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Cultural competence of RN to BSN students

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CULTURAL COMPETENCE OF RN TO BSN STUDENTS

by

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ABSTRACT

Cultural Competence of RN to BSN Students

by

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The purpose of this exploratory research study was to examine the cultural competence of registered nurses returning to school for an RN to BSN program in Nevada. Campinha-Bacote's model, The Process of Cultural Competence in the Delivery of Healthcare Services, was used as a theoretical framework for the study. A secondary analysis of data collected as part of a Health Resources and Services Administration (HRSA) Grant was completed. Fifty-three RN to BSN students voluntarily completed the Inventory for Assessing the Process of Cultural Competency Among Healthcare Professionals- Revised (IAPCC-R) electronically in the learning management system of the first nursing course in the program. Approximately half (50.94%) of the RN to BSN students who responded to this study were culturally competent as determined by Campinha-Bacote's IAPCC-R (M = 75.3, SD = 7.59). The highest scores occurred in the "cultural desire" construct; lowest scores occurred in the "cultural knowledge" construct. Descriptive statistics were used to evaluate the data. The strongest correlation was found between IAPCC-R scores and age range. The nurses in the 20-30 year age range scored significantly higher than those in the 41-50 year range. No significant relationship was found between gender or race and cultural competency scores.

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CHAPTER 1

INTRODUCTION

Background and Significance

In 2002 the Institute of Medicine of the National Academies (IOM) issued a seminal consensus report entitled *Unequal Treatment: Confronting Racial and Ethical Disparities in Health Care*. *Unequal Treatment* reported extensive research showing that in the United States (U.S.) persons of racial or ethnic minorities had a more limited access to health care overall and poorer quality in the health care provided them, regardless of their health insurance coverage. The IOM report further recommended that health care providers increase their own awareness of these disparities in order that inequalities are eliminated.

In partial response to the IOM report, attention became focused on the attitudes of health care providers towards patients of varying racial, cultural and ethnic backgrounds. The term *cultural competency* is now frequently used to describe one's ability to provide health care that is congruent with the cultural values of each individual as well as appropriate for the patient's racial genome.

Population trends.

The importance of cultural competence increases yearly as non-white minorities comprise more of the U.S. population and where practitioners are traditionally trained in a Eurocentric epistemology (Health Resource and Service Administration [HRSA], 2003; Poleck & Martinez, 2009). Americans of European descent, or "whites", have held a majority population for many decades. In 1980, European Americans formed about 80% of the U.S. population (U.S. Census Bureau, 2009); however, by 2000 that percentage

had decreased to approximately 75%. By the year 2050 the U.S. Census Bureau predicts that the population of non-white races will be equivalent to that of European-Americans with each of these groups contributing about 50% to the total population (2008a).

Non-native, or foreign-born Americans, peaked in 1910 with nearly 18% of the total population being non-native, but by 1990 foreign-born residents comprised less than 8% of the U.S. population. The number of immigrants is again on the increase. In 2008 foreign-born people increased to 12.5% of the total population (U.S. Census Bureau, 2008b). The origin of foreign-born nationals is also changing. During the 1960s the non-native population of the U.S. largely emigrated from Europe, but ensuing decades have brought a radical shift with an 83% decrease in European immigrants coupled with a dramatic rise in persons arriving from Latin America and Asia who combined now constitute over 80% of foreign-born residents (U.S. Census Bureau, 2010).

Along with the increasing cultural diversity of the U.S. population is a disproportionately low representation of minority (non-white) health care professionals (Bond, Kardong-Edgren, & Jones, 2001; Elisha, et.al, 2008; HRSA, 2003; HRSA, 2004). Studies have found that patients generally respond better to health professionals of their own cultural background (Polecek & Martinez, 2009; Wright, 2008); therefore, the underrepresentation of varied cultures as health care clinicians makes cultural competence by all providers more difficult, but still very important to attain good patient outcomes.

American attitudes towards immigrants and varying cultures are changing too. During the height of European immigration at the turn of the twentieth century, the U. S. was seen as a "melting pot" whereby foreign-born citizens were expected to blend in and

assimilate into mainstream American culture by learning English, adopting Eurocentric traditions, and even anglofying their names (Dinnerstein & Reimers, 1975). Now the U.S. is defined by many as a "salad bowl" rather than a melting pot where immigrants maintain much of their own ethnicity, but add to a potpourri of contrasting elements that make up American culture (Sullivan, 2006). This is a positive step for the concept of cultural competence, but not all Americans are willing to give up the melting pot notion, contrarily believing that newcomers should learn English and conform to mainstream America (Sullivan, 2006).

Definitions of cultural competence.

A number of definitions exist for the term cultural competence. The California Endowment, a private grant-endowing health foundation, suggests that cultural competence includes the necessary attitudes, knowledge and skills to provide quality and equitable treatment to a diverse patient population (2003). "[A]n ongoing process in which the health care provider continuously strives to achieve the ability of effective work within the cultural context of the client (individual, family, community)," was the definition offered by Campinha-Bacote (2002, p. 181). Cultural competence is defined by the U.S. Office of Minority Health (OMH) as "a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enables effective work in cross-cultural situations" (2001, p. 4). A culturally competent nurse is described as having self awareness through self-exploration; communication skills enabling the nurse to effectively communicate with members of other cultures; and the ability to effectively assess and plan for patients of varying cultures (Calvillo, et.al, 2009). Some experts in the field use the terminology "CLAS" or Culturally and

Linguistically Appropriate Services (Medscape Today, 2005). The Task Force on Community Preventative Service noted that by being culturally competent providers actually increase their effectiveness in diagnosing and treating racially and culturally diverse patients (Anderson, et.al, 2003).

Professional organization recommendations.

Providing culturally competent nursing care and educating nursing professionals to do the same is endorsed by many professional nursing groups such as the American Nurses Credentialing Center (AACN, 2008), the National League for Nurses Accreditation Commission (2005), the American Nurses Association (1991), and the hospital accreditation organization, the Joint Commission (2009). Colleges and universities have worked to incorporate this concept into nursing curricula nationwide, and nursing has "led the way" towards underscoring the importance of cultural competence in "vast [nursing] literature" and incorporating appropriate terminology in text (Parish, 2003, p. 15).

The federal Healthy People 2010 initiative listed "elimination of health disparities" as one of its two overarching goals (U.S. Depart of Health & Human Services, n.d.). In 2001, National Standards for Culturally and Linguistically Appropriate Services (CLAS) were published by the Office of Minority Health (OMH), mandating (under the 1964 Civil Rights Act) that health care organizations render health care that is culturally and linguistically appropriate. Fourteen CLAS standards were developed by the OMH and encompass three areas of relevance: culturally competent care (clinical), language access services (linguistic), and organizational support for cultural competence (organizational) (OMH, 2001). Linguistically appropriate care includes providing

medically trained interpreters for non-English speaking patients as well as health information in the patient's primary language, and care that is culturally sensitive.

Cultural competence as it relates to positive patient outcomes.

Training in transcultural care has been shown to improve patient outcomes (Brach & Fisher, 2000). By providing culturally competent care, the "health belief model" of the patient is acknowledged, respected, and incorporated into the care plan yielding a greater sense of trust and inclusion for the patient, thus patient adherence is enhanced (Langer, 2008). Patient adherence to a health care plan is linked to improved clinical outcomes in some studies (Sabate′, 2003; Stone, et.al., 1998). In their report on patient adherence, the World Health Organization (WHO) quoted R.B. Hayes' statement, **"**Increasing the effectiveness of adherence to interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments" (Sabate′, 2003, p. 11).

Patient compliance is defined by Langer as "the willingness or ability to perform in a prescribed manner" (2008, p. 386) and is also known as patient *adherence,* suggesting a less passive role by patients (Langer, 2008; Stone, et.al., 1998). Each person will examine and judge a plan for his or her own health care, and choose whether to follow it totally, partially, or not at all (Langer, 2008). Appropriate transcultural care enhances patient compliance through improved communication (Anderson, et.al., 2003; Langer, 2008), and adherence to a health care plan can be promoted by several approaches including establishing trust between provider and patient, and involving the patient in the development of the plan (Pawar, 2005; Stone, et.al., 1998).

Ethnogenetics.

Of great importance in considering culturally competent health care are genetic factors related to differing ethnicities. Although the human genome is 99.9% identical in all human beings (Human Genome Project, 2009), genetic differences do exist that can lead to factors such as ethnopharmacology challenges (Xu, 2009), and an incidence of racially prevalent diseases, for example Hexosaminidase (Tay-Sachs disease), or a higher rate of premature births among black mothers (Lerhman, 2007). A health care professional's knowledge of the effects of genetic factors among ethnicities is one component of providing culturally competent care (Campinha-Bacote, 2002).

Statement of Purpose

The purpose of this exploratory research study is to examine the cultural competence level of a specific group of registered nurses: those who are educated at either an associate degree or diploma level, and who are returning for a baccalaureate degree in nursing. This research study will also add to the limited body of knowledge available on the cultural competence level of registered nurses.

Research questions.

This study will attempt to answer the following questions:

1. What percentage of registered nurses entering an RN to BSN program is judged to be culturally competent based on IAPCC-R scores, and at what level of competence do these nurses possess as judged by the IAPCC-R?
2. In which of Campinha-Bacote's five constructs are the participants' scores lacking and excelling based on the IAPCC-R instrument?

3. How do the demographic factors of gender, race, age, previous nursing education, and years of nursing experience affect cultural competence based on IAPCC-R scores and the five different construct scores?

Theoretical Framework: Campinha-Bacote Model

Dr. Josie Campinha-Bacote described her model for culturally competent care in 1991 and made revisions in 1998 and again in 2002, as described in her article "The Process of Cultural Competence in the Delivery of Health care Services: A Model of Care" (2002). Campinha-Bacote calls the model the "volcano model" because it is formed by five interdependent constructs that she proposes represent a volcano. The metaphorical eruption of the "cultural desire" construct leads to gains in the other four constructs (Campinha-Bacote, 2008). The five constructs include (a) cultural awareness, (b) cultural knowledge, (c) cultural skill, (d) cultural encounters, and (e) cultural desire. By including each of these constructs in one's practice, Campinha-Bacote suggests the health care provider improves the effectiveness of medical, nursing, or other health care interventions to promote patient health. In her publications, Campinha-Bacote describes cultural competence as an "ongoing process or journey, not a final destination" (2002, 2003).

Constructs of the model.

The five constructs of Campinha-Bacote's model (2002) are defined as follows:

1. cultural awareness: A process of self-examination to determine one's own cultural biases and prejudices.
2. cultural knowledge: An active seeking of information about varying cultures, "biological variations, diseases and health conditions, and variations in drug

metabolism found among ethnic groups (biocultural ecology)" (Campinha-Bacote, 2010a, para 3).

3. cultural skill: The ability to conduct an assessment that includes culturally relevant information.
4. cultural encounters: An intentional self-exposure to persons, especially patients, of differing cultures in order to eliminate preconceptions about those different from oneself and improve interactions with members of varying cultures.
5. cultural desire: The motivation for becoming a more culturally competent nurse; "the spiritual and pivotal construct of cultural competence that provides the energy source and foundation for one's journey towards cultural competence" (Campinha-Bacote, 2010a, para 3).

Assumptions of the model.

Campinha-Bacote (2002, p.181) lists the following assumptions of her model:

1. Cultural competence is a process, not an event.
2. Cultural competence consists of five constructs: cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire.
3. There is more variation within ethnic groups than across ethnic groups (intra-ethnic variation).
4. There is a direct relationship between the level of competence of health care providers and their ability to provide culturally responsive health care services.
5. Cultural competency is an essential component in rendering effective and culturally responsive services to culturally and ethnically diverse clients.

Thesis Assumptions

The following are assumptions of this thesis:

1. A registered nurse will routinely care for patients of varying cultural, racial and ethnic backgrounds.
2. The academic program involved in this study strives to promote culturally competent nursing care by its RN to BSN students.
3. RN to BSN students will have varying levels of cultural competence as measured by the IAPCC-R.
4. RN to BSN students will have varying demographic characteristics as measured by a demographic questionnaire.

Definitions of Terms

The following list defines the terms used in this study.

1. culture: "[A social group with] shared beliefs, values, and attitudes that guide the behavior of the group members" (Kai, 2003, p 3).
2. cultural competence:

   Conceptual definition: "The process in which the health care professional continually strives to achieve the ability and availability to effectively work within the cultural context of a client (family, individual or community)" (Campinha-Bacote, 2002, p.181).

   Operational definition: Scores derived from the self-administered Inventory for Assessing the Process of Cultural Competence-Revised (IAPCC-R) based on Campinha-Bacote's model entitled The Process of Cultural Competence in the Delivery of Health care Services above 74 points (Campinha-Bacote, 2002).

3. race:

   Conceptual definition: A biological concept related largely to the similar physical appearance of a group of people (Kai, 2003).

   Operational definition: Choice participant makes on the demographic questionnaire describing "race".

4. ethnic group:

   Conceptual definition: A social group based on common characteristics such as language, religion, customs, history, lifestyle, or country of origin. The group sees themselves with a common identity, as do outsiders (Kai, 2003).

   Operational Definition: Choice participant makes on the demographic questionnaire describing "race".

5. white:

   Conceptual definition: A member of the Caucasoid race; a Caucasian; a person of European ancestry; a person with light colored skin tones (Kai, 2003, White-Means, et.al, 2009).

   Operational definition: A study participant who marks "white, non-Hispanic" as their ethnic group on the demographic survey associated with this study.

6. RN to BSN student or BSN completion student:

   Operational definition: A registered nurse with an associate level degree or diploma in nursing who is enrolled in a Bachelor of Science in Nursing (BSN) completion program at the collaborative program described in this research in NURS 408: the Conceptual Basis of Nursing, an entry level nursing course.

Variables

Independent variables.

Independent variables include the demographic factors of gender, race, age, previous level of nursing education, and years of nursing experience.

Conceptual definition: Demographics: specific characteristics collected and used to describe a sample.

Operational definition: Choices participant makes to self-describe the characteristics of gender, race, previous nursing education, age range, and years of nursing experience.

Dependent variable.

The dependent variable is the cultural competence of participants as measured by the IAPCC-R instrument in both total scores and individual construct scores.

Conceptual definition: "The process in which the health care professional continually strives to achieve the ability and availability to effectively work within the cultural context of a client (family, individual or community)" (Campinha-Bacote, 2002).

Operational definition: Scores derived from the self-administered Inventory for Assessing the Process of Cultural Competence-Revised (IAPCC-R) based on Campinha-Bacote's model entitled The Process of Cultural Competence in the Delivery of Health care Services (Campinha-Bacote, 2002).

Summary

Population trends indicate that the cultural diversity of the U.S. is growing, largely due immigration from a multitude of foreign countries while the current majority population of "white" Americans of European descent is shrinking annually. The

concept of cultural competence by health care professionals involves creating a health care plan for each individual that is congruent with the individual's cultural values and beliefs, also known as a health belief model, along with consideration of the specific effects pharmacology or other treatments may have with respect to the patient's genome. This approach has shown to improve patient adherence to a care plan, thus improving overall patient outcomes.

Culturally competent care is endorsed by many professional nursing and health care organizations. A model of cultural competence has been developed by Campinha-Bacote, and this study uses Campinha-Bacote's model as its theoretical framework. Campinha-Bacote's tool, Inventory for Assessing the Process of Cultural Competence among Health care Professionals-Revised (IAPCC-R) was used in this research study involving registered nurses newly enrolled in a BSN completion program of study. The purpose of the study is to examine the cultural competency levels of these nurses and the effects of certain demographic variables on the cultural competence of participants.

CHAPTER 2

REVIEW OF RELEVANT LITERATURE

This literature review discusses publications related to cultural competence, Campinha- Bacote's transcultural health model, and the IAPCC and IAPCC-R research instruments for the period of 2003-2010. The CINAHL database was used to search the terms "cultural competence", cultural competency", "Campinha-Bacote", "IAPCC-R", and "RN completion" alone and in combination.

The concept of providing health care that respects and incorporates a patient's values, desires, and cultural norms is not new. Dr. Madeleine Leininger, with her academic background in both nursing and anthropology, became interested in the differing responses of culturally diverse children to psychotherapy techniques as early as the 1950s (McFarland, 2006). Leininger went on to publish *Nursing and Anthropology: Two Worlds Blend* in 1970 and *Transcultural Nursing: Concepts, Theories, and Practices* in 1978. Much of Leininger's work is the basis for transcultural nursing, and the culturally sensitive focus of researchers that followed. Leininger entitled her concept "Universality Theory", and described her position on transcultural nursing in statements like, "culturally congruent care is essential for clients for their well-being or to gain and remain healthy" (1991, p. 181). When the IOM published its *Unequal Treatment* report in 2002, as discussed in chapter one, the work of Leininger and other cultural sensitivity proponents was thrust into the health care spotlight.

Choice of Framework

In an article by Angela Brathwaite (2003) a comparison of several transcultural nursing models was conducted using the following criteria: comprehensiveness, logical

congruence, conceptual clarity, level of abstraction, clinical utility, and perspective. Of the six models analyzed, only Campinha-Bacote's model, "The Process of Cultural Competency in the Delivery of Health care Services" met all of Braithwaite's criteria for use as a framework for guiding research. Brathwaite's review indicated that Campinha-Bacote's model entailed five constructs that build upon one another in a logical progression, provided concise outcomes for interventions, provided a clear description of processes, and offered an immediate clinical benefit in optimizing patient care planning. In reviewing the literature one sees that Campinha-Bacote's model is often used as a framework for research and is frequently quoted in transcultural nursing literature.

Populations Studied

Virtually all transcultural researchers agree that cultural competence is a valuable component of best nursing practice and an important program outcome for nursing education. Yet relatively few comprehensive studies of the cultural competency levels of practicing nurses are presented in the published literature, and even fewer specifically target the level of cultural competence in nurses returning for baccalaureate completion programs. Most studies appear to target generic nursing students and/or nursing faculty, probably due to researchers' convenient access to these groups (Bond, Kardong-Edgren & Jones, 2001; Doutrich & Storey, 2004; Fitzgerald, Kronin & Campinha-Bacote, 2009; Kardong-Edgren, 2007a; Kardong-Edgren, 2007b; Kardong-Edgren & Campinha-Bacote, 2008; Krainovich-Miller, et.al, 2008; Lampley, Little, Beck-Little & Xu, 2008; Richards, 2009; Sargent, Sedlak, & Martsolf, 2005; Wilbur, 2008). Several studies evaluated medical students alone, or with groups of students from multiple disciplines, i.e., medicine, pharmacology, physical therapy, and nursing (Gulas, 2005; Ho, Lee, Green,

2007; Ho & Lee, 2008; Musolino, et al., 2009; White-Means, Zhiyong, Hufstader, & Brown, 2009).

Instruments

Nearly all the identified studies evaluated transcultural nursing ability through self-assessment tools. These tools included: The Cultural Awareness Scale (Fitzgerald, Cronin & Campinha-Bacote, 2009; Krainovich-Miller, et.al., 2008); the Ethnic Attitude Scale (Bond, Kardong-Edgren, Jones, 2001; Jones, Cason, Bond, 2004); an untitled tool designed by Poleck and Martinez for their research on the cultural competence of hospital employees (2009); the Transcultural Self-Efficacy Tool (Fitzgerald, Cronin, & Campinha-Bacote, 2009; Toney, 2004); the Transcultural Questionnaire (Bond, Kardong-Edgren, Jones, 2001); the Ethnic Competency Skills Assessment (Fitzgerald, Cronin, & Campinha-Bacote, 2009); the California Brief Multicultural Competence Scale (Ho & Lee, 2008); the Cultural Self-Efficacy Scale (Jones, Cason, & Bond, 2004); the Cultural Competence Assessment Instrument (Doorenbos & Schim, 2004); Cross-Cultural Adaptability (Capell, Veenstra & Dean, 2007); and either the Inventory for Assessing the Process of Cultural Competency among Health Care Professionals (IAPCC) or the tool's revision (IAPCC-R), discussed below.

Inventory for Assessing the Cultural Competency Process of Health care Professionals

Both the IAPCC and the IAPCC-R are frequent choices for research focusing on health care clinicians' cultural competency, and were seen most often in the recent literature. Campinha-Bacote's instrument, the IAPCC, was initially developed in 1997 and revised in 2002 becoming the IAPCC-R. These tools have had extensive review and

testing and have acceptable reliability and validity (Gulas, 2005; Kardong-Edgren, 2007a; Kardong-Edgren & Campinha-Bacote, 2008; Seright 2007; Wilbur, 2008). The inventory is a self-administered, self-assessment tool that takes approximately 10-15 minutes to complete. Although studies exist in the literature using both of these instruments, only two of the studies reviewed used the older form, the IAPCC. The following discussion will be limited to a description of the revised IAPCC-R.

Validity and reliability.

Reliability describes an instrument's consistency in measuring data (Burns & Grove, 2009). A correlation coefficient, such as Chronbach's alpha, is often used to assess reliability by examining the amount of random error of the tool. A coefficient of 1.00 denotes perfect reliability, with most researchers considering a coefficient of 0.80 as the lowest acceptable measure for established research instruments, while new tools are deemed reliable when Chronbach's $\alpha \geq 0.70$ (Burns & Grove, 2009). Validity of a tool is established by three methods: current and classical publications, content experts, and relevant population members (Burns & Grove, 2009).

Campinha-Bacote (2010b) provides a list of research studies using the IAPCC-R on her Transcultural C.A.R.E. Associates website and notes a domestic reliability (Chronbach's α) range of 0.72-0.90 (see Table 1). Construct validity was identified through an inverse relationship with the Ethnocentrism Scale (Capell, Dean, and Veenstra, 2008). Content validity was verified by an expert panel of transcultural health care professionals (Kattner, 2006), and face validity "was established by reviews of national experts in the field of transcultural health care" (Campinha-Bacote, 2010b).

International validity of the IAPCC-R is recorded as well on the Transcultural C.A.R.E website for several studies (see Table 2).

Research studies using the IAPCC-R that are not listed on the Transcultural C.A.R.E. Associates website, but included in this discussion listed the following reliability ratings (when reported): Voirin (2003), $r = 0.73$; Brathwaite (2005), repeated measures were used: $\alpha = 0.78$, $\alpha = 0.75$, $\alpha = 0.90$, $\alpha = 0.93$; Gulas (2008), $\alpha = 0.78$; Sargent, Sedlak & Martsolf (2005), $\alpha = 0.76$; Ho, Lee & Green (2007), $\alpha = 0.71$; Kardong-Edgren & Campinha-Bacote, (2008), $\alpha = 0.82$; Wilbur (2008), $\alpha = 0.80$; Krainovich-Miller, et.al. (2008), $\alpha = 0.869$; Kawashima (2008), $\alpha = 0.717$.

Scoring of the IAPCC-R.

The scoring of the IAPCC-R ranges from 25-100 total possible points (see Table 3). According to Campinha-Bacote, "higher scores depict a higher level of competence." (2003, p. 111). It is important to note that an individual's score on the IAPCC-R is not an end point in achieving cultural competency, but part of an ongoing endeavor towards culturally sensitive care (Campinha-Bacote, 2003).

Sample types.

Research includes studies of differing types of health science students, but only registered nurses were seen in studies after graduation. Gulas studied physical therapy students using the IAPCC-R in 2005, while Ho, Lee & Green (2007) examined the cultural competency of medical students with this instrument. In a 2009 study Musolino, et.al. administered the IAPCC-R to a combination of health science students including medical, pharmacology, and nursing students; and Voirin used the IAPCC-R with "organ [donation] procurement professionals" in her 2003 doctoral dissertation.

Cultural competence of U.S. registered nurses was evaluated using the IAPCC-R by Toney (2004, *n* = 62,), Findley (2008, *n* = 270), Johnson (2008, *n* = 87), Wilber with APN students (2008, *n* = 185), and by Starr and Wallace (2009, *n* = 31). Brathwaite used the instrument in 2005 to investigate Canadian nurses (2005, *n* = 76), while Kawashima studied the cultural competence of Japanese nurses (2008, *n* = 1035). Lampley, Little, Beck-Little & Xu (2008) conducted a study that included nurse educators and students: RN to BSN students, MSN students, and nursing faculty, but failed to describe the participants in each subset of the sample (total *n* = 66).

Research on cultural competence has also evaluated nursing faculty using the IAPCC-R: Sargent, Sedlak & Martsolf (2005, *n* = 51); Kardong-Edgren (2007a, *n* = 170); Lampley, Little, Beck-Little & Xu (2008, *n* = 66). The usefulness of the Lampley, Little, Beck-Little and Xu study is limited in this research since the data for the three subsamples (RN to BSN students, MSN students, and nursing faculty) were not reported separately, and the older IAPCC version was utilized.

Finally, research with pre-licensure nursing students' transcultural competency using the IAPCC-R has included: Sargent, Sedlak & Martsolf (2005, *n* = 209 generic students); a large study by Kardong-Edgren (2007a, *n* = 559 generic students); Kardong-Edgren & Campinha-Bacote (2008, *n* = 218 generic students); Krainovich-Miller, et.al. (2008, generic BS students *n* = 87, MS students *n* = 139, PhD students *n* = 10); and Fitzgerald, Cronin, Campinha-Bacote (2009, generic and accelerated students *n* = 90). Of these, only the Lampley, Little, Beck-Little and Xu study included RN completion students of an unknown, but small sample size. One other publication included testing

using the IAPCC-R with a small sample of 10 RN to BSN students; however, scores of the IAPCC-R and reliability coefficients were not reported (Doutrich & Storey, 2004).

Study results.

Research findings indicate registered nurses and nursing students are consistently not culturally competent as measured by the IAPCC and IAPCC-R. Mean scores for registered nurses and nursing students ranged from 50.68 (Sargent, Sedlak, & Martsolf, 2005) to 73.96 (Kardong-Edgren & Campinha-Bacote, 2008) in the ten studies reporting scores of the IAPCC-R. Virtually all nurses and nursing students were found to be "culturally aware" as described by Campinha-Bacote (2002), with nursing faculty members scoring somewhat higher. Nursing educators scored in the "culturally competent" level in studies by Kardong-Edgren (2007a) and Richards (2009); but were judged as only culturally aware in the Sargent, Sedlak, & Martsolf research (2005) (see Table 4 for IAPCC-R scores for described studies).

A variety of demographic variables including gender, age, race, educational preparation, years of nursing experience, level of nursing program (BSN, MSN, PhD), and previous cultural competence training (either pre-licensure or as continuing education), have been examined with inconsistent results. No study found a significant relationship between gender, age, or race/ethnicity to cultural competence as measured by the IAPCC-R. Kardong-Edgren (2007a) linked geographic areas with higher immigrant populations to significantly higher levels of cultural competence in nursing faculty. Nurses who had previous courses or continuing education in cultural competence scored statistically higher than those who lacked this training (Lampley, Little, Beck-Little, & Xu, 2008; Seright, 2007). In a 2008 study, Kardong-Edgren and Campinha-Bacote found

no significant difference in geographic location or program methodology for nursing students. Krainovich-Miller, et.al. (2008) reported that master's level nursing students scored significantly higher on the IAPCC-R than did baccalaureate nursing students, and Findley (2008) also found increased cultural competency scores corresponded with increased amounts of formal education, e.g., associate degree nurses scored lower than baccalaureate degree RNs, who scored lower than master's prepared nurses. Contrarily, Bond, Kardong-Edgren, and Jones found no significant difference between pre-licensure, RN to BSN, and MSN students' scores (2001) when using the Ethnic Attitude Scale and Transcultural Questionnaire.

Mixed results were seen in the literature regarding years of nursing experience and IAPCC-R scores. Lampley, Little, Beck-Little and Xu (2008); Sargent, Sedlak and Martsolf (2005); and Wilbur (2008) found a positive correlation between years of experience and cultural competency. Conversely, Findley (2008) and Kawashima (2008) found no significant relationship between scores and experience.

Summary

Altogether, 14 studies using the IAPCC or IAPCC-R were found in the literature between 2003 and 2010 identifying nursing students, registered nurses, or nursing faculty as participants. Of these, only two (Doutrich & Storey, 2004 and Lampley, Little, Beck-Little & Xu, 2008) list RN to BSN students specifically as members of the sample. Doutrich and Storey had a small sample (n = 10) and did not report IAPCC-R scores. Lampley, Little, Beck-Little and Xu reported on a group of students and faculty (n = 66), but did not categorically list IAPCC mean scores. Currently, no data has been reported on this specific group (RN to BSN students) of nurses.

CHAPTER 3

METHODOLOGY

Design

This exploratory, descriptive study is a secondary analysis of data collected as part of a Health Resources and Services Administration (HRSA) grant awarded to two schools of nursing in the state of Nevada.

Setting

The research was conducted at two CCNE accredited schools of nursing in Nevada through a collaborative, online BSN completion program. During the first semester of the RN to BSN program, entering students are directed to enroll in an introductory course entitled Nursing 408: Conceptual Basis of Nursing. All research questionnaires were offered anonymously and electronically over this course's learning management system (WebCampus). This study examined IAPCC-R and demographic data for three contiguous semesters: Spring 2009, Fall 2009, and Spring 2010.

Sample

A convenience sample of registered nurses returning to school for a BSN completion program was used to ascertain the cultural competence of this group. All the participants were part time students with active nursing licenses. Participation was voluntary and anonymous to faculty; therefore course grades were not affected by participation or lack of participation.

Instruments

The tool used to gauge the cultural competence level of this group was the Inventory for Assessing the Process of Cultural Competency among Health care

Professionals- Revised (IAPCC-R) developed by Campinha-Bacote. The IAPCC-R is a self-administered questionnaire comprised of twenty-five likert-type questions. The five constructs of Campinha-Bacote's model are determined by five questions apiece. Scores range from 25-100 points. Campinha-Bacote lists four levels of cultural competency based on the total score of the IAPCC-R tool (see Table 3).

Written permission to use the IAPCC-R was granted to the principle investigator of the HRSA grant (see Appendix A). Payment was rendered for the use of the instrument.

In addition to the IAPCC-R, a demographic survey was used to collect descriptive data on participants' gender, age, race, previous nursing education, and years of nursing experience. Both instruments were administered electronically through the online course's learning management system (see Appendix B).

Ethical Considerations

Permission for the initial research was granted to the principle investigator by both institutions' Investigational Review Boards prior to the data collection phase (see Appendices C and D). Verbal approval for commencement of the study was also given by the deans of both schools. A request for approval of the secondary analysis of data was submitted to both institutions involved upon approval from the investigator's thesis committee (see Appendix E). No identifying data was used in the secondary analysis. Subjects were electronically provided information related to informed consent prior to initiating the two surveys involved in the research. Participants were notified that survey completion implied consent to participate in research (see Appendix F).

Data Collection Method

The RN to BSN program in this study is a collaboration between two schools of nursing in Nevada. An emphasis on cultural sensitivity in the provision of nursing care is a major factor in the program curriculum, and the original purpose of data collection of the HRSA grant was to examine differences in the cultural competency scores of registered nurses at the beginning of the RN to BSN program and again at the end of the course of study. This data would allow for statistical analysis of the effectiveness of the program in increasing the ability of nurses to provide appropriate transcultural care to patients and their families.

A decision was made to administer the IAPCC-R pre-test during Nursing 408, the first nursing content course in the program. Information regarding the HRSA grant, the research being conducted, plus essential information on informed consent was made available to all students via the course's learning management system (WebCampus). The demographic survey and the IAPCC-R were made available electronically in the learning management system for a minimum period of three weeks, depending on the semester students were enrolled. Students were encouraged to complete the study, but all participation was voluntary and anonymous. Since the HRSA research was to include both IAPCC-R pre-tests and post-tests, identifiers were linked to each data set, but remained unavailable to all faculty members at the college where Nursing 408 is offered. Students will be tracked for progression in the program and will have access to a post-test during their final semester prior to graduation. Only the pretest data was examined in this study.

Data Analysis

Data from the IAPCC-R was downloaded into a spreadsheet and converted to quantitative data by the researcher and entered into a Statistical Package for the Social Sciences (SPSS) version 17 software package for analysis. Demographic data were likewise downloaded into SPSS-17 for statistical comparison. All data conversions were checked for errors by two people. Demographic data were measured on nominal, ordinal, and ratio levels. Descriptive statistics, e.g., means, standard deviations, and ranges were calculated for continuous demographic data. An analysis of variance or Kruskal-Wallis test was used to compare both the age ranges and race variables to total and construct IAPCC-R scores. Pearson's *r* correlations and Spearman rho tests examined the relationship between years of experience and test scores. Gender's effect on scores was analyzed using independent t-tests. Significance level was set at $p = .05$.

Limitations

This research study has the following methodological limitations:

1. Single setting sample will limit generalizability of the study results (Burns & Grove, 2009).
2. Small sample size of RN to BSN students from two schools of nursing will limit the generalizability of the study (Burns & Grove, 2009).
3. Use of a convenience sample provides minimal bias control (Burns & Grove, 2009).
4. Lack of diversity in sample, i.e. the majority is white women in their forties.
5. Use of a clinician self-assessment instrument may not reflect patient ratings of the clinician's transcultural skills (Alpers & Zoucha, 1996; Ho, Green & Lee, 2007).

6. The demographic questionnaire did not include questions on participants' travel abroad or previous residence abroad, primary language, or previous cultural competence education. These factors have proven to affect IAPCC-R scores in previous research (Brathwaite, 2005; Findley, 2008; Kawashima, 2008; Lampley, Little, Beck-Little and Xu, 2008; Seright, 2007; Starr and Wallace, 2009).

Summary

This chapter offered information on the setting, sample, research instruments, ethical considerations, data collection, and analysis. Secondary analysis of data collected by a self-assessment tool of cultural competence level was completed for a sample of registered nurses attending an RN to BSN program. The data was analyzed using descriptive statistics. Rights of participants were addressed and respected during this research study.

CHAPTER 4

RESULTS

This descriptive, secondary data analysis examined the cultural competence levels of registered nurses returning to school in a BSN completion program. A convenience sample (n = 53) of nurses completed the tool, the Inventory of Assessing the Process of Cultural Competency among Health Care Professionals- Revised (IAPCC-R) designed by Campinha-Bacote (2002). The IAPCC-R was posted in an introductory course's learning management system and open for student's voluntary participation over three semesters: Spring 2009, Fall 2009, and Spring 2010.

Description of Sample

The sample consisted of 53 registered nurses enrolled in an RN to BSN program at an accredited school of nursing in Nevada over three contiguous semesters. During the study, a total of 76 nurse-students were enrolled in the course and 55 students completed the IAPCC-R tool (72.68%). Two respondents returned incomplete data and were discounted leaving a total sample of 53 participants with usable data (69.73%). Sample demographics were obtained through a supplemental questionnaire included with the IAPCC-R (see Appendix B). Participant gender characteristics included: 48 women (90.6%), 5 men (9.4%). The majority of the sample (37.7%) was in the 41-50 year age range and primarily white (see Table 5). One hundred percent of respondents reported their prior nursing education to be associate degree in nursing; no participant claimed to be a diploma graduate. The mean years of nursing experience for participants were 8.28 years (*SD* 7.68) with a range of 0.5 years to 37 years. Therefore, the majority of

participants in this study were female (90.6%), white (60.4%), middle-aged (41-50 years, 37.7%), with an associate's degree in nursing (100%).

Missing Data and Normality

When examining participant responses to each IAPCC-R question, it was discovered that items were missing from five different questions. Therefore, the mode for each of these items was substituted for the missing ordinal data.

> …if the missing value is of a numeric type, the mean of the non-missing values for the same attribute is used as the estimate; if it is categorical, the mode (most frequent) value is used. This method … provides a satisfactory solution to missing data problems in many cases. (Li, 2009, p 3:2)

Skewness (symmetry of distribution) and kurtosis (peakedness of distribution) were examined for both IAPCC-R total scores and the five construct scores. Skewness and kurtosis values from -1 to +1 are considered most desirable (Treboux, n.d.). When skewness and kurtosis were examined the total IAPCC-R scores and the cultural knowledge construct scores had desirable values for skew and kurtosis; however, the other four constructs did not.

The Shapiro-Wilk test for normality of the total IAPCC-R score and each construct score was also completed. The null hypothesis (the data are normally distributed) for the total score as well as cultural knowledge construct was accepted ($p > .05$) and therefore these scores were determined to have a normal distribution. The null hypothesis was rejected for cultural awareness, cultural skill, cultural encounters, and cultural desire constructs, and the constructs were transformed into ranked data (see Table 6).

Research Questions

This research study sought to answer three questions regarding the cultural competence of a specific group of registered nurses: those who had recently entered an RN to BSN program. The following is a discussion of the findings related to the three research questions.

Question 1.

Research question one inquired, "What percentage of registered nurses entering an RN to BSN program are judged to be culturally competent based on IAPCC-R scores, and what level of competence do these nurses possess as judged by the IAPCC-R?" Participant IAPCC-R scores ranged from a minimum score of 52 to a maximum score of 91 (range = 39). The overall mean score was 75.30 (*SD* 7.59). Scores corresponded to the four levels determined by Campinha-Bacote as follows: 0 participants scored in the culturally incompetent level, 26 were culturally aware (49.06%), 26 were culturally competent (49.06%), and 1 was culturally proficient (1.9%) (see Figure 1). Participants in the culturally competent and culturally proficient level are described by Campinha-Bacote as being "culturally competent"; therefore, 50.94% of this sample was culturally competent by measure of the IAPCC-R.

Question 2.

The second research question was "In which of Campinha-Bacote's five constructs are the participants' scores lacking and excelling based on the IAPCC-R instrument?" Mean construct scores ranged from 13.47 to 17.36 (see Figure 2). The highest mean score occurred in the cultural desire construct while the lowest scores were in the cultural knowledge construct. All five constructs had a positive correlation with

the total scores of the IAPCC-R using the Pearson's *r* test ($p = .05$). Several correlations were also found between individual constructs (see Table 7).

Question 3.

The final research question asked, "How do the demographic factors of gender, race, age, previous nursing education, and years of nursing experience affect cultural competence based on IAPCC-R scores?" As a result of a lack a variation in "previous nursing education", the education variable was eliminated from review. Since normality was present, an independent t-test was used to examine gender and IAPCC-R total scores, and gender and the cultural knowledge construct scores. Due to a lack of normal distribution, other constructs' ranked data were explored with the Mann-Whitney U test. No significant relationship was revealed between gender and the total scores or any construct scores ($p = .05$).

The variable of age range was compared to the participants' total IAPCC-R scores and cultural knowledge construct scores. Since the category of "age range 51-60" had a single datum, it was added to "age ranges 60+", creating a new category "age range 51+" for analysis. A one way analysis of variance (ANOVA) revealed a significant difference in total scores for age ranges (F (3, 48) = 2.955, $p = .05$). The effect size using eta squared calculations was 0.156 indicating a large effect. Post hoc analysis using the Tukey HSD test revealed age ranges of 20-30 years ($M = 78.88$, $SD = 6.64$) scored significantly higher than ages 41-50 years ($M = 72.05$, $SD = 8.19$) (see Figure 3). Other age groups did not differ significantly from one another. The cultural knowledge construct scores had no significant differences between age groups.

Due to the lack of normal distribution, the Kruskal-Wallace test was substituted for ANOVA for the remaining construct scores to compare to with age range. Kruskal-Wallace analysis revealed a significant difference in cultural skill construct scores, with youngest respondents, aged 20-30 years, recording the highest mean rank (M = 35.59, n = 16, x^2 [3, 52] = 9.518, p = .023). Post hoc analysis was completed using analysis of variance with ranked data and the Bonferroni correction. A significant difference in cultural skill construct scores was found between the 20-30 year and the 41-50 year ranges (p = 0.17). No other significant differences were discovered with regards to age.

Because the race category "Native American" had only one datum, it was added to the "mixed race" category to form "mixed race/other" to allow for one way ANOVA. Analysis of variance examination revealed no significant difference among races and the total IAPCC-R scores or the cultural knowledge construct. The cultural awareness, cultural skill, cultural encounter, and cultural desire constructs were investigated using the Kruskal-Wallis test. There were no significant differences found between races and these construct scores. See Table 7 for mean scores by race.

Race was examined in another way. All races were divided into two categories, "white" (M = 74.69) and "non-white" (M = 76.15) for analysis by independent t-test. Again, no significant difference was found between IAPCC-R total scores and race.

The mean IAPCC-R scores were next compared to years of nursing experience using the Pearson's r correlation. A correlation coefficient of -.294 (p = .05) was found, indicating a weak, negative correlation between years of nursing experience and total IAPCC-R scores. Individual construct scores were also examined for correlation to years of experience. Moderate, negative correlations were found between years of experience

and the cultural knowledge construct (r = -.342; p = .05). The relationships between years of experience and the cultural awareness, cultural skill, cultural encounter, and cultural desire constructs were examined using the Spearman rho coefficient. No constructs had a significant relationship to years of experience except the cultural skill construct which showed a moderate, negative relationship to years of experience (-.347, p = .05).

Reliability

Reliability of the IAPCC-R instrument was tested utilizing the Chronbach's alpha coefficient. The IAPCC-R showed an alpha level of 0.780 when examining total scores. Chronbach's alpha values greater than 0.7 are considered acceptable, although some experts prefer alpha to be 0.8 or above (Pallant, 2007), thus the alpha level was acceptable.

Chronbach's alpha coefficient tests were also run on the five individual construct scores. Reliability of construct scores included: cultural awareness, α = .386; cultural knowledge, α = .686; cultural skill, α = .518; cultural encounters, α = .494; cultural desire, α = .738.

Summary

In order to answer the research questions of this thesis, The IAPCC-R research instrument was offered to a total of 76 RN to BSN students in a program at an accredited school. A total of 55 students participated in the research, with 53 participants providing usable data. Just over 50% of the sample was determined to be culturally competent by the operational definition set by Campinha-Bacote. The participants scored highest in the cultural desire construct and the lowest in the cultural knowledge construct.

Given that all participants reported previous nursing education at the associate degree level, education was eliminated as a variable. Gender had no significant effect on total IAPCC-R scores or construct scores. Analysis of variance revealed a strong negative relationship between age ranges and total IAPCC-R scores. Post hoc analysis indicated the scores from age range 20-30 years had a significant difference from age range 41-50 years, with older nurses scoring lower overall. A significant difference in scores was also discovered in cultural skill construct, with 20-30 year olds again scoring the highest, and significantly higher than 41-50 year olds. No relationship was identified between cultural awareness, cultural knowledge, cultural encounter, or cultural desire constructs and age range.

No statistical significance was found between race and the total IAPCC-R score or any construct score. Years of experience was discovered to have weak, negative relationships with total IAPCC-R scores, and moderate, negative relationships with the cultural knowledge construct, and cultural skill construct. The reliability of the IAPCC-R for this sample was determined to be .740 using Chronbach's alpha.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

Summary of Background

As the U.S. population becomes increasingly more diverse, health care providers must consider the transcultural provision of safe and appropriate patient care. Suitable attention to an individual patient's cultural norms and preferences leads to increased rate of patient satisfaction and better adherence to a plan of care (Langer, 2008; Sabate′, 2003; Stone, 1998). These two components result in improvement in overall patient outcomes, the ultimate objective of any health care intervention. Striving for a high level of cultural competence should be the goal of every health care professional.

Sample Demographic Characteristics

The participants in this research study identified themselves as largely female (90.6%), aged between 41-50 years (37.7%), and white (60.4%) emulating the majority population of American nurses who are female (94.2%), an average age of 46.8 years, and white (89.3%) (Minority Nurse, 2010). With such unbalanced statistics, ensuring that health care is provided with attention to a wide variety of ethnic and cultural values is challenging.

Scores and Demographics

This research study used the theoretical framework and research instrument of Dr. Campinha-Bacote to examine the cultural competence level of a group of registered nurses previously educated at the associate degree level. The participants have returned for a baccalaureate degree in nursing in the state of Nevada. The nurses in this sample achieved an overall mean score of 75.30 on the Inventory for Assessing the Process of

Cultural Competence in the Delivery of Healthcare Services, revised (IAPCC-R) with 50.94% of the sample determined to be culturally competent. The respondents' total mean score is slightly higher than most of the previous studies utilizing the IAPCC-R (Findley, 2008; Johnson, 2008; Seright, 2007; Toney, 2004; Wilbur, 2008). However, the mean score barely crossed into the level of "cultural competency" which begins at 75 points as defined by Campinha-Bacote in her model.

Recent studies on cultural competence found that most nurses and nursing students were "culturally aware": Toney (2004), $M = 73.0$; Johnson (2008), $M = 71.38$; and Wilbur (2008), $M = 71.35$. Other recent studies found respondents' IAPCC-R scores also in the culturally aware level, but with lower mean scores: Seright (2007), $M = 68.1$; Findley (2008), $M = 68.16$.

As the importance of cultural competency becomes evident, more attention will undoubtedly be focused onto the education of physicians, nurses, therapists, and other health care professionals. The two accrediting bodies for schools of nursing, the Commission on Collegiate Nursing Education and the National League for Nurses, require that cultural competency content be incorporated into nursing curricula. Recent research found a significant and positive relationship between transcultural training and cultural competence scores for nurses and nursing students, justifying agency requirements for transcultural care education in nursing programs (Brathwaite, 2005; Kawashima, 2008; Lampley, Little, Beck-Little, and Xu, 2008; Seright, 2007; Starr and Wallace, 2009). The rise in the IAPCC-R scores of this study may be related to the recent nationwide emphasis on cultural competency.

Another factor appearing to influence IAPCC-R scores is the population make-up of the geographic area where the test is administered. Kardong-Edgren and Campinha-Bacote (2008) identified that nurse faculty residing in states with higher immigrant populations had significantly higher IAPCC-R scores than faculty in states with smaller numbers of immigrants. In 2009, Nevada's population included 28.8% immigrants (U.S. Immigration Support, 2009), and Nevada ranked sixteenth highest per capita of the fifty states in immigrant population (Camorota, 2007). Perhaps Nevada's high immigrant population contributed to the higher registered nurse IAPCC-R test scores of this study.

Construct Scores.

Campinha-Bacote included five interdependent constructs in her model: cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire. The participants involved in this study scored highest in the cultural desire construct which Campinha-Bacote defines as a yearning for understanding of and engagement with persons of varying cultures, and "includes a genuine passion to be open and flexible with others" (Campinha-Bacote, 2002, p. 183). The fact that these nurses chose to return to school with an aspiration for increased understanding and knowledge would lend itself to the idea that their cultural desire construct would have high scores. This finding was consistent with Wilbur (2008) and Mahabeer (2009) who also found nurses' scores were highest in the cultural desire construct.

Conversely, the lowest scores of the sample were in the construct cultural knowledge. Cultural knowledge is characterized by Campinha-Bacote as, "the process of seeking and obtaining a sound educational foundation about diverse culture and ethnic groups" (2002, p.182). Again, it seems logical that nurses returning for further education

would indicate in a self-evaluation the need for more knowledge in an area like cultural competence. Mahabeer (2009) also reported lowest construct scores in cultural knowledge for nurses.

Demographic Variables.

No significant relationships were identified between either gender or race and total IAPCC-R scores or any construct score. These findings are consistent with previous studies that found no correlation between gender and race with cultural competence (Findley, 2008; Kawashima, 2008; Lampley, Little, Beck-Little & Xu, 2008; Sargent, Sedlak & Martsolf, 2005; and Wilbur, 2008).

A large statistical difference was discovered between the 20-30 year age group and the 41-50 year group in this study with the younger group scoring significantly higher on the IAPCC-R. However, a previous study by Wilbur (2008) found no relationship between age and IAPCC-R scores. The participants of Wilbur's study were advance practice students, not RN to BSN students which may account for the different findings. In the construct of cultural skill, defined as the " the ability to conduct a cultural assessment to collect relevant cultural data regarding the client's presenting problem as well as accurately conducting a culturally-based physical assessment" (Campinha-Bacote, 2010a, para 3) The 20-30 year olds again scored significantly higher than the 41-50 age group. A study by Jacobs (2009) suggests that as people age, their own stereotypes become more engrained and more difficult to mask, which could explain the younger participants' higher scores in this construct.

This study found a significant, although weak, negative relationship between IAPCC-R total scores and years of experience. A significantly moderate and negative

relationship was also found between the cultural skill construct and years of experience. A negative relationship indicates that as experience increased, scores decreased. It could be hypothesized that a more experienced clinician would excel in cultural competence, but this was not the case with this sample. As Jacobs (2009) suggested, stereotypes may be more pronounced with age, and since age would increase as experience increased, the negative correlations may be due in part to a rise in age as well as experience. The variable of "years of nursing experience" when compared to IAPCC-R scores showed mixed results in the literature. Lampley, Little, Beck-Little and Xu (2008); Sargent, Sedlak and Martsolf (2005); and Wilbur (2008) found a positive correlation between years of experience and cultural competency. On the other hand, Findley (2008) and Kawashima (2008) found no relationship of significance between scores and experience.

Significance for Clinical Practice

Since many previous studies on transcultural nursing were focused on only students, and because research has shown that education on cultural competence raises self-assessed competency scores, more attention could be focused on providing practicing nurses training in transcultural care. Annual nurse competency testing would include administration of the IAPCC-R (or a similar tool) to measure transcultural care abilities. For nurses scoring at a lower than competent level, education could be required on the individual's staff development plan.

Significance for Education

Considering that only half of this group of registered nurses was identified as being culturally competent by the IAPCC-R tool, an outcome for nursing programs could be to increase the cultural competence of graduating nurses. Nursing academia could

strive to implement educational interventions designed to increase the transcultural prowess of registered nurses in RN to BSN programs as evidenced by increased cultural competency scores with whatever measuring tool is chosen.

The cultural knowledge construct had the lowest mean score of the five constructs. This is consistent with Mahabeer (2009), indicating nursing education programs should focus on the elements of this construct to improve cultural competency scores. Cultural knowledge includes "obtaining a sound foundation about diverse cultures and ethnic groups…[and] three specific issues: health-related beliefs and cultural values, disease incidence and prevalence, and treatment efficacy." (Campinha-Bacote, 2002, p.182). Specific health care knowledge as it relates to differing ethnicities appears to be lacking in current nursing education.

Future Study

Further investigation of the unique RN to BSN population with a larger sample and in more geographically diverse areas would add to the limited knowledge of the cultural competence of BSN completion students. Due to the limitations of this study, generalizations to the larger RN to BSN population are not possible.

Future research could examine what content and delivery methods of transcultural training would most benefit registered nurses already working versus student nurses. Cost analyses should be included since many health care facilities focus on training expenses as much as content.

Although all nursing specialties must exhibit respect for patients regardless of their beliefs and incorporate patients' cultural values into treatment plans, home care nurses have an intimate exposure with clientele in patients' own home environments.

Cultural norms may be much more apparent in a patient's home than either in inpatient or ambulatory care settings. A study of the cultural competence of home care nurses could be of interest. No such study was found in the literature.

Conclusion

About one half of the RN to BSN students who responded to this study were culturally competent as determined by Campinha-Bacote's IAPCC-R. This is the first study investigating and reporting on the self-reported cultural competency of this subset of registered nurses alone. Thus, it adds to the limited body of knowledge on the cultural competence of health care professionals.

Campinha-Bacote's IAPCC-R instrument is a widely accepted and often used tool, but since the value of self-reported assessments of cultural competence has not been established, a more accurate measure may be needed that includes objective assessment by patients or health care experts. Meanwhile, in order to maintain a high level of quality care in the increasingly diverse U.S. population, ongoing efforts to educate health care professionals about transcultural care and ensure that all patients receive such care is imperative.

In her literature review on cultural competence, T.G. Parish, a physician assistant, stated, "It would appear that the nursing community has taken a leadership role in this area" (2003, para 6). Hopefully nursing as a profession can continue to spearhead the holistic and patient centered care we aspire to.

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TABLES

Table 1

Reliability Coefficients for the Inventory for Assessing the Process of Cultural Competency among Health Care Providers- Revised (IAPCC-R) Administered Domestically

Author(s), Year of Publication	Participants	Chronbach's alpha
Wilbur, 2008	APN students	0.81
Nobel, 2007	pediatric residents	0.81
Kardong-Edgren, 2007	generic nursing students	0.81
Lippy, 2006	military physicians	0.81[a]
Anderson-Worts, 2006	osteopathic medical students	0.91, 0.81[b]
Bowen, Harris, & Homan, 2006[c]	registered nurses	0.817
Kattner, 2006[c]	generic nursing students	0.88 & 0.87[b]
Stephen, 2006	"health care providers"	0.72 & 0.87[b]
Crandall, 2006	medical students	0.85
Vito, Roszkowski &Wieland, 2005[c]	generic nursing students	0.77
Gulas, 2005	physical therapy students	0.78
McCoy, 2005	generic nursing students	0.81
Kardong-Edgren, 2004[c]	health education & nursing faculty	0.86
Koempel, 2003[c]	advance practice nurses	0.85

Adapted from Campinha-Bacote (2010a)

[a]Listed as Intraclass Correlation Coefficient, rather than Chronbach's alpha on Transcultural CARE Associates website.

[b]Denotes a repeated measures coefficient.

[c]Unable to locate this study using CINAHL or Dissertation/Theses databases.

Table 2

International Validity of the IAPCC-R

Author(s), Year	Participants	Validity indicator
Mabunda & White, 2006	generic & graduate nursing students & nursing faculty	Guttman split-half = 0.76 Spearman-Brown = 0.76
Olt & Emami, 2006	Swedish students, lecturers, & nurses	inconclusive
Morris, 2007	successfully compared with Eldercare Cultural Self-Efficacy tool	n/a
Jirwe, 2008	not listed	not reported

Adapted from Campinha-Bacote (2010a)

Table 3

Levels of Cultural Competence

IAPCC-R Score Range	Cultural Competence Level
91-100	Culturally Proficient
75-90	Culturally Competent
51-74	Culturally Aware
25-50	Culturally Incompetent

(Campinha-Bacote, 2002)

Table 4.

Research Utilizing the IAPCC-R Instrument with Mean Scores (when reported)

Author(s), Year Publication	Participants	Sample Size	IAPCC-R mean with SD[a]	Level of Cultural Competency
Voirin, 2003	"organ procurement professionals"	75	48.5 (5.5)	culturally incompetent
Toney, 2004	US registered nurses	62	73 (7.39)	culturally aware
Doutrich & Storey, 2004	US registered nurses	10	not reported	n/a
Gulas, 2005	physical therapy students	218		
Sargent, Sedlak, & Martsof, 2005	1st & 4th year nursing students & nursing faculty	260	1st yr: 50.68 (4.9) 4th yr: 54.75 (4.4) faculty: 59.04 (7.0)	culturally aware (all groups)
Brathwaite, 2005	Canadian registered nurses	76	not reported	n/a
Kardong-Edgren, 2007a	BSN faculty	170	75.72 (8.31)	culturally competent
Ho, Lee & Green, 2007	medical students	57	not reported	n/a
Kardong-Edgren, 2007b	generic nursing students	559	not available[b]	n/a
Serright, 2007	US registered nurses	179	68.1 (5.7)	culturally aware
Lampley, Little, Beck-Little & Xu, 2008	RN to BSN & RN to MSN students & nursing faculty	66[c]	53.05 (6.26)	culturally aware
Johnson, 2008	US registered nurses	87	71.38 (7.73)	culturally aware
Ho & Lee, 2008	medical students	237	not reported	n/a

Table 4-continued

Research Utilizing the IAPCC-R Instrument with Mean Scores (when reported)

Author(s), Year Publication	Participants	Sample Size	IAPCC-R mean with SD[a]	Level of Cultural Competency
Kardong-Edgren & Campinha-Bacote, 2008	generic nursing students	218	73.96 (8.29) 70.46 (11.23) 70.97 (12.75) 70.70 (6.18)[d]	culturally aware (all groups)
Wilbur, 2008	APN students	185	71.35(6.85)	culturally aware
Kawashima, 2008	Japanese registered nurses	1,035	53.85(5.28)	culturally aware
Findley, 2008	US registered nurses	270	68.16(6.95)	culturally aware
Musolino, et al., 2009	health science students	311	not reported	n/a
	generic nursing students (subset)	140	70.22(7.74) 70.34(7.06) 68.89(12.50)[d]	culturally aware (all groups)
Richards, 2009	nursing faculty	37	76.68(9.38)	culturally competent
Mahabeer, 2009	Canadian registered nurses	58	65.58(not reported)	culturally aware
Musolino, 2010	health science students	1974	pretest all: 69.4(6.7) posttest all:73.4(7.2) pretest nurse:69.9(6.0) posttest nurse:73.5(7.0)	culturally aware culturally aware culturally aware culturally aware

[a]SD = standard deviation.

[b]Study from an unpublished manuscript.

[c]Participants not separated categorically.

[d]Repeated measures used.

Table 5
Sample Demographics: Age Ranges and Race

Age Ranges	*n* (%)
20-30 years	16 (30.2%)
31-40 years	13 (24.5%)
41-50 years	20 (37.7%)
51-60 years	1 (1.9%)
60+ years	2 (3.8%)
Race	***n*** **(%)**
Native American	1 (1.9%0
Asian	4 (7.5%)
Black or African American	8 (15.1%)
Native Hawaiian or Pacific Islander	2 (3.8%)
White	32 (60.4%)
Hispanic or Latino	3 (5.7%)
Mixed Race	2 (3.8%)

Table 6
Tests of Normalcy

Construct	Shapiro-Wilk statistic	df	Significance
Cultural Awareness	.918	53	.001*
Cultural Knowledge	.962	53	.087
Cultural Skill	.953	53	.035*
Cultural Encounters	.954	53	.042*
Cultural Desire	.914	53	.001*
Total Score	.978	53	.423

*significant at $p = .05$

Table 7

Correlations between Total Scores and Construct Scores (n = 53)

	Total Score	Cult Awareness	Cult Knowledge	Cult Skill	Cult Encounters
Cult Awareness	.583**				
Cult Knowledge	.710**	.249*			
Cult Skill	.793**	.464**	.507**		
Cult Encounters	.718**	.197	.343**	.404**	
Cult Desire	.727**	.284*	.314*	.421**	.600**

*Correlation is significant at the .05 level (1-tailed).

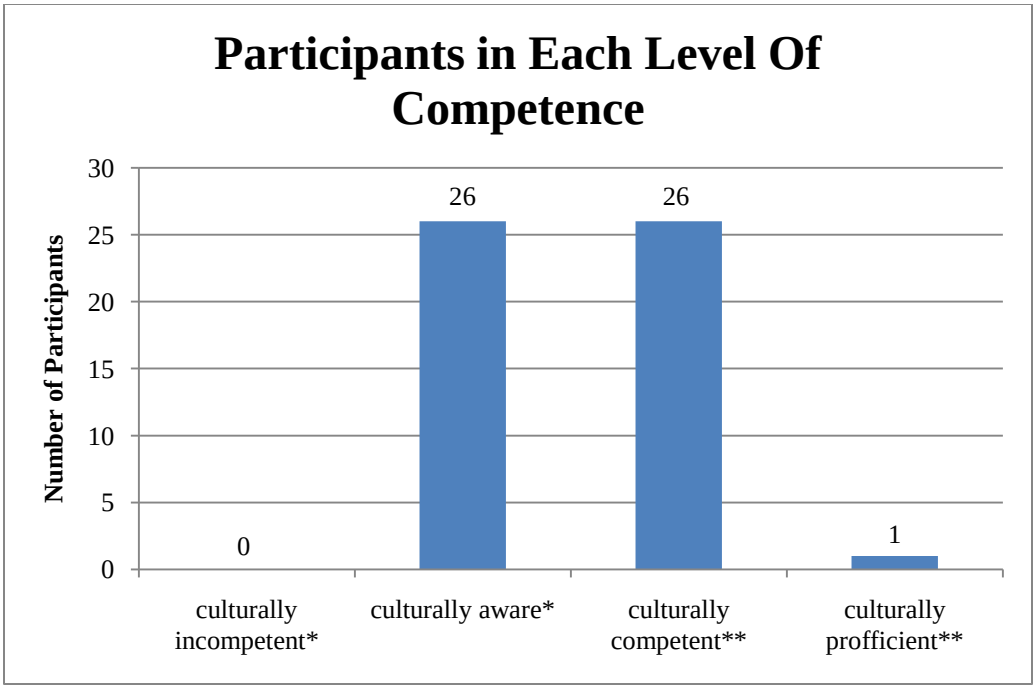
**Correlation is significant at the .01 level (1-tailed).

Table 8

Mean Scores by Race

Race	*M (SD)*
Native American	88.00 (0)
Asian	78.00 (7.87)
Black/African American	73.88 (5.57)
Native Hawaiian/Pac Islander	71.50 (2.12)
White	74.69 (8.33)
Hispanic/Latino	79.00 (4.58)
Mixed race	76.00 (7.00)

FIGURES



*Level considered *not* culturally competent overall

**Level considered culturally competent overall

Figure 1. Participants in Each Level of Competence

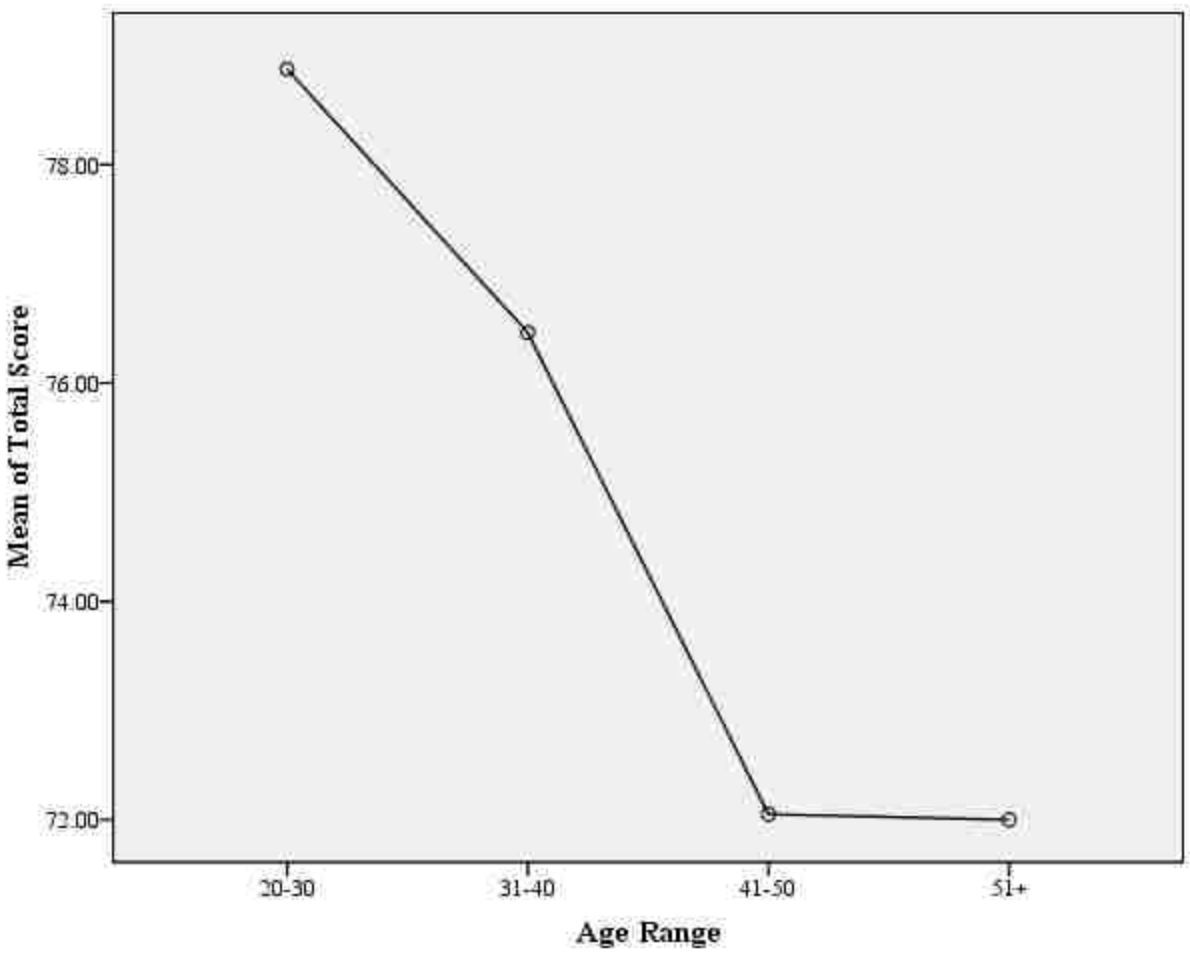


Figure 2. Means Plots for Age Range and Total Mean Score

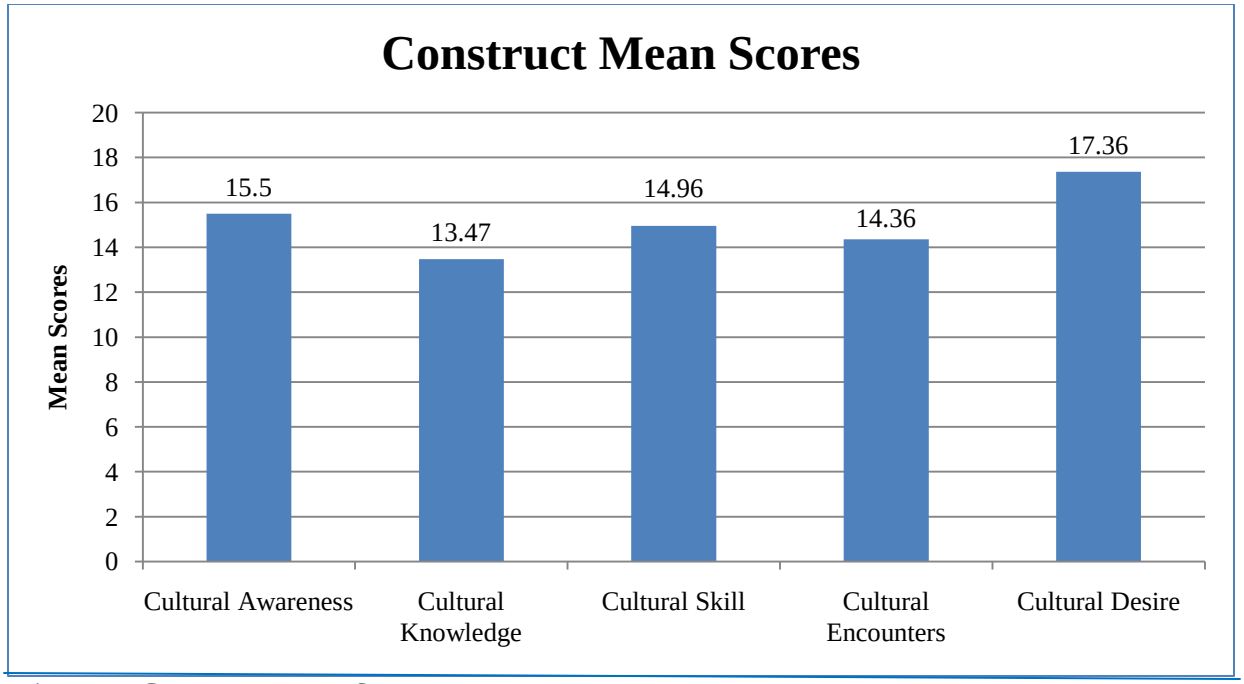


Figure 3. Construct Mean Scores

APPENDIX A

PERMISSION TO USE IAPCC-R

TRANSCULTURAL C.A.R.E.
Clinical, Administrative, Research & Educational Consultation In Transcultural Health Care

J. Campinha-Bacote,
PhD., RN, CS, CNS, CTN, FAAN

Transcultural Consultant

(513) 469-1664

www.transculturalcare.net

11108 Huntwicke Place
Cincinnati, Ohio 45241

Date: February 8, 2010
To: Dr. Tish Smyer
From: Dr. Josepha Campinha-Bacote
President, Transcultural C.A.R.E. Associates

RE: Letter of Permission for Extended Use of the IAPCC-R Online

This letter grants extended permission Dr. Tish Smyer to use the *"Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Revised" (IAPCC-R)* in the grant, "Collaborative Approach to Expanding RN to BSN Education" at University of Nevada, Las Vegas School of Nursing. I have received payment of $600 for 30 tools to be used as a one-time web-based format for 29 students in a pretest format and 1 student in a posttest format. Dr. Tish Smyer agrees to the following requirements regarding use of this copyrighted tool:

TIME FRAME: Permission to use the IAPCC-R is only granted from February 20, 2010 to April 15, 2010. Upon April 16, 2010 Dr. Tish Smyer must remove the IAPCC-R off the secure web-based format and destroy any hard copies of the tool.

ADMINISTRATION: This permission grants Dr. Tish Smyer to administer the IAPCC-R on a secure online web-based format that has access to only 30 students. Specifically, the 30 students must be selected at the beginning of this study and only these 30 students access will have the opportunity to complete the tool. Unfortunately, if only 10 students decide to take the tool the remaining 10 tools cannot be administered to other students. For online use, the tool must be copied verbatim as it appears on the hard copy that is enclosed in this letter and must use the citation on the top of the tool that reads:

Inventory For Assessing the Process of Cultural Competence Among Healthcare Professionals - Revised (IAPCC-R)
Copyrighted by Campinha-Bacote (2002)

RESTRICTIONS OF COPYING: Outside of placing the IAPCC-R online on a secure a web-based format for 30 students. Dr. Tish Smyer agrees that the IAPCC-R cannot be copied or reproduced for any other reason. This includes, but not limited to, being used in formal or informal publications or presentations, handouts for presentations, PowerPoint presentations or on an overhead transparency. The IAPCC-R is only to be used in the above project in which it is administered online for access to only 30 individuals/subjects.

PUBLICATIONS: Tish Smyer agrees that any publications (formal or informal) or presentations of the findings of the study using my tool will be shared with me.

Thank you for complying with the requests of using this copyrighted tool. Please feel free to contact me if you have any questions about using the IAPCC-R.

APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE

Question title: 26-Gender
Check the appropriate radio button.

a. ____1. Male
b. ____2. Female

Question title: 27-Age
Check the appropriate radio button.

a. ____1. 20-30
b. ____2. 31-40
c. ____3. 41-50
d. ____4. 51-60
e. ____5. 61+

Question title: 28-Hispanic Ethnicity
Are you Hispanic or Latino? (a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race):

____1. Yes
____2. No

Question title: 29-Race
Please select the racial category or categories with which you most closely identify by filling in the appropriate circle(s). Mark as many as apply.

1. American Indian or Alaska Native
2. Asian
3. Black or African-American
4. Native Hawaiian or other Pacific Islander
5. White

Question title: 30-Prev Ed
Indicate previous nursing education:

____1. Associate degree
____2. Diploma

Question title: 31-RN Experience
Enter the number of years of RN experience (working) that you have.

1. _____

APPENDIX C

INTERNAL REVIEW BOARD APPROVAL FROM UNIVERSITY OF NEVADA, LAS VEGAS

UNLV
UNIVERSITY OF NEVADA LAS VEGAS

UNLV IRB Approved JUN 08 2009 Expires

Biomedical IRB – Exempt Review
Approved as Exempt

DATE: June 9, 2009

TO: **Dr. Patricia Smyer,** Nursing

FROM: Office for the Protection of Research Subjects

RE: Notification of IRB Action by Dr. John Mercer, Chair JMC
Protocol Title: **DHHS HRSA Grant #1 D11HP09567 Collaborative Approach to Expanding RN to BSN Education (7/01/2008-6/30/2011)**
OPRS# 0903-3077

This memorandum is notification that the project referenced above has been reviewed by the UNLV Biomedical Institutional Review Board (IRB) as indicated in Federal regulatory statutes 45CFR46.

The protocol has been reviewed and deemed exempt from IRB review. It is not in need of further review or approval by the IRB.

PLEASE NOTE:
Attached to this approval notice is the **official Informed Consent/Assent (IC/IA) Form** for this study. The IC/IA contains an official approval stamp. Only copies of this official IC/IA form may be used when obtaining consent. Please keep the original for your records.

Any changes to the exempt protocol may cause this project to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**.

If you have questions or require any assistance, please contact the Office for the Protection of Research Subjects at OPRSHumanSubjects@unlv.edu or call 895-2794.

Office for the Protection of Research Subjects
4505 Maryland Parkway • Box 451047 • Las Vegas, Nevada 89154-1047

APPENDIX D

INTERNAL REVIEW BOARD EXEMPT FROM NEVADA STATE COLLEGE

(PERSONAL COMMUNICATION)

Date:	Wed, 3 Feb 2010 15:09:44 -0800
From:	Paul Buck <Paul.Buck@nsc.nevada.edu>
To:	"rileyd1@unlv.nevada.edu" <rileyd1@unlv.nevada.edu>
Subject:	FW: NSC IRB approval of UNLV protocol "DHHS HRSA grant#1 D11HP09567 Collaborative Approach"

Part(s):				
2	IRB Approval HRSA UNLV NSC Collaborative.pdf	application/pdf	208404 KB	
3	Citi Smyer.pdf	application/pdf	24393 KB	
4	IRB Informed consent HRSA NSC UNLV Collaborative.pdf	application/pdf	553163 KB	
5	IRB Protocal and Procedures UNLV NSC Collaborative.pdf	application/pdf	2263217 KB	
6	MOU NSC UNLV.pdf	application/pdf	484076 KB	
7	Notice of Grant Award Smyer HRSA.pdf	application/pdf	27490 KB	

1.2 unnamed text/html 2.63 KB

Because UNLV is our sister institution and has robust human subject review policy, the NSC IRB does not feel it is necessary to conduct a separate IRB review. We therefore accept UNLV's IRB approval. Any conditions and restrictions described in the approval letter from UNLV including use of the approved consent form and renewals must also be followed at NSC.

Thanks very much—good luck on your research.

Sincerely

Paul

APPENDIX E

INTERNAL REVIEW BOARD EXEMPT APPROVAL FOR SECONDARY ANALYSIS

UNLV
UNIVERSITY OF NEVADA LAS VEGAS

Biomedical IRB – Exempt Review
Determined to be Exempt

DATE: March 26, 2010

TO: **Dr. Nancy York,** Nursing

FROM: Office of Research Integrity – Human Subjects

RE: Notification of IRB Action by Dr. Charles Rasmussen, Co-chair CR
Protocol Title: **The Cultural Competence of RN-BSN Completion Students**
Protocol # 1003-3406

This memorandum is notification that the project referenced above has been reviewed by the UNLV Biomedical Institutional Review Board (IRB) as indicated in Federal regulatory statutes 45CFR46.

The protocol has been reviewed and deemed exempt from IRB review. It is not in need of further review or approval by the IRB.

Any changes to the exempt protocol may cause this project to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**.

If you have questions or require any assistance, please contact the Office of Research Integrity – Human Subjects at IRB@unlv.edu or call 895-2794.

Office of Research Integrity – Human Subjects
4505 Maryland Parkway • Box 451047 • Las Vegas, Nevada 89154-1047

APPENDIX F

INFORMED CONSENT DOCUMENT

Protocol Title: DHHS HRSA Grant #1 D11HP09567 Collaborative Approach to Expanding RN to BSN Education (7/01/2008-6/30/20

RECEIVED
JUN 01 2009

UNLV
UNIVERSITY OF NEVADA LAS VEGAS

UNLV IRB
Approved
JUN 08 2009
Expires

Informed Consent

Department of School of Nursing

TITLE OF STUDY: DHHS HRSA Grant #1 D11HP09567 Collaborative Approach to Expanding RN to BSN Education (7/01/2008-6/30/2011)

INVESTIGATOR(S): Dr. Patricia SmyerCNE
Dr. Shirlee Snyder EdD, RN
CONTACT PHONE NUMBER: 702-895-5952

Purpose of the Study

You are invited to participate in a research study. The purpose of this study is to analyze data obtained from your evaluations, questionnaires and activities in the program. This information is essential for assessing the program and ensuring that the expected outcomes of the program are met.

Participants

You are being asked to participate in the study because you are enrolled in the RN-BSN NSC/UNLV Collaborative Program.

Procedures

If you volunteer to participate in this study, you will be asked to do the following: complete evaluations of the RN to BSN NSC/UNLV Collaborative Program using designated forms throughout your course of study in the program. THESE RESPONSES MAY BE USED FOR RESEARCH PURPOSES. YOU WILL HAVE THE OPTION ON EACH EVALUATION TO ALLOW YOUR RESPONSES TO BE USED FOR RESEARCH PURPOSES OR DECLINE THAT YOUR RESPONSES BE USED FOR RESEARCH PURPOSES.

Benefits of Participation

There may not be direct benefits to you as a participant in this study. Completing the evaluations and questionnaires will provide you with an opportunity to self-reflect upon your progress in the RN-BSN NSC/UNLV Collaborative Program. Your feedback in the evaluations will be valuable in making improvements in the program. The data obtained from your participation will be beneficial in evaluating the overall effectiveness of the program. This information can be used in reports and in possible publications about the program.

Risks of Participation

There are risks involved in all research studies. This study may include only minimal risks. You may become uncomfortable when answering some questions on the evaluations or questionnaires. Please be assured that your personal data is not identifiable in this research study. Your individual data will be coded and reported

Participant Initials: _____

only as group data for the research study.

Cost /Compensation

There will not be financial cost to you to participate in this study. The study will take 15 to 30 minutes per evaluation/questionnaireof your time. You will not be compensated for your time.

Contact Information

If you have any questions or concerns about the study, you may contact Dr. Patricia Smyer at 702-895-5952. Tish.Smyer@unlv.edu

For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact the **UNLV Office for the Protection of Research Subjects at 702-895-2794 or toll free at 877-895-2794**.

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

Confidentiality

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at UNLV for 3years after completion of the study. After the storage time the information gathered will be destroyed and/or permanently deleted from electronic files. The time listed and the disposition of the data listed here should match Section 10.4 and 10.5 of the Protocol Proposal Form. If you are conducting a focus group or your research includes group participation, then you must include that confidentiality cannot be guaranteed within the group setting.

Participant Consent:

I have read the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

_____ _____

Signature of Participant Date

_____

Participant Name (Please Print)

Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.

Participant Initials: _____

VITA

Graduate College
University of Nevada, Las Vegas

Dierdre Riley

Degrees:

Associate of Arts in Liberal Arts, 1984
Leeward Community College, Pearl City, Hawaii

Associate of Arts in Nursing, 1988
University of Nevada, Las Vegas

Bachelor of Arts in Nursing, 2007
University of Nevada, Las Vegas

Special Honors and Awards:

Harry and Rebecca Lahrs Scholarship, 2008
Harry and Rebecca Lahrs Scholarship, 2009
Sigma Theta Tau International Honor Society of Nursing, 2010
Phi Kappa Phi National Honor Society, 2010

Publications:

Riley, D., Smyer, T. & Colosimo, R. (2009). Nursing in Nevada: It isn't just about you. *Nevada RNFormation, Official Publication of the Nevada Nurses Association, 18*(4), 7-13.
Riley, D. & Smyer, T. (2010). Educating Nevada's Nurses. *Nevada RNFormation Official Publication of the Nevada Nurses Association, 19*(2), 8.

Thesis Title: Cultural Competence of RN to BSN Students

Thesis Examination Committee:

Chairperson: Nancy York, PhD, RN, CNE
Committee Member: Tish Smyer, DNSc, RN, CNE
Committee Member: Yu Xu, PhD, RN, CTN, CNE
Committee Member: Chad Cross, PhD, MS, NCC, MAC, SAP, CCH, LCADC, MFT