regarding ethnic pharmacology and skills for cultural assessment to provide culturally competent care. However, such knowledge and skills were not identified by nurses as essential components for a cultural competent practitioner. As mentioned earlier, such knowledge and skills would be rather unfamiliar among Japanese nurses.

Nurses indicated other important knowledge and skills of cultural competency that they needed to develop. Nurses were aware of their limited knowledge or skills when trying to understand a clients' unique culture. A majority of the nurses further indicated that they should not be judgmental but instead be open-minded in order to accept a client's unique needs. Some nurses indicated the importance of reflecting upon their own views and values. These findings suggest again that nurses are motivated to become culturally competent practitioners. Supporting this, some nurses indicated their

willingness to learn about or be involved in cultural competency practice. Some nurses indicated their motivation to seek further learning opportunities to improve their cultural competency. These qualitative findings support the quantitative findings of higher mean scores for cultural desire and awareness. Increasingly foreign nationals and patients from diverse cultural, ethnic and linguistic backgrounds (Ministry of Justice Immigration Bureau of Japan, 2007) may have increased nurses' awareness of, and desire to improve, their cultural competency.

Core aspects of cultural competency are interconnected with the fundamental concept of caring. That fundamental concept is often defined as patient centered with respect for individual differences (Lauver et al., 2002). One interesting findings is that some nurses indeed hold this perspective, suggesting that improving fundamental nursing skills and knowledge are important for enhancing nurses' cultural competency. These particular nurses therefore appear to be aware of the general meaning of cultural competency as it applies to the ability to care for foreign clients and for Japanese clients with different cultural backgrounds.

The qualitative comments indicate that nurses' experiences with, and views of, culturally competent care are mostly related to caring for foreign clients. As previously mentioned, the majority of nurses in this study perceive that cultural competency generally refers to their ability to care for foreign clients but not Japanese people who hold different backgrounds. Because of this, when the IAPCC-R asked Japanese nurses about the meanings of cultural competency, they were confused and had difficulty interpreting such concepts. Indeed, free comments identified from the qualitative

questions mostly indicated confusion and difficulty when attempting to interpret the meaning of concepts such as “cultural competency” and “clients from culturally and ethnically diverse backgrounds” as used in the IAPCC-R. They suggested the need to provide extra definitions or explanations for the concepts of cultural competency. This has implications on the quality of IAPCC-R when used with Japanese culture as well as other non English speaking cultures. This point is particularly appropriate for cultures or societies where the concept of cultural competency has not permeated nursing practice and education. Further study may need to look at the issues of Japanese practice and education on cultural competency through a different perspective that makes more sense to Japanese nurses.

The Relationship between Cultural Competency and Demographic and Personal factors

This study also examined the relationship between Japanese nurses’ cultural competency and selected demographic and personal factors. ANOVA testing using Bonferroni correction indicates that the following variables did not significantly affect nurses’ cultural competency (age, professional qualifications, basic nursing education, length of clinical experience, overseas living experience, length of overseas living experience, types of prior learning, difficulty in caring for clients from other cultural and ethnic backgrounds, and the frequency in caring for clients from other cultural and ethnic backgrounds). Some of these findings are consistent with previous studies but others are incongruent.

Previous studies (Koempel, 2003; Mackey-Padilla, 2003; Noble, 2005; Rooda,

1993; Smith, 2001) suggest that age is generally not a strong factor influencing cultural competency. This study supports previous findings indicating that there is limited impact of age on the level of cultural competency.

Professional qualifications also did not influence cultural competency levels. This finding is associated with previous studies (Bernal & Froman, 1987, 1993; Koemel, 2006). However, this comparison must be made with caution. Previous studies were collected from a specialty area of practice in order to examine the relationship with cultural competency. This study, however, only asked for the type of professional qualifications nurses held and did not collect information on the specialty area of practice. As such, the correlation between IAPCC-R score and Japanese nurses' specialty areas of practice might need to be further examined.

The length of clinical experience was also not a significant factor influencing cultural competency. This supports previous studies (Bernal & Froman, 1987, 1993; Koemel, 2006; Noble, 2006; Rooda, 1993; Sargent, Sedlak & Martsolf, 2005) that indicate the length of clinical experience is not a strong predictor for cultural competency. While it should be noted that Noble's (2005) study indicated that although the total length of clinical experience did not have a significant impact on cultural competency, the length of clinical experience as a midwife was identified as a significant factor. Considering this information, a further study assessing a covariate such as the length of clinical experience in a specialty area or the professional qualifications nurses hold would be needed to determine the possible impact.

Like the length of clinical experience, basic nursing education has often been

examined as a possible predictor of cultural competency. In this study, this variable was not a strong factor in developing cultural competency. This result is not fully consistent with previous studies (Bernal & Froman, 1987; Mackey-Padilla, 2003; Noble, 2005). Two prior studies (Koempel, 2003; Rooda, 1993) indicated a significant impact of basic nursing education upon the level of cultural competency. Interestingly, although Rooda (1993) and Koempel (2003) found that basic nursing education was associated with the level of cultural competency, the findings were quite different between these two studies. Rooda (1993) found that nurses who were less formally educated had better mean score than those who were more educated. In her study, nurses with an associate degree possessed more cultural knowledge than nurses who had completed a BSN degree, while Koempel (2003) reported that nurse practitioners with a masters or doctorate level of education had significantly higher mean scores than the practitioners who had completed BSN degree. The finding of this study is congruent with Koempel's finding. Even if the mean differences between the groups were not significant, there was a consistent increase in the level of cultural competency from the group who were less formally educated to more formally educated. The mean score for the group of Japanese nurses who completed high school was lowest while the mean score for the group who completed a bachelor or higher degree was higher than other groups. Mean scores also increased from the group who completed a two year course to a three year course in both diploma program and junior college. The level of cultural competency logically progressed from nurses who were less educated to more educated. As such, no easy conclusion can be drawn regarding the impact of basic nursing education on cultural competency. The impact of

this variable need to be further examined.

Numerous learning strategies for developing nurses' and nursing students' cultural competency have been discussed in the literature. Studying or living abroad is one strategy that can increase cultural competency according to some authors (Brandi et al., 2003; Colling & Wilson, 1998; Heuer & Bengiamin, 2001). However, this study does not support this and instead indicated that neither the respondents' overseas living experience and the length of that experience influence the level of cultural competency. This finding is contrary to previous studies (Bernal & Froman, 1987; Sugiura, 2003). Bernal and Froman's (1987) and Sugiura's (2003) studies concluded that overseas living experience was a significant predictor. This difference may be due, in part, to the sample.

Background data indicate that the vast majority of respondents (98.4%) had no overseas living experience while only twenty nurses (1.6%) had overseas living experience. Thus further research examining the relationship with this variable would need to be explored.

The use of a more active learning style through a student centered approach is often suggested as an effective method for expanding cultural competency. Amerson (2001) for example, notes that active learning through an adult learning approach has a great potential for increasing the nurses' cultural competency. However, no previous research has attempted to determine the exact relationship between types of prior learning and cultural competency. To demonstrate this perspective, this study examined the relationship between these variables. However, the results indicate that no significant difference exists among types of prior learning. Future research in this area is nevertheless essential.

There have been a number of studies examining the relationship between nurses' care experience for diverse clients and their cultural competency. Only one study has focused on the impact of difficulty in caring for culturally and ethnically diverse clients and their corresponding cultural competency. Sugiura (2003) had an interest in this issue and found that a difficult experience was not a predictor of cultural competency. The result of this study is consistent with Sugiura's finding.

Sugiura's findings also revealed that having fewer experiences in caring for foreign clients was a factor affecting nurses' cultural competency. Koempel (2003) supported Sugiura's findings by indicating that nurse practitioners who had cared for clients with different backgrounds on a regular basis had the highest mean scores of IAPCCR scores. However, this study provides inconsistent findings. This study indicates that frequency in caring for patients who have different cultural backgrounds did not strongly impact on nurses' cultural competency. This is supported by Rooda's (1993) study that reported the percentage of a nurse's practice in caring for diverse clients was not a predictor of their cultural knowledge. Because of the inconsistent results, no conclusion can be made about the relationship between these two variables. Further research on the relationship between these two variables is needed.

Although this study concludes that difficult care experiences and the frequency of care experience were not factors influencing nurses' cultural competency, having experience caring for diverse clients did have a significant impact on nurses' cultural competency. This study found that nurses who had experienced caring for diverse clients had significantly higher mean scores of IAPCC-R than those who did not have any care

experiences. This finding supports Bernal and Froman's (1993) study on community nurses in which having experience caring for different cultural groups had a significant impact on self-efficacy levels for providing care to culturally diverse patients. This study therefore supports the effectiveness of having experience caring for culturally diverse clients on expanding nurses' cultural competency as suggested by literature (Campinha-Bacote, 1998, 1999, 2002, 2003a, b; Leininger, 1995, 1997)

This study further supports the effect of education relating to cultural competency. The results reveal that nurses who had learned the concepts relating to cultural diversity, who had taken a course related to cultural nursing care, or who had undertaken workshops/classes related to cultural nursing care had significantly higher scores of IAPCC-R than nurses who did not have such a learning experience. These results support findings that indicate having culturally competent education is a factor contributing to an increased cultural competency (Bernal & Froman, 1987, 1993; Cooper-Brathwaite, 2005; Doutrich & Storey, 2004; Koempel, 2003; Smith, 2001). Thus this study emphasizes that culturally competent education does play a role in expanding cultural competency.

Like education relating to cultural competency, nurses' language abilities have often been discussed as an enhancing factor for cultural competency (Campinha-Bacote, 2003b; Howard et al., 2001; OMH, 2001). Some studies (Bernal & Froman, 1993; Sugiura, 2003) investigated the impact of the ability to speak a foreign language on cultural competency and found that it was a predictor of cultural competency. The findings of this study support previous ones that indicate nurses who speak a little of a foreign language had significantly higher scores than those who did not. However, there

was not a significant difference between nurses who spoke another language very well or fairly well and those who did not. One possible reason for this finding is that there was only a small number of nurses who were very or fairly proficient at another language (N=8). This made the possibility of detecting a significant difference. Thus further research examining the relationship with this variable will need to be undertaken.

This study thus concludes that cultural competency related to education, having care experiences for culturally and ethnically diverse clients and ability to speak a foreign language are factors enhancing cultural competency. Other demographic and personal variables do not appear to be factors. Some of these findings are inconsistent with previous studies. These inconsistent findings may have occurred because some studies used different tools for measuring cultural competency and asked different questions than the IAPCC-R. Other reasons may be that there are different types of data analysis methods utilized in other studies. Thus, further research will be required to determine these factors.

The Level of CTDs Reported by Japanese nurses

The findings indicate that nurses in this study presented a slightly positive disposition towards total CCTDI. Of seven sub-scales, four sub-scales including truth-seeking, open-mindedness, maturity, and inquisitiveness showed positive dispositions for critical thinking while analyticity, systematicity indicated ambivalent disposition. Open-mindedness had the highest mean score while nurses had the lowest score for self-confidence, which was negative disposition toward CT. These results are congruent with Kawashima and Petrini's (2003) study which examined nursing students'

and registered nurses' CTDs in Japan. When comparing the findings of previous, western based studies, scores in this study were lower. For example, total scores and all sub-scale scores in this study were lower than those reported in Raymond's (2003) study of nurse educator' CTDs in Canada. Registered nurses in Rodriguez's (2000) study also had higher total scores and sub-scale scores, with the exception of truth-seeking and open-mindedness, than those reported in this study. Other studies (Giddens, 2002; Crawford, 2002) examined nursing students' CTDs and also revealed higher scores for total and sub-scales again with the exception of truth-seeking and openmindedness.

The low CCTDI scores could be due to the lack of an educational approach promoting CT. The importance of critical thinking is being recognized in Japan but nurses' prior learning experiences are still limited. Concepts such as self-directed learning with problem solving approaches, which is essential for promoting CT, are still not widely accepted in Japan (Kawashima & Petrini, 2004). In clinical learning, nurses have been taught technical and routine skills instead of being encouraged to use critical thinking.

Clinical practice environments are a potentially negative factor for CT. The influence of the physician's control hinders a nurse's autonomy and self-determination (Stockhausen & Kawashima, 2003; Hisama, 2000) and this may therefore discourage CT skills. The limited CTDs among Japanese nurses demonstrate the necessity for innovative educational approaches for promoting CT. Further research to examine the relationship between CTDs and educational environments should be emphasized.

The Relationship between Cultural Competency and CTDs

The examination of CTDs as possible predictors for Japanese nurses' cultural competency could provide a useful perspective. CTDs were thus examined as a factor potentially influencing nurses' cultural competency. The results indicate that inquisitiveness, openmindedness, self-confidence, systematicity, and maturity were significant predictors of cultural competency. Some of these results are consistent with Doutrich and Storey's (2004) study that indicated openmindedness and inquisitiveness had a positive correlation with total IAPCC. These results therefore support the assumption that CTDs of open-mindedness and inquisitiveness are congruent with some aspects of cultural competency.

The findings of this study further indicate that self-confidence and maturity are predictors for cultural competency. This finding further emphasizes the relationship between CTDs and cultural competency. If nurses possess high CTDs, their cultural competency is higher. This has implications for trying to develop innovative approaches for promoting CT and cultural competency together in the educational arena.

The sub-scale of systematicity was a negative predictor for cultural competency. The reason for this finding is unknown. No previous studies and theories discussed the relationship between these variables. Further research on the exploration of the impact of CTDs on cultural competency is therefore suggested.

Limitations of the Study

One limitation of this study is related to the selection of independent variables. Dependent variables may not only be correlated with selected predictor variables but also

other variables (Tabachnick & Fidell, 2001). This would be true for this study. It can be assumed that Japanese nurses' cultural competency may be correlated with other variables which are not included in this study. Thus, the study can not fully demonstrate that the selected demographic and personal variables and CTDs are appropriate factor variables influencing Japanese nurses' cultural competency. Selection of independent variables in this study was a concern and therefore further study selecting appropriate demographic and personal variables is needed.

Conducting an independent sixteen ANOVA had further limitations. Performing an independent sixteen ANOVA increases the instance of Type 1 errors. Although the Bonferroni correction was applied to reduce Type 1 errors, the study may not be fully protected. Using the one-way ANOVA further limits the determination of the main effects as it examines interactions between selected independent variables or controlling covariates.

Another limitation of the study is the quality of IAPCC-R. The Cronbach's alpha of the overall IAPCC-R was within an acceptable range of reliability, but those for the five sub-scales suggested low reliability. The reliability may have been affected by this first time use of IAPCC-R with Japanese nurses. To reduce translation problems concerning semantic and content equivalence issues, several procedures such as forward-backward translation, expert review, and a pilot study were used in this study. However, the respondents indicated their confusion and difficulty in interpreting some concepts related to cultural competency. This would possibly influence the study's findings. This may call into question the utility of the IAPCC-R when used for a different

culture.

The use of a self-report survey also has limitations. Self-report surveys could encourage people to respond based on social desirability rather than actual belief (Polit & Beck, 2004). There may be increasing pressure on nurses in Japan to expand cultural competency and CT. This may have contributed to response biases in that the participants gave socially favorable answers. Obtaining qualitative information would enhance the quality of findings.

The use of qualitative questions assists in discovering Japanese nurse' perceptions of cultural competency. However, the use of an anonymous survey means that following up with participants to seek clarification of their qualitative responses was not possible (Polit & Beck, 2004). This study could thus not clarify the researcher's interpretation of identified themes through any follow-up processes.

The sampling technique was a further limitation. All of the participants in the sample were recruited from seven general or university hospitals which were located in the western and middle part of Japan. Power analysis was initially conducted to identify a desired sample size. The overall number of returned questionnaires was 1063 out of 1980 and the return rate was 53.68 %. By focusing on Japanese nurses' cultural competency, this sample result would be enough to ensure the generalizability of findings. However, Polit and Beck (2004) indicate that there is no guarantee that samples are representative. The response from nurses from other geographic locations that had high representations of culturally and ethnically diverse clients such as foreign clients might be different from the findings of this study. To increase generalizability would require a sample

representative of Japanese nurses from several locations that represent more diversity in population.

Furthermore, this study was a cross sectional study. Due to the nature of a cross sectional study, claims from the study findings may only be made for a single point in time. As diverse populations increase in Japan, the delivery of quality care will further require nurses to possess cultural competency. This changing practice environment may provide different findings if further examination is conducted.

Finally the study only obtains information from nurses. The perspectives and concerns of patients from differing ethnic and cultural backgrounds were not represented. The quality of the findings would be greatly enhanced if the examination of the views of other stakeholders were possible.

Future Research Recommendations

Based on the findings of this study, several improvements in this study might be undertaken in future research. For example, larger and more diverse sample of nurses from varied geographical locations would be helpful to increase the generalizability. Another recommendation is to undertake a quasi-experimental design to determine the causal relationship between cultural competency and variables. Experimental design would be helpful especially if cultural competency education and practices are effective in increasing nurses' cultural competency levels. More appropriate selection of the number of independent variables with using different types of data analysis is required to demonstrate the main effects on cultural competency. Further research determining the relationship between CTDs and cultural competency is also required. Proof of the

relationship between these variables would provide useful information that could be used for improving teaching strategies to promote cultural competency and CTDs together. Undertaking a trend study would also be useful to see if any change occurs in nurses' cultural competency practice in the future. Future research could also incorporate a more expanded qualitative approach. Observation to evaluate nurses' cultural competency would provide more appropriate information to challenge future cultural competency practice. Individual or group interviews with nurses would illuminate nurses' views of cultural competency practice that could not be represented in this study. The examination of views of other stakeholders such as patients will further provide specific challenges for the future of cultural competency practice in Japan.

One further recommendation is to re-examine the quality of the IAPCC-R. Incorporating statistical methods such as test-retest reliability and factor analysis is required for future studies to examine the reliability and construct validity of a Japanese version of IAPCC-R. Several items in the Japanese version of the IAPCC-R need to be re-examined. Items 6, 8, 9, 20, 21, and 25 are still problematic items to interpret for the Japanese nurses, and therefore need to be further revised. This would improve the quality of IAPCC-R. However, a better and potentially more appropriate instrument for examining Japanese nurses' cultural competency level would for the researcher to develop a new instrument. Such an instrument should be more sensitive to Japanese culture and nursing practice in Japan. It must be able to reflect the meanings of diversity and cultural competency among Japanese nurses. The instrument might also be designed as a more cross-cultural instrument for Asian as well as other cultures for different

language groups.

Implications of the Study

Implications for Nursing Practice

The population of foreign nationals and patients from diverse cultural, ethnic and linguistic backgrounds will continue to increase in Japan. The delivery of quality nursing care therefore requires nurses to improve their cultural competency knowledge and skills. The findings of this study suggest that nurses need to expand their cultural competency, especially cultural knowledge and skills to provide appropriate care for the clients with different cultural and ethnic backgrounds. Nurses need to be more knowledgeable about clients' unique cultural backgrounds and skillful in cultural assessment, physical assessment, and interviewing and communication to collect data regarding clients' backgrounds. Nurses also need to improve their language and communications skill to interact with foreign clients and understand their service needs. It is also important for nurses to improve their abilities to work with interpreters effectively. Yet, it is important to recognize that a culturally competent nurse does not only focus on clients with different ethnic and linguistic backgrounds but also individual clients with unique needs relating to their values, gender, life stage, religious, social, political, economic categories, age, educational backgrounds, occupational status, geographic location, etc.

According to the results of this study, nurses are likely to possess some cultural desire, cultural awareness, and cultural encounters. The development of these aspects of cultural competency will expand other components of cultural competency. Using and developing educational and clinical practice opportunities relating to other cultures will

also expand nurses' cultural competency. In so doing, nurses should also be encouraged to improve key components of CT and then link them into the learning process regarding cultural competency.

Implications for Nursing Administration

Nursing administrators need to promote cultural competence related to education by providing workshops or educational services for nursing staff. Administrators should encourage active participation of all providers in the organization in such education. There is a significant need for administrators to be actively collaborating with educators to provide such education in hospital settings. Cultural competency education would be more effective if it encouraged nurses to improve and apply CT skills in everyday practice.

Nursing administrators further need to encourage and facilitate research on cultural competency to assess the quality of care for diverse clients. Information gained from the research should be used to develop clinical guidelines and procedures to ensure cultural competency. The introduction of helpful literature and cultural assessment tools would assist nurses in expanding their cultural knowledge and skills. Such learning resources should be based on information from various cultures, their religious beliefs, ethnic backgrounds, etc., and also address the general concepts of cultural competency.

Qualitative results further suggest the need for improvement of language services. Language services should include the regular availability of qualified interpreters/translators. The provision of language training to assist nurses with communication is a critically important component in improving the quality of care.

Finally, nursing administrators should review their healthcare service missions, goals and standards to emphasize culturally appropriate care.

Implications for Nursing Education

Nursing educators are challenged to develop culturally sensitive education. It is critical to incorporate cultural competency issue into nursing curricula to prepare nursing students. The contents of a cultural competency course or program should encourage students to obtain cultural knowledge and skills necessary to assess a client's individual needs. Using various teaching methods, educators should encourage students to explore the key components of cultural competency. Cultural competency cannot simply be developed through campus based didactic teaching (Kardong-Edgren, 2004; Mahabeer, 2006). Clinical practice and field experience need to be developed to provide effective learning opportunities to meet the needs of clearly different groups such as foreign patients/residents and also individuals or groups who may have grown up in Japan but have unique cultural backgrounds. There is further effort required by nursing educators to create innovative teaching strategies that encourage students to develop CT and use it for the development of cultural competency. Finally, future research will be required to assess the effectiveness of such cultural competency related education.

Implications for Policy

The Commission of Nursing Education and Research (1994) has proposed criteria for baccalaureate nursing education programs to emphasize cultural competency education. However not all nursing education programs incorporate a cultural competency course or program. Thus accreditation standards should be amended to

mandate the inclusion of a cultural competency component in all nursing education programs. New legislation for healthcare organizations should also include provision for exploring healthcare providers' cultural competency. Nursing associations in Japan should take a leadership stance to encourage increasing Japanese nurses' awareness of the need to be culturally competent. In the near future, they need to develop an accreditation program to prepare a certifiable for culturally competent nursing.

Conclusion

This study has examined Japanese nurses' cultural competency levels and their relationship to CTDs as well as to key demographic and personal variables. The study has further examined the nurses' perceptions of their experiences with culturally diverse clients and their views on culturally competent care. Overall this study indicates that the majority of nurses believed that they were culturally aware, but not culturally competent or culturally proficient. Nurses are particularly lacking in the components of cultural knowledge and skill. Comparison to previous findings suggests that Japanese nurses' cultural competency levels are relatively low. The qualitative analysis adds to that of nurses' frustration and difficulty when they need to accept and understand a client's unique culture and expectations of healthcare service, especially when those expectations are not consistent with known nursing practice. Language and communication barriers appear as a major factor contributing to these frustrations and difficulties.

Reflection on frustrating and difficult experiences encourages nurses to begin the learning process of cultural competency. They are now more likely to be open-minded to expand their cultural competency than in the past. Nurses' positive attitudes should be

supported through education relating to cultural competency. This study underlines the importance of cultural competency education and the positive impact of language ability on cultural competency. The development of cultural competency education is a critical challenge for nursing educators and administrators. Innovative teaching approaches exploring the key concepts of cultural competency are essential for concurrent nursing education. Education should also assist nurses and students to improve their language and communication abilities. Further challenges for nursing educators include developing unique teaching approaches that assist students and nurses to improve and apply their CT skills as a way to expand cultural competency. An ongoing emphasis on cultural competency would increase nurses' desire to improve their cultural competency and thereby promote quality of care.

Expanding research on cultural competency is essential to identify future challenges for cultural competency. The development of better measurements to examine nurses' cultural competency levels will provide more culturally sensitive and appropriate information that can be used to improve cultural competency through nursing practice and education. Cultural competency acquired through that combination of practice and education will also promote the overall development and professionalization of nursing in Japan.

Appendix A **Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals-Revised (IAPCC-R)** **(Original IAPCC-R)**

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- 1. Cultural competence mainly refers to one's competency concerning different ethnic groups.**

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

- 2. I feel that cultural competence is an ongoing process.**

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

- 3. Factors such as geographical location, gender, religious affiliation, sexual orientation, and occupation are not considered areas of concern when seeking cultural competence.**

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

- 4. I have a personal commitment to care for clients from ethnically/culturally diverse groups.**

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

- 5. I feel that there is a relationship between culture and health.**

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

- 6. I am knowledgeable in the area of ethnic pharmacology.**

VERY KNOWLEDGEABLE KNOWLEDGEABLE SOMEWHAT KNOWLEDGEABLE NOT KNOWLEDGEABLE

- 7. I am motivated to care for clients from culturally/ethnically diverse groups.**

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

- 8. I am knowledgeable about the worldviews, beliefs, practices and/or life ways of at least two cultural groups.**

VERY KNOWLEDGEABLE KNOWLEDGEABLE SOMEWHAT KNOWLEDGEABLE NOT KNOWLEDGEABLE

- 9. I am aware of the cultural limitations of existing assessment tools that are used with ethnic groups.**

VERY AWARE AWARE SOMEWHAT AWARE NOT AWARE

- 10. I am knowledgeable in the area of biological variations among different ethnic groups.**

VERY KNOWLEDGEABLE KNOWLEDGEABLE SOMEWHAT KNOWLEDGEABLE NOT KNOWLEDGEABLE

- 11. Anatomical and physiological variations do not exist in different ethnic groups.**

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

- 12. I am aware of specific diseases common among different ethnic groups .**

VERY AWARE AWARE SOMEWHAT AWARE NOT AWARE

- 13. I am willing to learn from others as cultural informants.**

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

- 14. I seek out education, consultation, and/or training experiences to enhance my understanding and effectiveness with culturally and ethnically diverse clients.**

STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

Appendix A
Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals-Revised (IAPCC-R)
(Original IAPCC-R)

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15. **I am aware of at least 2 institutional barriers that prevent cultural/ethnic groups from seeking healthcare services.**
 VERY AWARE AWARE SOMEWHAT AWARE NOT AWARE
16. **I recognize the limits of my competence when interacting with culturally/ethnically diverse clients.**
 STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE
17. **When my values and beliefs “clash ” with my client’s values and beliefs I become frustrated.**
 STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE
18. **I am aware of some of the stereotyping attitudes, preconceived notions and feelings that I have toward members of other ethnic/cultural groups.**
 VERY AWARE AWARE SOMEWHAT AWARE NOT AWARE
19. **I have a passion for caring for clients from culturally/ethnically diverse groups.**
 STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE
20. **I am aware of at least 2 cultural assessment tools to be used when assessing clients in a healthcare setting.**
 VERY AWARE AWARE SOMEWHAT AWARE NOT AWARE
21. **It is more important to conduct a cultural assessment on ethnically diverse clients than with other clients.**
 STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE
22. **I feel comfortable in asking questions that relate to the client’s ethnic/cultural background.**
 VERY COMFORTABLE COMFORTABLE SOMEWHAT COMFORTABLE NOT COMFORTABLE
23. **I am involved with cultural/ethnic groups outside of my healthcare setting role.**
 VERY INVOLVED INVOLVED SOMEWHAT INVOLVED NOT INVOLVED
24. **I believe that one must “want to ” become culturally competent if cultural competence is to be achieved.**
 STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE
25. **I believe that there are more differences within cultural groups than across cultural groups.**
 STRONGLY AGREE AGREE DISAGREE STRONGLY DISAGREE

Appendix A
Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals-Revised (IAPCC-R)
(Japanese Version of the IAPCC-R)

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医療従事者の異文化ケア能力評価リスト（改訂版）

各項目に対して最も当てはまる回答を一つだけ選んでください。

セッション I

1. 異文化ケア能力とは、主に民族的背景の異なる集団に対処する能力のことである。
強くそう思う そう思う そう思わない 全くそう思わない
2. わたしは、異文化ケア能力とは、継続的に伸ばしていく能力であり、成長プロセスをいうのだと思う。
強くそう思う そう思う そう思わない 全くそう思わない
3. 異文化ケア能力を伸ばすにあたって、地域性・性別・宗教・性的志向・職業などの要因は考えなくてよい。
強くそう思う そう思う そう思わない 全くそう思わない
4. わたしは、多様な民族的・文化的背景を持ったクライアントをケアすることに献身的である。
強くそう思う そう思う そう思わない 全くそう思わない
5. わたしは、文化と健康の間には関係があると思う。
強くそう思う そう思う そう思わない 全くそう思わない
6. わたしは、様々な民族に伝わる薬理療法についての知識がある。
とても知識がある 知識がある いくらか知識がある 知識がない
7. わたしは、多様な文化的・民族的背景を持ったクライアントをケアすることにやる気を感じる。
強くそう思う そう思う そう思わない 全くそう思わない
8. わたしは、少なくとも二つの文化的集団（自分とは異なる文化的背景をもつ集団）について、その世界観や信条、習慣や生活様式に関する知識がある。
とても知識がある 知識がある いくらか知識がある 知識がない

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9. わたしは、民族集団に用いるアセスメント方法を、文化的背景の異なる個人や集団（性別、年齢差、宗教、職業などによる文化的背景の違いをもつ個人や集団）に適応するには文化的な制限がある事に気づいている。
- とても気づいている 気づいている いくらか気づいている 気づいていない
10. わたしは、異なる民族集団間の身体的特徴の違いについて知識がある。
- とても知識がある 知識がある いくらか知識がある 知識がない
11. 異なる民族集団間には解剖学的及び心理学的な違いは存在しない。
- 強くそう思う そう思う そう思わない 全くそう思わない
12. わたしは、民族集団によって特有な疾病があることに気づいている。
- とても気づいている 気づいている いくらか気づいている 気づいていない
13. 異文化の情報を与えてくれる人々から、私は進んで学ぶ準備ができています。
- 強くそう思う そう思う そう思わない 全くそう思わない
14. わたしは、多様な文化的・民族的背景を持ったクライアントについての理解を深め、より効果的な対応をするために、教育や指導や訓練を積極的に受けるようにしています。
- 強くそう思う そう思う そう思わない 全くそう思わない
15. わたしは、文化的・民族的背景の異なる集団がヘルスケア・サービスを受けようとする時、これを妨げる制度上の障壁を少なくとも二つ知っている。
- よく知っている 知っている いくらか知っている 全く知らない
16. わたしは、多様な文化的・民族的背景を持ったクライアントと接する時、自分には異文化ケア能力の限界があることに気づいている。
- 強くそう思う そう思う そう思わない 全くそう思わない
17. わたしの持つ価値観や信条が、患者の持つ価値観や信条とぶつかると、わたしはイライラする。
- 強くそう思う そう思う そう思わない 全くそう思わない
18. わたしは、私自身が、民族的・文化的背景の異なる集団のメンバーに対してステレオタイプの態度や先入的な観念や感情を持っているということに気づいている。
- とても気づいている 気づいている いくらか気づいている 気づいていない

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19. わたしは、多様な文化的・民族的背景を持ったクライアントをケアすることに情熱を感じる。
- 強く思う そう思う そう思わない 全くそう思わない
20. わたしは、ヘルスケアの現場で、クライアントの文化背景を把握し、それに応じたケアを提供するための文化的アセスメント手段を少なくとも二つ知っている。
- よく知っている 知っている いくらか知っている 全く知らない
21. 民族的背景の異なる集団への文化的アセスメントを行うことは、文化的背景の異なる集団（性別、年齢差、宗教、職業などによる文化的背景の違いをもつ集団）にアセスメントするよりも重要である。
- 強く思う そう思う そう思わない 全くそう思わない
22. わたしは、クライアントの民族的・文化的背景に関する質問をためらわずに行える。
- 強く思う そう思う そう思わない 全くそう思わない
23. わたしは、ヘルスケアという自分の専門的役割以外の場で、文化的・民族的背景の異なる集団と関わりがある。
- とても関わりがある 関わりがある いくらか関わりがある 関わりがない
24. 異文化ケア能力を養うには、異文化ケア能力を身につけたいと思うことが大切である。
- 強く思う そう思う そう思わない 全くそう思わない
25. 異なる文化的集団間で見られる違いよりも、同一の文化的集団内で見られる違いの方が大きい。
- 強く思う そう思う そう思わない 全くそう思わない

Appendix A

注記: セッションⅡの質問 26-30 は医療従事者の異文化ケア能力評価リスト-改訂版 (IAPCC-R)の質問項目ではありません。本調査者が作成したものです。

セッションⅡ

多様な文化的・民族的背景を持ったクライアントに対するこれまでのあなたの看護経験について振り返り、以下質問について具体的にご回答ください。

26. 多様な文化的・民族的背景を持ったクライアントの看護ケアにおいて、あなたが最も満足した経験についてお書きください。

[]

27. 多様な文化的・民族的背景を持ったクライアントの看護ケアにおいて、あなたが最もイライラした経験についてお書きください。

[]

28. どのような特別な知識が、多様な文化的・民族的背景を持ったクライアントに対する看護に役立つと思いますか。

[]

29. どのような特別な技術が、多様な文化的・民族的背景を持ったクライアントに対する看護に役立つと思いますか。

[]

30. その他ご意見がありましたら、()にご自由にお書きください。

[]

Appendix A
Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals-Revised (IAPCC-R)
(The IAPCC-R backtranslated to English)

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Part 1

For each of the following items please chose the ONE most appropriate answer.

1. Cultural competence mainly refers to one's competency concerning different ethnic groups.

Strongly agree Agree Disagree Strongly disagree

2. I feel that cultural competence is ongoing process being continually improved competence.

Strongly agree Agree Disagree Strongly disagree

3. Factors such as geographical location, gender, religious affiliation, sexual orientation, and occupation are not considered areas of concern when seeking cultural competence.

Strongly agree Agree Disagree Strongly disagree

4. I have a personal commitment to care for clients from ethnically/culturally diverse groups.

Strongly agree Agree Disagree Strongly disagree

5. I feel that there is a relationship between culture and health.

Strongly agree Agree Disagree Strongly disagree

6. I am knowledgeable in the area of pharmacology being transmitted to diverse ethnic groups.

Very knowledgeable Knowledgeable Somewhat knowledgeable Not knowledgeable

7. I am motivated to care for clients from culturally/ethnically diverse groups.

Strongly agree Agree Disagree Strongly disagree

8. I am knowledgeable about the worldviews, belief, practices and/or life ways of at least two cultural groups (that are different from your own).

Very knowledgeable Knowledgeable Somewhat knowledgeable Not knowledgeable

Appendix A
Inventory for Assessing the Process of Cultural Competence among Healthcare
Professionals-Revised (IAPCC-R)
(The IAPCC-R backtranslated to English)

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9. I am aware of the cultural limitations of existing assessment tools that are used with ethnic groups when assessing clients/groups with diverse cultural backgrounds (clients/groups with diverse cultural backgrounds based on differences in sex, age, religion, occupation etc).

Very aware Aware Somewhat aware Not aware

10. I am knowledgeable in the area of biological variations among different ethnic.

Very knowledgeable Knowledgeable Somewhat knowledgeable Not knowledgeable

11. Anatomical and psychological variations do not exist in different ethnic groups.

Strongly agree Agree Disagree Strongly disagree

12. I am aware of specific disease common among different ethnic groups.

Very aware Aware Somewhat aware Not aware

13. I am willing to learn from people who provide the information regarding diverse culture.

Strongly agree Agree Disagree Strongly disagree

14. I seek out education, consultation, and/or training experiences to enhance my understanding and effectiveness with culturally and ethnically diverse clients.

Strongly agree Agree Disagree Strongly disagree

15. I am aware of at least 2 institutional barriers that prevent cultural/ethnic groups from seeking healthcare services.

Well know Know Somewhat know Do not know

16. I recognize the limits of my competence when interacting with culturally/ethnically diverse clients.

Strongly agree Agree Disagree Strongly disagree

17. When my values and beliefs clash with my client's values and beliefs I become frustrated.

Strongly agree Agree Disagree Strongly disagree

18. I am aware of some of the stereotyping attitudes, perceived notions and feelings that I have towards members of other ethnic/cultural groups.

Very aware Aware Somewhat aware Not aware

Appendix A
Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals-Revised (IAPCC-R)
(The IAPCC-R backtranslated to English)

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19. I have a passion for caring for clients from culturally/ethnically diverse groups.

Strongly agree Agree Disagree Strongly disagree

20. I am aware of at least 2 cultural assessment tools assessing clients' cultural background for providing appropriate care in a healthcare setting.

Well know Know Somewhat know Do not know

21. It is more important to conduct a cultural assessment on ethnically diverse clients than with other clients diverse cultural backgrounds (clients/groups with diverse cultural backgrounds based on differences in sex, age, religion, occupation etc).

Strongly agree Agree Disagree Strongly disagree

22. I feel comfortable in asking questions that related to the client's ethnic/cultural backgrounds.

Very comfortable Comfortable Somewhat comfortable Not comfortable

23. I am involved with cultural/ethnic groups outside of my healthcare setting role.

Very involved Involved Somewhat involved Not involved

24. I believe that one must want to become culturally competent if culturally competence is to be achieved.

Strongly agree Agree Disagree Strongly disagree

25. I believe that there are more differences within cultural groups than across cultural groups.

Strongly agree Agree Disagree Strongly disagree

Appendix A

Note: Question 26 to 30 in Part 2, are not part of the IAPCC-R. These questions are made by this author.

Part 2

Please reflect on your previous experience in caring for patients from culturally and ethnically diverse groups and provide free comments in the blank.

26. Please describe your most satisfying experiences when caring for patients from culturally and ethnically diverse group.

27. Please describe your most frustrating experiences when caring for patients from culturally and ethnically diverse group.

28. What particular knowledge do you think would be helpful for caring for patients from culturally and ethnically diverse group?

29. What particular skills do you think would be helpful for caring for patients from culturally and ethnically diverse group?

30. Is there anything else, which is not mentioned in this questionnaire? If yes, please provide free comments in the blank.

Appendix B
Demographic and Personal Questionnaire Sheet

Demographics and Personal Sheet

Please circle the appropriate response or provide a response in the blanks where indicated.

1. Gender:

- (1) Male
- (2) Female

2. Age: () years

3. What types of nursing licenses? Please circle ALL applicable.

- (1) Registered Nurse
- (2) Midwife
- (3) Public Health Nurse

4. Which educational program did you complete? Please circle ALL applicable.

- (1) High School (Licensed Practical Nursing course)
- (2) High School (2 years Nursing course)
- (3) Nursing School (2 years course)
- (4) Nursing Junior college (2 years course)
- (5) Nursing diploma program (3 year course)
- (6) Nursing Junior college (3years course)
- (7) Four years-baccalaureate program (Major: Nursing Othe:)
- (8) Master program (Major: Nursing Other:)
- (9) PhD program (Major : Nursing Other :)
- (10) Others ()

5. How many years of clinical work experiences have you had as nurse?

() years () months

Appendix B

Demographic and Personal Questionnaire Sheet

6. Have you lived overseas (at least more than one month to stay oversea) ?

(1) Yes (2) No



- 6-(1) How many years have you lived overseas?

() years () months

7. How well do you speak any foreign languages?

- (1) Speak very well
- (2) Speak fairly well
- (3) Speak a little
- (4) Not speak

8. Please reflect upon your previous learning experiences in the nursing programs which you have completed. Which types of learning approach were used in your nursing program?

- (1) Teacher-centered learning approach *
- (2) Student-centered learning approach **
- (3) Both teacher-centered learning approach and Student-centered learning approach
- (4) Others



Please specify the teaching approach.

$$\left[\begin{array}{cc} & \\ & \end{array} \right]$$

- * Teacher-centered learning approach is:**

Passive learning that teacher give one side of information and assignments.

- ** Student-centered learning approach:**

Active learning that encourage student's autonomous and independence to have their imagination and inquisitive mind.

Appendix B
Demographic and Personal Questionnaire Sheet

9. Have you ever learned about any concepts of cultural diversity in your previous nursing education programs?

(1) Yes (2) No



9- (1) Which educational programs did you learn about cultural diversity?

- (1) High School (Licensed Practical Nursing course)
- (2) High School (2 years Nursing course)
- (3) Nursing School (2 years course)
- (4) Nursing Junior college (2 years course)
- (5) Nursing diploma program (3 year course)
- (6) Nursing Junior college (3years course)
- (7) Four years-baccalaureate program (Major: Nursing Other:)
- (8) Master program (Major: Nursing Other:)
- (9) PhD program (Major : Nursing Other :)
- (10) Others ()

10. Have you taken any courses related to “cultural care nursing” in your previous education programs?

(1) Yes (2) No



10- (1) Which educational programs did you learn about cultural care nursing

- (1) High School (Licensed Practical Nursing course)
- (2) High School (2 years Nursing course)
- (3) Nursing School (2 years course)
- (4) Nursing Junior college (2 years course)
- (5) Nursing diploma program (3 year course)
- (6) Nursing Junior college (3years course)
- (7) Four years-baccalaureate program (Major: Nursing Other:)
- (8) Master program (Major: Nursing Other:)
- (9) PhD program (Major : Nursing Other :)
- (10) Others ()

Appendix B

Demographic and Personal Questionnaire Sheet

11. Have you taken any training classes or workshop related to “cultural care nursing” as continuing education after graduating from your nursing programs?

(1) Yes (2) No

12. Do you have any experience with caring for patients from culturally and ethnically diverse groups?

(1) Yes (2) No



13. How often do you care patients from culturally and ethnically diverse groups?

- (1) Almost everyday
- (2) 1 or 2 times a week
- (3) 1 or 2 times a month
- (4) Several times a year
- (5) Hardly at all

14. Did you experience any difficulties while caring for patients from culturally and ethnically diverse groups?

(1) Yes (2) No



If yes, please specify

Appendix B
Demographic and Personal Questionnaire Sheet
(Japanese Version of Demographic and Personal Questionnaire Sheet)

個人シート

以下の質問にお答えください。該当するところに○つけてください。()には数値や内容をご記入ください。

問 1. 性別

- 1. 男性
- 2. 女性

問 2. 年齢 () 歳

問 3. 取得している看護職としての資格について、該当するものすべてに○をつけてください。

- 1. 看護師
- 2. 助産師
- 3. 保健師

問 4. 修了した看護基礎教育課程と学位について、該当するものすべてに○をつけてください。また、看護系以外の学位については、() 内に専攻名を書いてください。

- 1. 高等学校准看護師課程
- 2. 高等学校看護専攻科 (看護師 2 年課程)
- 3. 看護専門学校 (2 年課程)
- 4. 看護短期大学 (2 年課程)
- 5. 看護専門学校 (3 年課程)
- 6. 看護短期大学 (3 年課程)
- 7. 4 年生大学 (看護系 看護系以外:)
- 8. 修士課程 (看護系 看護系以外:)
- 9. 博士課程 (看護系 看護系以外:)
- 10. その他 ()

問 5. 看護職としての臨床経験は何年ですか？

(約) 年 () ヶ月

Appendix B
Demographic and Personal Questionnaire Sheet
(Japanese Version of Demographic and Personal Questionnaire Sheet)

問6. 海外での生活体験（1ヶ月以上の滞在）はありますか？

1. ある 2. ない



問6-1. 海外生活体験は合計何年ですか？ （約 ）年 （ ）ヶ月

問7. 日本語以外の外国語をどの程度話せますか？

1. 流暢に話せる
2. かなり話せる
3. 少し話せる
4. まったく話せない

問8. これまで修了した看護教育機関での学習方法について振り返ってみてください。最も当てはまるあなたの学習方法はどれでしょうか？該当するもの一つだけに○を付けてください。

1. 教員主体の学習方法*
2. 学生主体の学習方法**
3. 1及び2が統合された学習方法
4. その他 → ()

* 教員主体の学習方法とは：
教員が一方向的に情報や課題を与える受身的学習方法

** 学生主体の学習方法とは：
学生が想像力や探求心を持ち、主体的、自立的に学ぶ能動的学習方法。

問9. 修了した看護教育機関で「異文化」あるいは「文化の多様性」に関する概念を学んだ経験はありますか？

-

1. 高等学校准看護師課程
2. 高等学校看護専攻科 (看護師 2 年課程)
3. 看護専門学校 (2 年課程)
4. 看護短期大学 (2 年課程)
5. 看護専門学校 (3 年課程)
6. 看護短期大学 (3 年課程)
7. 4 年生大学 (看護系 看護系以外：)
8. 修士課程 (看護系 看護系以外：)
9. 博士課程 (看護系 看護系以外：)
10. その他 ()

1. 高等学校准看護師課程
2. 高等学校看護専攻科（看護師2年課）
3. 看護専門学校（2年課程）
4. 看護短期大学（2年課程）
5. 看護専門学校（3年課程）
6. 看護短期大学（3年課程）
7. 4年生大学（看護系 看護系以外： ）
8. 修士課程（看護系 看護系以外： ）
9. 博士課程（看護系 看護系以外： ）
10. その他（ ）

Appendix B
Demographic and Personal Questionnaire Sheet
(Japanese Version of Demographic and Personal Questionnaire Sheet)

問 1 1. 卒後の継続教育として「異文化看護」に関する講習を受講した学習経験はありますか？

- 1. ある
- 2. ない

問 1 2. これまでの臨床経験で、多様な文化的・民族的背景を持ったクライアントに対する看護ケアを行ったことがありますか？

- 1. ある 2. ない



問 1 3. どのくらいの頻度で多様な文化的・民族的背景を持ったクライアントのケアを行いますか？

- 1. ほぼ毎日
- 2. 週に 1－2 回程度
- 3. 月に 1－2 回程度
- 4. 年に数回程度
- 5. ほとんどない

問 1 4. 多様な文化的・民族的背景を持ったクライアントのケアで、困難を感じた経験はありますか？

- 1. ある 2. ない



どのような経験でしたか？ () に具体的にお書きください。

Appendix C

Informed Consent/Cover Letter

Request to participate the study

I am involving in nursing education at nursing school while I am a doctoral student of PhD in Nursing Program at George Mason University, College of Health and Human Services. I am conducting a study related to Nurses' Cultural Competency as a doctoral dissertation. With the rapid development of globalization, there is increase in the number of foreign clients with culturally and ethnically diverse backgrounds in Japan. There are also many Japanese clients with different cultural backgrounds including different life style, values and beliefs. Thus nurses need to improve their cultural competency and respect the clients' cultural and ethnic backgrounds. However there are very limited studies related to nurses' cultural competency in Japan. There are no studies examining the relationship between nurses' cultural competency and their personal and demographic factors as well as critical thinking. Therefore, the study is aimed at examining nurses' cultural competency and the relationship between their cultural competency and personal and demographic factors as well as critical thinking. I understand how you are busy but I would like you to voluntarily participate in this study. Please read the following study instruction.

Study instruction and informed consent

Study method

The study is conducted to examine the Japanese nurses' cultural competency and the relationship between their cultural competency and their demographic and personal factors as well as critical thinking. If you are willing to participate in the study, please answer the questionnaires. The questionnaires ask about 1) cultural competency, 2) critical thinking dispositions, 3) personal and demographic factors. It will take approximately 30 minutes to complete the questionnaires. Please return the completed questionnaires by using the preaddressed, postage-paid envelope by (), 2007.

Participation

Your participation is voluntary; you are under no obligation to participate. You have a right to withdraw from the study at any time without penalty.

Benefit and risk

Although the study will not benefit you directly, the outcomes of the study will provide recommendations for future development of cultural competency education. There is no harm or discomforts including physical, psychological and social risks to you.

Confidentiality

No personal information will be identified within the data proceeding and with publication of the study outcomes. Your personal information such as your name, address and birth date will not be identified as a code will be utilized in data collection and analysis. The collected data will be accessed by the researcher and supervisor only. The collected date will only be used for the purpose of the study.

**Approval for the use
of this document
EXPIRES**

DEC 17 2007

Appendix C

Informed Consent/Cover Letter

Contact

The study will be conducted by Asako Serizawa who is a student in the Nursing Program, College of Health and Human Service at George Mason University as her doctoral dissertation project. You are free to contact to myself or Dr. Jennie Wu who is my faculty advisor on this project and ask questions or make comments. You may also contact the George Mason University Office of Research Subject Protections if you have questions or comments regarding your rights as a participant in this research.

This study has been reviewed by George Mason University Human Subject Review Protections.

Contact information

Researcher: Asako Serizawa
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Yamaguchi City Yamaguchi Prefecture
753-0011
Tel: 083-933-1465
Fax: 083-933-1483
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Faculty Advisor: Dr. Jennie Wu
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Email: jwu@gmu.edu

George Mason University Office of Research Subject Protections
4400 University Drive, MS 4C6, Fairfax, VA, 22030, America
Tel: 001-703-993-4121
Email: hsrb@gmu.edu

The George Mason University Human Subjects Review Board has waived the requirement for a signature on this consent form. However, if you wish to sign a consent, please contact the researcher (email: serizawa@n.ypu.jp, Tel: 083-933-1465).

Consent

I have read this inform and agree to participate in this study.

**Approval for the use
of this document
EXPIRES**

DEC 17 2007

Protocol # 5100
George Mason University

Appendix C
Informed Consent/Cover Letter
(Japanese Version of Informed Consent/Cover Letter)

Approval for the use
of this document
EXPIRES

DEC 17 2007

調査協力をお願い

みなさまにおかれましては、日々看護活動に追われ、ご多忙のことと存じます。 Protocol # 5100
私は、看護大学で教育活動に携わる一方、アメリカのジョージ・メソン大学院健康・ビューティ
ンサービスクラス看護学科博士課程に在籍し、「看護師の異文化ケア能力」に関する研究を行っていま
す。

グローバル化や人々の流れが活発化する中で、臨床場面においても、在日外国人クライ
エントをはじめ、多様な文化や民族背景を持ったクライアントが増加しています。また、在日外国
人クライアントに限らず、日本人クライアントにおいても、様々な異文化背景（多様な生活背景、
価値観、信条、習慣など）をもったクライアントへの対応が求められています。こうした中、看護
師は、クライアントの文化や民族背景に配慮した看護ケアを提供するための「異文化ケア能力」を
養う必要があります。しかしながら、我が国において、看護師の異文化ケア能力の現状や、その規
定因子について明らかにした調査はほとんどされていません。特に、看護師の個人属性や批判的思
考能力（物事や問題に批判的に感じ、考え、取り組む姿勢）との関連性を明らかにした調査は実施
されていません。そこで、本調査では、看護師の異文化ケア能力レベルの測定、並びに異文化ケア
能力と個人属性及び批判的思考能力との関連性を明らかにすることを目的に調査を行うことにしま
した。お忙しいところ、ご面倒おかけしますが、以下調査に関する説明文章をお読みいただきますよ
うお願い申し上げます。

調査に関する説明ならびに同意書

<調査方法>

本調査は、看護師の異文化ケア能力レベルの測定、並びに異文化ケア能力と看護師の個人属性及
び批判的思考能力との関連性を明らかにすることを目的に実施するものです。調査にご協力いた
だける方は質問紙にご回答ください。質問紙は、1) 異文化ケア能力について、2) 批判的思考能力
について、3) ご自身について、回答していただくものです。かなり多くの質問をお尋ねしており、
回答時間はおおよそ30分ほどかかるかと思いますが、日々の看護活動で忙しいかと思いますが、
どうぞ調査のご協力をお願いできればと思っております。なお、ご回答いただいた調査用紙は、返
信用封筒にて2007年 月 月末までにご返送いただければ幸いです。

<研究協力の任意性と撤回の自由について>

本研究への参加は、あなたの自由意志で決めてください。いったん同意された場合でも、あなた
が不利益を受けることなく、いつでも調査協力を取り消すことができます。

<調査協力することによる利益と被害>

本研究に参加することで、あなたが直接的利益を得ることはありませんが、本研究結果は、異文
化ケア能力育成を目指した看護教育開発への示唆を提示できると考えます。また、調査にご協力し
ていただくことで、あなたが身体的、精神的、社会的被害や不快感を被ることはありません。

<守秘義務について>

データの処理および結果の公表に際しましては、個人が特定されないよう、個人情報が出しな
いよう細心の注意を払いますことをお約束いたします。氏名、住所、生年月日などの個人情報は質
問紙から省き、代わりに符号を付け、データ収集および分析を行います。また、研究者と研究指導
者に限り、データの取り扱いを行い、研究目的以外に活用することはありません。

Appendix C
Informed Consent/Cover Letter
(Japanese Version of Informed Consent/Cover Letter)

<連絡先>

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Appendix D
Results of Reliability Test for IAPCC-R

Table D1

Summary of Means and Standard Deviations for Each Item under Five Sub-Scales of IAPCC-R

Items under five sub-scales	Mean	SD	Item mean
Cultural awareness (N=996)			
#15	1.30	.531	2.28
#18	1.93	.732	
#1	2.21	.484	
#2	2.73	.516	
#3	3.24	.582	
Cultural knowledge (N=1016)			
#6	1.08	.297	1.71
#8	1.21	.432	
#10	1.36	.516	
#12	1.89	.695	
#11	2.98	.526	
Cultural skill (N=961)			
#20	1.22	.462	2.18
#9	1.99	.718	
#22	2.01	.615	
#21	2.70	.581	
#5	2.99	.504	
Cultural encounters (N=966)			
#23	1.25	.578	2.25
#14	2.00	.623	
#25	2.20	.540	
#17	2.84	.655	
#16	2.94	.805	
Cultural desire (N=986)			
#19	2.02	.592	2.34
#13	2.13	.727	
#7	2.22	.603	
#4	2.39	.591	
#24	2.96	.595	

Appendix D
Results of Reliability Test for IAPCC-R

Tabel D2

Summary of Item-Item Correlation and Item-Total Statistic under Five Sub-Scales of IAPCC-R

Items under seven sub-scales	Item-item correlation			Item-total correlation	Squared multiple correlation
	Mean	Minimum	Maximum		
Cultural awareness (K=5)					
#1				-.740	.064
#2				-.030	.076
#3	.029	-.244	.215	.079	.018
#15				.219	.059
#18				.175	.053
Cultural knowledge (K=5)					
#6				.270	.134
#8				.331	.226
#10	.150	-.025	.390	.357	.202
#11				.008	.004
#12				.250	.079
Cultural skill (K=5)					
#5				.060	.017
#9				.130	.087
#20	.024	-.171	.201	.184	.054
#21				-.181	.040
#22				.071	.042
Cultural encounters (K=5)					
#14				.164	.037
#16				-.028	.025
#17	.017	-.139	.146	-.128	.033
#23				.059	.029
#25				.080	.029
Cultural desire (K=5)					
#4				.449	.264
#7				.620	.429
#13	.314	.109	.549	.426	.196
#19				.553	.345
#24				.227	.059

Note. K=Number of item

Appendix E
Results of Reliability Test for CCTDI

Table E1

Summary of Means and Standard Deviations for Each Item under Seven Sub-Scales of CCTDI

Items under seven sub-scales	Mean	SD	Item mean
Truth-seeking (N=962)			
#5	1.97	.973	3.56
#43	2.75	1.09	
#39	3.20	1.17	
#12	3.49	1.35	
#50	3.53	1.03	
#35	3.64	1.45	
#62	3.76	1.35	
#70	3.94	1.12	
#72	3.99	1.15	
#23	4.02	1.13	
#19	4.10	1.20	
#75	4.27	1.19	
Open-mindedness (N=978)			
#24	2.72	1.11	4.03
#45	2.81	1.15	
#20	3.60	1.45	
#13	3.75	1.20	
#8	3.99	1.28	
#1	4.02	1.24	
#41	4.18	1.17	
#36	4.52	1.11	
#48	4.56	1.05	
#30	4.62	1.09	
#64	4.62	1.09	
#73	4.90	1.01	

Appendix E
Results of Reliability Test for CCTDI

Table E1 (Continued)

Summary of Means and Standard Deviations for Each Item under Seven Sub-Scales of CCTDI

Items under seven sub-scales	Mean	SD	Item mean
Analyticity (N=993)			
#63	2.56	1.03	
#54	2.87	1.10	
#6	3.17	1.22	
#42	3.25	1.25	
#69	3.26	1.09	
#21	3.48	1.24	3.59
#31	3.51	1.24	
#66	3.82	1.14	
#60	4.12	1.20	
#57	4.43	.993	
#38	5.03	.888	
Systematicity (N=995)			
#25	2.52	1.48	
#22	2.57	1.11	
#74	2.84	1.13	
#68	3.14	1.16	
#17	3.23	1.33	
#37	3.44	1.39	3.49
#4	3.46	1.38	
#9	4.10	1.15	
#33	4.22	1.30	
#58	4.40	1.12	
#29	4.43	1.30	

Appendix E
Results of Reliability Test for CCTDI

Table E1 (Continued)

Summary of Means and Standard Deviations for Each Item under Seven Sub-Scales of CCTDI

Items under seven sub-scales	Mean	SD	Item mean
Maturity (N=974)			
#3	2.98	1.28	
#11	3.20	1.17	
#7	3.72	1.26	
#61	3.77	1.22	
#71	4.60	1.35	4.23
#67	4.62	1.18	
#53	4.77	.975	
#14	4.80	1.13	
#32	4.85	1.37	
#28	4.95	1.05	
Confidence (N=993)			
#40	2.86	1.23	
#56	2.89	1.08	
#10	3.02	1.10	
#46	3.03	1.12	
#18	3.09	1.15	3.21
#27	3.09	1.11	
#16	3.41	1.27	
#49	3.66	1.25	
#52	3.83	1.03	

Appendix E
Results of Reliability Test for CCTDI

Table E1 (Continued)

Summary of Means and Standard Deviations for Each Item under Seven Sub-Scales of CCTDI

Items under seven sub-scales	Mean	SD	Item mean
Inquisitiveness (N=925)			
#51	3.64	1.29	4.38
#59	3.69	1.22	
#55	3.70	1.16	
#26	4.12	1.32	
#15	4.51	1.09	
#44	4.54	1.10	
#65	4.63	1.10	
#34	4.77	1.07	
#47	4.94	.976	
#2	5.25	.912	

Appendix E

Results of Reliability Test for CCTDI

Table E2

Summary of Item-Item Correlation and Item-Total Statistic under Seven Sub-Scales of CCTDI

Items under seven sub-scales	Item-item correlation			Item-total correlation	Squared mutiple correlation
	Mean	Minimum	Maximum		
Truth-seeking (K=12)					
#5				.104	.079
#12				.207	.071
#19				.237	.153
#23				.335	.131
#35				.184	.142
#39				.182	.052
#43	.095	-.107	.336	.222	.105
#50				.304	.147
#62				.234	.150
#70				.175	.088
#72				.237	.075
#75				.276	.137
Open-mindedness (K =12)					
#1				.137	.084
#8				.037	.115
#13				.031	.039
#20				.083	.035
#24				-.107	.140
#30				.316	.187
#36	.045	-.261	.285	.168	.095
#41				.107	.094
#45				-.058	.072
#48				.249	.166
#64				.204	.118
#73				.313	.178

Note . K= Number of items

Appendix E
Results of Reliability Test for CCTDI

Table E2 (Continued)

Summary of Item-Item Correlation and Item-Total Statistic under Seven Sub-Scales of CCTDI

Items under seven sub-scales	Item-item correlation			Item-total correlation	Squared multiple correlation
	Mean	Minimum	Maximum		
Analyticity (K = 11)					
#6				.061	.074
#21				-.126	.092
#31				.244	.150
#38				.157	.116
#42				.162	.076
#54	.046	-.179	.519	.337	.297
#57				.243	.193
#60				-.041	.088
#63				.262	.337
#66				-.070	.060
#69				.211	.134
Systematicity (K = 11)					
#4				.458	.279
#9				.213	.149
#17				.256	.176
#22				.236	.173
#25				-.049	.074
#29	.111	-.219	.540	-.011	.101
#33				.379	.245
#37				.379	.214
#58				.144	.149
#68				.408	.364
#74				.351	.353

Appendix E
Results of Reliability Test for CCTDI

Table E2 (Continued)

Summary of Item-Item Correlation and Item-Total Statistic under Seven Sub-Scales of CCTDI

Items under seven sub-scales	Item-item correlation			Item-total correlation	Squared mutiple correlation
	Mean	Minimum	Maximum		
Maturity (K=10)					
#3				.226	.080
#7				.312	.149
#11				.161	.058
#14				.288	.101
#28	.131	-.003	.317	.345	.158
#32				.200	.056
#53				.374	.177
#61				.181	.058
#67				.350	.144
#71				.297	.117
Confidence (K = 9)					
#10				.470	.263
#16				.354	.138
#18				.615	.407
#27				.622	.475
#40	.361	.172	.688	.517	.298
#46				.624	.533
#49				.588	.417
#52				.428	.234
#56				.682	.576

Appendix E
Results of Reliability Test for CCTDI

Table E2 (Continued)

Summary of Item-Item Correlation and Item-Total Statistic under Seven Sub-Scales of CCTDI

Items under seven sub-scales	Item-item correlation			Item-total correlation	Squared mutple correlation
	Mean	Minimum	Maximum		
Inquisitiveness (K=10)					
#2				.385	.191
#15				.220	.204
#26				.322	.138
#34				.307	.260
#44				.151	.109
#47	.185	-.043	.518	.424	.234
#51				.381	.290
#55				.496	.374
#59				.395	.247
#65				.458	.257

Appendix F
Results of Descriptive and Frequency for Each Item of IAPCC-R

Table F1
Frequencies and Percentages of Each Item of IAPCC-R with 4-Point Likert Scale under Five Sub-Scales

Items under sub-scales	Strongly agree		Agree		Disagree		Strongly disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Cultural awareness								
#1 ^a	20	1.9	789	75.9	207	20.0	14	1.4
#2	17	1.6	732	70.7	256	24.7	18	1.7
#3 ^a	3	.3	71	6.9	634	61.3	323	31.2
#15	1	.1	34	3.3	235	22.7	757	73.1
#18	12	1.2	206	19.9	505	48.8	295	28.5
Cultural knowledge								
#6	1	.1	4	.4	72	7.0	957	92.5
#8	-	-	10	1.0	201	19.4	822	79.4
#10	-	-	18	1.7	333	32.2	677	65.4
#11 ^a	7	.7	130	12.6	763	73.7	128	12.4
#12	297	28.7	564	54.5	155	15.0	16	1.5
Cultural skill								
#5	111	10.7	802	77.5	109	10.5	10	1.0
#9	12	1.2	223	21.5	534	51.6	252	24.3
#20	-	-	20	1.9	180	17.4	819	79.1
#21 ^a	6	.6	342	33.0	580	56.0	56	5.4
#22	7	.7	177	17.1	662	64.0	174	16.8
Cultural encounters								
#14	2	.2	188	18.2	637	61.7	202	19.5
#16	231	22.3	580	56.0	144	13.9	74	7.1
#17 ^a	11	1.1	273	26.4	602	58.2	146	14.1
#23	6	.6	55	5.3	127	12.3	834	80.6
#25	8	.8	240	23.2	673	65.0	57	5.5
Cultural desire								
#4	10	1.0	416	40.2	535	51.7	48	4.6
#7	11	1.1	287	27.7	638	61.6	86	8.3
#13	16	1.5	300	29.0	16	1.5	1033	99.8
#19	7	.7	164	15.8	688	66.5	160	15.5
#24	124	12.0	754	72.9	108	10.4	32	3.1

Note . ^aItems are negative items

Appendix F
Results of Descriptive and Frequency for Each Item of IAPCC-R

Table F2

Means of Each Item of IAPCC-R with 4-Point Likert Scale under Five Sub-Scales

Items	<i>Mean</i>	<i>SD</i>	<i>N</i>
Cultural awareness			
#1 ^a	2.21	.482	1027
#2	2.73	.515	1023
#3 ^a	3.24	.581	1031
#15	1.30	.531	1027
#18	1.94	.536	1018
Cultural knowledge			
#6	1.08	.296	1034
#8	1.21	.433	1033
#10	1.36	.515	1028
#11 ^a	2.98	.527	1028
#12	1.89	.699	1032
Cultural skill			
#5	2.98	.502	1032
#9	2.00	.716	1021
#20	1.22	.457	1019
#21 ^a	2.70	.581	984
#22	2.02	.61	1020
Cultural encounters			
#14	1.99	.622	1029
#16	2.94	.806	1029
#17 ^a	2.86	.654	1032
#23	1.25	.575	1022
#25	2.20	.543	978
Cultural desire			
#4	2.38	.593	1009
#7	2.22	.601	1022
#13	2.13	.726	1033
#19	2.02	.588	1019
#24	2.95	.593	1018

Note . ^aItems are negative items

Appendix G **Results of Descriptive and Frequency for Each Item of CCTDI**

Table G1

Frequencies and Percentages of Each Item of CCTDI with 6-Point Likert Scale under Seven Sub-Scales

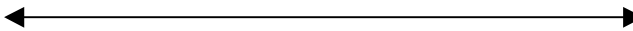
Items	6		5		4		3		2		1	
	Strongly agree										Strongly disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Truth-seeking												
#5 ^a	355	34.3	453	43.8	145	14.0	51	4.9	24	2.3	4	.4
#12 ^a	50	4.8	240	23.2	243	23.5	222	21.4	205	19.8	69	6.7
#19 ^a	15	1.4	86	8.3	206	19.9	286	27.6	322	31.1	112	10.8
#23 ^a	13	1.3	82	7.9	231	22.3	349	33.7	268	25.9	86	8.3
#35 ^a	65	6.3	193	18.6	249	24.1	183	17.7	225	21.7	119	11.5
#39 ^a	72	7.0	209	20.2	363	35.1	233	22.5	127	12.3	24	2.3
#43 ^a	123	11.9	323	31.2	344	33.2	173	16.7	54	5.2	11	1.1
#50 ^a	21	2.0	124	12.0	360	34.8	355	34.3	133	12.9	33	3.2
#62 ^a	42	4.1	153	14.8	271	26.2	206	19.9	260	25.1	98	9.5
#70 ^a	21	2.0	90	8.7	202	19.5	389	37.6	239	23.1	74	7.1
#72 ^a	23	2.2	86	8.3	190	18.4	389	37.6	251	24.3	86	8.3
#75 ^a	15	1.4	59	5.7	187	18.1	293	28.3	319	30.8	157	15.2
Open-mindedness												
#1 ^a	17	1.6	110	10.6	235	22.7	241	23.3	332	32.1	99	9.6
#8	104	10.0	287	27.7	312	30.1	178	17.2	106	10.2	42	4.1
#13	60	5.8	239	23.1	309	29.9	269	26.0	119	11.5	36	3.5
#20 ^a	95	9.2	176	17.0	174	16.8	262	25.3	239	23.1	85	8.2
#24 ^a	132	12.8	335	32.4	326	31.5	162	15.7	57	5.5	14	1.4
#30	223	21.5	396	38.3	265	25.6	101	9.8	34	3.3	10	1.0
#36 ^a	6	.6	40	3.9	138	13.3	297	28.7	337	32.6	213	20.6
#41	115	11.1	344	33.2	292	28.2	188	18.2	77	7.4	16	1.5
#45 ^a	116	11.2	318	30.7	333	32.2	182	17.6	63	6.1	17	1.6
#48	199	19.2	362	35.0	326	31.5	109	10.5	29	2.8	7	.7
#64 ^a	3	.3	43	4.2	114	11.0	257	24.8	385	37.2	223	21.5
#73 ^a	4	.4	22	2.1	74	7.1	204	19.7	412	39.8	312	30.5

Note . ^a Items are negative items

Appendix G

Table G1 (Continued)

Frequencies and Percentages of Each Item of CCTDI with 6-Point Likert Scale under Seven Sub-Scales

Items	6		5		4		3		2		1			
	Strongly agree												Strongly disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
Analyticity														
#6	30	2.9	113	10.9	257	24.8	309	29.9	227	21.9	89	8.6		
#21 ^a	49	4.7	165	15.9	321	31.0	300	29.0	140	13.5	57	5.5		
#31	41	4.0	203	19.6	282	27.2	279	27.0	172	16.6	56	5.4		
#38	330	31.9	471	45.5	177	17.1	34	3.3	13	1.3	4	.4		
#42	35	3.4	143	13.8	258	24.9	275	26.6	254	24.5	67	6.5		
#54	4	.4	67	6.5	224	21.6	338	32.7	290	28.0	110	10.6		
#57	124	12.0	407	39.3	335	32.4	127	12.3	34	3.3	6	.6		
#60 ^a	25	2.4	80	7.7	178	17.2	311	30.0	320	30.9	112	10.8		
#63	1	.1	31	3.0	155	15.0	331	32.0	348	33.6	165	15.9		
#66 ^a	18	1.7	117	11.3	251	24.3	357	34.5	221	21.4	67	6.5		
#69	14	1.4	121	11.7	285	27.5	356	34.4	207	20.0	49	4.7		
Systematicity														
#4 ^a	83	8.0	197	19.0	252	24.3	214	20.7	222	21.4	59	5.7		
#9	98	9.5	310	30.0	324	31.3	204	19.7	83	8.0	13	1.3		
#17 ^a	85	8.2	261	25.2	280	27.1	193	18.6	164	15.8	48	4.6		
#22	7	.7	54	5.2	137	13.2	288	27.8	389	37.6	155	15.0		
#25	42	4.1	107	10.3	93	9.0	174	16.8	288	27.8	327	31.6		
#29 ^a	28	2.7	70	6.8	126	12.2	244	23.6	328	31.7	235	22.7		
#33 ^a	28	2.7	77	7.4	185	17.9	258	24.9	306	29.6	177	17.1		
#37 ^a	82	7.9	204	19.7	260	25.1	230	22.2	176	17.0	79	7.6		
#58 ^a	6	.6	55	5.3	152	14.7	289	27.9	365	35.3	168	16.2		
#68	15	1.4	114	11.0	271	26.2	317	30.6	240	23.2	75	7.2		
#74	10	1.0	65	6.3	204	19.7	336	32.5	297	28.7	120	11.6		

Appendix G
Results of Descriptive and Frequency for Each Item of CCTDI

Table G1 (Continued)

Frequencies and Percentages of Each Item of CCTDI with 6-Point Likert Scale under Seven Sub-Scales

Items	6		5		4		3		2		1	
	Strongly agree										Strongly disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Maturity												
#3 ^a	127	12.3	281	27.1	274	26.5	206	19.9	110	10.6	26	2.5
#7 ^a	31	3.0	143	13.8	274	26.5	291	28.1	190	18.4	94	9.1
#11 ^a	68	6.6	233	22.5	310	30.0	265	25.6	137	13.2	15	1.4
#14 ^a	11	1.1	35	3.4	82	7.9	208	20.1	379	36.6	320	30.9
#28 ^a	5	.5	27	2.6	71	6.9	177	17.1	382	36.9	365	35.3
#32 ^a	29	2.8	64	6.2	80	7.7	130	12.6	280	27.1	449	43.4
#53 ^a	4	.4	20	1.9	81	7.8	230	22.2	469	45.3	223	21.5
#61 ^a	31	3.0	141	13.6	244	23.6	296	28.6	257	24.8	59	5.7
#67 ^a	12	1.2	54	5.2	103	10.0	229	22.1	370	35.7	258	24.9
#71 ^a	21	2.0	78	7.5	137	13.2	171	16.5	291	28.1	332	32.1
Confidence												
#10	11	1.1	74	7.1	258	24.9	359	34.7	243	23.5	85	8.2
#16	46	4.4	179	17.3	251	24.3	282	27.2	208	20.1	59	5.7
#18	18	1.7	90	8.7	261	25.2	349	33.7	219	21.2	93	9.0
#27	4	.4	99	9.6	275	26.6	335	32.4	233	22.5	83	8.0
#40	18	1.7	86	8.3	209	20.2	271	26.2	305	29.5	140	13.5
#46	8	.8	87	8.4	268	25.9	328	31.7	251	24.3	90	8.7
#49	65	6.3	195	18.8	318	30.7	268	25.9	133	12.9	50	4.8
#52	44	4.3	207	20.0	412	39.8	275	26.6	82	7.9	14	1.4
#56	3	.3	66	6.4	236	22.8	351	33.9	271	26.2	105	10.1

Appendix G
Results of Descriptive and Frequency for Each Item of CCTDI

Table G1 (Continued)

Frequencies and Percentages of Each Item of CCTDI with 6-Point Likert Scale under Seven Sub-Scales

Items	6		5		4		3		2		1	
	Strongly agree										Strongly disagree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Inquisitiveness												
#2	488	47.1	378	36.5	119	11.5	30	2.9	7	.7	8	.8
#15 ^a	8	.8	32	3.1	128	12.4	272	26.3	337	32.6	179	17.3
#26	152	14.7	306	29.6	253	24.4	174	16.8	117	11.3	29	2.8
#34 ^a	11	1.1	23	2.2	66	6.4	256	24.7	338	32.7	275	26.6
#44 ^a	8	.8	43	4.2	138	13.3	226	21.8	434	41.9	183	17.7
#47	323	31.2	408	39.4	227	21.9	56	5.4	16	1.5	4	.4
#51	68	6.6	207	20.0	301	29.1	238	23.0	165	15.9	52	5.0
#55	56	5.4	198	19.1	347	33.5	275	26.6	124	12.0	32	3.1
#59	57	5.5	216	20.9	303	29.3	270	26.1	152	14.7	35	3.4
#65	243	23.5	348	33.6	289	27.9	112	10.8	33	3.2	10	1.0

Appendix G
Results of Descriptive and Frequency for Each Item of CCTDI

Table G2

Means of Each Item of CCTDI with 6-Point Likert Scale under Seven Sub-Scales

Items	<i>M</i>	<i>SD</i>	<i>N</i>
Truth-seeking			
#5 ^a	1.98	.98	1032
#12 ^a	3.48	1.35	1029
#19 ^a	4.12	1.19	1027
#23 ^a	4.01	1.12	1029
#35 ^a	3.65	1.45	1034
#39 ^a	3.20	1.17	1028
#43 ^a	2.75	1.10	1028
#50 ^a	3.54	1.03	1026
#62 ^a	3.76	1.34	1030
#70 ^a	3.94	1.13	1015
#72 ^a	3.99	1.14	1025
#75 ^a	4.27	1.18	1030
Open-mindedness			
#8	3.98	1.28	1029
#13	3.75	1.20	1032
#30	4.62	1.09	1029
#41	4.18	1.17	1032
#48	4.55	1.05	1032
#1 ^a	4.02	1.23	1034
#20 ^a	3.61	1.45	1031
#24 ^a	2.73	1.13	1026
#36 ^a	4.51	1.11	1031
#45 ^a	2.81	1.14	1029
#64 ^a	4.61	1.09	1025
#73 ^a	4.89	1.02	1032

Note. ^aItems are negative items

Appendix G
Results of Descriptive and Frequency for Each Item of CCTDI

Table G2 (Continued)
Means of Each Item of CCTDI with 6-Point Likert Scale under Seven Sub-Scales

Items	<i>M</i>	<i>SD</i>	<i>N</i>
Analyticity			
#6	3.16	1.22	1025
#31	3.51	1.10	1033
#38	5.03	1.10	1029
#42	3.25	1.25	1032
#54	2.86	1.10	1033
#57	4.43	1.00	1033
#63	2.56	1.03	1031
#69	3.26	1.09	1032
#21 ^a	3.47	1.21	1032
#60 ^a	4.13	1.20	1026
#66 ^a	3.82	1.14	1031
Systematicity			
#9	4.09	1.14	1032
#22	2.58	1.10	1030
#25	2.51	1.48	1031
#68	3.15	1.16	1032
#74	2.83	1.12	1032
#4 ^a	3.46	1.38	1027
#17 ^a	3.23	1.33	1031
#29 ^a	4.43	1.30	1031
#33 ^a	4.23	1.29	1031
#37 ^a	3.44	1.39	1031
#58 ^a	4.41	1.12	1035

Appendix G
Results of Descriptive and Frequency for Each Item of CCTDI

Table G2 (Continued)
Means of Each Item of CCTDI with 6-Point Likert Scale under Seven Sub-Scales

Items	<i>M</i>	<i>SD</i>	<i>N</i>
Maturity			
#3 ^a	2.97	1.28	1024
#7 ^a	3.73	1.26	1023
#11 ^a	3.21	1.17	1028
#14 ^a	4.81	1.13	1035
#28 ^a	4.95	1.06	1027
#32 ^a	4.86	1.36	1032
#53 ^a	4.76	.97	1027
#61 ^a	3.76	1.22	1028
#67 ^a	4.62	1.18	1026
#71 ^a	4.58	1.36	1030
Confidence			
#10	3.03	1.10	1030
#16	3.41	1.27	1025
#18	3.09	1.15	1030
#27	3.08	1.11	1029
#40	2.85	1.23	1029
#46	3.03	1.12	1032
#49	3.65	1.24	1029
#52	3.82	1.02	1034
#56	2.90	1.08	1032

Appendix G
Results of Descriptive and Frequency for Each Item of CCTDI

Table G2 (Continued)
Means of Each Item of CCTDI with 6-Point Likert Scale under Seven Sub-Scales

Items	<i>M</i>	<i>SD</i>	<i>N</i>
Inquisitiveness			
#2	5.25	.91	1030
#26	4.11	1.32	1031
#47	4.92	.97	1034
#51	3.63	1.29	1031
#55	3.90	1.16	1032
#59	3.66	1.21	1033
#65	4.60	1.11	1035
#15 ^a	4.50	1.09	956
#34 ^a	4.77	1.08	969
#44 ^a	4.53	1.10	1032

Appendix H Results of Correlation

Table H1

Bivariate Pearson Correlations of Total IAPCC-R and Five sub-scales of IAPCC-R with Seven Sub-Scales of CCTDI
(N = 1030)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Total IAPCC-R	1												
2. Cultural awareness	.615**	1											
3. Cultural knowledge	.618**	.342**	1										
4. Cultural skills	.609**	.353**	.401**	1									
5. Cultural encounters	.625**	.243**	.258**	.218**	1								
6. Cultural desire	.717**	.301**	.304**	.323**	.455**	1							
7. Truth-seeking	-.054*	-.083*	-.074*	-.038	-.008	-.031	1						
8. Open-mindedness	.212**	.137**	.090**	.149**	.139**	.265**	.160**	1					
9. Analyticity	.189**	.139**	.123**	.155**	.109**	.163**	-.171**	.144**	1				
10. Systematicity	.108**	.014	.105**	.096**	.118**	.092**	.181**	.227**	.247**	1			
11. Maturity	.086*	.028	.023	.097**	.044	.088**	.474**	.321**	-.037	.225**	1		
12. Self-confidence	.282**	.171**	.218**	.218**	.144**	.266**	-.238**	.164**	.449**	.407**	-.115**	1	
13. Inquisitiveness	.279**	.166**	.141**	.169**	.197**	.304**	-.065*	.389**	.320**	.285**	.183**	.381**	1

Note. *. Correlation is significant at the .05 (2-tailed)

**. Correlation is significant at the .01 (2-tailed)

2~6: Sub-scales of IAPCC-R

7~13: Sub-scales of CCTDI

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