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Abstract

Local and immersion service learning methods prepare pre-licensure health care professionals to deliver culturally competent care to diverse populations- an important need because of the rapid racial and ethnic diversity growth in the U.S. A mixed-methods approach compared the effect of local and immersion service learning methods on multiple disciplines of pre-licensure health care students' confidence in delivering care to diverse populations. Guided by Jeffreys (2016) *CCC Model*, the Transcultural Self Efficacy Tool (TSET) was used to compare pre-licensure health care students' (n=34) transcultural self-efficacy perceptions following local or immersion service learning experiences. Secondary source, qualitative data obtained from post-immersion trip surveys from pre-licensure health care students' (n=13) was utilized to further examine quantitative data results, and name themes that arose from students' immersion service learning experience. Pre- and posttest TSET scores were analyzed based on total scores and subscale (cognitive, practical, and affective) scores. A paired samples t-test compared post-test scores of the local and immersion service learning groups. An open coding strategy was utilized on qualitative data. A significant increase was demonstrated in the post-test scores of both local and immersion service learning groups. The local group demonstrated a significant increase in the practical and affective subscales, and the immersion group demonstrated a significant increase in the cognitive and practical subscales. Qualitative data yielded the major concept of "cultural competence" with the themes of "comprehension", "compounded experiential learning", "skill development", "interaction", and "affective". Local and immersion service learning methods are effective in improving the transcultural self-efficacy in pre-licensure health care students and

produce outcomes that meet the national and professional goals for providing culturally competent health care to diverse populations.

Keywords: cultural competence, service learning, immersion, transcultural self efficacy

Comparing the Effects of Immersion Service Learning and Local Service Learning in Pre-Licensure Health Care Students' Transcultural Self-Efficacy

In the past 50 years, nearly 59 million immigrants have arrived in the U.S. (Chon & Caumount, 2016). According to the U.S. Census Bureau (2015), it is estimated that by 2060, 56% of the U.S. population will identify themselves as a member of a racial or ethnic minority. The rapidly growing diversity in the U.S. requires all health care professionals to be culturally aware, sensitive, knowledgeable, and confident to provide the highest quality of care to every patient, regardless of their race, ethnic background, or cultural background. Statistics demonstrate the relationship between poor health outcomes and health disparities to the deficiencies in culturally competent care (AHRQ, 2011; Loftin et al., 2013; ODPHP, 2014; WHO, 2016). The results of this research have created a strong push for change toward culturally sensitive health care practices. Organizations that establish U.S. health standards and goals, like the Office of Disease Prevention and Health Promotion (ODPHP, 2014), are urging academic institutions to take action to improve cultural sensitivity in future health care professionals. These organizations are insisting that pre-licensure health care students should establish the groundwork for providing culturally competent care within their academic institutions (AACN, 2008; Betancourt & Green, 2010; CDC, 2015; ODPHP, 2014; WHO, 2016).

Problem Statement

Leaders in multidisciplinary health care education have been challenged to make changes to curricula in order to begin the development of students' skills to deliver culturally competent care. Service learning has become a popular, evidence-based teaching strategy shown to increase students' cultural competence and confidence in delivering care to diverse populations (Amerson, 2010; Amerson & Livingston, 2014; Denton et al., 2016; Gaster, 2011; Larsen &

Reif, 2011; Long, 2016). Despite evidence supporting the use of service learning in nursing education, there is limited research on service learning as a teaching strategy used to improve cultural competence across multidisciplinary health care students. Additional studies are needed to compare the impact of local and immersion service learning methods on all multidisciplinary pre-licensure health care professional students' confidence in delivering culturally competent care to diverse populations.

Purpose

The purpose of this project was to use a mixed-methods approach to measure the effect of local and immersion service learning on multiple disciplines of pre-licensure health care students' confidence in delivering care to diverse populations. This project utilized quantitative data to evaluate pre-licensure health care professional students' perceived transcultural self-efficacy following a service learning experience, to compare the efficacy of local versus immersion service learning, and to identify the level of students' perceived change in the specific domains of cultural competence. Qualitative data, which was secondary data made available to the project leader, aimed to identify themes of learning and students' perceptions of immersion service learning trips at Belmont University.

Cultural competence

Cultural competence is viewed as an integrative, on-going process that combines skills and knowledge to provide effective clinical care to clients from diverse backgrounds (Amerson, 2010; Halter et al., 2015; Jeffreys, 2016; Long, 2016). The ongoing process of cultural competence is a multidimensional learning process that includes three dimensions: *cognitive*, which focuses on the comprehension of cultural factors; *practical*, which focuses on the applications of skills to care for a patient; and *affective*, which involves a healthcare

professionals' attitudes beliefs, and values (Amerson, 2012; Jeffreys, 2016). To embody culturally competent care, a health care system must provide holistic care to clients: care that is tailored to individuals' cultural practices and sensitive to diverse beliefs, values, and behaviors (Betancourt, Green, & Carrillo, 2002). A culturally competent health care system is made up of health care professionals who have the desire and tools to develop skills, and a framework to assess and recognize sociocultural factors that affect patient care. Transcultural self-efficacy, or confidence, is a self-reflective measurement of cultural competence development in individuals (Jeffreys, 2016). Transcultural self-efficacy represents an individual's understanding, desire, and utilization of culturally sensitive practices.

Service learning methods

In order to improve health care outcomes and decrease health care disparities associated with minority populations, multiple authors suggest cultural competence education should be the focus of pre-licensure health care professionals (AACN, 2008; Jeffreys & Dougan, 2012; Kripalani et al., 2006; Maier-Lorentz, 2008; Saha, Beach, & Cooper, 2008; WHO, 2016). In addition to these reports, the Institute of Medicine (IOM) published the report, *Unequal Treatment*, recommending that all heath care professionals receive training in cultural competence as a strategy for addressing and combating racial and ethnic disparities (Betancourt & Green, 2010).

Nationwide, service learning methods have been adopted by universities; this teaching method emphasizes meaningful learning through students' active participation while providing service to a community. Thus, service learning methods teach pre-licensure health care students about diverse populations. Providing culturally specific care with specific skills, and fostering an appreciation for cultural diversity through service learning experiences, allows students

opportunities to address social justice, employ critical reflection, gain transcultural knowledge, and participate in cross cultural practice (Amerson, 2010). Engaging students in activities that address the needs of a community and providing students experiences with diverse populations has positive effects on cultural understanding, sensitivity, and skills (Amerson, 2010; Amerson, 2012; Amerson & Livingston, 2014; Gaster, 2011; Long, 2016).

Two types of service learning exist: local and immersion. Local service learning requires pre-licensure health care students to become involved in their local communities, providing health care services to individuals within the U.S. or within their own countries. The second method, immersion service learning, requires pre-licensure health care students to travel abroad, immersing themselves into places of differing cultures. Both methods of service learning provide students with lived experiences that produce critical reflection and impact their ability to deliver culturally competent care.

Review of the Literature

Governing and accrediting health care organizations have recognized the need for cultural competence, and all multidisciplinary health care professions have been called upon to enhance cultural competence prior to licensure, during the educational process (AHRQ, 2011; Betancourt & Green, 2010; CDC, 2015; ODPHP, 2014; Saha et al., 2008; WHO, 2016). An established need for cultural competence education in pre-licensure health care students with the use of service learning experiences exists. However, a gap exists in the literature pertaining to cultural competence education and development in health care professions outside of nursing. This includes the disciplines of physical therapy, occupational therapy, social work, and pharmacy.

Nursing research has identified the positive impact of service learning education on pre-licensure nursing students' confidence in caring for diverse populations, cultural awareness, and social growth (Anderson, Calvillo, & Fongwa, 2007; Allen et al., 2013; Amerson, 2010; Chen et al., 2012; Gaster, 2011, Halter et al., 2015; Jeffreys & Dogan, 2012). Additionally, studies have identified immersion service learning as having a larger impact on nursing students' self-perceived confidence in delivering culturally competent care to diverse populations (Amerson, 2010; Amerson, 2012; Amerson & Livingston, 2014; Larsen & Reif, 2011). In a comparative study of 60 baccalaureate nursing students enrolled in either immersion or local service learning it was demonstrated that immersion service learning produced a greater effect on the transcultural self-efficacy of pre-licensure nursing students (Amerson, 2010). Long (2016), utilized a mixed methods study design with the Cultural Efficacy Self scale and personal interviews to evaluate 18 nursing students' cultural competence growth following a two-week international medical trip to Belize. Quantitative results from this study indicated that all students significantly improved in self-efficacy, self-confidence, and self-awareness toward delivering care to a diverse population and developing cultural competence; qualitative themes supported students' development in cultural knowledge and awareness (Long, 2016).

Supplementary quantitative and qualitative data is needed to support the use of immersion service learning in multidisciplinary pre-licensure health care students, and to provide insight into all multidisciplinary pre-licensure health care students' perceptions of immersion service learning. Additional quantitative comparison studies of immersion and local service learning have the potential to inspire educators to develop collaborative and beneficial service learning courses that improve the transcultural self-efficacy in all pre-licensure health care students. Qualitative data has the potential to provide insight into students' perceptions of

immersion service learning and demonstrate the impact of immersion service learning experiences on cultural competence development.

Conceptual Framework

The *Cultural Competence and Confidence (CCC) Model* aims to explain, describe, and predict the phenomenon of cultural competence. This model supports the utilization of formalized learning experience to increase the model's main construct, transcultural self-efficacy (or confidence). Therefore, the *CCC Model* supports the use of formalized education experience, in the form of service learning, to develop pre-licensure health care professional students' confidence in delivering care to diverse populations.

The *CCC Model* was developed from Jeffreys' observations in the nursing field; Jeffreys' observations focused on the role of confidence, lack of confidence, and overconfidence in nursing students and professionals development of nursing skills. Jeffreys later captured this observation and began applying it to the self-efficacy perceptions concerning specific transcultural nursing, or healthcare, skills necessary for developing cultural competence (Jeffreys, 2016). Jeffreys identified three dimensions to explain specific areas of cultural competence development. These three dimensions -- cognitive, practical, and affective -- are transcultural health care skills, which develop following formalized educational experiences and must be present, in order to provide culturally competent care (Jeffreys, 2016).

Transcultural self-efficacy (TSE) is the perceived confidence for performing or learning the skills necessary to provide care to diverse populations (Jeffreys, 2016). The *CCC model* recognizes that learning is influenced by TSE, and increased TSE improves an individual's ability to provide culturally competent care (Jeffreys, 2016). This connection provides the

rationale for measuring transcultural self-efficacy to reflect pre-licensure health care students' growth in cultural competence.

Furthermore, the *CCC model* identifies three domains, cognitive, practical, and affective, required for the delivery of optimal cultural competence (Jeffreys, 2016). The cognitive domain focuses on one's confidence in one's knowledge concerning many cultural factors that may affect health care (Jeffreys, 2016). The practical domain focuses on one's confidence in interviewing clients of different cultural backgrounds and one's ability to learn about clients' values and beliefs (Jeffreys, 2016). Lastly, the affective domain addresses the attitudes, values, and beliefs an individual has towards providing culturally congruent care (Jeffreys, 2016). These domains are seen as measureable areas that evaluate an individual's confidence in delivering culturally competent care. It is assumed formalized learning experiences in the form of service learning provide development in these domains, thus providing the opportunity for TSE to increase (Jeffreys, 2016).

For the purpose of this project, it is important to note that Jeffreys' *CCC Model* is the theoretical framework for the Transcultural Self Efficacy Tool (TSET). This 83-question survey was utilized in this project to obtain quantitative data to compare the effect of local versus immersion service learning on the impact of confidence, or transcultural self-efficacy, in pre-licensure health care students. The three domains (cognitive, affective and practical) of the *CCC model* were used as subscales for scoring in the transcultural self-efficacy test (TSET) (Jeffreys, 2016). The constructs of Jeffreys' *CCC Model,* including the three domains and transcultural self-efficacy, provided the framework to organize themes from qualitative data. Therefore, Jeffreys' CCC Model was not only the theoretical backbone to quantitative results presented in this project but also supported students' perceptions of cultural competence development

following immersion service learning. The project leader's adapted version of Jeffreys' *CCC Model* is displayed in Figure 1.

Hypothesis Development

According to the CCC Model transcultural self-efficacy is influenced over time by formalized exposure to cultural care concepts and comprehensive learning. Comprehensive learning involves the integration of cognitive, affective, and practical dimensions. Learning and performing transcultural health care skills directly influences the learners' transcultural self-efficacy. Transcultural self-efficacy, or confidence, is believed to directly relate to ones' cultural competency. In order to evaluate growth in transcultural self-efficacy following a service learning experience, a paired-samples t-test was utilized to compare pre and post-test transcultural self-efficacy scores (TSES). A paired-samples t-test was also used to compare change impacted by local or immersion service learning on specific learning dimensions (cognitive, affective and practical). In order to compare the effectiveness of the two service learning types (local and immersion), TSET post-test scores were compared with an independent t-test.

Based on a study by Amerson (2010) of 60 baccalaureate-nursing students, a significant increase from pre-test to post-test TSET scores in students taking part in local and immersion service learning should occur. Kohlbry (2016) supported the positive increase in cultural competency post-test scores compared to pre-test scores after nursing students took part in international travel, with qualitative findings from student surveys that supported positive student growth. Based on a study by Larsen & Reif (2011), nursing students taking part in immersion service learning had significantly higher change in post-test TSET scores when compared to nursing students taking part in local service learning.

Therefore, the hypotheses for this study are:

H1: Pre-licensure health care students experiencing local service learning will not have a statistically significant increase in transcultural self-efficacy scores.

H2: Pre-licensure health care students experiencing immersion service learning will have a statistically significant increase in transcultural self-efficacy scores.

H3: Transcultural self-efficacy scores will increase significantly for pre-licensure health care students who experienced an immersion service learning compared to students who experienced a local immersion service learning.

Design

This study utilized a mixed method design. Quantitative data was obtained from a convenience sample of pre-licensure health care students who took part in immersion and local service learning experiences through Belmont University. The study's qualitative data was obtained as a secondary source of data from Belmont University's Global Health Committee, who surveyed a convenience sample of students all of whom took part in an immersion service learning experience.

Sample

The sample for quantitative data consisted of 276 pre-licensure health care professional students from Belmont University who were enrolled in academic courses that required service-learning experiences. The convenience sample for quantitative data included 31 pre-licensure health professional students enrolled in courses with immersion service learning experience, and 245 pre-licensure health professional students enrolled in courses with local service learning experience. This large convenience sample yielded a small result of completed pre and post-test

surveys. In total, 36 students completed the pre and post-test survey: 16 immersion service learning students and 20 local service learning students.

During the recruitment and surveying of students for quantitative data, a secondary source of qualitative data was presented to the project leader. This data included survey responses from 13 pre-licensure health care professional students from Belmont University. These students took part in unspecified immersion service learning trips to Guatemala in 2016 or 2017. The decision was made to include the qualitative data as supplementary data in order to further support and define students' perceptions of immersion service learning experiences.

Students were each assigned to different lengths of service learning depending on their program of study and course curriculum. The longest amount of service learning was two months in a local setting and three weeks in an immersion setting. Approval for this research project was received from the institutional review board of the university prior to recruitment and surveying. Each student received an invitation to take part in the survey, which included information describing the survey, risks, and benefits.

Students taking part in this project were seeking health professional degrees in nursing, physical therapy, occupational therapy, social work, and pharmacy from Belmont University, classifying these students as pre-licensure health professionals. Students who were not pre-licensure health professional students were excluded from this project. Pre-licensure health care students from these disciplines were chosen because they represent the future population of health care professionals and will be responsible for the care and treatment of diverse populations following graduation and licensure exams. As health care professionals, these individuals will be responsible for upholding the standards for culturally competent care set by governing organizations, including the Institute of Medicine (IOM), Centers for Disease Control

(CDC), American Medical Association, American Nurses Credentialing Center (ANCC), American Physical Therapy Association (APTA), American Occupational Therapy Association (AOTA), National Association of Social Workers (NASW), American Pharmacists Association (APA) and the Joint Commission (Saha et al., 2008). Participation in the TSET survey from pre-licensure health care students allowed for comparison of the effects of local and immersion service learning in multiple health care disciplines.

All pre-licensure health care students included in the quantitative portion of this study had previous clinical experience. The expectation was that pre-licensure students with previous clinical experience had foundational patient care training and experience, giving them the groundwork for cultural competence development. Jeffreys' *CCC Model* explains the assumption that novice learners will have lower Transcultural Self-Efficacy (TSE) scores because of their inexperience (Jeffreys, 2016). For this reason, it would be considered inaccurate to compare novice and advanced students. The qualitative data survey did not ask students to specify if they had previous clinical experience. Therefore, it was not possible for the project leader to exclude these participants from the qualitative data set based on the classification of previous clinical experience.

Four clinical groups of pre-licensure health professional students who took part in immersion service learning were included in this project. Three immersion service learning groups contributed to the quantitative results of this project, while one immersion group contributed qualitative results. The sample of students for quantitative data included 7 students who traveled to Cambodia in May of 2016, 7 students who traveled to Cambodia in May of 2017, and 2 students who traveled to Guatemala in May of 2017. A single group of 13 students who took part in unspecified immersion service learning trips in 2016 or 2017 contributed to the

qualitative data in this study. All immersion clinical groups required pre-licensure students to work in clinical groups to assess community health needs, learn about local culture, and carry out hands-on health care experience.

Pre-licensure health students who took part in local service learning experience did so in clinical groups or individually as assigned by their program advisor. Five groups of pre-licensure health professional students from the Doctorate of Pharmacy, Masters of Science in Occupational Therapy, Doctorate of Physical Therapy, Bachelors of Science in Nursing, and Bachelors of Social Work programs were included in the local service learning portion of the quantitative data included in this study. Local service learning required students to assess the needs of clients at local facilities in Nashville, Tennessee. Pre-licensure health care students assisted in patient care, and developed patient care plans during local service learning experiences.

Belmont University is a private university that provides liberal arts and professional education in a non-denominational Christian community focused on learning and service (Factbook, 2017). The university's population is 78.8% white and 63% female (Factbook, 2017). The pre-licensure health professional students involved in this study were all enrolled in Belmont University's Gordon E. Inman College of Health Sciences & Nursing or Belmont University's College of Pharmacy. Belmont University is located in Nashville, Tennessee, which is known as a hub for U.S. health care and is home to nearly 400 health care companies (Fletcher, 2015).

Instrument

The Transcultural Self-Efficacy Tool (TSET) was designed as a diagnostic tool to evaluate students' self-efficacy (confidence) concerning culturally competent care of diverse individuals (Jeffreys, 2000). Utilization of the TSET in this project provided quantitative data in

the form of transcultural self-efficacy (TSE) scores from pre-licensure health care students. The TSET consists of 83 items that measure confidence on a 10-point rating scale (1=not confident, 10= totally confident) (Jeffreys, 2016). Three subscales (cognitive, affective, practical) exist within the TSET in order to holistically reflect transcultural self-efficacy perceptions (Jeffreys, 2016).

Multiple studies have confirmed the reliability and validity of the TSET (Amerson, 2010; Jeffreys, 2000, 2016; Jeffreys & Dogan, 2010; Jeffreys & Smodlaka, 1999). Content validity, criterion-related validity, construct validity, and reliability for internal consistency has been reported for the TSET (Cronbach's α= .92 to .98) and stability (test-retest reliability= .64 to.75) (Jeffreys & Dogan, 2010; Halter et al., 2015). A factor analysis by Jeffreys and Dogan (2012) has resulted in estimates of internal consistency that resulted in .99 for total and .95 to .99 for the three subscales.

All data from the TSET and initial demographics form was obtained through Qualtrics, a research platform funded and supported by Belmont University to conduct academic research. Qualtrics allowed the TSET to be delivered in electronic form that is compatible with multiple mobile devices. Surveys completed by pre-licensure students on Qualtrics were automatically delivered as an online report to the researcher.

Qualitative data presented in this project was obtained from a structured four-question, post-trip survey created by Belmont University's Global Health Committee. The project leader had no involvement in the creation of this survey. Survey questions were created with the purpose of receiving students' perceptions on the use/ importance of immersion service learning trips with the questions having some pre-determined foci. This survey was later presented to the project leader of this study as a source of additional data to evaluate the effect of immersion

service learning on students' perceptions of their development in the delivery of health care. It is unknown if students that received this survey were specifically educated on cultural competence and the constructs of Jeffreys' *CCC Model* because the project leader had no involvement in the delivery of surveys.

Data collection

All quantitative data was obtained electronically, with invitations, pre-test, and post-test survey links emailed to pre-licensure health care students using the university's email system. In an effort to improve recruitment and response rates, faculty members who served as course administrators sent survey invitations and survey links. It was expected that the sampling population would comply with a request if it came from an authoritative source, leading to a higher survey return rate (Dillman et al., 2014).

Permission was obtained from Springer Publishing to transcribe the TSET survey into Qualtrics survey system. Transcribing the 83-question survey into Qualtrics allowed students to receive a link that directed them to the pre and post-test survey. Pre-licensure students received email invitations with the pre- and post-test survey link on a weekly basis for three weeks, beginning one week prior to service learning experience and immediately after service learning experience. In an effort to improve response rates, students that completed the pre-test but did not finish the post-test immediately prior to their experience received an email invitation with an added incentive for completion of the post-test up to four months after service learning experience. The added incentive was entrance into a raffle for a $50 gift card; all students who completed the pre- and post-test were included in the raffle.

Qualitative data was obtained in hard-copy format from Belmont University's Global Health Committee. Trip leaders/faculty members delivered hard copy, paper surveys to students

prior to their immersion trip and at the completion of the trip. For the purpose of this study, only post-trip data was utilized. Students did not receive a monetary incentive to complete the survey. All surveys were de-identified, with students providing a four-digit code to match pre- and post-test responses. All hard copy surveys were stored in a file locked cabinet by a professor in Belmont University's Global Health Committee. Once hard copies were returned for analysis, they were kept secure in a locked cabinet, though as mentioned, no identifiers were available other than the number designations. Student responses were then transcribed into NVivo, a qualitative data analysis software that organizes and maintains all coded material. This software allowed qualitative data to be managed in an organized and secure manner.

Quantitative data analysis

All completed TSET surveys were analyzed based on total scores and subscales scores. Means for total scores and subscales scores were calculated and displayed according to students' learning type, immersion or local service learning. The IBM SPSS statistics software program was used to perform independent t-tests to compare pre-test totals between local and immersion service learning. A paired samples *t*-test to compare pre-test total score to the post-test total score for both immersion and local service learning. The same paired-samples t-test was used to analyze each subscale score and compare mean pre- and post-test scores of immersion and local service learning. Lastly, an independent t-test was used to compare the post-test scores between immersion and local service learning in order to examine the effect of each clinical section and the service leaning method it employed.

This statistical analysis method is consistent with guidelines provided by Jeffreys' (2016) *Teaching Cultural Competence in Nursing and Health Care*.

Qualitative data analysis

A qualitative analysis was performed on the pre-licensure health care students' responses to the four, structured pre- and post-test survey questions. Pre-test surveys were not included in this study but were included in the analysis process to provide congruency for the project leader and qualitative data expert/faculty advisor, who performed analysis of surveys. The analysis of pre-licensure health care students' responses was done with an open coding strategy using NVivo 10.

An open coding strategy was utilized as an exploratory method to ensure all concepts were identified in students' responses (Corbin & Strauss, 2015). Open coding produced nodes, or codes, for points of data. Nodes (codes) were clustered into themes and subthemes and were abstractly named according to meaning and where appropriate, in conjunction with the *CCC Model*. Prior to the analysis of surveys, the project leader and faculty advisor identified that the data might present strong connections with the theoretical concepts of Jeffreys' *CCC Model* and that this could serve as a junction between qualitative and quantitative data. After analysis, nodes that provided clear and strong connections to Jeffreys' CCC Model were categorized into subthemes for themes named according to concepts within the model. Nodes not clearly and specifically related to Jeffreys' theoretical model were identified and presented a clear picture of students' perceptions.

Verification of data was established through many strategies, including the creation of memos and audits performed by Belmont University's Qualitative Research Group, in addition to the use of a mentor/external auditor well experienced in qualitative analysis. Memos were created by the project leader in order to produce an audit trail and create a dialogue of thought and decision making behind the creation of nodes, themes and subthemes (Corbin & Strauss, 2015). The data and process were also reviewed and audited by the Qualitative Research Group,

composed of Belmont University faculty. Audits were performed by faculty not directly involved in the project to produce confirmability and to ask questions of the project leader to clarify themes. Auditors gave minor suggestions, which the research team considered and incorporated into the analysis.

Results

Quantitative Data

Thirty-four pre-licensure health care students were included in this study. One student classified as a male, while the remaining 33 classified as female. The majority of students were 21 years old (56%), 6% percent were under the age of 21, 38% were over the age of 21. Twenty-four students classified themselves as undergraduate seniors, 21 nursing students and three social work students. The remaining 10 students were 3rd or 4th year graduate students, one student in the Masters for Occupational Therapy (OT-M) program, five students in the Doctorate of Physical Therapy (PTD) program, and four students in the Doctorate of Pharmacy (PharmD) program. The majority of students were white (82%), other ethnic groups included Asian (12%) and African American (6%). Of the 34 students, 44% of students had previous experience with immersion. See Figure 2 for complete descriptive statistics.

An independent samples t-test was conducted to compare totals between the local and immersion groups. Levene's test indicates homoscedasticity $F(18,14) = .894$, $P= 0.352$. There was not a significant difference in the local group pre-test scores ($M= 607.53$, $SE= 94.82$) and the immersion group pre-test scores ($M= 613.2$, $SE= 119.43$) conditions; $t (32) = -0.16$, $p= 0.88$; $d=-0.05$. These results suggest that our local and immersion group pre-test scores are consistent. See Figure 3.

A paired-samples t-test indicated that post-test scores were significantly higher for local group total post-test scores (M= 682.74, SE= 91.20) than for the total pre test scores (M= 607.53, SE= 94.82), t(19) = 4.855, p = .000, d = 0.57. The paired t-test results do not support our assumption. A paired-samples t-test indicated that post-test scores were significantly higher for immersion group total post-test scores (M= 724.33, SE= 83.05) than for the total pre-test scores (M= 613.20, SE= 119.43), t(15) = 4.41, p= .001, d = -0.76. These results support our assumption. See Figure 4.

A paired-samples t-test was used to analyze each subscale score and compare pretest and posttest mean scores for both local and immersion service learning groups. In the local group, significant increase was demonstrated in the practical subscale [pre-test, M= 168.21, SE= 40.80; post-test M= 193.58 SE= 35.24; t(19)=2.81, p<.001] and affective subscale [pre-test, M= 257.42, SE= 23.24; post-test M= 275.68 SE= 20.52; t(19)=5.73, p<.001]. The immersion group demonstrated significant increase in the cognitive subscale [pre-test, M= 178.33, SE= 48.76; post-test M=215.00 SE= 28.43; t(15)=4.32, p=.001] and practical subscale [pre-test, M= 177.00, SE= 53.70; post-test M= 235.40 SE= 44.83; t(15)=5.02, p<.001]. See Figure 5.

An independent samples t-test was conducted to compare post scores between the local and immersion groups. Levene's test indicates heteroscedasticity F(18,14) = 0.184, P= 0.67. There was not a significant difference in the local groups post-test scores (M= 682.74, SE= 91.20) and the immersion group post-test scores (M= 724.33, SE= 83.05); t (31)=-1.37, p = 0.179; d=-0.47. These results suggest that post-test scores are consistent between the intervention and control group, therefore not supporting the assumption. See Figure 6.

Qualitative Data

The qualitative data collected from Belmont University pre-licensure health care students' post immersion trip questionnaires did not contain any specific demographic information. Demographic information that was obtained included students' majors, identifying them as pre-licensure health care professionals, and their involvement in an immersion service-learning project. A total of 13 pre-licensure health care students' post-immersion trip questionnaires were included in this study.

The major concept of "cultural competence" centered the themes of the students' questionnaires. This major concept may have been identified because of the title of the questionnaire that students received, "Intercultural Competency Study Participation." It is assumed that this title focused the students' responses toward the idea of cultural competence. From this major concept, themes of "comprehension", "compounded experiential learning", "skill development", "interaction", and "affective" emerged. Sub-themes that were subservient to their larger themes included, but were not limited to, "interprofessional", "immersion", and "long-term impact". Sub-themes were made up of many focused codes; focused codes included invivo codes, which are codes composed of students actual written words, and specific nodes that described sub-themes.

Pieces of important data found in transcripts were named (coded). These frequently cited codes were then sorted into groups called focus codes. These focus codes were sorted and larger sub-themes names were derived. Some themes that arose from the data appear to be consistent with the *CCC Model,* which was used to drive this project. In order to highlight congruency, conceptual names that occurred in the *CCC Model* that were consistent with the data found in student questionnaires were used as theme names.

Abductive reasoning was used in the naming and sorting process of open and focused codes. Abductive reasoning is defined as a type of reasoning that begins by examining data and after scrutiny of the data, all possible explanations of data are entertained, allowing the researcher to arrive at the most plausible interpretation of the observed data (Charmaz, 2006). By using abductive reasoning, themes were identified due to being highly referenced in multiple sources, or questionnaires. “Skill development” was the most coded and appeared most often, appearing in all 13 questionnaires and references 38 times. “Comprehension” appeared in 12 questionnaires and was referenced 35 times. “Interaction” occurred in seven questionnaires and was referenced 13 times. “Affective” appeared in nine questionnaires and was referenced 12 times.

The theme “comprehension” emerged from multiple students describing how and what they comprehended, largely focusing on their newfound comprehension of the culture in which they were immersed. “Skill development” was widely mentioned in the questionnaires, including students’ recognition of the long-term impact of new skills related to cultural immersion. Students’ used phrases such as: “huge in my career” and “prepares me for challenges”, when speaking about “skill development”. Throughout questionnaires, students referenced how hands-on experience, coupled with classroom learning improved their understanding, resulted in “compounded experiential learning” emerging as a theme influencing the other themes of “comprehension” and “skill development”. The theme “interaction”, with the culture and other professions, emerged from questionnaire responses. Students used the terms “working with”, “learning from”, and “to aid my team” to describe interactions on immersion trips. Most students’ shared affective feedback including feelings, beliefs, self-awareness, and emotions experienced on their immersion trips.

Abductive reasoning was also utilized to define sub-themes that emerged from the data. Many sub-themes fit easily inside of major themes and were coded as focus codes during the questionnaire analysis process. Sub-themes for the themes “skill development” and “comprehension” included “cultural” and “interprofessional”. Because of focus codes derived from students’ questionnaires responses, it was clear that their experiences working with other healthcare professionals and a culture different than their own were impactful. Sub-themes that did not clearly fit into a theme at the time of analysis were re-evaluated during the sorting process, and under scrutiny were found to describe or relate to a theme. For example, the theme, “affective” includes many invivo codes as sub-themes. These invivo codes were not originally coded under a specific theme, however, during the sorting process the team evaluated the invivo codes further and identified their connection to “affective” based on students’ references to emotions, feelings, and self-awareness.

The data evaluated in this project was insufficient to suggest specific relationships (and therefore create a theory or specific framework), but abductive reasoning suggested a relationship between the common themes that emerged through this project’s data to concepts identified in *Jeffreys’ CCC Model*. Major themes were explicated from student questionnaires; additionally themes were connected and depicted in an integrative diagram based on Jeffreys pre-existing model.

See Figure 7 for an integrative diagram of the major concept and themes. See Figure 8 for a table of themes and sub-themes. See Figure 9 for student focus codes related to specific themes.

Discussion

Quantitative Data

Three research questions were evaluated by this project. The first question was: 1) Would pre-licensure health care students taking part in a local and immersion service learning experience a significant change in Transcultural Self-Efficacy Scores (TSES)? 2) Would students who took part in immersion service learning experience a significant increase in post-test TSES when compared to local service learning students? 3) Did local or immersion service learning produce a significant change in differing TSET subscales?

Overall, pre-licensure health care students taking part in both, local or immersion service learning experienced a significant increase in transcultural self-efficacy scores. The results of this project demonstrate the effectiveness of local and immersion service learning methods to improve the transcultural self-efficacy in pre-licensure health care students. The project results support findings from previous studies, which demonstrated not only successful utilization of service learning methods, but also improvement in students' cultural competence and confidence when delivering health care to diverse populations (Amerson, 2010; Amerson & Livingston, 2014; Denton, 2016; Gaster, 2011; Larsen & Reif 2011; Jeffreys & Dogan, 2012; Long 2016).

When the service learning methods were compared to one another, no difference was found between local and immersion service learning related to total TSET scores. Though TSES are not significant differently, it should be noted that the immersion service learning group did display higher pre-test scores and on average did display a greater amount of change from pre-test to post-test scores. Higher pre-test scores of immersion service learning students is supported by the 2010 study by Amerson is likely related to students' voluntarily involvement in immersion trips. Students taking part in immersion service learning were required to submit

applications and raise funds for trips, which demonstrated a vested interest in increasing their cultural competence and a selection bias.

Pre-licensure health care students who took part in local service learning had significant change from pre- to post-test scores in their practical and affective subscales. Pre-licensure health care students who took part in immersion service learning had significant change from pre- to post-test scores in their cognitive and practical subscales scores. According to the *CCC Model*, the practical dimension includes growth in the students' confidence to apply practical skills, including communication (Jeffreys, 2016). The affective dimension coincides with students' growth in self-awareness, awareness of cultural differences, acceptance, appreciation, recognition, and advocacy (Jeffreys, 2016). The cognitive domain relates to students' development in their knowledge and comprehension about ways that culture can influence health care practices.

Pre-licensure health care students who took part in immersion service learning displayed an insignificant change from pre- to post-test scores in the affective dimension. This lack of difference is likely due to pre-licensure health care students' voluntary involvement in immersion service learning, thus elevating their pre-test affective subscale scores compared to students taking part in local service learning. It should be noted that significant change did occur for both the local and immersion service learning groups in the practical dimension. This change is mostly likely due to the hands-on experience, including interviewing and caring for individual patients that all pre-licensure health care students experienced. Lastly, it should be recognized that the immersion service learning group displayed a significant change in the cognitive subscale, while the local service learning group did not display a significant change in this subscale. The cognitive dimension asks students to rate their understanding of specific cultural

differences that impact health care. Students who took part in immersion service learning were engaged in health care systems outside of their own country, therefore these students had learning experiences in a transcultural health care setting. These opportunities contributed to students' knowledge of cultural differences and barriers by providing health care to patients of differing cultures.

Qualitative data

The qualitative analysis of this project supports the quantitative results found from the immersion service learning group. The major concept that emerged from student data was cultural competence, representing students central focus and the basis behind their involvement in immersion service learning. Themes that emerged from pre-licensure health care students' questionnaires included "comprehension," "skill development," "compounded experiential learning," "interaction," and "affective." Themes that emerged from the students' questionnaires reflected dimensions of the TSET, which were representative of the constructs of Jeffreys' *CCC Model* (2016). Themes of "skill development" and "comprehension" were the most coded and appeared the most often, supporting the statistically significant change in pre- to post-test cognitive and affective subscale scores from the immersion service learning group. The theme "affective" was coded the least within the pre-licensure health care students' questionnaires, reflecting the insignificant change from pre- to post-test affective scores in the immersion service learning group. The themes of "interaction" and "compounded experiential learning" supported the *CCC Model's* assumption that cognitive, affective, and practical dimensions of transcultural self-efficacy and transcultural skill development change over time as the result of formalized education and learning experiences.

Limitations

Several limitations exist in this study. The sample size for this project was small and homogeneous. Therefore, the sample did not effectively represent the population and the power of the study was low. This project also utilized a self-reporting tool, allowing students to rate their growth in transcultural health care dimensions. Therefore, self-report bias may have occurred. As previously mentioned, pre-licensure health care students taking part in immersion service learning volunteered to take part in the immersion experiences. They submitted applications and raised individual funds to take part in the experiences, thus influencing their desire to increase their cultural competence. Students' voluntary involvement in immersion service learning could also be due to their pre-existing, higher awareness of cultural competence or value of cultural competence.

Implications for Practice

The findings from this project support important implications for pre-licensure health care education, including the fields of nursing, pharmacy, social work, physical therapy, and occupational therapy. The results indicate that immersion and local service learning teaching strategies contribute to students' cultural knowledge, understanding, and skills. Pre-licensure health care students gain confidence in caring for diverse populations from both, local and immersion service learning experiences, thus, improving their ability to provide culturally competent health care to diverse populations.

Future research on cultural competence and transcultural self-efficacy in health care professionals should include the long-term impact of immersion service learning experiences with pre-licensure health care students, including but not limited to, whether immersion service learning experience influences a healthcare professional's skills within their work environment,

and if immersion service learning impacts a health care professionals' willingness to work in a culturally diverse setting. A cost-benefit analysis of short term immersion service learning experiences would also be beneficial in determining the benefit to pre-licensure health care students' TSE when evaluated with the cost of immersion trips. Additionally, the qualitative analysis revealed students' recognition of a multidisciplinary approach to health care practices, this is likely due to students' experiences working with other pre-licensure health professionals on immersion service learning trips. The theme, multidisciplinary approach, should be researched further in order to evaluate the effect of working with multidisciplinary health professionals on students' education and health care practices.

Conclusion

The findings of this project support the use of local and immersion service learning methods to positively influence pre-licensure health care students' transcultural self-efficacy. The pre-licensure health care students from this project demonstrated a significant change in transcultural self-efficacy, representing their confidence in providing culturally competent care to individuals of diverse populations. According to these results, local and immersion service learning methods can effectively improve cultural competence in pre-licensure health care students. Local and immersion service learning methods should be utilized to provide pre-licensure health care students with the experience and knowledge they will need to provide care to individuals of the rapidly-growing, diverse population of the U.S.

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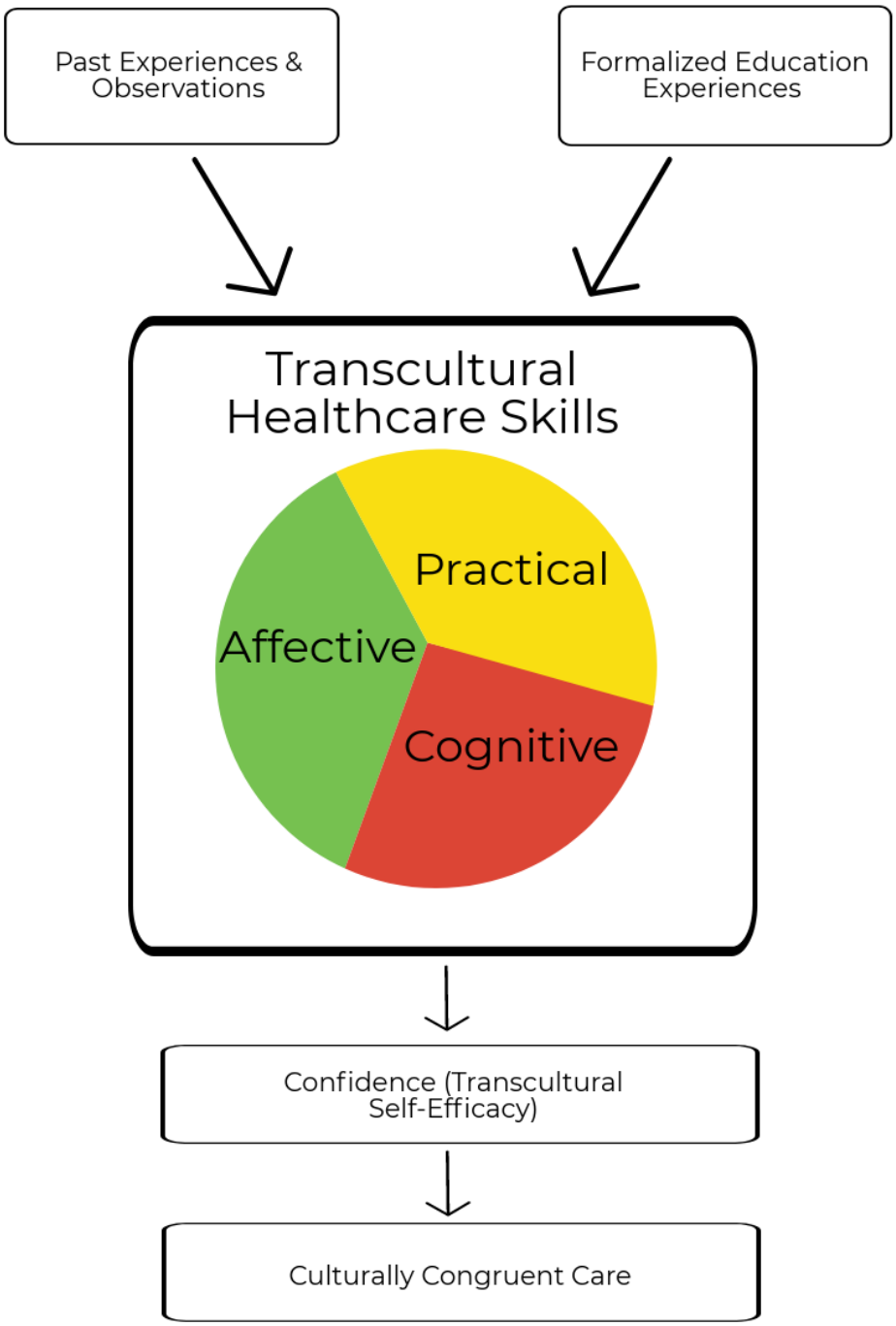
Figure 1: Project leader's adapted version of Jeffrey's CCC Model



Adapted from source: Jeffreys, M. (2016). *Teaching Cultural Competence in Nursing and Healthcare*. New York: Springer Publishing Co.

Figure 2: Descriptive statistics

Demographics	Sample n (%)	Local	Immersion	Sig.
	34(100)	19(55.9)	15(44.1)	
Age in years	23(4.51)	23.68(2.05)	23.1(2.70)	F(1,332) = 0.327; p=0.327
Gender				$\chi^2(1) = 0.813$; p>0.10
Male	1(2.9)	1(5.3)	0(0)	
Female	33(97.1)	15(100)	18(94.7)	
Academic year				$\chi^2(2) = 1.551$; p=>.10
Undergraduate senior	24(70.6)	12(63.2)	12(80)	
3rd year grad	5(14.7)	4(21.2)	1(6.7)	
4th year grad	5(14.7)	3(15.8)	2(13.3)	
Program of study				$\chi^2(4) = 5.839$; p>.10
Nursing	21(61.8)	9(47.4)	12(80)	
OT-M	1(2.9)	1(5.3)	0(0)	
DPT	5(14.7)	4(21.1)	1(6.7)	
PharmD	4(11.8)	2(10.5)	2(13.3)	
SW	3(8.8)	3(15.8)	0(0)	
English as 1st language				$\chi^2(1) = 2.692$; p>.10
Yes	32(94.1)	19(100)	13(86.7)	
No	2(5.9)	0(0)	2(13.3)	
2nd Language				$\chi^2(1) = 0.040$; p>0.10
Yes	5(14.7)	3(15.8)	2(13.3)	
No	29(85.3)	16(55.2)	13(86.7)	
What is your 1st language				$\chi^2(4) = 4.908$; p>0.10
English	29(85.3)	16(84.2)	13(86.7)	
French	1(2.9)	1(5.3)	0(0)	
German	1(2.9)	1(5.3)	0(0)	
Hmong	2(5.9)	0(0)	2(13.3)	
Spanish	1(2.9)	1(5.3)	0(0)	
Born in the US				$\chi^2(1) = 0.813$; p>0.10
Yes	33(97.1)	18(94.7)	15(100)	

No	2(2.9)	1(5.3)	0(0)	
Ethnicity				$\chi^2(2) = 1.696$; $p>0.10$
Asian	4(11.8)	2(10.5)	2(13.3)	
Black	2(5.9)	2.10.5)	0(0)	
White	28(82.4)	15(78.9)	13(86.7)	
Previous work experience				$\chi^2(4) = 3.395$; $p>0.10$
None	14(41.2)	8(42.1)	6(40)	
PT Tech	12(35.3)	5(26.3)	7(46.7)	
OT Assist	1(2.9)	1(5.3)	0(0)	
Pharm Tech	5(14.7)	3(15.8)	2(13.3)	
Other	2(5.9)	2(10.5)	0(0)	
Other clinical experience				$\chi^2(3) = 2.598$; $p>0.10$
None	31(91.2)	16(84.2)	15(100)	
CNA	1(2.9)	1(5.3)	0(0)	
SA Trainer	1(2.9)	1(5.3)	0(0)	
VESNIP	1(2.9)	1(5.3)	0(0)	
Previous abroad experience				$\chi^2(1) = 0.071$; $p>0.10$
Yes	15(44.1)	8(42.1)	7(46.7)	
No	19(55.9)	11(57.9)	8(53.3)	
Number of abroad experiences				$\chi^2(1) = 0.010$; $p>0.10$
1	13(38.2)	7(85.7)	6(85.7)	
2	2(5.9)	1(12.5)	1(14.3)	
Previous medical missions				$\chi^2(1) = 1.754$; $p>0.10$
Yes	4(11.8)	1(5.3)	3(20)	
No	30(88.2)	18(94.7)	12(80)	

Figure 3: Independent t test for pre totals

	Local			Immersion						
	M	SE	n	M	SE	n	t	df	p	d
Total	607.53	94.82	19	613.2	119.43	15	-0.16	32	0.88	-0.05

	95% CI
Total	69.10; -80.45

Figure 4: Paired t test for pre scores and post total scores by group

	Diff		Post			Pre						
	M	SE	M	SE	n	M	SE	n	t	df	p	d
Local	75.21	67.52	682.74	91.20	19	607.53	94.82	19	4.86	18	<.001	0.57
Immersion	111.13	97.71	724.33	83.05	15	613.2	119.43	15	4.41	14	.001	-0.76

	95% CI
Local	42.67; 107.75
Immersion	57.03; 165.24

Figure 5: Paired t test for subscale pre scores and post total scores by groups

	Post			Pre						
Local	M	SE	n	M	SE	n	t	df	p	95% Cl
Cognitive	193.58	35.24	19	168.21	40.80	19	2.81	18	.011	6.43, 44.31
Practical	213.47	47.92	19	181.89	50.58	19	3.99	18	.001	14.96, 48.20
Affective	275.68	20.52	19	257.42	23.24	19	5.73	18	<.001	11.56, 24.97
Immersion										
Cognitive	215.00	28.43	15	178.33	48.76	15	4.32	14	.001	18.48, 54.85
Practical	235.40	44.83	15	177.00	53.70	15	5.02	14	<.001	33.45, 83.35
Affective	273.93	23.18	15	257.87	30.31	15	1.96	14	.070	-1.48, 33.61

Figure 6: Independent t test for post totals

	Local			Immersion						
	M	SE	n	M	SE	n	t	df	p	d
Total	682.74	91.20	19	724.33	83.05	15	-1.37	32	0.18	-0.47

	95% CI
Total	20.13; -103.32

Figure 7: Integrative diagram of major concept and themes

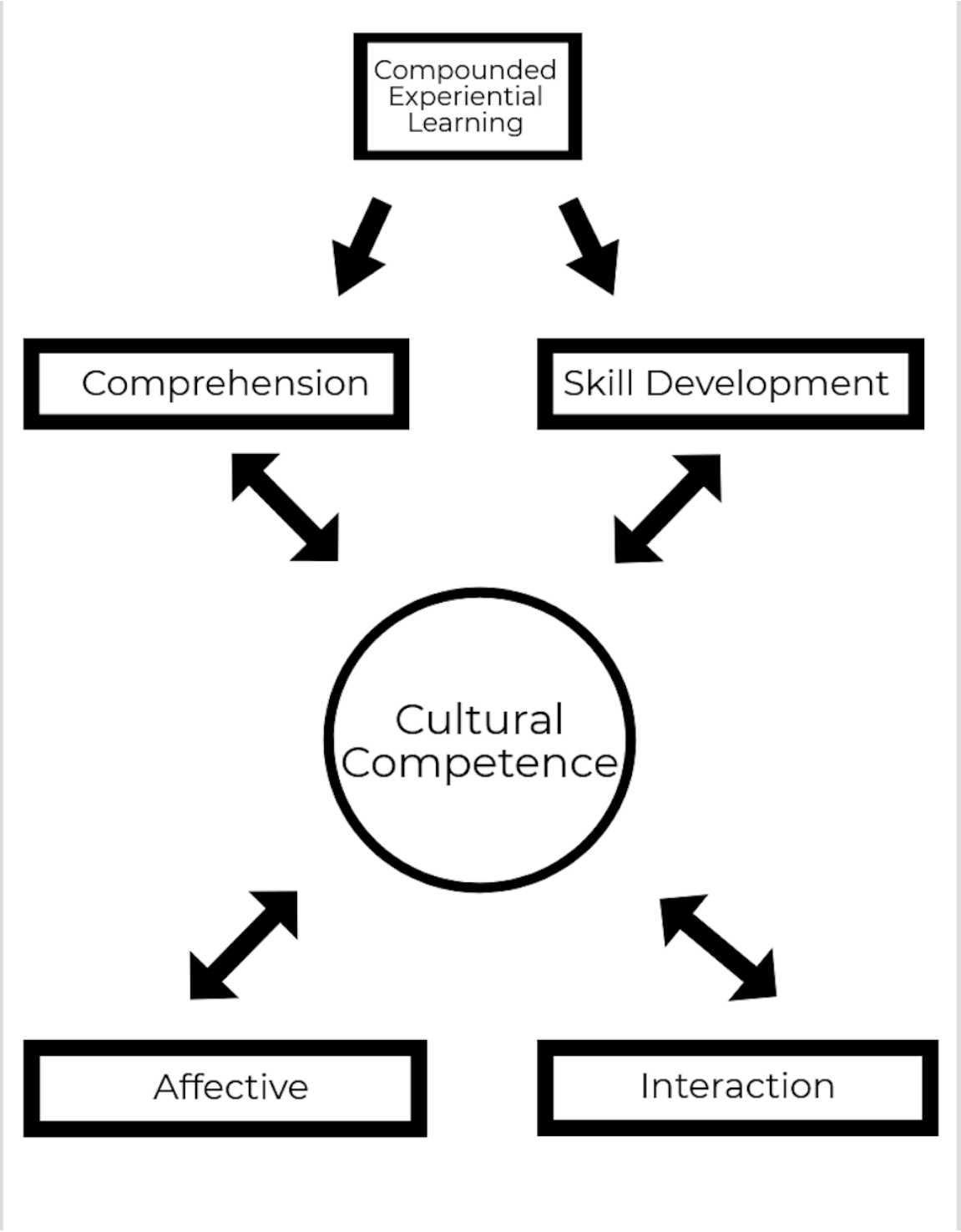


Figure 8: Themes and their sub-themes

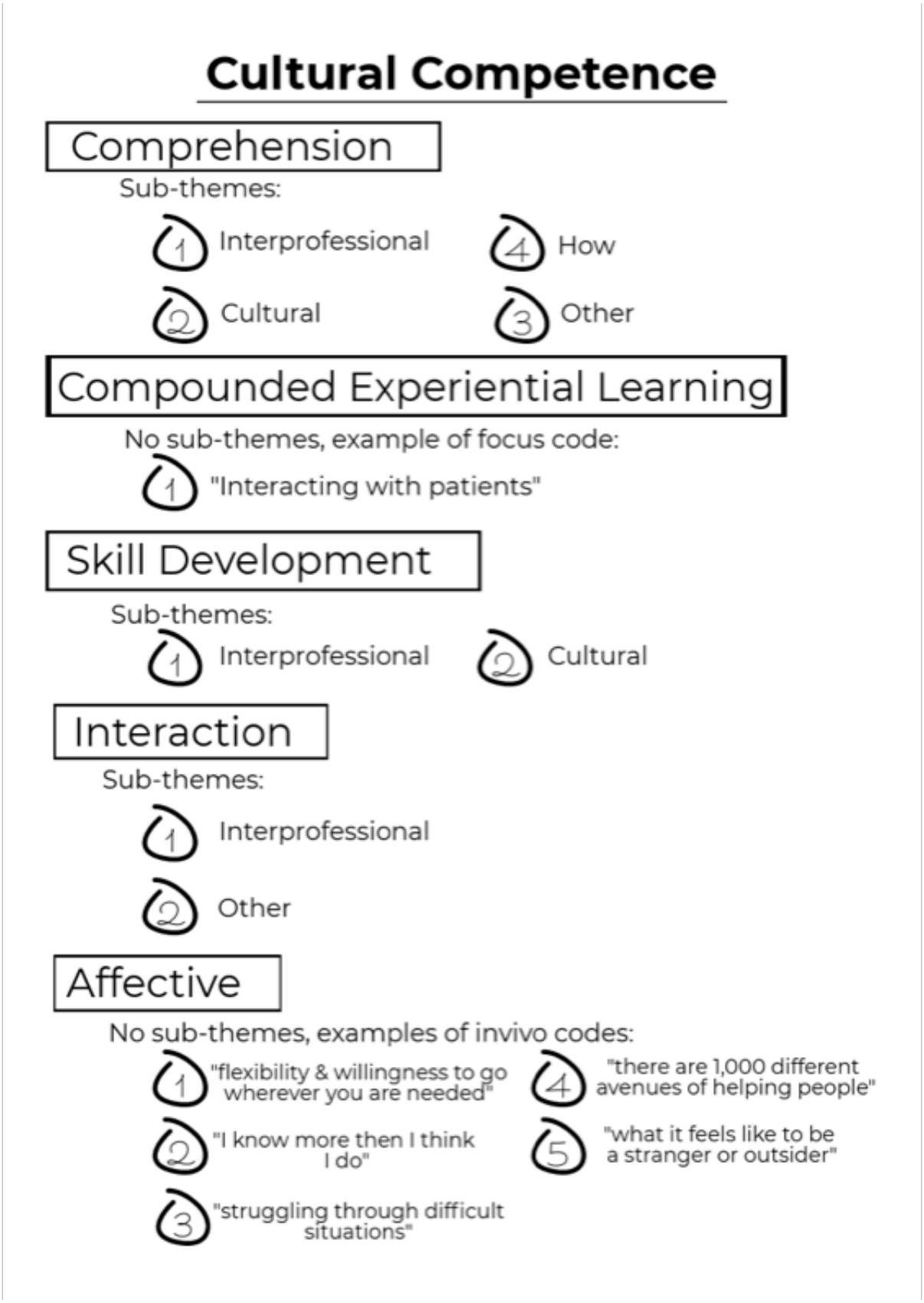


Figure 9: Student exemplars related to common themes and subthemes

Common Themes	**Focus Codes (exemplars)**
Comprehension	• "…improved cultural and interprofessional understanding…" • "…learned about orphan care and how to create sustainable, appropriate changes based on the country or regions need." • "I understand the backgrounds of others better."
Skill Development	• "I plan to improve my Spanish skills so that I am a more competent communicator in the healthcare setting." • "…use any skill I had, medical/other to aid my team." • "…use these skills and this understanding to be more empathetic and culturally competent provider." • "…very important for developing my career skills because I will see a diverse population of patients as well as it is extremely important to communicate well with the other healthcare workers from different professions."
Compounded Experiential Learning	• "We learn about it in class, but it was helpful to see it applied." • "I now have a more tangible understanding of what it is like to live and spend time in a foreign place where I don't speak the same language as the natives." • "I learned this through my experiences this week in Guatemala while working with kids, patients"

Interaction	• "…the experiences I had with working as a team this week will be invaluable." • "…talking and building relationships with those around me because it helped me learn." • "I had the opportunity to work with OT to co-treat children, and with OT/nursing/pharmacy to assess and provide education for patients in a temporary clinic setting."
Affective	• "This experience has allowed me to have a greater appreciation and understanding of other healthcare professionals and another culture." • "…what it feels like to be a stranger or outsider." • "….flexibility and willingness to go wherever you are needed."

Appendix

Section 1: Complete list of qualitative data codes

Themes	Subthemes	Codes
Affective	• Appreciation →	• Cultural -Complexity -Individualized care • Interprofessional
	• Spiritual impact-life changes →	• Invivo-"I'd like to adopt"
	• Self-awareness →	• Perception alignment • Invivo- " it is important to let go of the need to be needed"
		Codes not held within a subtheme: • Invivo-"Flexability and willingness to go wherever you are needed" • Invivo- "I know more than I think I do" • Invivo- "struggling through difficult situations" • Invivo- "There are 1000 different avenues of helping people" • Invivo' "what it feels like to be a stranger or outsider" • Missed opportunities
Compounded experiential learning		Codes not held within a subtheme: • Daily experiences • Immersion • Interacting with patients • Invivo- "treating my patient differently based off how I felt this week"

Comprehension	• Cultural →	• Avoiding bias • Factor acknowledgement • Need for cultural sensitivity -Sustainment • Patient goals
	• Importance of structured prep →	• Lack of • Invivo- "Vital to success" Codes not held within a subtheme: • Authentic presence • Best practices • By doing • By listening • By observing • By reflecting • Interprofessional • Personal relations • Professional role

Interaction	• Interprofessional →	• Importance of professional guidance-hierarchical leadership -Accepting practice ambiguity • Invivo- "each one of them has a gift" • Invivo- "working as a team this week will be invaluable" • Relationship building Codes not held within a subtheme: • Cultural • Human experience

Skill development	• Clinical application →	• Education provision
	• Cultural →	• Managing bias
	• Long-term impact →	• Career development - Specific role • Career goals • Future participation • Importance of structured prep • Integration • International application
		Codes not held within a subtheme: • Being client entered • Best practices • Cognitive • Communication • Confidence instilled • Creative & innovative • Empathy • Flexibility and willingness • Importance of structured prep • Interprofessional • Maximizing resources

Section 2: Memo synopsis

Nov 15th, 2017:

Six questionnaires have been coded at this time and it has been identified that major themes that are arising include skill development, a multidisciplinary approach, and compounded experiential learning. It is believed that students have a focus on the multidisciplinary approach because this idea has been a huge push through the Belmont University's health sciences college. These immersion trips are also one of the few times that pre-licensure health students have the opportunity to work alongside students from other health science majors. It is also important to note that skill development is many different facets have been identified. These immersion experiences provide hands on experience with patients, providing an opportunity for students to practice patient care. Many students have also spoken to the idea of compounded experiential learning. That they become more comfortable with patient care after time goes on and they are giving more experiences to practice and learn.

Nov 16th, 2017:

Analysis of surveys has been continued, including continued discussions about coding. Because of nodes emerging, and continued use of terminology by students that pertains to the learning dimensions of Jeffreys CCC Model it is thought at this time that the dimensions (cognitive, affective, and practical) will be utilized as major themes. At this time it has been discussed to organize nodes into major themes, subthemes, and descriptive concepts. This idea has arisen because of the natural separation that is taking place with node identification. Some nodes have clearly been identified as fitting into larger concepts of comprehension & skill development. It is also believed that there are major themes that are outliers to Jeffreys CCC Model, one that stands out specifically is many students mention of the importance of

interprofessional interactions, communication, and skills. Interprofessional experience is an outlier of this project's objective of evaluating cultural competence, but it will be important to note as it has emerged as an important concept to students.

Nov 28th, 2017:

Another aspect of the surveys that is important to note at this point in the analysis is that these students were responding to structured questions, because these questions were structured students spoke specifically to them. A question 3 in the post-test survey specifically asks why the students experience is important for them to develop career skills. This should be noted because strong concepts of "career development" and "skill development" have arisen during the analysis processes; these questions may have played a role in the development of these concepts.

Belmont University's Intercultural Group, without the project leaders involvement, created all survey questions. This data was received as a secondary data set. This is important to note because there is potentially important information that has not been included in this survey; this includes students' identifying how much previous clinical experience they have. This was included in the quantitative portion of this project to ensure that all students included were not considered novice learners and had foundational pieces for cultural competence development (as identified in Jeffreys CCC Model). Though there has been some difficulties with receiving a secondary data set that I, the project leader, has not had an involvement in, therefore, giving students a larger range of concepts to discuss. Thus, giving a more complete picture of the students' perceptions of the outcome following immersion experiences.

Lastly, in there was an interesting new concept identified in case 3721. This student made a strong point that had not been mentioned by any other students. This student identified that cultural competence is an ongoing process, and that they are specific needs in order to be

comfortable with practice ambiguity and working through a lack of confidence. Specific needs that this student suggested were a requirement for working through ambiguity included professional guidance, in the form of leaders that were open to sharing that they also did not know every clinical answer. This is a strong example of cultural competence and growing confidence in the delivery of healthcare.

Nov 30th, 2017:

At this point in the analysis process coding of students' survey forms is complete. All nodes have been compiled in Nvivo. These nodes will be accounted for and sorted in 1-2 upcoming sorting sessions. It has been discussed that sorting will including matching to the theoretical model for this project, Jeffreys CCC Model. This decision has been made because concepts have emerged that clearly fall into the major concepts of Jeffreys' model. The major concepts of Jeffreys model include: the areas of transcultural health care skills (cognitive, practical, and affective), compounded experiential learning, formalized learning experiences, and confidence. Jeffreys CCC Model will not be used to drive sorting but will allow for the correlation between the model and emerging concepts to be highlighted. Concepts that do not match the CCC Model will still be represented by this project as they still represent the thoughts and perceptions that are important to pre-licensure health care students following immersion service learning.

Following the most recent coding session it is important to note that the most common concepts that have emerged are skill development (referenced 33 times), comprehension (30), and interaction (10). Many discussions have taken place between the qualitative data analysis team for this project about how skill development has represented a strong relationship to Jeffreys' concept of development of practical skills. These skills include communication and the

practical application of skills related to caring for patients (Jeffreys, 2016). Many students have specifically noted skill development, and many have specifically noted what skills they have developed. For example, skill development related to specific cultural skills has been referenced 7 times. In the case 3456, the student stated her experience had made her more culturally sensitive and unassuming, leading to patient care that was not judgmental.

The concept of comprehension was references 30 times throughout the 13 student surveys. Sub-concepts related to comprehension include cultural knowledge, communication, and how comprehension was achieved (by listening, doing, observing, and reflecting). This concept clearly relates to the concept of the growth of the cognitive transcultural healthcare skill. It is clear throughout the students' surveys that they gained knowledge following immersion service learning experiences. An example of this is seen in the case 6325 when they reference that following their experience they now understand that cultural difference has a large impact on care. It should also be noted that one student (3721) noted that he/she was made more aware of the knowledge she already had following the experience, stating, "I know more than I think I do".

The concept of interaction was referenced 10 times throughout the post-test surveys. Sub-concepts of interaction included cultural, interprofessional, and human experience. Interprofessional interactions were referenced the most at 10 times, including the specific invivo code of "each one of them has a gift" in case 1234. At this time it seems like this concept is an outlier of Jeffreys CCC Model but has obvious importance to students' perception of the outcomes related to immersion service learning.

Dec 4th, 2017:

The project leader and qualitative advisor/team member began the process of sorting nodes today. There were 4 main concepts that arose that already contained child nodes from the coding process. The concepts that emerged and were named by the team included: interaction, affective, comprehension, and skill development. These were identified as main concepts because of the amount of times they were references and the amount of sources, or questionnaires, that they were present in. “Skill development” was the most referenced and was in the most sources, appearing in all 13 questionnaires and references 38 times. “Comprehension” appeared in 12 questionnaires, and was referenced 35 times. “Interaction” occurred in 7 questionnaires and was referenced 13 times. Lastly, “affective” appeared in 9 questionnaires and was referenced 12 times.

Like previously stated most main concepts already included child nodes that clearly fit while coding was taking place. Some main concepts were also found to be important, as they fit well into and confirmed information founded in Jeffreys’ theoretical model. For example, there were clear interprofessional and cultural pieces that belonged to the comprehension and skill development sections. Another main concepts that was identified and named, based on existing nodes, were “affective concepts”. It was clear that appreciation, self-awareness, spiritual impact, and multiple invivo codes all represented an affective piece that was presented by questionnaire participants, therefore this concept was created and title accordingly. An example of some of the invivo codes that clearly fit into the affective concept include: “what it feels like to be a stranger or outsider” and “struggling through difficult situations”. These affective invivo codes speak volumes to the definition of the concept, which is defined by Jeffreys in the CCC Model. Jeffreys’ defines the affective dimension of the CCC Model as including self-awareness,

awareness of cultural differences, acceptance, appreciation, recognition, and advocacy (Jeffreys, 2016).

After defining these four major concepts, outliers were examined. One outlier included compounded experiential learning. This concept was identified in 6 sources of students' questionnaires, and was referenced 9 times. This concept included 4 child nodes, these included: daily experiences, immersion, interacting and an invivo ("treating my patients differently based off how I felt this week"). When looking at this concept it was decided that though this concept was strong, it was not solitary like the previously mention concepts. After looking deeper into the context of the nodes included in the compounded experiential learning concept, it was made clear that this concept influence both comprehension and skill development. For example, participant 1234, stated "we learned it in class, but it was helpful to see it applied" in reference to comprehending different medical conditions in children.

During this meeting the project leader and qualitative expert/team member began to discuss and plan a conceptual image to graphically display the major concepts and sub-concepts. It was clear that all of the major concepts at this point were pointing to a larger, centerpiece theme of cultural competence. This was even supported by the fact that the questionnaire that students completed was titled "Intercultural Competency Study Participation"; therefore it was clear that students were speaking to the idea of cultural competence. The project leader and qualitative expert/team member decided that a circular thematic structure made the most sense, with major themes surrounding the main concept of cultural competence. While the suggested relationships based on Jeffreys' model, the data we evaluated was insufficient to suggest specific relationships (and therefore create a theory or specific framework). We are explicating concepts involved but the concepts were connected based on Jeffreys pre-existing model. The main

concept of cultural competence can also be referred to as the core category, which clearly represents the main theme of the research and the concepts that all other concepts relate to (Corbin & Strauss, 2008).

Dec 11th, 2017:

The project leader and qualitative advisor/team member have completed sorting the remaining nodes including importance of structured prep, cultural competence, cultural competence-confidence, missed opportunities, and importance of professional guidance. It was clear that "cultural competence" and cultural competence-confidence", clearly fit into the center of the model, which emerged from the data. These nodes are important to note that student spoke directly about the concept of cultural competence even without being prompted to do so by the survey questions.

It should be noted that the team used abductive reasoning in the sorting process of the nodes. Abductive reasoning is defined as a type of reasoning that begins by examining data and after scrutiny of the data, all possible explanation of data are entertained, from looking at all possible explanation the researcher arrives at the most plausible interpretation of the observed data (Charmaz, 2006).

It should also be noted that the diagram of nodes and their relationship to each other through this diagram is referred to as an integrative diagram. Corbin & Strauss (2008) define an integrative diagram as a tool that is useful in storytelling and can be valuable in creating a visible representation of the relationship between concepts. In terms of this project, the team created the integrative diagram, but connections between concepts were also established through Jeffreys' model. The integrative diagram does not include all node (concepts) that emerged in the data those will be included in the appendix of the project report. The diagram does include major

categories and is organized in a clean, precise manner to allow a reasonable explanation for possible relationships that are in keeping with the overall model for this project (Corbin & Strauss, 2008). After the sorting of the nodes, the team leader and qualitative advisor/team member reviewed and accounted for all nodes to ensure that all nodes were properly represented.

Section 3: Qualitative Survey

End reflection – Please complete at the end of your experience

Level of student: Graduate Undergraduate

Major at Belmont _____

The 4 digit number you created to enable us to match your pre and post survey's

____ ____ ____ ____

1. What have you learned during this experience? (about yourself, your profession and role, clients, colleagues, communities, culture)?

2. How did you learn this?

3. Why will this be important for you in developing your career skills?

4. How will you be able to use what you have learned in your future profession?

Section 4: Example of TSET survey

Throughout your education and career as health care providers, faculty, or students, you will be caring for clients of many different cultural backgrounds. These clients will represent various racial, ethnic, gender, socioeconomic, and religious groups.

Cultural differences exist in health care needs, caring, and curing practices. Knowing and understanding cultural factors related to client care help establish a theoretical foundation for providing culture-specific health care.

Part I: *Among clients of **different** cultural backgrounds, how knowledgeable are **YOU** about the ways cultural factors may influence health care? Please use the following scale and mark your response accordingly.*

	Not Confident ←									→ Totally Confident
	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
You know and understand the ways **cultural factors** may influence **health care** in the following areas:										
(1) health history and interview	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(2) physical examination	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(3) informed consent	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(4) health promotion	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(5) illness prevention	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(6) health maintenance	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(7) health restoration	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(8) safety	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(9) exercise and activity	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(10) pain relief and comfort	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(11) diet and nutrition	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(12) patient teaching	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(13) hygiene	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(14) anxiety and stress reduction	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(15) diagnostic tests	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(16) blood tests	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(17) pregnancy	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(18) birth	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(19) growth and development	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(20) aging	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(21) dying and death	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(22) grieving and loss	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(23) life support and resuscitation	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(24) sexuality	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
(25) rest and sleep	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩