January 2022

Analysis Of The Multicultural Awareness, Knowledge, Skills Survey – Healthcare Edition

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ANALYSIS OF THE MULTICULTURAL AWARENESS, KNOWLEDGE, SKILLS SURVEY – HEALTHCARE EDITION

by

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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota
May
2022

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ACKNOWLEDGEMENTS

I would like to thank my advisor and dissertation committee chair, Dr. Virginia Clinton-Lisell for her guidance, support, and encouragement throughout my graduate school journey. This journey would not have been possible without her support and insight on transforming this "idea" into a research study. I would also like to thank my dissertation committee members, Drs. Robert Stupnisky, Tamba-Kuii Bailey, and Breann Lamborn, for their guidance, support, and patience throughout the course of my dissertation project. Thank you, Dr. Stupnisky for questioning my statistical analysis, and guiding me through the robust process of factor analysis. I am leaving with process with excitement for future research possibilities. Thank you, Dr. Bailey for your insights on cultural competence and recommendations for statistical analysis which added to the findings and provided support for future research. Thank you, Dr. Lamborn for your insights on cultural competence, attention to detail and encouragement throughout this process.

I would also like to thank my children for their sacrifices while trudging this journey with me, and keeping faith that there would be an end. In the words of the Grateful Dead – "What a long strange trip it's been". I would not have taken this trip with anyone but you all, Sam, Nick, and Jace. Thank you to my family and friends for their unconditional love and support throughout my life and educational journey. You all have been there to encourage me to see this through, to talk reason into me when I have not been able to see through the forest through the trees, and to be there at the end cheering me on.

Lastly, I would like to thank my colleagues for your compassion, and encouragement throughout this process. It is an honor to work with such amazing people. Thank you, Drs. Janet Jedlika and LaVonne Fox for mentoring me to bring this passion for cultural competence to fruition. It is because of you two that this dream of a doctor in philosophy degree ever started.

ABSTRACT

Cultural competence has been identified as one of the methods needed to reduce health disparities for over the last 40 years. Despite being largely accepted method in reducing health disparities, there has been limited progress to increase cultural competence of the healthcare workforce. One of the issues identified that limits progress is inconsistent means of measuring cultural competence. Based on this issue, this study investigated the construct validity of the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC) using exploratory factor analysis methodology, specifically Principle Axis Factoring using oblique rotation. Results were interpreted using the Multicultural counseling competence (MCC) model. Further data analysis using the MAKSS-HC and the NSSE: Topical Module of Inclusion and Engagement with Cultural Diversity was completed in order to explore correlations and predictive relationships between levels of cultural competence and institutional support. Results indicated good construct validity and internal reliability of the MAKSS-HC, and also found that coursework and student engagement positively predicted levels of cultural competence.

CHAPTER I

INTRODUCTION

The United States is becoming increasingly diverse. The U.S. Census Bureau indicates that by 2044, the U.S. will become a plurality nation in which no one race will comprise more than 50% of the population (Colby & Ortman, 2015). In addition, other cultural groups are increasing in population size including persons in the LGBTQ community, older adults, and people with disabilities (Gates, 2017; Okoro et al., 2018; Vespa et al., 2020). Despite increasing diversity among the U.S. population, there has been little change in the demographics of the U.S. healthcare workforce (Bureau of Labor Statistics, 2021; Bouye et al., 2016; Clark et al., 2011; Goode & Landefeld, 2019; Pittman et al., 2018). In spite of efforts to increase diversity in healthcare, it has remained predominately White (Goode & Landefeld, 2019). Limited diversity and decreased cultural competence among healthcare professionals has been noted as contributing factors to health disparities (Betancourt et al., 2002; Pittman et al., 2018; Reyes et al., 2013; Shen, 2015).

Lack of cultural competence among healthcare professionals is one of the perpetuating factors of health disparities (Assari, 2018; Betancourt et al., 2014; Bouye et al., 2016; Hall et al., 2015; IOM, 2003; Matteliano & Stone, 2014; Oikarainen et al., 2019; Pittman et al., 2018; Reyes et al., 2013; Shaya & Gbarayor, 2006). Health disparities are health differences that disproportionately affect socially disadvantaged groups who have been marginalized and have experienced discrimination and social injustices (Artiga et al., 2020; Assari, 2018; Braveman et

al., 2010; Dzau et al., 2017; Hall et al., 2015; Kilbourne et al., 2006; Sue et al., 1982). Racism and discrimination by healthcare professionals directly impact health and quality of care (Assari, 2018; Ayhan Balik et al., 2020; Betancourt et al., 2003; Braveman et al., 2011; Hall et al., 2015; IOM, 2003; Walls et al., 2015). Implicit biases and microaggressions by healthcare providers also have a significant impact on a person's health and level of satisfaction with healthcare services (Ayhan Balik et al., 2020; Ben et al., 2017; FitzGerald & Hurst, 2017; Hall et al., 2015; Paradies et al., 2014; Walls et al., 2015).

Despite advancements in healthcare, health disparities still exist, and there is a need to increase cultural competence of healthcare professionals (Assari, 2018; Avendano et al., 2009; Bouye et al., 2016; Hall et al., 2015; IOM, 2003; Le Cook et al., 2009; Odlum et al., 2020). Increasing cultural competence has been consistently identified as one approach to reduce health disparities (Betancourt & Green, 2010; Bonvicini, 2017; Clark et al., 2011; Eddey & Robey, 2005; IOM, 2003; Horvat et al., 2014; James et al., 2017; Jongen et al., 2018; Kilbourne et al., 2006; Lie et al., 2011; Matteliano & Stone, 2014; Shen, 2015). Despite the consensus that cultural competence is essential in reducing health disparities, research has been limited in measuring the effectiveness of cultural competence curricula (Benuto et al., 2018; Boysen & Vogel, 2008; Guy-Walls, 2007; Lie et al., 2011; Long, 2012; Murden et al., 2008; Oikarainen et al., 2019; Reyes et al., 2013). Lack of methodological rigor is contributed to inconsistencies with measuring the effectiveness of cultural competence education (Benuto et al., 2018; Boysen & Vogel, 2008; Long, 2012; Oikarainen et al., 2019; Price et al., 2005; Reyes et al., 2013).

Statement of the Problem

Significant efforts have been made over the last 40 years to increase cultural competence through governmental, academic, and institutional agencies as a means to decrease health

disparities (Betancourt et al., 2005; Braveman et al., 2011; Dzau et al., 2017; IOM, 2003; IOM, 2011). Despite these nationwide efforts, there has not been significant improvement in healthcare professionals' levels of cultural competence. Additionally, implementation of cultural competence education has been inconsistent (Assari, 2018; Horvat et al., 2014; Jongen et al., 2017; Le Cook et al., 2009). Cultural competence curricula vary by discipline and program, as well as the amount of time spent on the content (Benuto et al., 2018; Clark et al., 2011; Jongen, et al., 2018; Lie et al., 2011; Matteliano & Stone, 2014; Murden et al., 2008; Price et al., 2005; Shaya & Gbarayor, 2006). Due to inconsistency in teaching methods, further research is warranted to assess effectiveness in cultural competence education (Betancourt et al., 2005; Horvat et al., 2014; Jongen et al., 2018; Lie et al., 2010).

Research has identified inconsistency in how cultural competence is measured and what assessments are used to measure outcomes (Alizadeh & Chavan, 2016; Benuto et al., 2018; Jongen et al., 2018; Kumas-Tan et al., 2007; Lie et al., 2011; Shen, 2015). Several issues of existing measures include: (a) those that only have questions related to race and ethnicity, (b) are specific to healthcare discipline, (c) are costly and difficult to access, (d) are not developed based on a theoretical model, and (e) are not psychometrically tested (Alizadeh & Chavan, 2016; Benuto et al., 2018; Dao, 2017; Jongen et al., 2017; Kumas-Tan et al., 2007; Lie et al., 2011; Shen, 2015). There is need for a unified means to measure student outcomes of cultural competence that is easily accessible (Alizadeh & Chavan, 2016; Benuto et al., 2018; Lie et al., 2011).

Importance of the Study

Having a reliable and validated self-report measure used with various disciplines in order to promote development of cultural competence could make significant contributions to the

existing body of research (Alizadeh & Chavan, 2016; Benuto et al., 2018; Lie et al., 2011). An assessment tool that is openly accessible may provide a link for researchers to compare levels of cultural competence with health disparity rates (Benuto et al., 2018; Lie et al., 2011). In addition, a tool of this nature would provide ways for healthcare programs to compare student outcomes with other programs throughout the nation (Benuto et al., 2018; Lie et al., 2011). This would allow programs to monitor and improve effectiveness of cultural competence curricula. To the researcher's knowledge, there is not currently a validated cultural competence survey that is accessible, low-cost, and generalized for use with multiple health disciplines that does not focus on race and ethnicity but cultural groups as a whole.

Purpose of the Study

The purpose of this study was to analyze the construct validity of a cultural competence assessment for use with various health disciplines that is grounded and guided by a theoretical framework. Permission was received from the main author of the Multicultural Awareness Knowledge and Skills Survey – Counselor Edition (MAKSS-C) to revise the survey to be generalizable to multiple healthcare disciplines. The original MAKSS-C was designed to measure multicultural awareness, knowledge, and skills of counseling students (D'Andrea et al., 1991). D'Andrea and colleagues developed the survey based on Sue et al.'s (1982) model of Multicultural counseling competence (MCC) which is the most widely recognized model of cross-cultural competence (Geerlings et al., 2018). The revised survey was titled Multicultural Awareness Knowledge and Skills Survey – Healthcare Edition (MAKSS-HC). In addition to the revised MAKSS-HC, the NSSE Topical Module: Inclusion and Engagement with Cultural Diversity was included in this study to measure organizational support as this is identified as an

important aspect of developing cultural competence (Balcazar et al., 2009; Betancourt et al., 2002).

The purpose of this quantitative study was to complete a factor analysis of the MAKSS-HC, as well as to examine the correlations between cultural competence levels of healthcare students and student-reported culturally diverse experiences from an upper Midwest university in the United States. The study also examined demographic variables' influences on levels of cultural competence. These data analysis methods were used to answer the following research questions:

Research Questions

1. Will the revised Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC) demonstrate validity and reliability similar to the original MAKSS-C?
2. Do scores on the NSSE Topical Module: Inclusiveness and Engagement with Cultural Diversity predict scores on the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC)?
3. Are there significant relationships between demographic data and scores of the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC)?

Theoretical Framework

The Multicultural counseling competence (MCC) model was chosen to guide the development of this study. The MCC has been the most frequently cited model of cultural competence; it has been referenced over 4,000 times since it was published. The original 1982 model continues to be the most widely accepted and influential model in research today

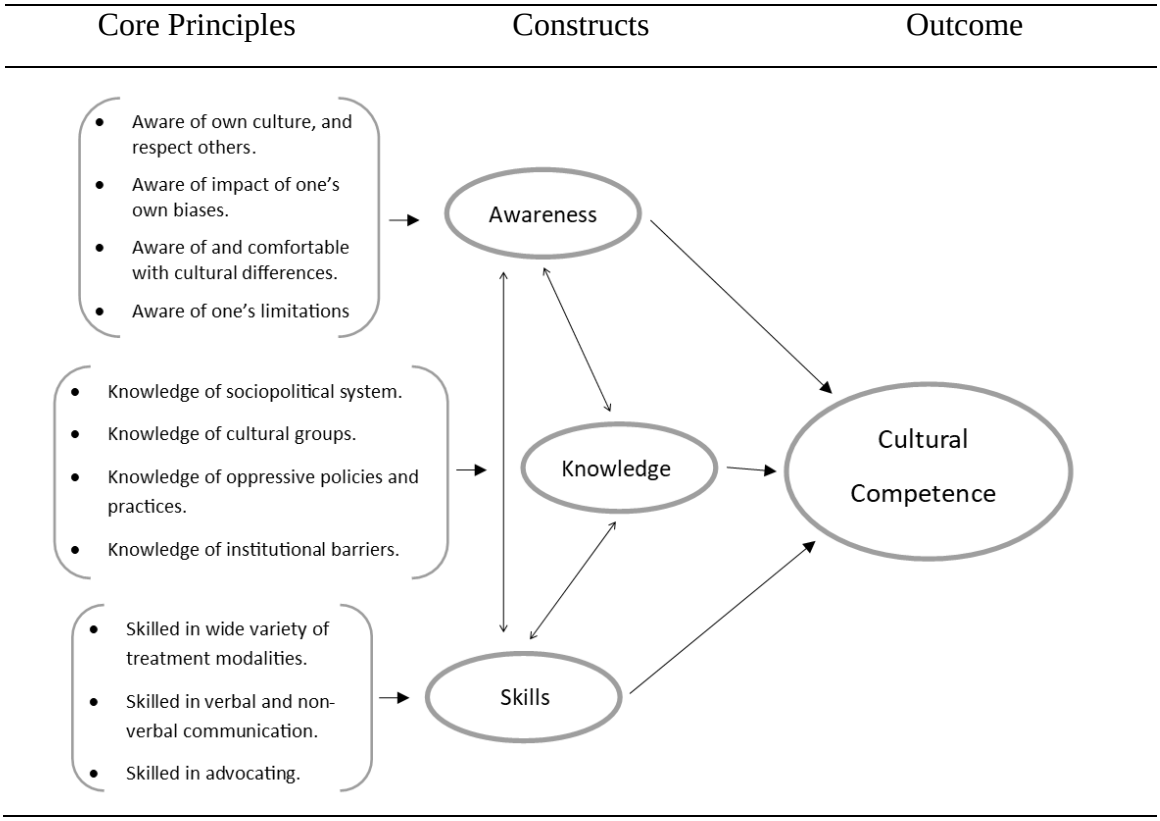
(Geerlings et al., 2018). The model is inclusive of cultural differences from a broad, inclusive perspective acknowledging similarities in developing cultural competence across a variety of cultural groups (Sue et al., 1982). There are basic universal principles of developing cultural competence. This model does not assume that cultural competence is an end but rather a lifelong process that one engages in and is continually evolving (Sue et al., 1982; Sue et al., 1992).

The MCC is a tripartite model asserting that development of cultural competence requires the development of awareness, knowledge, and skills (Sue et al., 1982). Within each construct are core principles that one must attain in order to become a culturally competent healthcare professional. Figure 1 presents a conceptual framework of the core principles and constructs that are required to develop cultural competence. This conceptual model was used to interpret the factor analysis of the MAKSS-HC and then was compared to the original MAKSS-C.

Another construct identified in developing cultural competence that is not a focus of the MCC model is the need for organizational support. It has been identified that organizational/institutional support is important in order for one to develop cultural competence (Balcazar et al., 2009; Betancourt et al., 2002; Dzau et al., 2017). The NSSE Topical Module: Inclusion and Engagement with Cultural Diversity was used in this study to further research whether there was a predictive relationship between institutional support and levels of cultural competence.

Figure 1

Conceptual Framework of the Multicultural counseling competence model.



Delimitations

The scope of this study was determined by several delimitations. First, the study was completed at one university in the upper Midwest. Only students currently enrolled in medical and health science programs from this university were eligible for participation in the study. Second, students were recruited through program directors of the following programs: physician, physician assistant, nursing, counseling, psychology, social work, public health, physical therapy, occupational therapy, speech-language pathology, athletic training, and medical lab sciences.

Limitations

The results of this research study must be interpreted with awareness of the following limitations. First, the current study included participants currently enrolled in medical and health science programs, a majority of whom were physician and occupational therapy students. In addition, the majority of students identified as White. As such, this study may have limited generalizability for other university populations.

Terminology

Culture: An accumulation of attributes, language, characteristics, beliefs, and values that shape a person and the social group(s) to which they belong.

Cultural competence: A continuous, life-long process of developing cultural awareness, knowledge and skills to effectively work with individuals from varying cultural backgrounds.

Health disparity: Systematic, avoidable, and inequitable health differences that are attributed to racism, discrimination, and marginalized experienced by minoritized populations.

Low socioeconomic status (SES): Person's living below the poverty line.

Minoritized populations: Cultural groups who have historically experienced racism, discrimination, and marginalization. This includes race/ethnicity, sexual orientation, gender identity, low socioeconomic status, older adults, and people with disabilities.

Minoritized sexual and gender groups (SGM): Individuals who identify as lesbian, gay, bisexual, transgender, queer/questioning, intersex, or other.

Older adults: Individuals over the age of 65 to align with research on older adults.

Person with disability: Any individual living with an intellectual, developmental, or chronic disability.

Sociocultural factors: Social factors that disproportionately impact certain cultural groups such as SES, geographical location, educational status, and whether the person has health insurance.

White population: The majority population who has not experienced racism, discrimination and marginalization to the extent that other minoritized populations have.

CHAPTER II

LITERATURE REVIEW

The purpose of this study was to investigate the construct validity of the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC). Exploratory factor analysis (EFA) was utilized to analyze construct validity of the MAKSS-HC. The Multicultural counseling competence (MCC) model was used as the theoretical framework for interpreting the factors determined by the EFA. The MAKSS-HC was then compared to the original MAKSS-C. Additionally, this study compared students' levels of cultural competence with institutional support. This literature review is intended to synthesize the existing academic research of cultural competence in healthcare-related professions and establish the need for a cultural competence assessment that has been validated, is generalizable for use with multiple healthcare professions, and is easily accessible. As such, this chapter covers the following sections:

1. *Demographics of the U.S.*, which identifies the significant differences in demographics of the overall U.S. population and the demographics of people working in healthcare professions.
2. *Health Disparities*, which provides a background of health disparities and causes of these disparities.
3. *Improving Health Disparities*, which describes methods for addressing and decreasing disparities with the focus being on the development of cultural competence.

4. *Theoretical Framework Utilized for the Current Study*, which provides a synopsis of the Multicultural counseling competence model, including an examination of the constructs of the model.
5. *Assessing Cultural Competence Education*, which describes how cultural competence is measured and identifies the need for an accessible, validated measure that is usable among multiple healthcare professions.

This literature review intends to provide both support for the necessity of the current study and the historic background information necessary to structure the rationale, methods, and conclusions of this study. This chapter intends to consolidate the literature that informed this study, as well as provide the foundation for the research approach used.

Demographics of the U.S.

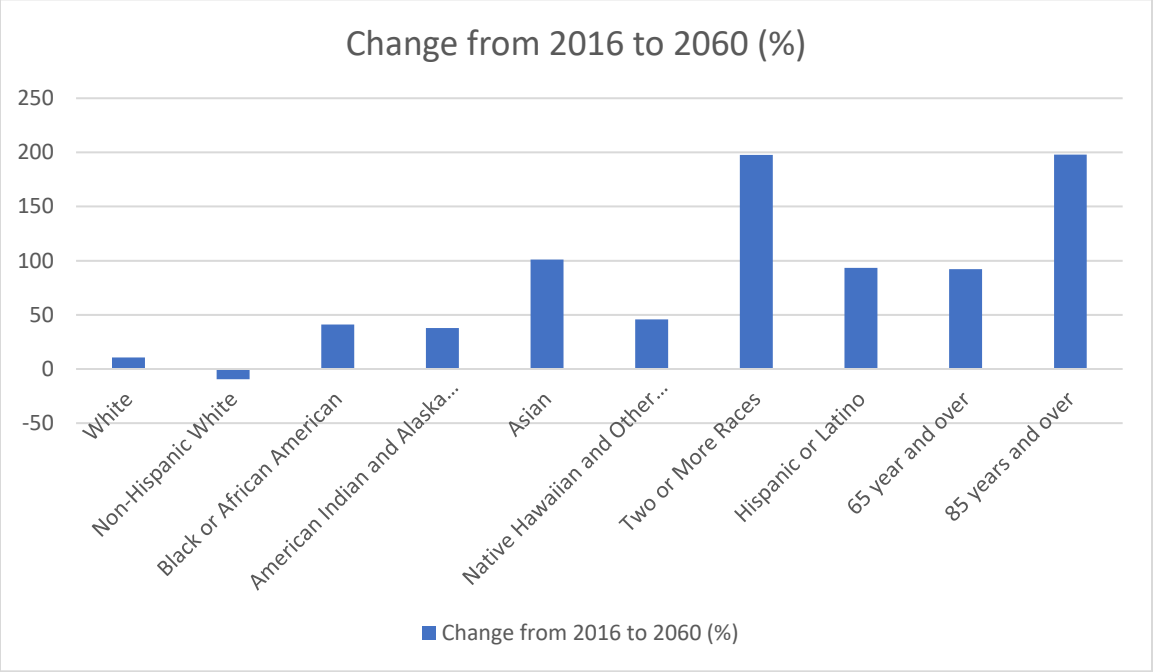
The United States is becoming increasingly diverse while the healthcare workforce remains predominately White (Bouye et al., 2016; Goode & Landefeld, 2019; Matteliano & Stone, 2014; Pittman et al., 2021; Reyes et al., 2013). This increasing diversity creates both opportunities and challenges for healthcare professionals to provide culturally competent care (Betancourt et al., 2005; Henderson et al., 2018). Though the U.S. population overall is projected to grow slowly over the next several decades, increasing racial and ethnic diversity is expected, as well as a considerable increase in adults over the age of 65 (Vespa et al., 2020).

The U.S. Census Bureau indicates that by 2044, the U.S. will become a plurality nation in which no one race comprises more than 50% of the population (Colby & Ortman, 2015). This estimate is consistent with more recent statistics gathered by the 2020 U.S. Census Bureau (Vespa et al., 2020). Over the next 40 years, it is estimated that all racial and ethnic minoritized populations will increase while the White population will decrease (Vespa et al., 2020). Figure 2

shows the estimated percentage change of populations in the U.S. It is estimated that there will be a 198% increase in individuals who are two or more races (Vespa et al., 2020). Increases in other racial and ethnic groups include Asian by 101%, Latinx by 94%, Native Hawaiian and other Pacific Islander by 46%, African American by 41%, and American Indian and Alaskan Native by 38% (Vespa et al., 2020). In contrast, the White population is projected to decrease by 10%. Over the next 40 years, there will be a continuous and significant shift in racial and ethnic demographics increasing diversity throughout the country.

Figure 2

Projected Percentage Change of Populations in the U.S. by 2060

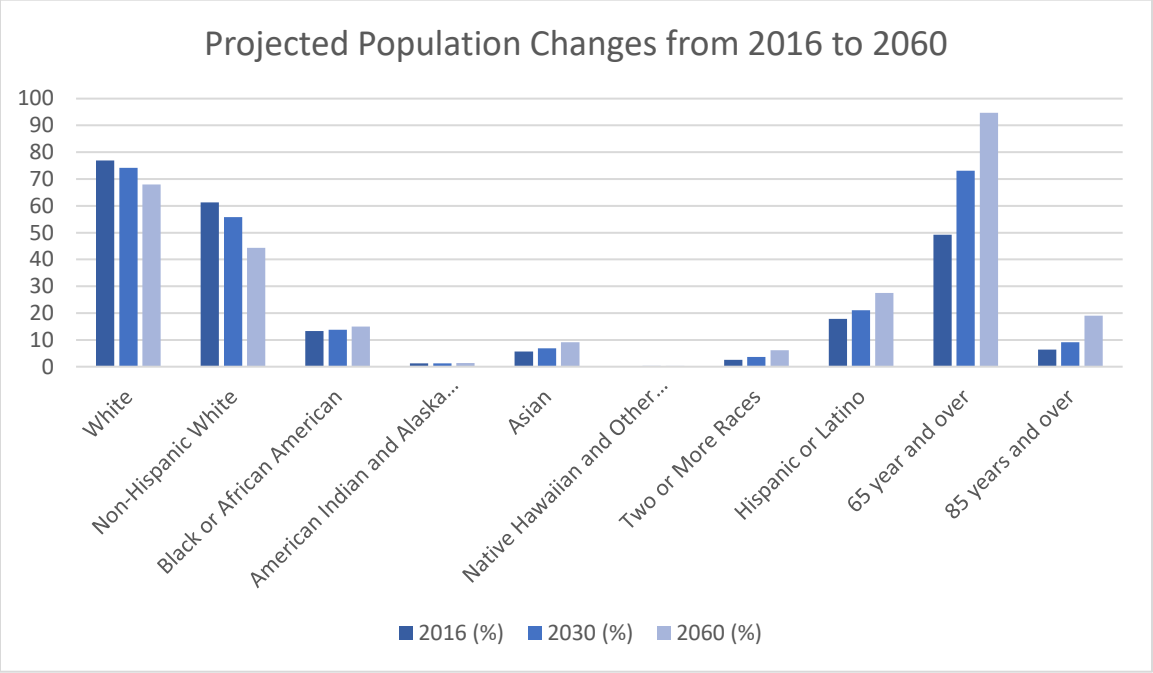


By 2030, one in five Americans will be 65 years and older (Vespa et al., 2020). The population of people over the age of 65 has grown from 12.4% in 2000 to 16% in 2018 (Vespa et al., 2020). Figure 3 shows the estimated percentage increase for people over the age of 65. For the first time in U.S. history, there will be more adults over the age of 65 than children under 18 years (Vespa et al., 2020). Figure 3 shows the overall progression of population change in the

U.S. for racial/ethnic and aging adults. Figures 2 and 3 provide effective visual representations of significant change in demographics throughout the U.S. population.

Figure 3

Progression of Projected Population Change in the U.S. from 2016 to 2060



In addition to racial/ethnic diversity and aging adults, the LGBTQ+ population is increasing in size. The number of people who identify within this population varies and estimates range from 4-10% of the population (Gates, 2017; IOM, 2011). In a recent Gallup survey, over 7% of millennials identified as part of the LGBTQ+ population. This is almost double the percentage compared to all adult age groups in the U.S. in which only 4% identify as part of the LGBTQ+ population (Gates, 2017). This is an indicator that the LGBTQ+ community is increasing in population, and individuals may be more comfortable with openly identifying as part of the community. This population is likely to continue increasing as future policy changes afford equal rights.

Persons with disabilities also make up a significant part of the U.S. population. The CDC reports that one in four adults are living with a disability (Okoro et al., 2018). This includes physical and intellectual disabilities, as well as disabilities due to chronic illness and disease. In the U.S. Census report, *Americans with Disabilities: 2014*, it was identified that 18% of the population is living with a "severe" disability (Taylor, 2018). This study defined severe disabilities as individuals who required a mobility device, had intellectual and/or developmental diagnoses, were blind or deaf, had any other mental, emotional, or physical condition that seriously interfered with everyday activities, and the like (Taylor, 2018). These severe disabilities apply to children and adults. There are a substantial number of persons with disabilities living in the U.S. There is significant diversity in the U.S. with consideration of various racial and ethnic groups, as well as the aging population, LGTBQ+ population, and persons with disabilities.

Despite the significant shift in U.S. demographics, there has been little change in the demographics of healthcare providers (Goode & Landefeld, 2019; Pittman et al., 2021). Statistics collected by the Health Resources and Services Administration provides demographic information on the U.S. healthcare workforce (Bureau of Labor Statistics, 2021). Figures 4 and 5 illustrate the demographics of healthcare professionals by their identified race and gender. On average, of the nine health professions listed, approximately 73% are White, 27% are persons of color, 68% are female, and 32% are male. There is a significant under-representation of people of color in healthcare, and healthcare professions are predominately occupied by women. There is a vast difference between demographics of the overall U.S. population and that of healthcare professionals. The lack of diversity in healthcare professions leads to a disconnection with the diverse populations served in healthcare.

Figure 4

Demographics of Healthcare Professionals by Race

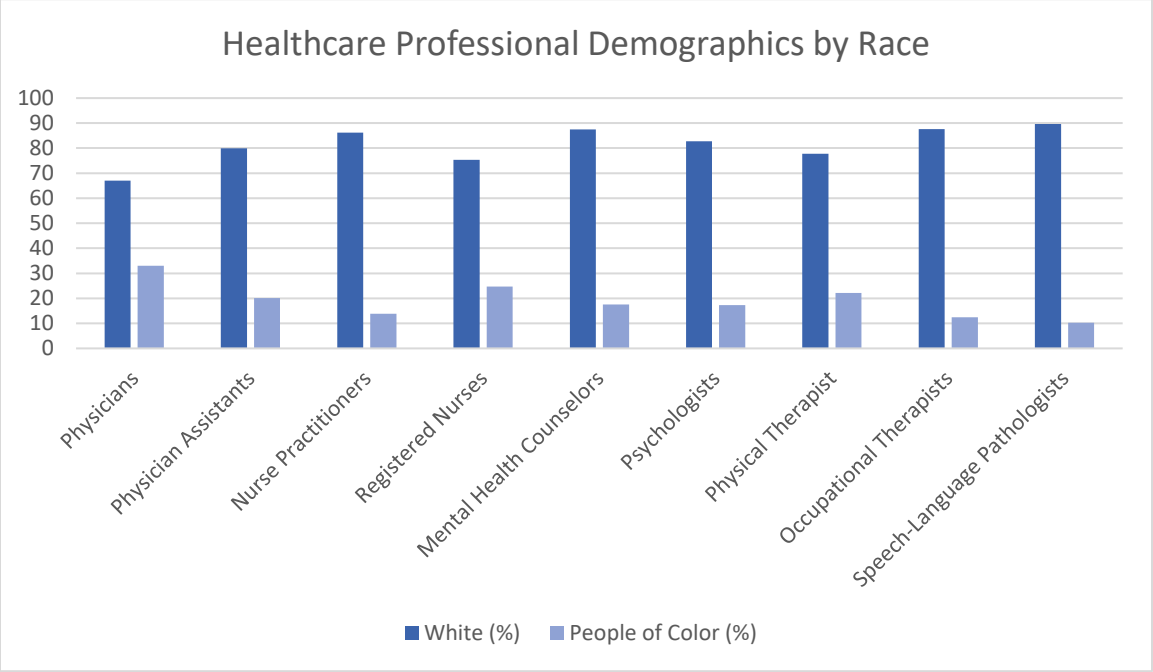
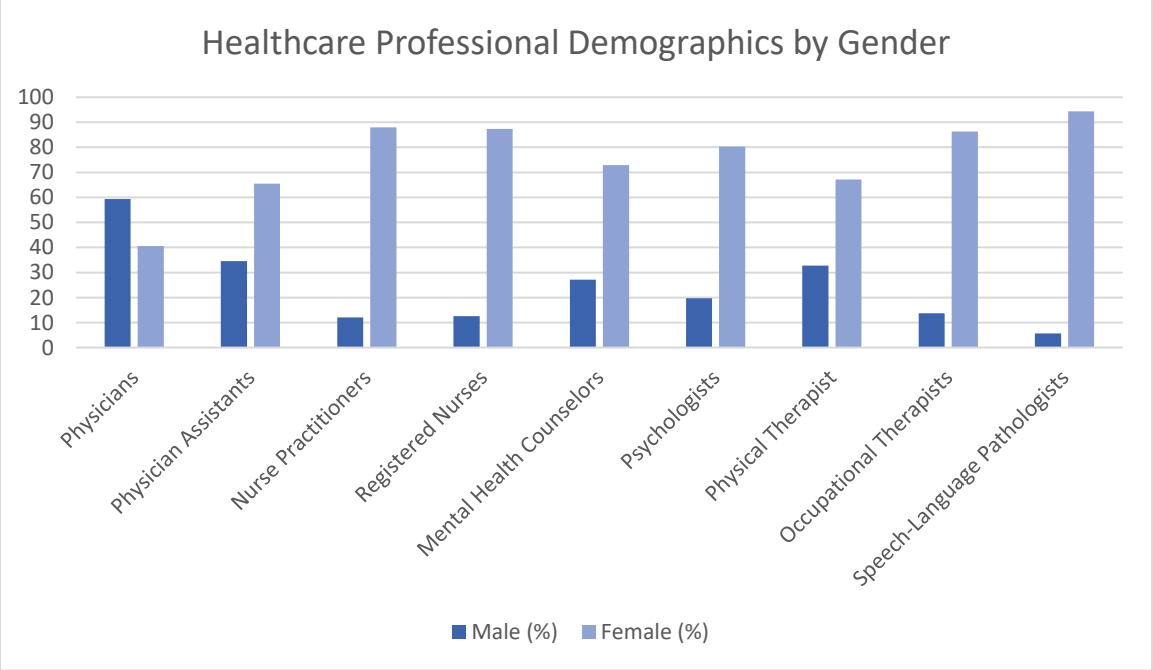


Figure 5

Demographics of Healthcare Professionals by Gender



Experts of cultural competence have identified lack of diversity as an area of concern for over 40 years (Betancourt et al., 2002; Good & Landefeld, 2019; Pittman et al., 2021; Reyes et al., 2013; Shen, 2015). Increasing diversity in healthcare professions is one of the means to assist in reducing health disparities (Bouye et al., 2016; Goode & Landefeld, 2019; Pittman et al., 2021; Shaya & Gbarayor, 2006). A critical method to reduce health disparities is to increase cultural competence. Cultural competence needs to be implemented at national, institutional, and individual levels within the healthcare system (Betancourt et al., 2014; Hall et al., 2015; Jongen et al., 2018; Oikarainen et al., 2019). The failure to implement culturally inclusive policies and practices at national and institutional levels is a significant contributor to health disparities (Assari, 2018; Betancourt et al., 2014; Dzau et al., 2017). Additionally, healthcare professionals who are not culturally competent lack the knowledge, awareness, and skills to provide culturally sensitive and appropriate care to diverse populations (Assari, 2018; Betancourt et al., 2014; Bouye et al., 2016; Reyes et al., 2013; Matteliano & Stone, 2014; Oikarainen et al., 2019; Shaya & Gbarayor, 2006).

Healthcare professionals may not have immediate control over policy changes that would improve health disparities. However, they are their own agent of change and can educate themselves on cultural competence that can positively impact the quality of care they provide to individuals who have been marginalized (Alizadeh & Chavan, 2016). Despite lack of diversity in healthcare, developing cultural competence is a vital step in improving health outcomes of minoritized populations. It is necessary to understand health disparities and how the health of minoritized groups has been impacted by the lack of cultural competence in healthcare.

Health Disparities

Health disparities are of significant concern because they are systemic to historical discrimination and marginalization at a societal, healthcare, and individual level (Assari, 2018; Betancourt et al., 2014; Braveman et al., 2011; Dzau et al., 2017; McGinnis et al., 2017; Pittman et al., 2021). Research of health disparities in the U.S. has historically focused on racial and ethnic inequalities in health outcomes. As more research is gathered, the focus has expanded to include socioeconomic and social injustices for a variety of cultural groups that experience poor health outcomes (Adler et al., 2017; Artiga, 2020; Betancourt et al., 2014; Braveman et al., 2011; McGinnis et al., 2017). This is not to minimize health disparities experienced by racial and ethnic minoritized groups, as they still experience the most significant disparities, but to acknowledge and address the multifactorial nature of health disparities (Adler et al., 2017; Artiga et al., 2020; Assari, 2018; Braveman et al., 2010; Dzau et al., 2017; Hall et al., 2015; McGinnis et al., 2017). Therefore, within this study, the term minoritized groups is intended to encompass all populations that have experienced racism, marginalization, and discrimination in order to better examine the multifactorial nature of health disparities.

Defining Health Disparities

Several researchers and scholars of healthcare inequalities have generated definitions of health disparities that are inclusive of race/ethnicity, low socioeconomic status (SES), age, gender, sexual orientation, gender identity, disability, and geographical location (Artiga et al., 2020; Braveman et al., 2011; Kilbourne et al., 2006). These definitions are focused on social injustices experienced by these minoritized cultural groups (Artiga et al., 2020; Braveman et al., 2011; Kilbourne et al., 2006; Whitehead, 1991). Social injustices are attributed to societal norms established by the White population, which lends to a socially disadvantaged perspective when

defining health disparities. This problem merits a need for changes in public policy, organizational structure, and cultural competence (Adler et al., 2017; Braveman et al., 2010; Kilbourne et al., 2006; Whitehead, 1991). Having a clear definition of health disparities enables medical and public health agencies to more effectively reduce disparities (Braveman et al., 2011). In addition, a clear definition of health disparities guides the development of cultural competence at both the theoretical level and in implementation of education and measuring attainment.

Examining research of health disparities, it is evident that the U.S. has primarily focused on race and ethnicity while many European countries have focused on health disparities in relation to social disadvantages and socioeconomic levels while also including race and ethnicity (Braveman et al., 2010). Margaret Whitehead from the United Kingdom developed one of the most intuitive and concise definitions of health disparities (Braveman, 2014). Whitehead (1991) defined health disparities as those health differences in health outcomes that are unnecessary, avoidable, unfair, and unjust.

Health differences are variances in health that can be seen when comparing groups or populations of people. Not all health differences are health disparities (Braveman, 2014). For example, when comparing the health of two countries, differences may be noted in prevalence of certain health conditions. Another example would be professional athletes having higher rates of certain injuries in comparison to the general public which does not warrant changes in public policies. Health disparities are those health differences that are inequitable and result from social injustices experienced by socially disadvantaged groups of people (Braveman, 2014). Whitehead (1991) asserted that inequitable differences are the result of societal factors that put certain populations in situations where choices are limited resulting in poorer health. Healthcare should

be a right for everyone, and being denied care based on race, age, sex, or religion is unjust (Whitehead, 1991). Limited access to quality healthcare due to uneven allocation of services is avoidable. People may have limited access to healthcare for reasons varying from lack of financial resources to accessible services to geographical location. Whitehead (1991) clearly states that countries need to identify where the inequitable access to healthcare is and consequently address those inequalities.

Health disparities are systematic, avoidable, and are associated with race/ethnicity, socioeconomic status, gender, age, sexual orientation, gender identity, geography, disability, and/or other characteristics that lead to discrimination or marginalization (Braveman et al., 2011). Not every person of a socially disadvantaged group will experience health disparities, but as a whole, they experience health disparities at a statistically higher rate than the more advantaged White population (Braveman et al., 2011; Kilbourne et al., 2006). Health disparities are directly related to socially disadvantaged groups' experiences of social injustices, discrimination, and marginalization (Braveman et al., 2011; Kilbourne et al., 2006; Whitehead, 1991). There must be intentional reform of social systems in order to address the causes of health disparities (Braveman et al., 2011; Kilbourne et al., 2006; Whitehead, 1991). Having healthcare professionals who are culturally competent will directly impact policy reform at the institutional level, as well as improve quality of care. Developing cultural competence is one way to mitigate health disparities by reducing experiences of discrimination in healthcare interactions.

Understanding Health Disparities

Despite advancements in healthcare, health disparities have worsened over the last 20 years (Assari, 2018; Avendano et al., 2009; Bouye et al., 2016; Dzau et al., 2017; Hall et al., 2015; Le Cook et al., 2009; Odlum et al., 2020). Even though technology and treatment methods

have improved, people from minoritized populations still have poor health outcomes compared to their White counterparts. Disadvantaged cultural groups are experiencing statistically significant differences in health outcomes which are avoidable and due to societal injustices (Adler et al., 2017; Betancourt et al., 2014; Braveman et al., 2011; Hall et al., 2015; McGinnis et al., 2017; Odlum et al., 2020).

Health disparities are multifactorial, social determinants of health (Betancourt et al., 2014). Factors external to the healthcare system impact and further perpetuate health disparities (Assari, 2018; Avendano et al., 2009; Betancourt et al., 2003; McGinnis, 2017). Social determinants of minoritized populations that are external to the health care system and affect health outcomes include: (a) higher levels of poverty, (b) jobs with increased occupational hazards, (c) increased numbers of individuals without insurance, and (d) the impact of prolonged racism and marginalization (Assari, 2018; Betancourt et al., 2003; Braveman et al., 2011; Stepanikova & Oates, 2017). Health disparities have been well documented for racial and ethnic populations, persons of low SES, minoritized sexual and gender groups (SGM), older adults, and persons with disabilities (Assari, 2018; Avendano et al., 2009; Ayhan Balik et al., 2020; Ben et al., 2017; Bonvicini, 2017; Bosworth, 2018; Braveman et al., 2010; Brucker et al., 2016; Cannon et al., 2017; Eddey & Robey, 2005; Hall et al., 2015; Hatzenbuehler et al., 2017; IOM, 2011; Pelleboer-Gunnink et al., 2017; Semega et al., 2020; Stepanikova & Oates, 2017). Though each of these populations experience unique disparities in health, there are commonalities across populations that experts identify as contributing factors.

For the purpose of this study, the term White is used to describe the majority population who has not experienced racism, discrimination and marginalization to the extent that minoritized populations have. This population is typically heterosexual, middle to upper income,

has access to quality healthcare including insurance coverage, and has higher levels of educational attainment with employment. Health disparities of minoritized groups are historically compared to this White population in research and literature. It is also acknowledged that intersectionality of multiple minoritized cultures more significantly impacts a person's experiences of healthcare, such as a woman of color who also identifies as lesbian. Research on the effects of intersectionality and health disparities has found that race is the factor that increases the experience of poor healthcare, discrimination and increased health disparities. This literature review intends to provide a broad overview of health disparities experienced by minoritized groups in order to establish the need for a validated cultural competence measure. This broad overview, does not dismiss the complex experiences of minoritized populations and also does not assert that all individuals in the White population have not experienced discrimination or marginalization.

Causes of Health Disparities within the Healthcare System

Health disparities are complex in nature, and causes of disparities interplay with one another (Betancourt et al., 2014; McGinnis, 2017). Populations that have experienced prolonged racism and discrimination experience poorer health outcomes (Braveman et al., 2011; IOM, 2003; IOM, 2011; Kilbourne et al., 2006; Whitehead, 1991). Health disparities are linked to external social factors that disproportionately impact certain cultural groups which are referred to as sociocultural factors (Adler et al., 2017; Betancourt et al., 2014; Braveman et al., 2011; Kilbourne et al., 2006; Whitehead, 1991). Examples of sociocultural factors are socioeconomic status, geographical location, educational status, and whether the person has health insurance (Betancourt et al., 2014; Braveman et al., 2011; Whitehead, 1991). Addressing and understanding sociocultural factors that impact health disparities has become a mainstream

initiative of both government agencies and healthcare systems (Adler et al., 2017; Betancourt et al., 2014; IOM, 2003; IOM, 2011).

Minoritized populations have been historically marginalized, and their views have been excluded from the development of major infrastructures such as the U.S. healthcare system (IOM, 2003; Riley, 2012; Sue et al., 1982). The healthcare system is deeply rooted in the values and beliefs of the White population (Assari, 2018; Cross et al., 1989; IOM, 2003; Riley, 2012). These Westernized values do not historically take into consideration other cultural values and beliefs of health (Assari, 2018; IOM, 2003).

In a study of cultural competence training, Steed (2010) noted that participants shared beliefs that health disparities were due to people's own choices, with stronger beliefs towards African Americans and people from low SES. In addition, participants of this study felt that people from minoritized groups should conform to Westernized medicine. This mindset results in a perception of "cultural blindness" (Steed, 2010). Cultural blindness is a term defined by Cross et al. (1989) to describe one of the stages of cultural competence in which a person believes that color and culture make no difference and that Western views of healthcare are universal. These ethnocentric views assume all cultural groups should assimilate to Westernized values of healthcare (Cross et al., 1989). The exclusion of input from culturally diverse populations in the development of healthcare policies perpetuates cultural blindness and beliefs that "others" should conform to the existing values of Western medicine. Healthcare professionals who do not move past the stage of cultural blindness negatively impact the quality of care provided, because they do not acknowledge and take into consideration the cultural values and beliefs of those different than them. Denial of cultural differences in healthcare interactions is a major contributing factor to health disparities.

Change is needed in order to address issues with the current structure of healthcare including policy changes at a societal, national, and institutional level (Dzau, 2017; IOM, 2003). There is limited diversity in healthcare professions, and the U.S. healthcare system does not take into consideration cultural values outside of Westernized values. Cultural blindness and healthcare professionals assuming that everyone should be treated the same based on the values of Westernized healthcare negatively impacts marginalized populations. Healthcare professionals must have awareness and knowledge of the values of Westernized healthcare and how it has historically excluded input from diverse populations (Sue et al., 1982). It is essential that institutions implement policies to change the current structure of healthcare and support healthcare professionals in gaining cultural competence (Adler et al., 2017; IOM, 2003; IOM, 2011).

Healthcare providers' lack of cultural competence is widely accepted as a contributing factor to health disparities (Betancourt et al., 2014; Bonvicini, 2017; Eddy & Robey, 2005; Hall et al., 2015; IOM, 2003; Jongen et al., 2018; Oikarainen et al., 2019; Reyes et al., 2013). The historical IOM (2003) report, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, identified potential causes of health disparities within the healthcare system and by healthcare professionals. Causes identified by healthcare professionals included clinical uncertainty, conscious and unconscious bias, and prejudice (IOM, 2003). This finding is supported throughout the literature regarding causes of health disparities (Assari, 2018; Boysen & Vogel, 2008; Braun et al., 2017; Jongen et al., 2018; Paul et al., 2014; Reyes et al., 2013; Shaya & Gbarayor, 2006; VanPuymbrouck et al., 2020). Additional causes noted in research include the healthcare professionals' lack of knowledge related to cultural values, norms, and customs, as well as communication barriers between the healthcare professionals and clients due

to varying cultural backgrounds (Betancourt et al., 2014; Eddey & Robey, 2005; Jongen et al., 2018; Shaya & Gbarayor, 2006; Sue et al., 1982; VanPuymbrouck et al., 2020; Walls et al., 2015). Healthcare professionals must have awareness of personal biases and knowledge of cultural values held by others in order to communicate effectively with clients.

Relationships between healthcare providers and clients may be negatively impacted if assumptions are made based on sociocultural factors (Assari, 2018; Betancourt et al., 2002; Hall et al., 2015; IOM, 2003; Morris et al., 2020; Pelleboer-Gunnink et al., 2017; Sue et al., 1982; Walls et al., 2015). Assumptions or biases held by healthcare professionals may be conscious or unconscious and are heavily influenced by societal norms and historical racism (Assari, 2018; Hall et al., 2015; Sue et al., 2007). Research indicates that racism, discrimination, and marginalization are some of the most significant factors to health disparities (Assari, 2018; Betancourt et al., 2003; Braveman et al., 2011; IOM, 2003; Stepanikova & Oates, 2017; Whitehead, 1991). In an effort to better understand the impact of racism and discrimination, implicit bias, and microaggressions by healthcare professionals, these topics will be discussed in more depth. However, it must be noted that these topics are often addressed together in the research.

Racism and Discrimination by Healthcare Professionals. Racism is a key driver of healthcare disparities in minoritized populations (IOM, 2003). This includes racism and discrimination at a systemic, organizational, and individual level. Research identifies a significant correlation between racism and discrimination and poor health outcomes (Ben et al., 2017; Burnes et al., 2019; Paradies et al., 2015; Pelleboer-Gunnink et al., 2019).

A large body of the research on racism and discrimination, in relation to health disparities, is through the perspective and experiences of minoritized populations. It is important

to understand experiences of minoritized populations, because healthcare in the U.S. has shifted to a patient-driven payment system in which patient satisfaction is one of the determining factors in reimbursement and funding. In addition, the experiences of minoritized populations provide healthcare professions with knowledge about why healthcare experiences may be perceived as negative. Experiences of minoritized populations also provide suggestions for ways to improve healthcare interactions. Experiences of racism and discrimination are correlated with poor health experiences, and healthcare professionals must understand experiences of disadvantaged populations in order to better understand and address health disparities. Understanding the experiences of minoritized populations is an important part of developing cultural competence (Sue et al., 1982; Sue et al., 1992).

Racism and discrimination have a direct impact on the health of minoritized populations (IOM, 2003). In a systematic review and meta-analysis of the relationship between experiences of racism and health service utilization, it was found that persons who had experienced racism had approximately two to three times the odds of reporting decreased trust in healthcare, less satisfaction with care, and poorer communication and relationships with providers (Ben et al., 2017). Despite these experiences, persons who experienced racism were no less likely to access healthcare. In other words, people need to access healthcare for various reasons despite negative experiences in healthcare. Individuals who needed to access healthcare more frequently due to health and medical conditions had a stronger association between racism and healthcare experiences (Ben et al., 2017). This suggests that racism may be more detrimental for those in the most need of healthcare (Ben et al., 2017).

A systematic review of experiences of the LGBTQ+ population in healthcare also found evidence of discrimination from healthcare professionals (Ayhan Balik et al., 2020). Levels of

discrimination varied based on what a person identified as under the LGBTQ+ umbrella. For example, transgender individuals experienced different levels of discrimination based on whether they were transitioning, had transitioned, or had chosen not to transition. Persons of color who identified as LGBTQ+ experienced higher rates of discrimination across the board. Men who were gay experienced discrimination because of stereotypes about AIDS and HIV. Consequences of discrimination included denial of certain medications and treatments, delay in seeking healthcare services, and decreased health outcomes (Ayhan Balik et al., 2020). Other themes identified in the systematic review include experiences of being denied needed medications and decreased disclosure of sexual orientation or gender identity due to fear of stigmatization. Specifically, transgender individuals reported experiences of delaying or postponing healthcare services because of fear of stigmatization and even verbal and physical abuse during examinations (Ayhan Balik et al., 2020). These experiences directly impact the quality of health for individuals in the LGBTQ+ population.

Negative attitudes toward older adults correlates with poor health outcomes (Burnes et al., 2019). These negative attitudes are known as ageism which is a form of discrimination experienced by older adults (Burnes et al., 2019). Ageist attitudes held at societal, institutional, and individual levels have a significant impact on health (Burnes et al., 2019). Discrimination manifests in healthcare professionals not explaining medical information and not providing certain treatments to older adults (Burnes et al., 2019). Ageist attitudes also limit development of policies that would promote the health and well-being of aging populations. Research has shown that a substantial number of healthcare professionals have ageist attitudes and may unknowingly discriminate against the aging population (Burnes et al., 2019).

Research of discrimination toward people with disabilities is limited, and future research is needed to better understand experiences in healthcare by people with disabilities (Pelleboer-Gunnink et al., 2017). Main findings of existing research include examples of discrimination in healthcare such as not providing certain treatments due to the assumption that persons with disabilities do not have the capacity to improve, inaccessible spaces within healthcare systems, and explicit failure to accommodate for the disability (Eddey & Robey, 2005; Pelleboer-Gunnink et al., 2017; VanPuymbrouck et al., 2020). Other examples of discrimination are related to communication and communicating to the proxy rather than the client directly, as well as the dismissal of client and family input in healthcare decisions (Eddey & Robey, 2005; Pelleboer-Gunnink et al., 2017). The results of these experiences are directly related to decreased satisfaction with healthcare services (Eddey & Robey, 2005).

There are commonalities identified in the research of racism and discrimination experienced by all of the identified minoritized populations which results in poor health outcomes. The experiences may vary person to person or group to group, but overall minoritized groups have negative experiences with healthcare professionals and often have received less than adequate or complete denial of certain services because of views and assumptions held by the healthcare provider (Ayhan Balik et al., 2020; Ben et al., 2017; Burnes et al., 2019; VanPuymbrouck et al., 2020). Additionally, every minoritized group has experienced racism, discrimination, marginalization, and stereotyping to some extent by a healthcare provider (Ayhan Balik et al., 2020; Ben et al., 2017; Burnes et al., 2019; VanPuymbrouck et al., 2020).

Racism and discrimination not only negatively affect an individual's quality of healthcare regarding physical health but may also increase other health conditions such as mental health issues (Assari, 2018; Ayhan Balik et al., 2020; Betancourt et al., 2002; Burnes et al., 2019; Dzau

et al., 2017; Hall et al., 2015; IOM, 2003; Walls et al., 2015). Hall et al. (2015) found that physician bias was associated with decreased life satisfaction and increased depression for both Black and White patients who experienced discrimination. Similarly, LGBTQ+ individuals have been reported to experience higher rates of mental health issues and incidences of suicidal ideation (IOM, 2011). Oftentimes, healthcare providers will dismiss mental health issues experienced by older adults because of ageist attitudes (Burnes et al., 2019). Persons with disabilities are often stereotyped by healthcare professionals based on their perceived mental capacity or labeled as aggressive (Pelleboer-Gunnink et al., 2017). Racism and discrimination by healthcare professionals directly impact both physical and mental health outcomes of minoritized groups. Developing cultural competence is essential to bring awareness to one's personal beliefs, values, and education regarding the impact of racism and discrimination on minoritized populations.

Implicit Biases of Healthcare Professionals. Most often healthcare professionals are not overtly racist or discriminatory against clients (Sue et al., 2007). Rather, they are more likely to show implicit biases and stereotypes that impact the quality of care they provide to clients (Ayhan Balik et al., 2020; Ben et al., 2017; FitzGerald & Hurst, 2017; Hall et al., 2015; Paradies et al., 2014; Walls et al., 2015). Implicit bias or "aversive racism" is subtle and often unconscious. It may be more damaging than overt racism because of the psychological impact (Sue et al., 2007). The subtle nature of this discrimination is detrimental to the perpetrator as well, because they often do not realize their acts and will continue committing these acts unless they become aware of their implicit biases (Sue et al., 2007). Implicit biases are one's unconscious beliefs that have developed throughout a person's lifetime which are impacted by historical, systemic racism and discrimination, societal norms, personal interactions within a

community, and personal cultural background. Several systematic reviews and meta-analyses found that healthcare providers demonstrated implicit biases for multiple minoritized groups including people of color, LGBTQ+, older adults, and persons with disabilities (Ben et al., 2017; Burnes et al., 2019; FitzGerald & Hurst, 2017; Hall et al., 2015; IOM, 2011; Paradies et al., 2014; Pelleboer-Gunnink et al., 2017).

FitzGerald and Hurst (2017) found that almost all studies included in their systematic review demonstrated evidence of implicit biases among physicians and nurses. Implicit bias was associated with patient diagnosis, treatment recommendation, testing, and number of questions asked of the patients. As a result, there is a negative correlation between level of bias and quality of care (FitzGerald & Hurst, 2017).

Hall et al. (2015) found evidence of implicit bias toward persons of color by healthcare professionals in 14 out of 15 articles. Persons of color were associated with being less cooperative, less compliant, and less responsible for their health, which are associated with negative stereotypes that are ingrained in U.S. culture. Providers who demonstrated implicit bias were less likely to provide or refer for certain treatments or medications and would make patients of color wait longer in the waiting room (Hall et al., 2015). Patients of healthcare providers who demonstrated higher levels of implicit bias reported feeling less respected (Hall et al., 2015). Additionally, they were less satisfied with their healthcare, reporting feelings that the provider was dominant in communication style and less collaborative (Hall et al., 2015).

A systematic review of discrimination toward sexual and gender minorities identified similar findings of stigmatization and denial of services based on sexual orientation or gender identity (Ayhan Balik et al., 2020). This is attributed to attitudes against LGBTQ+ individuals by healthcare professionals. Overall, negative attitudes toward SGM people were noted; however,

this varied by healthcare profession and even specialty area within professions. In this systematic review, participants who reported positive attitudes from their healthcare provider had higher satisfaction with their care. More research is needed to properly understand the implicit biases held by healthcare professionals toward LGBTQ+ persons (Ayhan Balik et al., 2020).

There is relatively limited research regarding healthcare professionals' implicit biases toward the aging population. Implicit biases or stereotypes held by healthcare professionals toward aging individuals are more often related to end-of-life assumptions. Historically, the U.S. has viewed older adults as being less physically and cognitively intact. The result of this is implicit biases resulting in the assumption that older adults cannot comprehend or participate in treatments due to their age (Burnes et al., 2019). These implicit biases exclude older adults from being offered all of the opportunities in healthcare services that younger adults may be offered (Burnes et al., 2019). Despite the limited research in specific types of implicit biases held by healthcare professionals, there is supporting research that healthcare professionals have implicit biases toward older adults which results in poor health outcomes for this population (Burnes et al., 2019).

Stigmatizing attitudes by healthcare professionals toward people with disabilities has also been noted (Pelleboer-Gunnink et al., 2017). A systematic review identified that healthcare professionals exhibited implicit biases toward people with intellectual disabilities noting that they are less cooperative, less compliant, and childlike (Pelleboer-Gunnink et al., 2017). These attitudes toward people with intellectual disabilities are attributed to lack of knowledge about intellectual disabilities (Pelleboer-Gunnink et al., 2017). Implicit biases of healthcare professionals toward people with disabilities are significantly higher than explicit biases or outward discrimination (VanPuymbrouck et al., 2020). Similar to research of discrimination

toward people with disabilities, there is limited research on implicit biases of healthcare professionals toward people with disabilities (VanPuymbrouck et al., 2020). Existing research of implicit biases and attitudes suggests that overall, healthcare professionals want to provide equal care to people with disabilities. However, attitudes are impacted by historical views that society has placed on people with disabilities (VanPuymbrouck et al., 2020). Implications of these implicit biases or attitudes are that most healthcare professionals are completely unaware that they hold these beliefs; as a result, they treat people with disabilities differently than non-disabled people (VanPuymbrouck et al., 2020). The consequence of these implicit biases is that people with disabilities have decreased satisfaction with care which results in health disparities.

Implicit biases are heavily weighted on the historical views of society, as well as assumptions and stereotypes that have been reinforced over centuries. Implicit biases are deeply ingrained in our subconscious. A person needs to become aware of what implicit biases are and how to identify their own. It is important for healthcare professionals to become aware of their own implicit biases, because these biases often lead to discriminatory acts. Discriminatory acts are often embodied as microaggressions rather than blatantly overt forms of racism or discrimination.

Microaggressions of Healthcare Professionals. Microaggressions are a manifestation of implicit biases that are often employed unconsciously and take the form of subtle comments, negative body language, gestures, tones, and assumptions (Sue et al., 2007). Healthcare professionals may inadvertently affect a patient's healthcare experience by making an off-handed joke, assuming a stereotype, or simply how they present themselves in a client encounter. A healthcare professional may not use an interpreter when necessary for communication or may grant special privileges for some and not others, such as allowing visitors after hours while

limiting visitation for others (Hall et al., 2015). Microaggressions are the product of stereotypes and biases that have been conditioned in a person throughout their lifetime and have an impact on the quality of care a person receives (Burnes et al., 2019; Hall et al., 2015; Walls et al., 2015).

Walls et al. (2015) examined microaggressions experienced by American Indians. Most commonly reported microaggressions included healthcare providers avoiding discussing or addressing cultural issues, minimizing the importance of cultural issues, over-identifying with experiences related to race or culture, and being insensitive toward their cultural group when trying to understand or treat medical issues. More than 30% of participants in this study reported a healthcare encounter in which the provider committed a microaggression. There was a statistically significant association between microaggressions and an increase in mental and physical health issues (Walls et al., 2015).

Morris et al. (2020) explored microaggressions experienced by transgender individuals. Themes that emerged include lack of respect for client identity, lack of competency, saliency of identity, and gatekeeping. Participants reported healthcare providers not using clients' identified gender or preferred pronouns, lacking knowledge and competency, over-emphasizing one's identity or not acknowledging one's identity, and withholding treatments (Morris et al., 2020). Microaggressions were correlated with decreased health outcomes which is consistent with existing research regarding the impact of microaggressions in healthcare (Morris et al., 2020).

Microaggressions are difficult to separate from racism, discrimination, and implicit bias, because a microaggression is basically racism or discrimination at a smaller, less obvious level in response to an implicit bias. Racism, discrimination, implicit biases, and microaggressions by healthcare professionals have a significant impact on the health of socially disadvantaged groups. Healthcare professionals have an ethical responsibility to provide quality healthcare services to

all individuals regardless of cultural background. It is necessary to increase awareness of one's personal biases and beliefs in order to decrease the likelihood of intentionally or unintentionally committing a discriminatory act toward a client. This is done through developing cultural competence. It is widely accepted that increasing cultural competence of healthcare professionals will have a positive impact on health disparities (Ayhan Balik et al., 2020; Betancourt et al., 2003; Betancourt et al., 2005; FitzGerald & Hurst, 2017; Guy-Walls, 2007; IOM, 2003; Matteliano & Stone, 2014; Morris et al., 2020; Paradies et al., 2014; Shaya & Gbarayor, 2006; Walls et al., 2015).

Improving Health Disparities

Increasing cultural competence is a mainstream policy initiative in healthcare to improve health disparities (Betancourt & Green, 2010; Bonvicini, 2017; Clark et al., 2011; Dzau et al., 2017; Eddey & Robey, 2005; IOM, 2003; Horvat et al., 2014; James et al., 2017; Jongen et al., 2018; Kilbourne et al., 2006; Matteliano & Stone, 2014; Shen, 2015). Experts agree that sociocultural factors are major contributors to health disparities and education of cultural competence must be inclusive of these factors (Adler et al., 2017; Betancourt et al., 2003; Braveman et al., 2011; Dzau et al., 2017). Developing cultural competence is a method of reducing disparities over which healthcare professionals and students have direct control (Alizadeh & Chavan, 2016). Policy changes to address the historical marginalization and discrimination faced by various cultural groups is something that has and will continue to take time. Healthcare professionals developing cultural competence is a method that can immediately begin to reduce health disparities.

It is necessary to have an understanding of the core components of how culture and cultural competence are defined. In addition, exploring the foundational concepts of theoretical

models of cultural competence is essential in order to understand how one develops cultural competence and how to assess attainment of cultural competence.

Defining Culture

Culture is an accumulation of attributes, language, physical characteristics, beliefs, and values that shapes a person and the social group(s) to which they belong (Awaad, 2003; Betancourt et al., 2002; Carrillo et al., 1999; Chang et al., 2012; Long, 2012; Purnell, 2014). Culture is influenced by race, ethnicity, language, age, religion, sex, sexual orientation, gender identity, and socioeconomic status (Betancourt et al., 2002; Braveman et al., 2011). Additionally, culture is an evolutionary process that has developed over centuries and is individual to how each person identifies themselves (Dickie, 2004; Purnell, 2014). Culture also depends on personal experiences and the meaning gathered from those experiences. It is dependent on an individual's beliefs and how closely they identify with their cultural group(s) (Carrillo et al., 1999; Purnell, 2014; Talero et al., 2015). How each person identifies with the cultural group(s) should not be considered universal in that they all do not have the same values and beliefs (Dickie, 2004; Purnell, 2014). As a fluid and dynamic concept, culture must be appreciated as unique to each person in what they value and believe and how they view health and healthcare (Munoz, 2007). It is essential that healthcare professionals are aware of the complexity of culture in order to understand and appreciate differences within each client interaction.

Defining Cultural Competence

Defining cultural competence has been an area of research and scholarly work for many decades (Benuto et al., 2018; Campinha-Bacote, 2002; Henderson et al., 2018; Shen, 2015; Sue et al., 1982). Research agrees that cultural competence is ambiguous and difficult to define as the understanding of it continues to evolve (Balcazar et al., 2009; Braveman, 2014; Campinha-

Bacote, 2002; Henderson et al., 2018; Jongen et al., 2018; Matteliano & Stone, 2014; Suarez-Balcazar et al., 2011). A commonality among definitions of cultural competence include that it is a continuous, life-long process of people striving to effectively interact with others who come from a different cultural group than themselves (Blanchet Garneau & Pepin, 2015; Campinha-Bacote, 2002; Oikarainen et al., 2019; Paparella-Pitzel et al., 2016; Shen, 2015; Wittman & Velde, 2002). Cultural competence is described as a developmental process that starts with foundational knowledge and develops into analysis, application, and synthesis (Constantinou et al., 2018; Boggis, 2012; King & Baxter-Magolda, 2005; Wittman & Velde, 2002). Though cultural competence is a developmental process, it is not a linear process. There is constant interplay between the constructs (Blanchet Garneau & Pepin, 2015; Campinha-Bacote, 2002; Constantinou et al., 2018).

Developing a unified definition of cultural competence has been identified as a need (Alizadeh & Chavan, 2016; Henderson et al., 2018; Kumas-Tan et al., 2007; Shen, 2015). Definitions of cultural competence need to be considered at an aggregate level (Alizadeh & Chavan, 2016). This means that there are commonalities among all definitions of cultural competence. At the most simplistic level, cultural competence has universal components that can be applied to any cultural group and used with any health profession. In addition, a general definition of cultural competence that can be used across disciplines increases the opportunities for collecting empirical data contributing to reducing health disparities (Alizadeh & Chavan, 2016; Shen, 2016).

Limiting definitions to a specific profession or practice area limits the application of well-developed definitions and models that may come from different professions or practice areas (Alizadeh & Chavan, 2016). It is necessary to examine definitions from multiple practice

areas to find similarities and develop a unified definition of cultural competence. Alizadeh and Chavan (2016) completed a systematic review of definitions of cultural competence and practice models used in healthcare fields and businesses. Of the models included in the systematic review, all health-related models used the term "cultural competence" while business-related models varied in terminology using "cultural competence," "intercultural competence," "cultural intelligence," "cross-cultural competence," and "intercultural competency" (Alizadeh & Chavan, 2016). Even though terminology may vary, the goal of all of these models is in the development of more culturally competent professionals, and cultural competence was the first term ever used to describe this concept of becoming more culturally aware and skilled to work with diverse populations (Alizadeh & Chavan, 2016; Danso, 2018).

The term cultural competence has been criticized for being too essentialist (Danso, 2018; Dao et al., 2017). This means that when cultural competence education first emerged in healthcare programs, it often focused on developing knowledge and skills to work with "the other" and did not include the complex nature of how a person develops cultural competence (Danso, 2018; Dao, 2017; Green-Moton & Minkler, 2019). The term "cultural competence" has also been criticized for implying an end to learning (Alizadeh & Chavan, 2016; Green-Moton & Minkler, 2019). These criticisms, or critiques, have been scrutinized as well. Danso (2018) asserts that many of the critiques of cultural competence lack analytical rigor. At its initial development in the late 1970s and early 1980s, cultural competence was a revolutionary idea that was developed based on the current sociopolitical culture of that time (Danso, 2018). Since then, cultural competence has evolved in meaning and adapted to the changing sociopolitical culture. Another critique of criticisms is that people have unrealistic expectations of cultural competence and what it should all encompass. Danso (2018) suggests that culture is something that is too

fluid and ever-changing to expect a single framework capable of encompassing all aspects of culture. The final critique of criticisms is that the argument that cultural competence is an essentialist view is unfair because that is not what the originators intended when they developed the first models of cultural competence (Danso, 2018). Cross et al. (1989) described cultural competence as a process in learning how to work with those who are culturally different than oneself. The process described is a developmental process in which one strives to develop proficiency in the ability to seek out and add to their knowledge base of cultural competence (Cross et al., 1989). There is no indication that cultural competence has an end to learning; rather, it is a life-long process and has always been described as such (Cross et al., 1989).

One of the terms that has more recently received attention in the literature is "cultural humility" (Danso, 2018). Tervalon and Murray-Garcia (1998) coined the term "cultural humility" in response to criticisms of cultural competence. Cultural humility is defined as a life-long learning process inclusive of self-awareness and critical analysis of power imbalance and having a willingness to collaborate with clients. Since the term cultural humility emerged, there has been ongoing discussion of whether it is a more appropriate term than cultural competence (Danso, 2018; Green-Moton & Minkler, 2019). In reality, both are important, and cultural competence arguably includes the concept of cultural humility within the many ways it has been defined (Danso, 2018). There is no benefit in using one term over the other (Danso, 2018; Green-Moton & Minkler, 2019). However, cultural competence is more widely recognized and universal in understanding (Alizadeh & Chavan, 2016; Danso, 2018; Green-Moton & Minkler, 2019). The term cultural competence should be viewed broadly with the understanding that it encompasses many different aspects of the developmental process in which cultural competence happens.

Foundational Constructs of Cultural Competence

Developing cultural competence is a multidimensional process and has been described as such since the first models were published. Cross et al. (1989) presented one of the first models of cultural competence, and even in the early stages, it was seen as a developmental process. Sue et al. (1982) also introduced one of the first models of cultural competence and described the multidimensional nature of developing cultural competence. Since its initial conception, cultural competence has been viewed as a complex process that one actively engages in (Cross et al., 1989; Sue et al., 1982; Sue et al., 1992).

Henderson et al. (2018) completed a concept analysis of cultural competence and identified six antecedents as critical in the development process (Henderson et al., 2018). These included: (a) openness to learning about other cultures; (b) awareness of other cultures and being able to identify discrimination and how Western medicine constrains Eastern cultures; (c) desire to learn; (d) cultural knowledge, which is the cognitive component of learning; (e) cultural sensitivity; and (f) having cultural encounters (Henderson et al., 2018). These antecedents are present in all well-established models of cultural competence though each model combines them differently into constructs (Blanchet Garneau & Pepin, 2015; Campinha-Bacote, 2002; Constantinou et al., 2018; Cross et al., 1989; King & Baxter Magolda, 2005; Purnell, 2014; Sue et al., 1982; Sue et al., 1992). The three constructs most often identified in cultural competence models include awareness, knowledge, and skills (Alizadeh & Chavan, 2016; Oikarainen et al., 2019; Shen, 2015).

Cultural awareness, knowledge, and skills have been adopted by multiple health professions including medical, nursing, counseling, psychology, social work, physical therapy, occupational therapy, and speech-language pathology as necessary areas one must address in

order to develop cultural competence (Shen, 2015). Some healthcare professions have additional constructs, but awareness, knowledge, and skills are the most universal across healthcare professions. Other constructs that have been commonly incorporated into models and definitions of cultural competence are related to the motivation of the learner and organizational support (Alizadeh & Chavan, 2016; Balcazar et al., 2009; Oikarainen, 2019; Shen, 2015). Organizational support is a construct that has been identified as a need at collegiate and clinical practice levels, as well as part of the healthcare structure overall (Betancourt et al., 2002; Balcazar et al., 2009; Dzau et al., 2017; Oikarainen, 2019). Research has indicated that healthcare professionals have higher levels of cultural competence when they feel that their place of employment is supportive of cultural diversity (Betancourt et al., 2002; Balcazar et al., 2009; Dzau et al., 2017; Oikarainen, 2019). This includes healthcare institutions implementing policies to increase cultural competence and cultural diversity, as well as intentionally creating inclusive environments for multiple cultural groups. Overall, cultural competence is seen as the development of awareness, knowledge, and skills necessary to work with individuals from differing cultural backgrounds. Development of cultural competence is a fluid, life-long process that requires organizational support in order to create a learning environment that is supportive and inclusive of cultural diversity.

Assessing Cultural Competence Education

One of the persistent issues of developing cultural competence is how to measure attainment (Horvat et al., 2014; Jongen et al., 2018; Lie et al., 2010; Shen, 2015). This is in part due to inconsistencies with how cultural competence is taught (Jongen et al., 2018). Some educational courses are provided as standalone lectures/modules that are completed over several hours ranging from two to four hours (Jamieson et al., 2017; Paparella-Pitzel et al., 2016; Steed,

2010). Other educational programs have semester long courses specific to cultural competence (Boysen & Vogel, 2006). Some healthcare programs have incorporated cultural competence educational models throughout the program (Boggis, 2012). Due to inconsistency with how cultural competence education is provided, further research of effective teaching methods is warranted (Betancourt et al., 2005; Horvat et al., 2014; Jongen et al., 2018; Lie et al., 2010). An issue with determining effective teaching methods is that there are relatively few instruments that have been psychometrically evaluated (Benuto et al., 2018; Price et al., 2005; Shen, 2015).

Measurements of Cultural Competence

Many measures of cultural competence exist across healthcare disciplines. However, most have not been tested for reliability and validity (Benuto et al., 2018; Price et al., 2005; Shen, 2015). The majority of cultural competence measures are self-report surveys (Benuto et al., 2018; Shen, 2015). Benuto et al. (2018) found in a systematic review of cultural competence training outcomes that 82% of studies used quantitative methods to measure outcomes. It was identified that the most commonly used cultural competence assessments included the Multicultural Awareness, Knowledge, Skills Survey (MAKSS-C), the Multicultural Competency Inventory (MCI), and the White Racial Identity Attitude Scale (WRIAS) (Benuto et al., 2018). The MAKSS-C is one of several quantitative measures that has been developed based on the Multicultural counseling competence (MCC) model (Boysen & Vogel, 2008). Measures based on the MCC have been some of the most frequently used in research (Boysen & Vogel, 2008). An issue with these MCC-based measures is that they been developed mainly for counseling, psychology, and other mental health disciplines though there is potential to expand these to encompass all healthcare professions.

The field of nursing has also been at the forefront of incorporating cultural competence into curricula and developing assessments of cultural competence. The Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals (IAPCC) was developed based on Campinha-Bacote's (2002) model of cultural competence and is one of the most commonly used surveys in research of the nursing field. The IAPCC, similar to the MAKSS-C and other MCC surveys, is a quantitative self-report instrument (Kumas-Tan et al., 2007; Shen, 2015). A strength of the measure is that it is not discipline specific which allows for research using the measure among a variety of healthcare programs in order to evaluate whether some fields of practice equip students more effectively than others to successfully work with culturally diverse clients (Moran Fitzgerald et al., 2009). This strength has been challenged as a limitation, because it is written at an advanced reading level which limits the ability for it to be used among health professions of varying levels of education (Doorenbos et al., 2005). Another limitation identified in the research is decreased accessibility due to cost of the survey. Research has identified the need for cultural competence materials to be openly accessible (Alizadeh & Chavan, 2016).

When considering the devastating impact of health disparities on minoritized populations, there is a clear need to address lack of cultural competence among healthcare professionals immediately. Unifying cultural competence materials and outcome measures provides an opportunity for healthcare programs to ensure most effective practices. Examining the foundational constructs of cultural competence, one can appreciate that there are universal core values among healthcare professionals despite specific professions. Quantitative measures are most feasible for universal application among healthcare professions. Despite the ease of using

quantitative measures, there are several criticisms identified in the research of existing self-report measures of cultural competence.

Critique of Criticisms for Quantitative Cultural Competence Measures

Criticisms of self-report cultural competence measures include lack of psychometric testing and lack of a theoretical framework (Alizadeh & Chavan, 2016; Benuto et al., 2018; Lie et al., 2010; Price et al., 2005; Shen, 2015). Measures guided in development by a theoretical model typically demonstrate better validity and reliability (Shen, 2015). Of those that have been validated, many of the measures have been normed with population samples that lack diversity (Kumas-Tan et al., 2007). There is also concern of social desirability with self-report measures (Kumas-Tan et al., 2007). One of the last main criticisms of self-report measures is the subjectivity of the questions (Kumas-Tan et al., 2007).

Many cultural competence measures have not been psychometrically validated (Alizadeh & Chavan, 2016; Lie et al., 2010; Shen, 2015). This has been identified as an ongoing issue in the literature. Some of the most commonly used measures, such as the MAKSS-C, have not undergone robust testing. Despite the lack of vigorous testing, measures like the widely used MAKSS-C have been initially validated at minimum. Many of these measures were developed in the early 1990s in response to the need for developing cultural competence (Benuto et al., 2018; Campinha-Bacote, 2002; D'Andrea et al., 1991). Interestingly, most of these first measures of cultural competence were developed based on theoretical models which has also been identified as a criticism. Measures that were guided in development by a theoretical model typically demonstrate better validity and reliability (Shen, 2015).

Another criticism is that most cultural competence measures have not been normed with diverse population. In response to this criticism, it needs to be considered that diversity as a

whole is lacking in healthcare, so this is not just an issue specific to the standardization of cultural competence instruments. A more relevant criticism is that, as with the Westernized healthcare as a whole, there has been limited input from minoritized populations in the development of cultural competence measures (Kumas-Tan et al., 2007). Intentional efforts need to be taken to include persons from various cultural backgrounds in the development of cultural competence materials including assessment measures. In addition, health disparities are contributed to lack of diversity and limited cultural competence of healthcare professionals. Those that most need to develop cultural competence are a population of healthcare professionals who lack diversity.

There is also concern of social desirability with self-report assessment measures (Kumas-Tan et al., 2007). Research of correlations between levels of cultural competence and social desirability are inconclusive (Constantine, 2001; Greelings et al., 2018; Larson & Bradshaw, 2017). Overall, there is a positive correlation between level of identified cultural competence and social desirability scores (Constantine, 2001; Larson & Bradshaw, 2017). However, it is noted that the strength of correlation is variable based on the cultural competence instrument (Larson & Bradshaw, 2017). Social desirability needs to be taken into account with any self-report measure and the potential of participants responding to questions in a manner that they think is socially desirable. The use of mixed research methods has potential to account for social desirability, but it is still necessary to have a validated quantitative measure that is universal and accessible.

One of the last main criticisms of self-report measures is the subjectivity of the questions (Kumas-Tan et al., 2007). One person's interpretation of a question is variable. Questions that are written with the White race assumed as the norm can perpetuate current issues with healthcare (Kumas-Tan et al., 2007). This reiterates the criticism of limited input from diverse

cultural groups in the development of assessments. It is necessary to examine questions and ensure that they are written in a manner that does not assume the person taking the survey is White. Additionally, the questions should be written in a way that explores differences between the self and clients (Kumas-Tan et al., 2007).

Benefits of Using Quantitative Measures of Cultural Competence

Despite criticisms, quantitative measures are the most frequently used in research. Quantitative measures have several benefits. There is potential to increase quality of research on cultural competence using multi-profession and multi-institution comparisons which is most easily done through quantitative measures (Lie et al., 2010). This would provide opportunity for the development of multi-institutional databases for programs to use when assessing cultural competence levels (Lie et al., 2010). In order to do this, there needs to be a cultural competence measure that is generalizable to multiple healthcare professions (Alizadeh & Chavan, 2016).

Another potential benefit of using quantitative measures is that they are generally cost-effective and time-efficient, which is an important consideration for any program to take into account when determining how to assess cultural competence outcomes. Research has identified that cultural competence materials that are affordable and generalizable to multiple health professions have the potential to advance the field of cultural competence (Alizadeh & Chavan, 2015; Lie et al., 2011). An affordable and accessible cultural competence measure is needed in order to advance research of multi-professions and multi-institutions.

Quantitative measures have the ability to assess cultural competence levels on a much greater scale. However, research has identified the effectiveness of using qualitative methods to assess cultural competence (Isaacson, 2014; Kamas-Tan et al., 2007). Qualitative methods are not as time-efficient and transferrable to multiple healthcare professions, though there are

benefits to healthcare programs to have qualitative data to inform curriculum development. Using quantitative measures in conjunction with qualitative methods would provide healthcare programs with a more well-rounded understanding of cultural competence outcomes. The quantitative measure could assess competence levels in comparison to national norms, while the qualitative measure could add depth and understanding to the levels of cultural competence. Even though qualitative methods are important in the assessment of cultural competence, a quantitative measure that can be used multi-professionally and multi-institutionally has greater potential to advance research of cultural competence.

One of the main issues identified with assessing cultural competence is the lack of methodological rigor of assessment measures (Alizadeh & Chavan, 2016; Benuto et al., 2018; Lie et al., 2010; Price et al., 2005; Shen, 2015). It is necessary to have a cultural competence measure that has undergone robust testing. The instrument needs to measure competence regarding various cultural groups (Kumas-Tan et al., 2007). It needs to be inclusive of the three constructs of awareness, knowledge, and skills. The instrument also needs to be generalizable to multiple healthcare professions, and it needs to be affordable and easily accessible (Alizadeh & Chavan, 2016; Benuto et al., 2018; Jongen et al., 2018).

Multicultural Awareness, Knowledge, and Skills Survey – Counselor Edition

The Multicultural Awareness, Knowledge, Skills Survey – Counselor Edition (MAKSS-C) was developed in 1991 by D'Andrea and colleagues to evaluate the effectiveness of a cultural competence course that they developed for their counseling program. The course and survey were developed based on Sue et al.'s model of MCC. The MAKSS-C was one of the first measures to include the constructs of awareness, knowledge, and skills (Kim et al., 2003). It has been reported that the survey has been used well over 600 times in research and continues to be

one of the most utilized measures of cultural competence (Kim et al., 2003). The MAKSS-C has been modified and used with various disciplines including counseling students, clinical psychology students, social work education, pre-service teachers, and art therapy students (Greelings et al., 2018; Guy-Walls, 2007; Kim et al., 2003; Robb, 2014; Tolbert, 2019). The measure is inclusive of various socially disadvantaged groups including questions related to race/ethnicity, SGM, older adults, persons with disabilities, and low SES. In addition, the MAKSS-C is easily accessible for use. There is a onetime fee of $20 to use the MAKSS-C. Accessibility to curricula and assessments has been identified as necessary in order to adequately measure cultural competence of healthcare professionals (Benuto et al., 2018; Lie et al., 2011).

The main limitation of this measure is that it was developed to specifically assess counselors' levels of cultural competence, so the wording is discipline specific. One of the recurring themes in research is that outcome measures are often too focused on specific disciplines which makes it difficult to generalize findings (Alizadeh & Chavan, 2016; Shen, 2015). Modifying the MAKSS-C would provide a measure that could make it easier to generalize findings to other health disciplines and potentially be used in a multi-institution database for advancing research of cultural competence.

Another limitation of the measure is that it does not account for organizational support. Research has identified that organizational/institutional support is an important component of developing cultural competence (Betancourt et al., 2002; Suarez-Balcazar et al., 2009). Most quantitative cultural competence measures do not measure organizational support (Suarez-Balcazar et al., 2009). For that reason, this study includes a separate measure of organizational support that was developed through the National Survey of Student Engagement. The NSSE Topical Module: Inclusiveness and Engagement of Cultural Diversity measures organizational

support that students receive at the collegiate level and is a well-established survey. This survey will be discussed in further detail in Chapter III.

The MAKSS-C has undergone relatively limited psychometric testing. During initial development of the MAKSS-C, reliability coefficients (Chronbach's alphas) of .75 for awareness, .90 for knowledge, and .96 for skills were noted. D'Andrea and colleagues (1991) used principal axis extraction and varimax rotation to analyze each factor. Factor analysis of the awareness subscale indicated that there may be three dimensions within the scale which warranted further research (D'Andrea et al., 1991). The subscale of knowledge and skills loaded onto one factor and were not further explored. Overall, it was determined that the MAKSS-C demonstrated adequate construct validity and reliability (D'Andrea et al., 1991). Research has identified the need for additional factor analysis of the scale (Kim et al., 2003).

Revision of the MAKSS-C: MAKSS-CE-R

Kim et al. (2003) completed an exploratory factor analysis of the MAKSS-C using principal component analysis with oblique rotation. Based on evaluation of eigenvalues and scree plot, it was determined a three-factor solution was most interpretable (Kim et al., 2003). The EFA was completed with a sample size of 158 participants. Thirty-three items of the 60-point scale met the criteria of having a structure coefficient greater than .30 resulting in 10 items in the awareness subscale, 13 items in the knowledge subscale, and 10 items in the skills subscale. Questions that remained in the revised survey under the skills subscale included questions related to willingness to refer to other professionals, as well as the level of comfort working with the elderly population, the lesbian and gay community, people with disabilities, and people from poor socioeconomic backgrounds. The awareness subscale included an array of questions related to awareness of health disparities and the disproportionate quality of services

that minorities receive. The knowledge subscale included questions related to the person's understanding of terms related to cultural competency such as ethnicity, culture, prejudice, racism, and pluralism (Kim et al., 2003). Internal reliability of the revised survey included coefficient alphas of .71 for awareness, .85 for knowledge, .87 for skills, and .82 for the entire 33-item survey (Kim et al., 2003).

The second study completed by Kim et al. (2003) consisted of a sample size of 137 participants. Construct validity was completed by looking for correlations between the revised MAKSS-CE-R, the Multicultural Counseling Inventory (MCI), and the Cognitive Flexibility Scale (CFS). Internal reliability of the MAKSS-CE-R included the following coefficient alphas: .80 for awareness, .87 for knowledge, .85 for skills, and .81 overall. The results indicate adequate reliability of the revised survey (Kim et al., 2003). Correlations for construct validity were as expected from the authors in comparison to the other two surveys (Kim et al., 2003).

Based on results of the study by Kim et al. (2003), several limitations were noted. The first was in the method used for exploratory factor analysis. The authors chose Principal Component Analysis (PCA), which can yield misleading results though commonly used (Preacher & MacCallum, 2003). It is suggested that PCA be avoided unless the researcher's intention is data reduction (Preacher & MacCallum, 2003). Kim et al. (2003) stated the intent of the study was to identify meaningful factors underlying items of the survey. This purpose would have been better operationalized through EFA, specifically Principal Axis Factoring (PAF) (Preacher & MacCallum, 2003). In addition, there was limited interpretation of the three-factor solution based on the constructs of the Multicultural counseling competence (MCC) model from which the MAKSS-C was developed. Research has identified that measures that are ground by a theoretical framework are a better measure of cultural competence (Alizadeh & Chavan, 2016;

Benuto et al., 2018; Lie et al., 2010; Shen, 2015). The intention of this research study was to address these limitations and revise the original MAKSS-C to be generalizable to various healthcare professions, complete an EFA using PAF, and interpret the results based on the MCC model.

Theoretical Framework for Current Study

The most commonly used and cited model of cultural competence is the Multicultural counseling competence (MCC) model, which has been referenced over 4,000 times since it was published. Comparatively, the second most commonly used model is the Process of Cultural Competence in the Delivery of Healthcare Services (Campinha-Bacote, 2002), which has been referenced approximately 2,000 times. Though the MCC has been altered over the years, the original 1982 model is the most widely accepted and influential model in research and at policy level (Geerlings et al., 2018).

Multicultural Counseling Competence (MCC) Model

Sue et al. (1982) identified the need for a model of cultural competence to guide education practices for healthcare professionals, specifically counselors. In their Position Paper: Cross-Cultural Counseling Competencies, the authors outlined how historical racism and discrimination toward minoritized groups have developed a culture of healthcare that is not inclusive of diverse populations (Sue et al., 1982). The result of this culture in healthcare has failed to meet the needs of minoritized populations (Sue et al., 1982). Issues identified in this article from 40 years ago are still at the forefront of issues with healthcare. Examples include: (a) healthcare professionals assuming Western medical models fit all cultural groups, (b) ineffective communication between healthcare professionals and clients, (c) language barriers, (d) and barriers related to cultural differences between the majority of healthcare professionals and the

diverse cultural groups accessing healthcare (Ben et al., 2015; Dzau et al., 2017; Hall et al., 2015).

Furthermore, institutional racism and discrimination were identified as barriers for minoritized groups to access quality healthcare services which are still identified as barriers to accessing healthcare (Ayhan Balik et al., 2020; Ben et al., 2015; Hall et al., 2015; IOM, 2011; Sue et al., 1982). Sue et al. (1982) asserted that while addressing cultural competence, it is imperative to target the sociopolitical system that has oppressed and discriminated against minoritized populations. In light of recent events in the United States, much emphasis has been placed on the fact that the sociopolitical system of this country still oppresses minoritized populations. Unfortunately, this directly relates to health disparities and decreased quality of life.

Sue et al. (1982) also addressed the need of including sociocultural factors into theoretical models of cultural competence. Sociocultural factors are thought to be some of the most detrimental factors to health outcomes (Betancourt et al., 2003; Braveman et al., 2011; Dzau et al., 2017; Kilbourne et al., 2006). Lastly, Sue et al. (1982) identified that culture does not only include race and ethnicity but also gender, sexual orientation, socioeconomic status, religion, and age. Other models of cultural competence that originated during the 1980s, such as Cross et al.'s (1989) work, were more focused on race and ethnicity. These models from the 1980s did not include other cultural groups that have experienced discrimination.

The MCC was developed in response to issues within the healthcare system and sociopolitical system that still have not changed 40 years later. The MCC model is relevant now, as it was when developed. Like many of the models of cultural competence, the MCC was created based on principles of what one needs to develop cultural competence. The MCC is a

tripartite model that includes the main constructs of awareness, knowledge, and skills (Sue et al., 1982).

Awareness. Within the construct of awareness (beliefs/attitudes) are four principles. The first is becoming aware of one's cultural heritage while valuing and respecting the differences of other cultures. A culturally skilled healthcare professional is one who understands their own cultural background, values, and beliefs, as well as seeing other cultures as equally valuable and authentic as their own (Sue et al., 1982). The second principle is being aware of personal biases and understanding the impact of biases on those who are culturally different from themselves (Sue et al., 1982). The third principle is being comfortable with cultural differences. This requires having awareness of Westernized medicine and the implications of imposing those practices on everyone in the same manner. This is in response to "cultural blindness" which is the practice of not acknowledging cultural differences but rather treating everyone the same (Sue et al., 1982). The fourth principle is being sensitive to what is not in a person's control and being comfortable with referring a client to another healthcare professional if they do not feel they can adequately meet the client's needs.

The construct of awareness is primarily focused on feeling comfortable with exploring personal biases and values and how they influence beliefs of others (Sue et al., 1982). Once a person is aware of and willing to challenge personal biases, they are able to better embrace differences with others and develop more authentic relationships. Developing awareness requires self-reflection and the ability to critically analyze personal values and beliefs.

Knowledge. The construct of knowledge is rooted in understanding systematic societal influences that minoritized groups have experienced in the United States and how these factors have created barriers to accessible healthcare (Sue et al., 1982). The first principle of knowledge

requires an understanding of the sociopolitical system regarding treatment of minoritized groups at a national level (Sue et al., 1982). This is done by gaining knowledge of historical trauma minoritized groups have experienced at the national level. The second principle requires having information-specific knowledge of cultural groups. This specific knowledge is related to understanding the history, experiences, cultural values, and lifestyles of various cultural groups (Sue et al., 1982). The third principle is having knowledge of how oppressive policies and practices in healthcare have impacted minoritized populations. A person needs to have knowledge of the culture of healthcare and inherent values that might impact interactions with those who are culturally different (Sue et al., 1982). For example, Westernized medicine maintains an inherent value that people accessing healthcare services should be independent in managing their health. Therefore, goals are typically directed toward independence. The issue with this is that collectivist cultures may not value independence in the same way as individualistic cultures. Lastly, the fourth principle of knowledge includes understanding institutional barriers to healthcare such as accessibility due to geographical location, the physical environment of the facility, and whether it is welcoming and accessible to various cultural groups. Other institutional barriers include hours of operation, translator services for language barriers, and types of services offered (Sue et al., 1982). The construct of knowledge is most concerned with the person taking an active role in gaining knowledge of the world around them and learning about experiences of those from differing cultures (Sue et al., 1982). This construct is often viewed as the cognitive component, because it requires active learning for the person developing cultural competence.

Skills. The construct of skill is focused on the skill set of the person and their effectiveness in interacting with people from differing cultural groups. The first principle of skill

is being competent and comfortable with a wide variety of treatment modalities. A healthcare professional must be skilled in multiple ways to treat or address an issue in order to be culturally inclusive. The second principle is having the ability to send and receive verbal and non-verbal communication accurately and appropriately (Sue et al., 1982). This includes understanding one's own body language and non-verbal communication, as well as being able to interpret a client's non-verbal cues. It is necessary to avoid ambiguous terminology that can be misunderstood by persons of differing cultures. Healthcare providers must also possess skills to communicate in a clear and concise manner to avoid miscommunication and the implementation of interventions that are not culturally sensitive (Sue et al., 1982). The third principle is being skilled in advocating for the client when appropriate (Sue et al., 1982). A culturally skilled healthcare professional possesses a wide skill set and should be adaptable to interactions with persons from various cultural groups. This requires a desire to learn and develop these skills to effectively work with a multitude of cultural groups.

The three constructs of the MCC provide an excellent theoretical foundation for how to develop cultural competence. Current literature on most important factors in developing cultural competence is consistent with the constructs of the MCC (Betancourt et al., 2005; Braveman et al., 2010; Henderson et al., 2018; Kilbourne et al., 2006). In addition, the MCC has been used to develop some of the most frequently used cultural competence assessments (Benuto et al., 2018; Boysen & Vogel, 2008). The MAKSS-C is one of those measures, though it has not been evaluated to determine whether it is measuring the constructs of the MCC. This research study intended to examine to what extent the factors of the MAKSS-HC are a measure of the constructs of the MCC. This model was used to explore this study's proposed research questions.

Structural Equation Modeling

Structural equation modeling (SEM) was chosen as the research framework for this research study. Specifically, exploratory factor analysis (EFA) was employed for data analysis. EFA is one of the most widely used statistical methods in psychological research (Fabrigar et al., 1999). The decision to use EFA was based on several factors.

The first reason for choosing EFA is that the MAKSS-HC was revised for use with multiple healthcare professions for the reason that the original MAKSS-C was designed specifically for counseling students. EFA is the recommended method when reevaluating a scale for use with new populations to investigate whether the same number of factors underlies the scale (Flora & Flake, 2017). Regarding the MAKSS-C, there is limited research to determine how items load onto factors. Further investigation is warranted (Kim et al., 2003).

The second rationale for using EFA is that even though it is hypothesized that the MAKSS-HC should demonstrate similar factor loadings as the original MAKSS-C, it is possible that items will load onto other factors. The MAKSS-C was developed based on the MCC model (D'Andrea et al., 1991). The original MCC model identifies three areas of cultural competence: awareness, knowledge, and skills (Sue et al., 1982). Each of the three constructs contains four core principles that a culturally competent healthcare professional should possess. On examination of the items that compose the MAKSS-C, it seems that there is representation of each construct and the core principles within that construct. Therefore, a person could theorize that items would load onto three distinct factors. On deeper analysis of the MCC model, this may not be the case. Sue et al. (1992) expanded the MCC to include three characteristics of developing cultural competence. Within each characteristic are the dimensions of awareness, knowledge, and skills (Sue et al., 1992). Based on the MCC model, one could interpret the

constructs of cultural competence in different ways. By using EFA as the analytical framework, there was an organic process to discovering latent variables and interpreting measured variables of the MAKSS-HC (Preacher & MacCallum, 2003). The MCC was used to interpret measured variables that co-varied (Preacher & MacCallum, 2003).

Inferential Analysis

Levels of cultural competence have been found to vary based on several factors including student demographics, amount of cultural competence education provided, and teaching methods. Demographics are identified as important aspects of assessing cultural competence. Collecting demographic information allows healthcare programs to track and compare student populations with other programs and levels of cultural competence. Inferential analysis provides healthcare programs with a method for tracking themes in cohorts and levels of cultural competence. Issues identified in the research indicate that diversity is lacking in healthcare fields of practice (Bouye et al., 2016; Goode & Landefeld, 2019; Matteliano & Stone, 2014; Pittman et al., 2021; Reyes et al., 2013). In addition, diversity of faculty in healthcare programs has been an identified concern (Shen, 2015). Objective measures, such as inferential statistics, can track changes in the demographics of healthcare professions and monitor changes in levels of cultural competence.

Summary

This chapter focused on synthesizing research in five areas that are the foundation for this research study. First, the demographics of the U.S. were examined in order to highlight the lack of diversity in healthcare professions compared to the diversity in the U.S. as a whole. Healthcare is predominately composed of White healthcare professionals, and lack of cultural competence is noted as a leading cause of health disparities. Second, extant literature related to

health disparities was examined to emphasize the consequences of healthcare professionals lacking cultural competence and the impact this has on health outcomes. Third, literature examining how to improve health disparities was explored to support the need for cultural competence in healthcare professions due to minoritized populations experiencing poor health outcomes because of racism and discrimination. Fourth, issues in assessing cultural competence were investigated in order to establish the need for a cultural competence measure that is universal and openly accessible to healthcare professions. Fifth, an overview of the theoretical framework utilized for this study was provided. Combined, these sections frame the rationale for the current study and establish the need for the empirical investigation to evaluate construct validity of the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC), the revised version of the MAKSS-C.

Analysis of the body of literature, which informed the rationale and provided the research approach foundation for this research study, revealed that despite consensus among experts that cultural competence will reduce health disparities, healthcare professionals continue to lack cultural competence (Betancourt & Green, 2010; Bonvicini, 2017; Clark et al., 2011; Dzau et al., 2017; Eddey & Robey, 2005; IOM, 2003; Horvat et al., 2014; James et al., 2017; Jongen et al., 2018; Kilbourne et al., 2006; Matteliano & Stone, 2014; Shen, 2015). Healthcare professionals must increase levels of cultural competence in order to improve health disparities. Research identifies that there is a need for an accessible and affordable cultural competence measure that can be used among healthcare professions (Alizadeh & Chavan, 2016; Benuto et al., 2018; Lie et al., 2010). Healthcare professions need a measure that can be used to compare levels of cultural competence to other professions and other healthcare programs. Analysis of the body of

literature established a need for empirical investigation of a cultural competence measure that is generalized and accessible to multiple healthcare professions.

In summary, this cross-sectional study assessed construct validity of the MAKSS-HC through EFA with the factors being interpreted using the MCC model. Then relationships between the MAKSS-HC and institutional support were examined. The methods and research design that were utilized for the current study are discussed in Chapter III.

CHAPTER III

METHODOLOGY

This study employed structural equation modeling, specifically exploratory factor analysis to measure validity and reliability of the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC). The MAKSS-HC was then compared to the original MAKSS-C. In addition, this study examined the correlation between healthcare students' levels of cultural competence and their culturally diverse experiences and engagement related to institutional support from an upper Midwest university in the United States. This study also compared means between demographic variables and students' level of cultural competence. Examining the correlations between scores of the MAKSS-HC and the NSSE Topical Module: Inclusiveness and Engagement with Cultural Diversity assisted in gaining a better understanding of future directions that healthcare programs and institutions could take to improve and enhance cultural competence education and experiences in order to decrease health disparities. Comparing demographics such as racial identity, age, gender, program of study, year in program, and amount of cultural competence education to scores of the MAKSS-HC provided the opportunity to compare findings of this research study with other research in cultural competence. This study addressed the following three research questions:

1. Will the revised Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC) demonstrate validity and reliability similar to the original MAKSS-C?

2. Do scores on the NSSE Topical Module: Inclusiveness and Engagement with Cultural Diversity predict scores on the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC)?
3. Are there significant relationships between demographic data and scores of the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC)?

It is hypothesized that students who have received more cultural competence education will report higher levels of cultural competence. It is also hypothesized that older students and students who are further along in their program of study will report higher levels of cultural competence.

This chapter outlines the research methodology of this study. Discussion includes the participants, procedures, instruments, and protocols utilized to investigate the research questions. Finally, data collection and data analysis methods are discussed.

Procedures and Participants

This study used a cross-sectional research design to examine the relationship between students' perceived level of cultural competence and students' culturally diverse experiences from a specific point in time. Cross-sectional design was chosen because the purpose of this study was to examine the psychometric properties of the survey, and outcomes were measured based on current levels of cultural competence. The study was operationalized through administration of one online survey with two scales distributed to students in the fall semester of 2021. The research was conducted at a large university in the upper Midwest. The university's Institutional Review Board (IRB) approved the study design, instrument, and consent prior to distribution of the study. Documentation of IRB approval is provided in Appendix A.

Participants for this study were recruited from the medicine and health sciences programs offered at the university including physician, physician assistant, nursing, psychology, counseling, public health, physical therapy, occupational therapy, athletic training, medical lab sciences, social work, and speech-language pathology. Programs were chosen for convenience of being offered at the university and to obtain the largest sample size possible. In addition, these health professions have been frequently evaluated in the research of cultural competence.

Participants recruited for the study were students currently enrolled in one of the identified health science programs in the fall semester of 2021. In order to gain the greatest possible sample size, the only exclusion criterion was if a participant was not currently enrolled in an identified health program. It was estimated that approximately 1,200 students would be emailed. In total, 267 students participated in the survey (an approximate 22% response rate based on estimated enrollment in the programs).

Data collection occurred following IRB approval, and the online survey was open from October 4-19, 2021. The survey was closed after three consecutive days of no participant responses with no responses in progress. Program directors of the health programs served as gatekeepers to send the email invitation to enrolled students. They also sent a reminder email to students one week after initial distribution of the survey. The online questionnaire was hosted through the Qualtrics™ survey engine. Students were asked to indicate their consent directly on the online survey prior to completing the survey. Estimated time to complete the survey was less than 15 minutes.

Frequencies and percentages of participants' general demographic information from the data collection is presented in Table 1. All demographic questions were open text in order to be as inclusive as possible and then were coded into categories. Similar to the overall statistics of

persons in healthcare professions, the majority of participants were White females. Statistical differences in gender and race were higher with the participants of this study in comparison to national averages of healthcare professionals with 85% (*n* = 206) reporting their gender as female compared with the 68% of the national average, and 85% (*n* = 209) of participants identifying as White in comparison to 73% of the national average of healthcare providers. The age of participants ranged from 20-51 years old with a mean age of 25.01 years old. At 39.7%, the majority of participants indicated growing up in metropolitan communities with populations greater than 50,000. Nearly 20% were from micropolitan communities with populations ranging from 10,000 to 49,999, 14% were from small town communities with populations ranging from 2,500 to 9,999, and 18% were from rural communities with populations less than 2,500. Population sizes ranged from 100 to 10,000,000 with the median population being 142,168. Over half of participants had family incomes of less than $125,000 (*n* = 158, 72.1%). Family income ranged from $5,000 to $500,000 with the median income being $105,457. At 90% (*n* = 218), the majority of participants were from the Midwest region.

Table 1
General Demographic Information

Demographic Category *N* (*N* missing)		Overall Sample *N* = 267	%
Sex *N* = 242(25)	Female	206	85.1
	Male	36	14.9
Age *N* = 246(21)	20-21	54	22.0
	22-23	81	32.9
	24-27	70	28.5
	28+	41	16.7
Race/Ethnicity	White	209	85.3
N = 245(22)	African American	2	0.8
	Latino	1	0.4
	American Indian/Alaskan Native	12	4.9
	Asian	7	2.9
	2 or more races	14	5.7

Table 1 continued

Demographic Category *N* (*N* missing)		Overall Sample *N* = 267	%
Population size	Rural	49	18.4
N = 241(26)	Small town	37	13.9
	Micropolitan	53	19.9
	Metropolitan	106	39.7
Household income	< $60,000	44	20.1
N = 219(48)	$60,000 - < $100,000	64	29.2
	$100,000 - < $125,000	50	22.8
	> $125,000	61	27.9
Geographical region	West	18	7.4
N = 243(24)	Midwest	218	89.7
	Northeast	1	0.4
	Southeast	3	1.2
	Southwest	3	1.2

Frequencies and percentages of participants' demographic data related specifically to program of study are presented in Table 2. Three programs accounted for the majority of participants: 25% occupational therapy, 22% physician, and 15% nursing. These three programs collectively represented two-thirds of participants (*n* = 150, 60.9%). The majority, over 80% (*n* = 209), of participants reported having received some form of cultural competence education within their program's curriculum. It should be noted that two questions in demographics were dropped from data analysis. The question "How many courses/lectures have you received related to cultural competence?" was not specific enough, and there was no way to determine whether participants were reporting the number of courses or number of lectures. The question "What topics related to cultural competence were covered in the courses/lectures? Please give a brief

description in the box below" was also removed from data analysis due to the numerous ways students described content that was covered in courses.

Table 2

Demographic Information Related to Program of Study and Cultural Competence Education

Demographic Category *N* (*N* missing)		Overall Sample *N* = 267	%
Program of study *N* = 246(21)	Physician	53	21.5
	Physician assistant	14	5.7
	Nursing	35	14.2
	Counseling	6	2.4
	Psychology	2	0.8
	Social work	18	7.3
	Public health	11	4.5
	Physical therapy	24	9.8
	Occupational therapy	62	25.2
	Speech-language pathology	4	1.6
	Athletic training	5	2.0
	Medical lab science	12	4.9
Year in program *N* = 246(21)	1st year	82	33.3
	2nd year	70	28.5
	3rd year	34	13.8
	4th year	34	13.8
	5th year	7	2.8
	Other	19	7.7
Some form of CC education *N* = 241(26)	Yes	209	86.7
	No	32	13.3

Demographics of participants in this research study were similar to the national averages of demographics of healthcare professions. Despite the need to increase diversity within all healthcare professions, the demographics of this sample suggest a good representation of the current U.S. healthcare workforce.

Instruments and Protocols

The codebook, found in Appendix B, contains all of the scales used in this study including demographic questions and individual scale items. Additionally, the codebook describes how open text responses for demographics were coded.

Participant Incentives

Participants were provided the option to enter for a randomized drawing of one of 10 twenty-dollar Visa gift cards. If students chose to enter their email for the gift card drawing, that data was collected separately, and a random drawing took place within two weeks of the close of the survey. Students were informed by email at that time if they were chosen and received the gift card electronically. Incentives were in compliance with Institutional Review Board study approval and were granted to all students who were present when the survey was administered regardless of their completion of the survey.

Measures

The survey instrument administered in this study was composed of three components including informed consent, the revised version of a previously validated scale, and another validated scale. The first component of the survey was the Informed Consent document required by the Institutional Review Board (IRB). Students were required to consent in order to proceed with the survey questions. If students did not consent, they were directed to the end of the survey. The survey contained 98 items in total and was designed to measure students' self-perceived levels of cultural competence and experiences they have received in school related to cultural diversity. A summary of survey items and related research questions is presented in Table 3.

Table 3

Summary of Survey Items and Related Research Questions

Survey	Subscale	Number of Survey Items	Related Research Questions/Purpose
Demographics	--	12	Identify participant attributes, 3
MAKSS-HC	Awareness	20	1, 2, 3
	Knowledge	20	1, 2, 3
	Skills	20	1, 2, 3
NSSE	Coursework Emphasis	7	2
	Institution Emphasis	7	2
	Institution Support	7	2
	Student Engagement	5	2
Total items		98	

The second component of the instrument was comprised of the revised cultural competence survey, the MAKSS-HC. The first section of the survey measured demographic variables, such as gender, age, race, geographical location, population size and income growing up, program of study, year in the program, and education received related to cultural competence. The second section measured levels of cultural competence which was divided into three constructs based on the original MAKSS-C: awareness, knowledge, and skills. The final component of the survey measured institutional support and experiences related to cultural diversity through use of a well-established instrument that is psychometrically robust. A copy of the complete Qualtrics™ survey, including the approved informed consent, can be found in Appendix C.

Multicultural Awareness, Knowledge, Skills Survey – Healthcare Edition. The original MAKSS-C was designed to measure multicultural awareness, knowledge, and skills of

students in a counseling program (D'Andrea et al., 1991). D'Andrea and colleagues developed the survey based on Sue et al.'s (1982) model of Multicultural counseling competence (MCC). The original MCC is still the most widely recognized model of cross-cultural competence, and the MAKSS-C is one of the most widely used cultural competence instruments in the literature (Benuto et al., 2018; Boysen & Vogel, 2008; Geerlings et al., 2018). The survey was developed to assess the effectiveness of a cultural competence course developed on the principles of Sue et al.'s (1982) model.

The MAKSS-C is a 60-item self-report instrument divided into three subscales: Awareness, Knowledge, and Skills. The construct of Awareness is intended to measure the level of awareness one has in relation to personal bias and stereotypes, as well as awareness and respect of cultural differences of diverse groups (Sue et al., 1982). Items 1-20 comprise the construct of Awareness. The construct of Knowledge is intended to measure one's understanding of how the sociopolitical system of the U.S. has impacted minoritized populations, as well as how the healthcare system is grounded in Westernized values which creates barriers for minoritized populations to access healthcare (Sue et al., 1982). Items 21-40 comprise the constructs of Knowledge. Lastly, the construct of Skills is intended to measure one's level of confidence or skill set in working with diverse cultural groups and includes a healthcare professional's effectiveness with verbal and non-verbal communication (Sue et al., 1982). Items 41-60 comprise the construct of Skills. Survey items are ranked on a Likert-type scale from 1-4. A response of 1 indicates "Very Limited" or "Strongly Disagree," 2 indicates "Limited" or "Disagree," 3 indicates "Good" or "Agree," and 4 indicates "Very Good" or "Strongly Agree." Initial analysis of the scale completed by D'Andrea et al. (1991) identified reliability coefficients (Cronbach's alpha) of .75 for awareness, .90 for knowledge, and .96 for skills. Intercorrelations

were reported at .45 for awareness and knowledge, .32 for awareness and skills, and .51 for knowledge and skills.

Permission from the primary author of the MAKSS-C was received through verbal communication and verified by email communication to modify the survey in order to be generalizable to multiple health disciplines. Permission can be found in Appendix D. The MAKSS-C was revised in order to be generalizable to multiple healthcare professions. This was done by adjusting wording and making slight changes to several questions for more current terminology of cultural competence. A complete explanation of changes to the questions can be found in Appendix E. To the researcher's knowledge, the MAKSS-C has not been revised in this manner to be generalizable to multiple healthcare programs and analyzed for construct validity. The revised MAKSS-HC retained the same number of items. It was hypothesized that the MAKSS-HC should demonstrate similar results to the original MAKSS-C, so the three constructs of Awareness, Knowledge, and Skills were used to categorize the items of the survey. The same Likert-type scale was used with a response of 1 indicating "Very Limited" or "Strongly Disagree," 2 indicating "Limited" or "Disagree," 3 indicating "Good" or "Agree," and 4 indicating "Very Good" or "Strongly Agree." Table 4 reports the survey responses per question.

Table 4

The Multicultural Awareness, Knowledge, Skills Survey – Healthcare Edition Survey Question Responses

	% Some Form of Agreement	*M*	*SD*
Awareness			
Aw1. Culture is not external but is within the person	58.5	3.6	0.7
Aw2. One of the potential negative consequences about gaining information concerning specific cultures is that individuals might stereotype members of those cultural groups according to the information that they have gained.	72.4	2.8	0.7
Aw3. At this time in your life, how would you rate yourself in terms of understanding how your cultural background has influenced the way you think and act?	91.7	3.3	0.6
Aw4. At this point in your life, how would you rate your understanding of the impact of the way you think and act when interacting with persons from different cultural backgrounds?	89.0	3.1	0.6
Aw5. How would you react to the following statement? While healthcare enshrines the concepts of desiring to help others, treating each client fairly and equally, and doing no harm; it has continually underserved large groups of people	90.3	3.4	0.7
Aw6. In general, how would you rate your level of awareness regarding different cultural groups and systems?	75.7	2.9	0.6
Aw7. The healthcare professions have failed to meet the health needs of minoritized groups.	78.4	3.1	0.7
Aw8. At the present time, how would you generally rate yourself in terms of being able to accurately compare your own cultural perspective with that of a person from another culture?	68.4	2.8	0.7
Aw9. What is your comfort level in distinguishing cultural nuances of body language and communication styles in multicultural interactions?	54.2	2.6	0.8
Aw10. Stress and misunderstanding often result when ambiguous terminology is used in healthcare interactions with persons from differing cultural backgrounds.	89.4	3.2	0.7
Aw11. (R) Quality of healthcare would be enhanced if healthcare professionals would consciously adopt universal definitions of normality and treat everyone the same regardless of cultural background.	46.8	2.5	1.0
Aw12. (R) The criteria of level of adherence to treatment recommendations, level of independence carrying out treatment, and initiative to improve health are important outcome measures during healthcare visits.	4.1	1.7	0.6

Table 4 continued

	% Some Form of Agreement	*M*	*SD*
Aw13. (R) Even in healthcare interactions with clients of differing cultural backgrounds, basic implicit concepts such as "fairness" and "health", are not difficult to understand.	43.6	2.4	0.7
Aw14. (R) Promoting client's independence in evaluation and treatment interventions is usually a safe goal to strive for in most healthcare situations.	7.4	1.8	0.6
Aw15. (R) While a person's natural support system (i.e., family, friends, etc.) plays an important role in the healing process, the healthcare professionals' treatment recommendations result in better health outcomes.	39.2	2.3	0.7
Aw16. (R) How would you react to the following statement? It is most important for clients to understand and conform to the culture of the healthcare system.	85.7	3.2	0.7
Aw17. Healthcare professionals need to change not just the content of what they think, but also the way they handle this content if they are to accurately account for the complexity of culture and individual interpretations of culture.	97.2	3.3	0.5
Aw18. Health conditions vary with the culture of the client.	89.3	3.2	0.6
Aw19. How would you rate your understanding of "cultural safety" in terms of evaluation, goals, and treatment plan of working with culturally different clients?	42.4	2.4	0.7
Aw20. There are some basic interpersonal skills that are applicable to create positive outcomes regardless of the client's cultural background.	98.2	3.3	0.5
Knowledge			
Kn21. At the present time, how would you rate your level of understanding of the following term? "Culture"	90.5	3.1	0.6
Kn22. At the present time, how would you rate your level of understanding of the following term? "Ethnicity"	87.2	3.1	0.6
Kn23. At the present time, how would you rate your level of understanding of the following term? "Racism"	95.3	3.4	0.6
Kn24. At the present time, how would you rate your level of understanding of the following term? "Microaggression"	62.6	2.7	0.9
Kn25. At the present time, how would you rate your level of understanding of the following term? "Unconscious bias"	90.5	3.3	0.6
Kn26. At the present time, how would you rate your level of understanding of the following term? "Cultural humility"	57.8	2.7	0.8
Kn27. At the present time, how would you rate your level of understanding of the following term? "Ethnocentrism"	52.1	2.6	0.9
Kn28. At the present time, how would you rate your level of understanding of the following term? "Pluralism"	22.7	2.0	0.8
Kn29. At the present time, how would you rate your level of understanding of the following term? "Prejudice"	88.2	3.2	0.6

Table 4 continued

	% Some Form of Agreement	*M*	*SD*
Kn30. At the present time, how would you rate your level of understanding of the following term? "Critical consciousness"	47.9	2.5	0.8
Kn31. At the present time, how would you rate your level of understanding of the following term? "Transcultural"	46.4	2.5	0.8
Kn32. At the present time, how would you rate your level of understanding of the following term? "Cultural encapsulation"	21.3	1.9	0.8
Kn33. What do you think of the following statement? Traditional, complementary, and integrative medicine have similar intentions and goals for the client.	65.4	2.7	0.6
Kn34. Differential treatment in the provision of health services is not necessarily thought to be discriminatory with consideration of cultural differences.	64.9	2.6	0.6
Kn35. In the early grades of formal schooling in the United States, the academic achievement of minoritized groups such as African Americans, Latinos, and American Indians is close to parity with the achievement of White mainstream students.	44.2	2.4	0.8
Kn36. Research indicates that in the early elementary school grades girls and boys achieve about equally in mathematics and science.	61.0	2.6	0.7
Kn37. Most of the immigrant and minoritized ethnic groups in Europe, Australia, and Canada face problems similar to those experienced by minoritized ethnic groups in the United States.	57.5	2.6	0.6
Kn38. (R) Clients from different ethnic/cultural backgrounds should be given the same treatments that White mainstream clients receive.	25.3	2.0	0.8
Kn39. The difficulty with the U.S. healthcare system is its implicit bias in favor of integration to the dominant culture.	88.5	3.2	0.7
Kn40. There is a lack of diversity in healthcare professions.	75.8	3.0	0.8
Skills			
Sk41. How would you rate your ability to conduct an effective evaluation or follow up visit / treatment session with a person from a cultural background significantly different from your own?	63.7	2.7	0.7
Sk42. How would you rate your ability to effectively assess the health needs of a person from a cultural background significantly different from your own?	65.2	2.7	0.7
Sk43. How well would you rate your ability to identity culturally sensitive formal and informal evaluation strategies?	50.0	2.5	0.7

Table 4 continued

	% Some Form of Agreement	*M*	*SD*
Sk44. In general, how would you rate yourself in terms of being able to effectively deal with biases, discrimination, and prejudices directed at you in an interaction with a client?	71.1	2.8	0.6
Sk45. How well would you rate your ability to accurately identify culturally biased assumptions as they relate to your professional training?	79.3	2.9	0.6
Sk46. How well would you rate your comfort level discussing a client's cultural beliefs and values as part of the intervention process?	80.4	3.0	0.7
Sk47. In general, how would you rate your ability to effectively communicate with a client who speaks limited to no English?	34.3	2.3	0.8
Sk48. How would you rate your ability to identify unique cultural characteristics of a client who comes from a cultural group different from your own?	59.3	2.6	0.7
Sk49. How would you rate your ability to identify the strengths and weaknesses of formalized tests in terms of their use with persons from different cultural/racial/ethnic backgrounds?	48.1	2.5	0.7
Sk50. How would you rate your understanding of research related to health disparities and causes of disparities?	63.2	2.7	0.8
Sk51. In general, how would you rate your skill level in terms of being able to provide appropriate healthcare services to culturally different clients?	72.0	2.8	0.6
Sk52. How would you rate your ability to effectively consult with another health professional concerning the health needs of a client whose cultural background is significantly different from your own?	81.4	3.0	0.6
Sk53. How would you rate your ability to effectively secure information and resources to better serve culturally different clients?	70.6	2.8	0.7
Sk54. How would you rate your ability to accurately assess the health needs of women?	85.2	3.2	0.7
Sk55. How would you rate your ability to accurately assess the health needs of men?	76.5	2.9	0.7
Sk56. How well would you rate your ability to accurately assess the health needs of older adults?	79.5	3.0	0.7
Sk57. How well would you rate your ability to accurately assess the health needs of gay, lesbian, or bisexual clients?	66.1	2.7	0.8
Sk58. How well would you rate your ability to accurately assess the health needs of transgender or non-binary clients?	45.5	2.4	0.8
Sk59. How well would you rate your ability to accurately assess the health needs of persons with a disability?	63.3	2.8	0.8
Sk60. How well would you rate your ability to accurately assess the health needs of persons who come from very poor socioeconomic backgrounds?	77.4	2.9	0.7

To test the construct validity for use in this research study, exploratory factor analysis (EFA) was completed including all items of the MAKSS-HC. Initial EFA was performed on the scores of the 60-item self-rating survey items with no factors specified. Principal Axis Factoring (PAF) with oblique rotation (Direct Oblimin) was performed on the data set (60 variables, n = 267). Results from the initial analysis yielded 16 factors with eigenvalues greater than 1.0, but the scree plot suggested three factors should be extracted. In the first run of the EFA, items with coefficients greater than .35 were retained. Appendix F includes a table with all initial factor loadings. Twenty-three items were removed from all further analyses that did not load or cross-loaded on other factors and that were not conceptually consistent with each other. For example, Kn25 was thrown because the item loaded on factor two while similar questions loaded on factor one. Additionally, Kn23 and Kn29 items loaded on factor three while similar questions loaded on factor one. The final three-factor solution accounted for 44.6% of the variance in the data set and demonstrated strong loadings. Thirty-seven items were retained from the original 60-item scale with 17 items on factor one, six items on factor two, and 14 items on factor three.

Items on these factors were not consistent with the hypothesized scales based on the original MAKSS-C, so additional analyses were performed to further examine how items would load onto factors. It was hypothesized that based on the MCC model there could be several ways of grouping items that would be consistent with the constructs of cultural competence as identified in the literature review. Additional analyses ranged from two to six factor solutions. In addition, analyses adjusting for small coefficients (.30 and .40) were completed in order to explore the relationship of items within the specified factors and determine the most appropriate solution based on the theoretical model. After multiple analyses, the initial three-factor solution

was still the most interpretable and most parsimonious. The results are presented in Table 5. Further analysis of results are presented in Chapter IV.

Table 5

Exploratory Factor Analysis of MAKSS-HC

Item	1	2	3
Aw3	.51		
Aw4	.49		
Aw6	.53		
Aw8	.51		
Aw9	.43		
Aw19	.54		
Kn21	.58		
Kn22	.51		
Kn24	.50		
Kn26	.71		
Kn27	.47		
Kn28	.70		
Kn30	.69		
Kn31	.69		
Kn32	.60		
Sk48	.39		
Sk49	.44		
Aw5		.67	
Aw7		.77	
Aw16r		.50	
Aw17		.53	
Kn39		.62	
Kn40		.68	
Sk41			.50
Sk42			.63
Sk45			.37
Sk46			.50
Sk51			.65
Sk52			.59
Sk53			.50
Sk54			.62
Sk55			.59
Sk56			.76
Sk57			.64

Table 5 continued

Item	1	2	3
Sk58			.52
Sk59			.74
Sk60			.73
Eigen	10.596	3.727	2.618
% Var	27.885	9.809	6.891

NSSE: Inclusion and Engagement with Cultural Diversity. The National Survey of Student Engagement (NSSE) Topical Module of Inclusion and Engagement with Cultural Diversity was the second instrument used in this study. This scale was included to address the construct of the institutional/organizational support. Research has identified the important role institutional support plays in creating an open environment for developing cultural competence (Betancourt et al., 2002; Balcazar et al., 2009; Oikarainen, 2019).

The NSSE was established as a method of measuring quality of education for undergraduate colleges and universities. The NSSE measures the amount of time and effort students put into their education and other activities and how institutions provide learning opportunities to engage students. It was first piloted in 1999 and since then has been widely used by colleges and universities throughout the country. In 2020, 600 colleges and universities participated in the NSSE with over 480,000 student responses.

Topical modules have been developed in addition to the NSSE that target more specific topics such as diversity. The Inclusiveness and Engagement of Cultural Diversity module is focused on the level of student engagement in culturally diverse education and activities, as well as the level of support provided by their respective institution. Permission was received for use of the topical module related to Inclusion and Engagement with Cultural Diversity and can be found in Appendix D. This specific topical module examines environments, processes, and

activities that students are exposed to in higher education in order to develop a greater understanding of societal differences. Questions include exposure to intercultural learning, perceptions of the institutions' values regarding diversity, and participation in diversity-related events and coursework. The NSSE contains 26 items divided into four subscales: coursework emphasis, institution emphasis, institution support, and student engagement. The construct of coursework emphasis measures how much participants feel that coursework has emphasized opportunities to develop cultural competence. Items are ranked on a Likert-type scale from 1-4. A response of 1 indicates "Very Little," 2 indicates "Some," 3 indicates "Quite a Bit," and 4 indicates "Very Much." The survey is presented in Table 6.

Table 6

NSSE: Inclusiveness and Engagement with Cultural Diversity Topical Module Item Response

Survey Questions	% Some Form of Agreement	*M*	*SD*
Coursework Emphasis Construct: During the current scho year, how much has your *coursework* emphasized the following?			
Ce1. Developing the skills necessary to work effectively with people from various backgrounds	57.5	2.7	0.9
Ce2. Recognizing your own cultural norms and biases	54.6	2.7	1.0
Ce3. Sharing your own perspectives and experiences	62.1	2.8	1.0
Ce4. Exploring your own background through projects, assignments, or programs	44.6	2.4	1.1
Ce5. Learning about other cultures	46.6	2.5	1.0
Ce6. Discussing issues of equity or privilege	51.3	2.6	1.1
Ce7. Respecting the expression of diverse ideas	63.1	2.9	1.0
Institution Emphasis Construct: How much does your institution emphasize the following?			
Ie1. Demonstrating a commitment to diversity	69.7	3.0	0.8

Table 6 continued

Survey Questions	% Some Form of Agreement	*M*	*SD*
Ie2. Providing students with the resources needed for success in a multicultural world	58.0	2.7	0.9
Ie3. Creating an overall sense of community among students	74.8	3.1	0.9
Ie4. Ensuring that you are not stigmatized because of your identity (racial/ethnic, gender, religious, sexual orientation, etc.)	75.7	3.1	0.9
Ie5. Providing information about anti-discrimination and harassment policies	70.1	3.1	0.8
Ie6. Taking allegations of discrimination or harassment serious	79.2	3.1	0.8
Ie7. Helping students develop the skills to confront discrimination and harassment	53.1	2.6	1.0
Institutional Support Construct: How much does your institution provide a supportive environment for the following forms of diversity?			
Is1. Racial/ethnic identity	71.0	3.0	0.8
Is2. Gender identity	67.6	2.9	0.9
Is3. Economic background	58.1	2.6	0.9
Is4. Political affiliation	38.3	2.3	1.0
Is5. Religious affiliation	50.3	2.6	0.9
Is6. Sexual orientation	63.9	2.8	0.9
Is7. Disability status	65.5	2.9	0.9
Student Engagement Construct: During the current school year, about how often have you done the following?			
Se1. Attended events, activities, or presentations that reflect an appreciation for diverse groups of people	23.1	2.0	0.9
Se2. Participated in the activities of centers related to specific groups (racial-ethnic, cultural, religious, gender, LGBT, etc.)	17.7	1.8	0.8
Se3. Participated in a diversity-related club or organization	12.8	1.6	0.9
Se4. Participated in a demonstration for a diversity-related cause (rally, protest, etc.)	8.8	1.4	0.7
Se5. Reflected on your cultural identity	55.9	2.7	0.9

Data and Data Analysis

Analysis of the data included two phases. Phase one included item level exploratory factor analysis of the MAKSS-HC to test for construct validity. Average scale data analysis was completed for both the MAKSS-HC and NSSE to evaluate distributions and Cronbach's alphas to test for internal consistency (scale reliability) of the multi-item measurement scales. Phase one analysis findings have been reported throughout this chapter as appropriate. Phase two data analysis included specific analysis tools to address each research question. Phase two analysis results are explored completely in Chapter IV. All computational analyses for both phases were completed using IBM SPSS 28.0, a computer software statistical program.

Average Scale Data Analysis

For both scales used in this research study, the construct items were averaged, resulting in higher scores indicating stronger agreement. To examine variable distributions, skewness and kurtosis descriptive statistics were examined. Table 7 reports the findings for this analysis. It was determined that the distributions for all variables were suitably normal and acceptable for further analysis [i.e., skew and kurtosis < |2.0| (Warner, 2013)].

Scale Reliability

To test scale reliability, Cronbach's alphas, an indicator of the measure's consistency, were calculated for the multi-item scales used in this study. Researchers have indicated that Cronbach's alphas ranging from .70 to .95 are acceptable. As noted in Table 7, all variables in this study met this established criterion.

Table 7

Reliability Coefficients, Skewness, and Kurtosis for Survey Items

Measure	# of items	Cronbach's α	Skewness	Kurtosis
Awareness	17	.89	.13	.05
Knowledge	6	.80	-.45	.34
Skills	14	.90	-.22	.22
Coursework Emphasis	7	.91	-.03	-.91
Institution Emphasis	7	.90	-.26	-.55
Institution Support	7	.92	-.01	-.68
Student Engagement	6	.74	1.1	1.3

Main Analysis

The following is a breakdown of the analysis tools utilized to address each research question.

Research Question 1. Will the revised Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC) demonstrate validity and reliability similar to the original MAKSS-C?

An exploratory factor analysis was conducted to examine how items of the MAKSS-HC loaded onto factors. Results of the factor analysis were presented in this chapter and analysis tools were described. Comparison of the MAKSS-HC and the original MAKSS-C are addressed in further detail in Chapter IV.

Research Question 2. Do scores on the NSSE Topical Module: Inclusiveness and Engagement with Cultural Diversity predict scores on the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC)?

Descriptive statistics including means, standard deviations, and percentage of agreement were conducted for the constructs of the MAKSS-HC and the NSSE Topical Module: Inclusiveness and Engagement with Cultural Diversity. Next, bivariate correlations (Pearson's *r*) were analyzed to determine the strength of relationships between the MAKSS-HC and NSSE.

Lastly, multiple regression analysis was employed to explore predictive relationships between the NSSE scores (independent variables) and MAKSS-HC scores (outcome variables).

Research Question 3. Are there significant relationships between demographic data and scores of the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC)?

Descriptive statistics including means and standard deviations were conducted. Additional analysis included independent samples *t*-tests and one-way ANOVAs to determine group differences.

Summary

This chapter described the methodology used to investigate the construct validity and reliability for the MAKSS-HC, investigate correlations between the MAKSS-HC and NSSE scores, and examine relationships between demographic data and scores of the MAKSS-HC. This quantitative study employed a cross-sectional research design gathering data from one specific timeframe of two weeks. Participants for this study were recruited from a large upper Midwest university and were enrolled in medicine and health sciences programs in the fall semester of 2021. Program directors served as gatekeepers in sending email invitations to currently enrolled students.

The survey instrument used for this study was composed of a revised cultural competence instrument, as well as another previously validated instrument. Phase one of analysis results were reported in this chapter and included descriptive statistics, factor analysis, and measure reliability analysis. This analysis indicated that a large, representative sample had been gathered and that the data collected was reliable and valid. The next chapter presents results using more in-depth

analysis tools as described in phase two analysis, and these tools were selected to address each research question.

CHAPTER IV

RESULTS

The purpose of this study was to analyze the construct validity and reliability of the MAKSS-HC through EFA and then compare results to the original MAKSS-C. Results of the EFA were presented in Chapter III. The results of the comparison between findings of the MAKSS-HC and the original MAKSS-C are presented in this chapter. In addition, this study intended to analyze correlations between the MAKSS-HC and the NSSE to determine if institutional support is a predictive factor in levels of cultural competence. Lastly, demographic variables were compared to the MAKSS-HC to explore demographics of significance with scores of the MAKSS-HC and predictive factors that influence level of cultural competence.

This study was operationalized through administration of an online Qualtrics™ survey emailed to students enrolled in medical and health sciences programs in the fall semester of 2021. Interpretation of the factor analysis for the MAKSS-HC and comparison to the original MAKSS-C are discussed in this chapter. Correlation and multiple regression analyses were completed for the MAKSS-HC and NSSE to investigate predictive relationships between institutional support and levels of cultural competence. Independent *t*-tests and one-way ANOVAs were conducted to explore statistical significance between demographic means. These analyses were conducted to determine the answer to the following research questions:

1. Will the revised Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC) demonstrate validity and reliability similar to the original MAKSS-C?
2. Do scores on the NSSE Topical Module: Inclusiveness and Engagement with Cultural Diversity predict scores on the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC)?
3. Are there significant relationships between demographic data and scores of the Multicultural Awareness, Knowledge, and Skills Survey – Healthcare Edition (MAKSS-HC)?

In Chapter III, descriptive statistics of the sample were presented including frequencies and percentages, along with instrument item analysis. Results of the factor analysis of the MAKSS-HC were also presented. In this chapter, further analyses of the findings are presented.

Research Questions

Question 1: Will the Revised Multicultural Awareness, Knowledge, Skills Survey – Healthcare Edition (MAKSS-HC) Demonstrate Validity and Reliability Similar to the Original MAKSS-C?

The primary purpose of this study was to evaluate construct validity of the MAKSS-HC revised from the original MAKSS-C and to compare the constructs of the surveys. In order to analyze validity of the MAKSS-HC, exploratory factor analysis (EFA) was employed to determine how survey items loaded onto specific factors. Results of the EFA were not consistent with the hypothesized constructs of awareness, knowledge, and skills of the original MAKSS-C. Due to this, multiple analyses were completed in order to explore how items would load onto factors based on interpretation of the MCC model. For example, within each construct of the MCC, there are four core principles of how a person develops awareness, knowledge, and skills, so it was hypothesized that each construct should have representation of each of the principles.

This was not supported in the factor analysis. Another factor analysis was completed with the hypothesis that factors could be related to a more in-depth conceptual framework of the original MCC model that Sue et al. published in 1992. This more in-depth explanation of the MCC proposed that there are three characteristics of a culturally competent healthcare professional, and within each characteristic, there are the three dimensions of awareness, knowledge, and skill. Factor analysis was completed hypothesizing that each characteristic should be represented by a factor with representation of each dimension for a total of six factors. This was not supported by the factor analysis. Overall, data analyses in this study were not able to replicate a factor solution that was clearly consistent with the originally published MCC (Sue et al., 1982) or the updated MCC (Sue et al., 1992). As a result, each item that was retained in the EFA was compared to the constructs and core principles of the original MCC (Sue et al., 1982) for interpretation. The original MCC was chosen as the theoretical model because it has been the most widely used in research (Greelings et al., 2018). The three-factor solution that was determined to be most parsimonious was first compared to the three factors of the original MAKSS-C. Then the interpreted results, based on the MCC, are presented with more in-depth comparison to the original MAKSS-C.

Awareness. The original MAKSS-C contained 20 items in the awareness subscale that were conceptually supported by the MCC construct of awareness. However, during factor analysis in this research study, it was apparent that items from the awareness subscale did not load onto the same factor. Six items loaded onto factor one (Aw3, Aw4, Aw6, Aw8, Aw9, Aw19), and four items loaded onto factor two (Aw5, Aw7, Aw16r, Aw17). The remaining ten items from the awareness subscale were removed from all further analysis for cross-loading or not loading at all onto any factors (Aw1, Aw2, Aw10, Aw11r, Aw12r, Aw13r, Aw14r, Aw15r,

Aw18, and Aw20). The items from the awareness subscale consistently loaded in this manner in all of the factor analyses that were completed. This suggested that items from the awareness subscale were not as conceptually consistent with the MCC as hypothesized. This study was not able to replicate a factor solution comparable to the original MAKSS-C awareness subscale.

Knowledge. The original MAKSS-C contained 20 items in the knowledge subscale. However, during factor analysis in this study, it was apparent that items from the knowledge subscale were not loading as hypothesized. Twelve items (Kn21-Kn32) consistently loaded onto one factor, and the remaining eight items (Kn33-Kn40) loaded onto another factor or not at all in all of the factor analyses. In the final three-factor solution, nine items were retained on factor one (Kn21, Kn22, Kn24, Kn26, Kn27, Kn28, Kn30, Kn31, and Kn32), and two items (Kn39 and Kn40) were retained on factor two. When examining these items with the MCC, it was apparent that many of these items were not conceptually consistent with the knowledge construct of the model and could be interpreted differently.

Skills. The original MAKSS-C contained 20 items in the skills subscale. This subscale was best represented in the factor analysis with most items consistently loading together. Items Sk48 and Sk49 loaded onto factor one, and items Sk41, Sk42, Sk45, Sk46, and Sk51-Sk60 loaded onto factor three. Items Sk43, Sk44, Sk47, and Sk50 were removed from all further analysis for cross-loading or not loading onto any factors. The majority of items from the skills subscale consistently loaded together in all of the factor analyses. This suggests that the original skills subscale is a good representation and measurement of the theoretical construct of the MCC.

Interpretation of the MAKSS-HC Factor Analysis. The final factor analysis indicated three distinct factors with strong item loadings. The three-factor solution was consistent with the

three subscales of the original MAKSS-C. However, items on the constructs of awareness and knowledge did not load as hypothesized. Items from the skills construct were reasonably represented in the factor analysis. Based on the results of the three-factor solution, further interpretation of the factors was completed using the MCC to analyze what the factors represented. Based on interpretation, the three factors were labeled as awareness, knowledge, and skills.

MAKSS-HC Awareness. Seventeen items in total were retained on factor one including six items from the original MAKSS-C awareness construct, nine items from the knowledge construct, and two items from the skills construct. Table 8 presents the retained items followed by the interpretation based on the MCC (Sue et al., 1982; Sue et al., 1992).

Table 8

MAKSS-HC Awareness Subscale Survey Item Responses

	% Some Form of Agreement	*M*	*SD*
Aw3. At this time in your life, how would you rate yourself in terms of understanding how your cultural background has influenced the way you think and act?	91.7	3.3	0.6
Aw4. At this point in your life, how would you rate your understanding of the impact of the way you think and act when interacting with persons from different cultural backgrounds?	89.0	3.1	0.6
Aw6. In general, how would you rate your level of awareness regarding different cultural groups and systems?	75.7	2.9	0.6
Aw8. At the present time, how would you generally rate yourself in terms of being able to accurately compare your own cultural perspective with that of a person from another culture?	68.4	2.8	0.7
Aw9. What is your comfort level in distinguishing cultural nuances of body language and communication styles in multicultural interactions?	54.2	2.6	0.8
Aw19. How would you rate your understanding of "cultural safety" in terms of evaluation, goals, and treatment plan of working with culturally different clients?	42.4	2.4	0.7
Kn21. At the present time, how would you rate your level of understanding of the following term? "Culture"	90.5	3.1	0.6

Table 8 continued

	% Some Form of Agreement	*M*	*SD*
Kn22. At the present time, how would you rate your level of understanding of the following term? "Ethnicity"	87.2	3.1	0.6
Kn24. At the present time, how would you rate your level of understanding of the following term? "Microaggression"	62.6	2.7	0.9
Kn26. At the present time, how would you rate your level of understanding of the following term? "Cultural humility"	57.8	2.7	0.8
Kn27. At the present time, how would you rate your level of understanding of the following term? "Ethnocentrism"	52.1	2.6	0.9
Kn28. At the present time, how would you rate your level of understanding of the following term? "Pluralism"	22.7	2.0	0.8
Kn30. At the present time, how would you rate your level of understanding of the following term? "Critical consciousness"	47.9	2.5	0.8
Kn31. At the present time, how would you rate your level of understanding of the following term? "Transcultural"	46.4	2.5	0.8
Kn32. At the present time, how would you rate your level of understanding of the following term? "Cultural encapsulation"	21.3	1.9	0.8
Sk48. How would you rate your ability to identify unique cultural characteristics of a client who comes from a cultural group different from your own?	59.3	2.6	0.7
Sk49. How would you rate your ability to identify the strengths and weaknesses of formalized tests in terms of their use with persons from different cultural/racial/ethnic backgrounds?	48.1	2.5	0.7

When interpreting the seventeen factors that loaded onto factor one, it was determined that these items most closely aligned with the awareness subscale of the MCC. Aw3, Aw4, and Aw6 directly relate to the core principle of being aware of one's own culture and respecting other cultures. Items Aw8, Aw9, and Aw19 can be interpreted as having an awareness of the impact of one's biases and how they may affect clients. Within this principle, Sue et al. (1982) state that a culturally skilled healthcare professional monitors this principle through evaluating their effectiveness in interactions with clients. Based on this, being able to compare one's own cultural perspective with another's (Aw8), having awareness of one's comfort level in distinguishing cultural nuances of body language and communication styles (Aw9), and having an understanding of "cultural safety" in terms of the treatment process (Aw19) could be

interpreted as awareness of one's biases and how they impact client interaction (Sue et al., 1982). These three items are part of the self-evaluation process that directly relates to the level of self-awareness.

Nine items from the knowledge construct loaded onto the first factor which was not consistent with the original MAKSS-C. On examination of the MCC, it is possible that these items could represent the core principle of being aware of and comfortable with cultural differences. Items Kn21, Kn22, Kn24, Kn26, Kn27, Kn28, Kn30, Kn31, and Kn32 ask the participant to rate their level of understanding of the following terms: culture (Kn21), ethnicity (Kn22), microaggressions (Kn24), cultural humility (Kn26), ethnocentrism (Kn27), pluralism (Kn28), critical consciousness (Kn30), transcultural (Kn31), and cultural encapsulation (Kn32). On first examination, it would seem that these items would fit more conceptually in the knowledge subscale as in the original MAKSS-C. However, upon deeper examination, it is argued that they better fit into the awareness subscale. Within this core principle, Sue et al. (1982) discuss the consequences of "cultural blindness" and that a person needs to acknowledge and embrace cultural differences. In order to have awareness and an increased level of comfort with cultural difference, a person must have knowledge of terms used in issues of cultural competence. For example, if a person does not know what a microaggression is, then it would be unrealistic to assume that they would have awareness of microaggressions enacted on minoritized populations. Without an understanding of these terms, it would be difficult to have awareness and respect for cultural differences as these are some of the basic concepts and terms used in cultural competence. Based on this interpretation, it is argued that these items from the knowledge subscale better fit into the construct of awareness.

The last two items that loaded onto factor one were from the skills subscale. These two items (Sk48 and Sk49) align with the core principle of having an awareness of one's limitations. Rating one's ability to communicate with a client who speaks limited or no English (Sk48) and being proficient in culturally sensitive assessment measures (Sk49) could be interpreted as having awareness of one's limitations and being comfortable with referring to another healthcare professional if necessary. For example, if a healthcare professional has self-awareness that they are not communicating effectively with a non-English speaking client, then they will either implement translator services or refer to a healthcare provider who is proficient in the client's primary language. This is more representative of awareness rather than skill, because the healthcare professional needs to be aware of their limitations and know when it is best to refer to another healthcare professional so that the client's needs are best served.

The revised awareness subscale is supported by the above interpretation of the items and corresponding construct of the MCC. Items are representative of all four core principles of the awareness subscale identified by Sue et al. (1982). Analysis of the scale demonstrates good reliability evidenced by a Cronbach's alpha of .89. Positive correlations (Pearson's *r*) were noted for all but two variables. No correlation was noted for Kn24 and Aw9. Six variables demonstrated a correlation value of $p < .05$ (Kn28 and Aw8; Sk49 and Aw3; Sk49 and Aw4). Otherwise, all items correlated at a value of $p < .01$. Statistically significant correlations were demonstrated for all but two variables. Correlations are presented in Table 9.

Table 9

Correlations MAKSS-HC Awareness Subscale

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Aw3	-															
2. Aw4	.46**	-														
3. Aw6	.30**	.42**	-													
4. Aw8	.48**	.41**	.46**	-												
5. Aw9	.22**	.35**	.36**	.45**	-											
6. Aw19	.25**	.27**	.38**	.50**	.49**	-										
7. Kn21	.41**	.41**	.39**	.41**	.29**	.37**	-									
8. Kn22	.35**	.41**	.39**	.41**	.29**	.40**	.64**	-								
9. Kn24	.28**	.32**	.23**	.30**	.11	.23**	.32**	.33**	-							
10. Kn26	.32**	.39**	.36**	.42**	.39**	.51**	.51**	.47**	.36**	-						
11. Kn27	.23**	.25**	.28**	.25**	.18**	.18**	.40**	.27**	.46**	.35**	-					
12. Kn28	.21**	.24**	.26**	.17*	.22**	.29**	.30**	.29**	.44*	.47**	.47**	-				
13. Kn30	.35**	.36**	.30**	.38**	.37**	.37**	.35**	.35**	.40**	.52**	.17*	.46**	-			
14. Kn31	.31**	.30**	.26**	.31**	.32**	.37**	.39**	.42**	.43**	.45**	.31**	.46**	.57**	-		
15. Kn32	.22**	.18**	.19**	.18**	.22**	.29**	.25**	.26**	.28**	.41**	.30**	.58**	.51**	.54**	-	
16. Sk48	.18*	.18*	.24**	.22**	.35**	.28**	.30**	.37**	.19**	.31**	.25**	.29**	.29**	.37**	.25**	-
17. Sk49	.26**	.27**	.26**	.33**	.27**	.35**	.40**	.34**	.28**	.38**	.31**	.34**	.36**	.40**	.33**	.48**

Note. $^{**}p < .01$, $^{*}p < .05$

MAKSS-HC Knowledge. Six items were retained during the EFA including four items from the original MAKSS-C awareness construct and two items from the knowledge construct. Table 10 presents the retained items followed by the interpretation based on the MCC and comparison to the original MAKSS-C.

Table 10

MAKSS-HC Knowledge Subscale Survey Item Responses

	% Some Form of Agreement	*M*	*SD*
Aw5. How would you react to the following statement? While healthcare enshrines the concepts of desiring to help others, treating each client fairly and equally, and doing no harm; it has continually underserved large groups of people	90.3	3.4	0.7
Aw7. The healthcare professions have failed to meet the health needs of minoritized groups.	78.4	3.1	0.7
Aw16. (R) How would you react to the following statement? It is most important for clients to understand and conform to the culture of the healthcare system.	85.7	3.2	0.7
Aw17. Healthcare professionals need to change not just the content of what they think, but also the way they handle this content if they are to accurately account for the complexity of culture and individual interpretations of culture.	97.2	3.3	0.5
Kn39. The difficulty with the U.S. healthcare system is its implicit bias in favor of integration to the dominant culture.	88.5	3.2	0.7
Kn40. There is a lack of diversity in healthcare professions.	75.8	3.0	0.8

Items that loaded onto factor two were most closely aligned with the knowledge construct of the MCC. The items retained were representative of the core principles related to knowledge of oppressive policies and practices in healthcare and institutional barriers in healthcare. Aw5, Aw7, Aw16r, and Aw17 can be interpreted as having knowledge of the oppressive policies and practices in healthcare. Policies and practices continually underserve minoritized populations despite the concept of healthcare to help others (Aw5), and healthcare has failed to meet the needs of underserved groups (Aw7). The structure of the U.S. healthcare system is created on

Westernized values which has historically expected minoritized populations to conform to Western medicine practices (Aw16r). These three items represent general knowledge of healthcare culture and the negative impact it has on minoritized populations (Sue et al., 1982).

Items Aw17, Kn39, and Kn40 can be interpreted to having knowledge of barriers in healthcare. Acknowledging the need for change in healthcare (Aw17), having knowledge of the implicit bias toward assimilation to the dominant culture (Kn39), and understanding that there is a lack of diversity in healthcare (Kn40) are all related to barriers in healthcare (Sue et al., 1982; Sue et al., 1992). Items related to knowledge of the sociopolitical system in the U.S. and specific knowledge of cultural groups' historical experiences and values did not load onto any of the three factors which is discussed in Chapter V. Significant correlations (Pearson's *r*) for all items ($p < .01$) of the knowledge subscale were noted and are presented in Table 11.

Table 11

Correlations MAKSS-HC Knowledge Subscale

	1	2	3	4	5
1. Aw5	-				
2. Aw7	.56**	-			
3. Aw16r	.31**	.37**	-		
4. Aw17	.32**	.39**	.29**	-	
5. Kn39	.43**	.49**	.27**	.33**	-
6. Kn40	.40**	.60**	.26**	.35**	.51**

Note. $^{**}p < .01$

MAKSS-HC Skills. The third factor of the EFA was most representative of the skills subscale in the original MAKSS-C. Items that loaded onto the third factor are a good representation of the skills construct of the MCC. Throughout the various hypotheses that were tested through the factor analysis, the items from the skills subscale tended to factor together. This suggests that the skill subscale is a strong construct of the original MAKSS-C. Table 12 presents the 14 items retained for the skills subscale.

Table 12

MAKSS-HC Skills Subscale Survey Item Responses

	% Some Form of Agreement	*M*	*SD*
Sk41. How would you rate your ability to conduct an effective evaluation or follow up visit / treatment session with a person from a cultural background significantly different from your own?	63.7	2.7	0.7
Sk42. How would you rate your ability to effectively assess the health needs of a person from a cultural background significantly different from your own?	65.2	2.7	0.7
Sk45. How well would you rate your ability to accurately identify culturally biased assumptions as they relate to your professional training?	79.3	2.9	0.6
Sk46. How well would you rate your comfort level discussing a client's cultural beliefs and values as part of the intervention process?	80.4	3.0	0.7
Sk51. In general, how would you rate your skill level in terms of being able to provide appropriate healthcare services to culturally different clients?	72.0	2.8	0.6
Sk52. How would you rate your ability to effectively consult with another health professional concerning the health needs of a client whose cultural background is significantly different from your own?	81.4	3.0	0.6
Sk53. How would you rate your ability to effectively secure information and resources to better serve culturally different clients?	70.6	2.8	0.7
Sk54. How would you rate your ability to accurately assess the health needs of women?	85.2	3.2	0.7
Sk55. How would you rate your ability to accurately assess the health needs of men?	76.5	2.9	0.7
Sk56. How well would you rate your ability to accurately assess the health needs of older adults?	79.5	3.0	0.7
Sk57. How well would you rate your ability to accurately assess the health needs of gay, lesbian, or bisexual clients?	66.1	2.7	0.8
Sk58. How well would you rate your ability to accurately assess the health needs of transgender or non-binary clients?	45.5	2.4	0.8
Sk59. How well would you rate your ability to accurately assess the health needs of persons with a disability?	63.3	2.8	0.8
Sk60. How well would you rate your ability to accurately assess the health needs of persons who come from very poor socioeconomic backgrounds?	77.4	2.9	0.7

Table 13

Correlations MAKSS-HC Skills Subscale

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Sk41	-												
2. Sk42	.69**	-											
3. Sk45	.36**	.37**	-										
4. Sk46	.41**	.36**	.46**	-									
5. Sk51	.56**	.69**	.44**	.41**	-								
6. Sk52	.45**	.40**	.43**	.52**	.49**	-							
7. Sk53	.36**	.40**	.39**	.40**	.43**	.45**	-						
8. Sk54	.19**	.29**	.35**	.23**	.35**	.29**	.37**	-					
9. Sk55	.34**	.39**	.35**	.27**	.40**	.33**	.33**	.33**	-				
10. Sk56	.31**	.41**	.25**	.22**	.44**	.34**	.36**	.56**	.54**	-			
11. Sk57	.32**	.51**	.28**	.29**	.46**	.33**	.33**	.38**	.47**	.41**	-		
12. Sk58	.36**	.47**	.30**	.22**	.40**	.33**	.38**	.27**	.38**	.32**	.77**	-	
13. Sk59	..40**	.40**	.39**	.31**	.43**	.44**	.39**	.47**	.48**	.59**	.50**	.47**	-
14. Sk60	.32**	.42**	.34**	.28**	.42**	.37**	.41**	.46**	.46**	.52**	.52**	.42**	.54**

Note. $^{**}p < .01$

Items on the skills subscale are most representative of the core principle of being well-versed in treatment modalities for culturally diverse clients. The core principle of being skilled in verbal and non-verbal communication is not well represented with the items that were retained. Similarly, the core principle of advocating for diverse populations is not explicitly represented. Despite the 14 items representing only one of the core principles of the skills construct, the items have a good representation of the spectrum of minoritized groups who experience poorer health outcomes. Correlations (Pearson's *r*) were significant for all items in the subscale and are presented in Table 13 above.

Summary of Findings for the MAKSS-HC. This study aimed to explore whether the revised MAKSS-HC would demonstrate similar constructs of the original MAKSS-C. This hypothesis was not supported by the EFA that was completed. The skills subscale had the best representation of the original MAKSS-C. Items from the original awareness and knowledge subscale did not load as hypothesized. Using the MCC to interpret results, items that were previously written for the knowledge subscale fit better with items from the awareness subscale, and items that were previously written for the awareness subscale better fit with the knowledge construct. However, the resulting 37-item MAKSS-HC did demonstrate good construct validity and reliability as evidenced by factor loadings and Cronbach's alphas which were previously presented.

Comparison of the MAKSS-HC and MAKSS-CE-R. After completing factor analysis of the MAKSS-HC and comparing to the original MAKSS-C, an additional factor analysis was completed in an attempt to replicate a study completed by Kim et al. (2003). Similar to the purpose of the current study, Kim et al. (2003) completed a factor analysis of the original MAKSS-C to further investigate construct validity. The same data analysis procedures, Principal

Component Analysis (PCA) and oblique rotation (Direct Oblimin), were used as outlined by Kim et al. (2003). Coefficients greater than .30 were retained. These methods were employed on the current data set (60 variables, *n* = 267). Table 14 presents the results and identifies items that were retained in the current study in comparison to items retained by Kim et al. (2003).

Table 14

Comparison of Factor Analyses for MAKSS-HC and MAKSS-CE-R

	EFA MAKSS-HC			**PCA MAKSS-HC**			**MAKSS-CE-R**		
Item	1	2	3	1	2	3	1	2	3
Aw3	.51			.56			-.45		
Aw4	.49			.52			-.55		
Aw6	.53			.56			-		
Aw8	.51			.53			-		
Aw9	.43			.47			-.40		
Aw19	.54			.54			-		
Kn21	.58			.57			-.77		
Kn22	.51			.52			-.77		
Kn23	-			-			-.61		
Kn24	.50			-			-.53		
Kn25	-			-			-.61		
Kn26	.71			.73			-.26		
Kn27	.47			.53			-		
Kn28	.70			.78			-.57		
Kn29	-			-			-.39		
Kn30	.69			.71			-		
Kn31	.69			.69			-.58		
Kn32	.39			.67			-.49		
Sk48	.39			-			-		
Sk49	.44			-			-		
Aw5		.67			.67			-	
Aw7		.77			.78			.50	
Aw11		-			-			.49	
Aw12r		-			-			.44	
Aw13r		-			-			.61	
Aw14r		-			-			.73	
Aw15r		-			-			.52	
Aw16r		.50			.62			.53	
Aw17		.53			.62			-	
Kn35		-			-.43			-	

Table 14 continued

	EFA MAKSS-HC			PCA MAKSS-HC			MAKSS-CE-R		
Item	1	2	3	1	2	3	1	2	3
Kn36		-			-.34			-	
Kn38		-			.35			.46	
Kn39		.62			.68			.36	
Kn40		.68			.68			.48	
Sk41			.50			-			-
Sk42			.63			.61			-
Sk45			.37			-			-
Sk46			.50			.52			-
Sk49			-			-			.63
Sk51			.65			.66			-
Sk52			.59			.63			.67
Sk53			.50			.54			.48
Sk54			.62			.69			.47
Sk55			.59			.62			.62
Sk56			.76			.80			.64
Sk57			.64			.67			.63
Sk58			.52			.55			.64
Sk59			.74			.74			.58
Sk60			.73			.74			.63
% Var	27.89	9.81	6.89	25.19	10.73	7.01	17.06	7.53	5.21
Cronbach's Alpha	.89	.80	.90	.88	.58	.90	.87	.85	.82

Similar to findings from the EFA using PAF and oblique rotation, items from the skills subscale had the best representation of findings by the study from Kim et al. (2003). Awareness and knowledge subscales cross-loaded as they did with the PAF. It was noted that with both PAF and PCA of the MAKSS-HC, there were moderate inconsistencies with items that were retained in the study by Kim et al. (2003) as evidenced in Table 14. Overall, this study was not able to replicate the study by Kim et al. (2003). This is further discussed in Chapter V.

Question 2: **Do Higher Scores on the MAKSS-HC Predict Higher Scores on the NSSE?**

The second research question was addressed through correlation and multiple regression analyses. Descriptive statistics including means (*M*) and standard deviations (*SD*) were first

conducted for the constructs of the MAKSS-HC and the NSSE Topical Module: Inclusiveness and Engagement with Cultural Diversity and are presented in Table 15.

Table 15

Descriptive Statistics of the Measures

Measure	*N*	# of items	*M*	*SD*
MAKSS-HC	197	37	104.08	13.37
Awareness	203	17	45.2	7.52
Knowledge	206	6	19.12	2.99
Skills	203	14	39.67	6.55
NSSE	188	27	67.71	14.25
Coursework Emphasis	194	7	15.78	4.98
Institution Emphasis	191	7	20.61	4.79
Institution Support	193	7	19.20	5.20
Student Engagement	192	6	9.43	3.09

The next phase of data analysis consisted of correlations (Pearson's *r*) for the MAKSS-HC and the NSSE. Most correlations were statistically significant which are presented in Table 16. The three subscales of the MAKSS-HC demonstrated significant correlations among each other ($p < .01$), and the four subscales of the NSSE demonstrated significant correlations among each other ($p < .01$). A number of significant correlations between the MAKSS-HC and NSSE were discovered. For the subscale awareness, statistical significance ($p < .01$) was found for the total NSSE, coursework emphasis subscale, and student engagement subscale. For the subscale of knowledge, statistical significance ($p < .01$) was additionally noted for the total NSSE, coursework emphasis construct, and student engagement construct. Statistically significant correlations found for the skills subscale included correlation among the total NSSE ($p < .01$), coursework emphasis ($p < .01$), institution emphasis ($p < .05$), institution support ($p < .01$), and student engagement ($p < .001$). For the overall MAKSS-HC, significant correlations were noted for the total NSSE ($p < .01$), coursework emphasis ($p < .01$), institution support ($p < .01$), and

student engagement ($p < .01$). There were not any significant correlations between institution emphasis and the overall MAKSS-HC and the awareness and knowledge subscales. Institution emphasis was negatively correlated with awareness.

Table 16

Correlations of the MAKSS-HC and NSSE

Measure	1	2	3	4	5	6	7	8
1. MAKSS-HC	-							
2. Awareness	.63**	-						
3. Knowledge	.84**	.57**	-					
4. Skills	.87**	.34**	.58**	-				
5. NSSE	.31**	.20**	.25**	.27**	-			
6. Coursework Emphasis	.31**	.27**	.24**	.23**	.80**	-		
7. Institution Emphasis	.12	-.27	.08	.18*	.81**	.50**	-	
8. Institution Support	.19**	.06	.13	.23**	.83**	.48**	.64**	-
9. Student Engagement	.37**	.35**	.34**	.28**	.49**	.28**	.15*	.30**

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

Strong correlations of all three subscales and overall MAKSS-HC with the total NSSE, coursework emphasis, and student engagement constructs suggest that coursework plays an important role in the development of cultural competence along with students having culturally diverse experiences as all of these constructs were correlated at a p value of $< .01$. This indicates that knowledge received through education, as well as self-directed engagement in culturally diverse experiences, directly correlates to increased levels of cultural competence. Institution support was significantly correlated ($p < .01$) to overall MAKSS-HC and the skills subscale. Institution support items are related to providing a supportive environment for culturally diverse groups. This suggests that participants with higher levels of cultural competence and skills specifically reported feeling that the institution was supportive of cultural diversity. Interestingly, institution emphasis was only correlated to the skills subscale ($p < .05$). The items of institution emphasis are focused on whether the institution is actively supporting cultural diversity by

fostering a sense of community and ensuring safety from stigmatization and discrimination. It was hypothesized that institution emphasis would yield significant correlations with cultural competence, but this was not supported in the data analysis. Discussion related to these findings are discussed further in Chapter V.

Multiple Regression. After correlations were determined, multiple linear regression analyses were utilized to test the predictive relationships among the MAKSS-HC, awareness, knowledge, and skills scales with NSSE scales. This was done to analyze whether having increased institutional support can predict higher levels of cultural competence identified by MAKSS-HC scores. Regression analyses were completed for the overall MAKSS-HC and all three subscales. To predict levels of cultural competence, four regression analyses were conducted using the four subscales of the NSSE (coursework emphasis, institution emphasis, institution support, and student engagement) as predictors and the subscales of the MAKSS-HC as the outcome.

The first regression model was analyzed for overall MAKSS-HC score. It was hypothesized, based on published research, that increased institutional support would predict increased levels of cultural competence. Supporting this prediction, the regression equation with MAKSS-HC was significant, $R^2 = .18$, $F(4,177) = 9.496$, $p < .001$. As shown in Table 17, the coursework emphasis ($p < .01$) and student engagement ($p < .001$) factors significantly predicted participants' scores on the MAKSS-HC. This suggests that an emphasis in coursework on cultural competence and student engagement in culturally diverse experiences positively predict the level of cultural competence. There was no statistical significance of institution support or institution emphasis predicting level of cultural competence.

Table 17

Multiple Regression MAKSS-HC

	MAKSS-HC		
Predictor	*B*	*SE*	β
NSSE:			
Coursework Emphasis	.58	.22	.22**
Institution Emphasis	-.07	.25	.78
Institution Support	.01	.24	.00
Student Engagement	1.33	.31	.32***
R^2			.18
R^2_{adj}			.16
F			9.496***

Note. $^{**}p < .01$, $^{***}p < .001$

The next regression model was computed for level of awareness which is presented in Table 18. It was hypothesized that institutional support predicts level of cultural competence. The regression equation model for awareness was significant [$R^2 = .18$, $F(4,182) = 9.981$, $p < .001$] and supported this prediction. Coursework emphasis ($p < .01$) and student engagement ($p < .001$) positively predicted the level of cultural awareness. Participants had higher levels of cultural awareness when there was a higher level of emphasis on cultural competence in their education and also when they participated in more culturally diverse activities. Institution emphasis and institution support were not statistically significant.

Table 18

Multiple Regression Awareness

	MAKSS-HC		
Predictor	*B*	*SE*	β
NSSE:			
Coursework Emphasis	.33	.12	.21**
Institution Emphasis	-.01	.15	-.01
Institution Support	-.06	.13	-.04
Student Engagement	.82	.17	.34***

Table 18 continued

	MAKSS-HC		
Predictor	*B*	*SE*	β
R^2			.18
R^2_{adj}			.16
F			9.981***

Note. $^{**}p < .01$, $^{***}p < .001$

The third regression model was calculated for level of knowledge. It was hypothesized that level of knowledge for cultural competence would be higher with institutional support. This prediction was supported with significant findings [$R^2 = .09$, $F(4,177) = 4.412$, $p < .01$] as shown in Table 19. Coursework emphasis ($p < .05$) and student engagement ($p < .05$) positively predicted level of cultural knowledge. Institution emphasis ($p < .05$) negatively predicted cultural knowledge. This suggests that participants had lower levels of cultural competence when they felt increased emphasis by the institution on cultural diversity.

Table 19

Multiple Regression Knowledge

	MAKSS-HC		
Predictor	*B*	*SE*	β
NSSE:			
Coursework Emphasis	.13	.05	.22*
Institution Emphasis	-.14	.06	-.23*
Institution Support	-.02	.06	-.03
Student Engagement	.18	.08	.18*
R^2			.09
R^2_{adj}			.07
F			4.412**

Note. $^{*}p < .05$, $^{**}p < .01$

The last regression model was analyzed for skills. It was hypothesized that increased institutional support would positively predict levels of cultural skill. Table 20 presents the results

of the multiple regression which were significant [R^2 = .07, $F(4,183) = 3.522$, $p < .01$]. Student engagement was the only factor that significantly predicted level of cultural skill.

Table 20

Multiple Regression Skills

	MAKSS-HC		
Predictor	*B*	*SE*	β
NSSE:			
Coursework Emphasis	.07	.11	.05
Institution Emphasis	.08	.13	.06
Institution Support	.13	.12	.10
Student Engagement	.32	.16	.15*
R^2			.07
R^2_{adj}			.05
F			3.522**

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

Multiple regression analysis of the overall MAKSS-HC and three subscales suggests that for institutional support, coursework emphasis, and student engagement are the most significant predictors for level of cultural competence. Institution emphasis and institution support were not significant predictors of level of cultural competence, and institution emphasis was a negative predictor of cultural knowledge. These findings are discussed further in Chapter V.

Question 3: **Are there Significant Interactions between Demographic Data and Scores of the MAKSS-HC?**

Independent sample paired *t*-tests and one-way ANOVAs were used to analyze significant interactions between demographic data and scores of the MAKSS-HC. The means (*M*) and standard deviations (*SD*) for awareness, knowledge and skills were first calculated for categorical demographics and are presented in Table 21. For means and standard deviation of the overall MAKSS-HC, refer to Appendix G.

Table 21

General Demographic Means Comparisons for Awareness, Knowledge, and Skills

	Awareness			Knowledge			Skills		
Variable	*N*	*M**	*SD*	*N*	*M**	*SD*	*N*	*M**	*SD*
Race									
White	171	44.54	7.27	175	19.92	2.90	171	39.47	6.69
Person of Color	31	48.71	8.13	30	20.23	3.34	31	40.87	5.77
African American	1	54.00	-	1	23.00	-	1	38.00	-
Latino	1	43.00	-	1	19.00	-	1	41.00	-
AI/AN**	11	50.36	7.43	11	22.00	2.90	11	40.10	5.82
Asian	5	52.80	7.33	5	18.00	1.87	5	37.20	5.63
2 or more races	13	45.77	8.80	12	19.42	3.68	13	43.15	5.65
Gender									
Male	31	100.26	6.66	31	100.26	3.56	31	100.26	6.55
Female	162	104.60	7.67	162	104.60	2.86	162	104.60	6.54
Age Range									
20-21	44	44.16	7.89	46	18.41	2.84	43	40.07	6.97
22-23	68	43.71	7.20	69	19.16	2.63	68	38.60	6.97
24-27	59	46.32	6.84	57	19.77	3.08	60	39.75	5.72
28+	32	47.75	8.20	34	18.91	3.60	32	41.25	6.55
Rurality									
Rural	42	44.69	7.78	42	18.29	2.99	42	38.95	6.61
Small town	29	45.90	6.31	32	17.97	3.71	29	40.10	6.95
Micropolitan	40	45.05	6.40	41	20.05	2.35	39	39.49	5.99
Metropolitan	87	45.09	8.16	86	19.49	2.81	88	39.92	6.87
Income Group									
< $60,000	34	48.82	8.84	35	19.54	3.68	34	41.76	7.01
$60,000 to < $100,000	53	44.89	7.79	54	18.81	2.70	54	39.61	6.18
$100,000 to < $125,000	43	44.70	7.58	46	18.96	2.97	42	39.90	5.80
> &125,000	49	44.67	6.41	48	19.48	2.90	49	38.67	6.66
Region									
West	16	46.25	7.59	16	17.69	4.76	16	38.06	6.44
Midwest	177	44.94	7.33	180	19.16	2.74	177	39.76	6.56
Northeast	1	57.00	-	1	24.00	-	1	47.00	-
Southeast	3	49.33	4.04	3	21.00	2.00	3	41.33	3.06
Southwest	3	41.00	14.05	3	19.33	4.73	3	38.00	12.53

Note. *Higher number indicates greater level of cultural competence. **American Indian and Alaskan Native (AI/AN).

Independent samples *t*-tests and one-way ANOVAs are presented in Tables 22-27. Persons of color demonstrated statistically higher scores for the overall MAKSS-HC ($p < .01$) and the subscales of awareness ($p < .01$) and knowledge ($p < .05$). No significant differences

were noted for the skills subscale. It should be noted that the only demographic group that demonstrated significant differences for overall MAKSS-HC score was race and ethnicity. For that reason the overall MAKSS-HC findings are not reported for any other comparison. There were no significant differences were noted for gender scores with any of the three subscales. For age groups, significant differences were noted on the awareness subscale ($p < .05$). No other significant findings were noted for age groups. Rurality demonstrated a statistically significant difference on the knowledge subscale ($p < .01$). There were no other significant differences in scores for rurality. There were significant differences noted for income range and the subscale of awareness ($p < .05$). No other statistically significant findings were noted for income groups. There were no significant findings for geographical region and levels of cultural competence. To further examine significant findings of the one-way ANOVA's, post hoc *t*-tests using Tukey alpha comparisons were used to determine which variables demonstrated significant differences. These findings are reported following the one-way ANOVA tables.

Table 22

Independent Samples t-test for Race/Ethnicity

Subscale Variables	Larger number means	White	Person of color	*t-value*	*df*	*p*	Cohen's *d*
MAKSS-HC	Increased cultural competence (CC)	103.03	109.83	-2.60	194	.01**	-.52
Awareness	Increased CC	44.54	48.71	-2.88	200	.004**	-.56
Knowledge	Increased CC	18.92	20.23	-2.24	203	.026*	-.44
Skills	Increased CC	39.47	40.87	-1.09	200	.276	-.21

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

Table 23

Independent Samples t-test for Gender

Subscale Variables	Larger number means	Male	Female	*t-value*	*df*	*p*	Cohen's *d*
Awareness	Increased CC	44.06	45.33	-.89	197	.376	-.16
Knowledge	Increased CC	18.44	19.23	-1.38	200	.170	-.27
Skills	Increased CC	38.18	39.88	-1.36	197	.175	-.26

Table 24

One-Way ANOVA Results for Age Groups

Dependent Variables	*df*	*MS*	*F*	*p*	η^2
Awareness					
Between Groups	3	160.61	2.92	.04*	.03
Within Groups	199	55.03			
Knowledge					
Between Groups	3	16.36	1.84	.14	.01
Within Groups	202	8.86			
Skills					
Between Groups	3	54.86	1.29	.28	.00
Within Groups	199	42.71			

Note. $*p < .05$

Results of the one-way ANOVA indicated statistically significant differences in awareness subscale based on age group, $F(3, 199) = 2.92$, $MS = 160.61$, $p < .05$, $\eta^2 = .03$. It was noted the eta-squared value demonstrated a small effect size suggesting findings were not practically significant. This was supported by post-hoc *t*-tests using a Tukey alpha adjustment which revealed no significant differences between groups and awareness.

Table 25

One-Way ANOVA Results for Rurality

Dependent Variables	*df*	*MS*	*F*	*p*	η^2
Awareness					
Between Groups	3	8.50	.15	.93	-.01
Within Groups	194	56.28			
Knowledge					
Between Groups	3	39.55	4.61	.004*	.05
Within Groups	197	8.57			
Skills					
Between Groups	3	11.29	.25	.86	-.01
Within Groups	194	44.37			

Note. $*p < .01$

Results of the one-way ANOVA indicated differences in knowledge based on rurality, $F(3, 197) = 4.61$, $MS = 39.55$, $p < .01$, $\eta^2 = .05$. A medium effect size was noted for the

proportion of variance with an eta-squared value of .05. Post-hoc *t*-tests using a Tukey alpha adjustment confirmed significantly higher levels of knowledge for micropolitan (M = 20.05, SD = 2.35) compared to rural (M = 18.29, SD = 2.99), and small town (M = 17.97, SD = 3.71). No significant differences were noted for participants in metropolitan areas (M = 19.49, SD = 2.81).

Table 26

One-Way ANOVA Results for Income Group

Dependent Variables	*df*	*MS*	*F*	*p*	η^2
Awareness					
Between Groups	3	152.16	2.63	.05*	.03
Within Groups	175	57.81			
Knowledge					
Between Groups	3	6.12	.67	.57	-.01
Within Groups	179	9.17			
Skills					
Between Groups	3	65.21	1.60	.19	.01
Within Groups	175	40.87			

Note. *$p < .05$

Results of the one-way ANOVA indicated statistically significant differences in awareness subscale based on income group, $F(3, 175)$, MS = 152.16, $p < .05$, $\eta^2 = .03$. A small effect size was noted with the eta-squared value suggesting findings were not practically significant. This was supported by post-hoc *t*-tests using a Tukey alpha adjustment which revealed no significant differences between groups and awareness.

The main significant difference that was noted comparing general demographic means to levels of cultural competence was that persons of color demonstrated significantly higher scores of cultural competence with the exception of the skills subscale. The skills subscale was still higher but not to the point of significance. Though income groups identified significant differences between groups for awareness, the Tukey alpha comparison did not find any significant comparisons. This was also the findings for income groups and awareness.

Interestingly, participants from micropolitan areas demonstrated statistically higher scores for knowledge in comparison to small town and rural groups, but there were no significant differences noted for the metropolitan group. These findings are further discussed in Chapter V.

Next, the means (*M*) and standard deviations (*SD*) for Awareness, Knowledge, and Skills were calculated for categorical demographics related to program of study which are presented in Table 27. The means and standard deviations of the overall MAKSS-HC is reported in Appendix G. Next independent sample paired *t*-tests and one-way ANOVAs were used to analyze significant differences between demographic data and scores of the MAKSS-HC.

Table 27

Demographics Related to Program of Study Means Comparison for Awareness, Knowledge, and Skills

	Awareness			Knowledge			Skills		
Variable	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
Program of Study									
Physician	48	44.02	7.46	46	20.15	2.87	49	38.93	6.78
Physician Assistant	12	42.83	5.44	12	18.17	2.62	12	41.58	3.53
Nursing	31	46.80	7.46	33	18.42	2.18	31	41.77	5.33
Counseling	6	49.33	6.74	6	21.67	1.97	6	41.33	7.53
Psychology	2	53.00	8.48	2	19.50	2.12	2	41.00	1.41
Social Work	15	48.20	7.53	15	20.00	2.83	15	38.80	6.50
Public Health	8	51.00	6.89	9	22.78	1.64	8	37.88	5.35
Physical Therapy	20	42.86	6.65	19	18.21	3.37	19	37.37	7.33
Occupational Therapy	43	44.58	7.95	46	19.04	2.09	43	39.51	7.46
Speech-Language Pathology	3	46.67	5.51	3	15.75	4.93	3	39.33	7.02
Athletic Training	4	39.00	8.98	4	17.33	2.22	4	37.50	10.87
Medical Lab Science	11	45.00	6.82	11	15.75	4.32	11	41.73	4.40
Year in Program									
1st Year	73	43.09	8.13	72	19.80	2.60	72	37.95	7.49
2nd Year	57	45.92	6.40	58	18.79	2.85	57	40.61	5.47
3rd Year	24	45.00	7.45	25	18.84	2.93	24	39.79	6.63
4th Year	26	47.80	8.12	27	17.74	3.97	27	42.12	4.99
5th Year	5	48.20	6.01	6	19.50	2.07	5	42.60	4.77
Cultural Competence Education									
Yes, received CC education	178	45.47	7.64	181	19.29	2.90	178	39.78	6.60
No, had not received CC education	18	42.72	6.48	18	17.72	3.69	18	38.88	6.73

The one-way ANOVA comparing differences for program of study and level of cultural competence is presented in Table 28. Statistically significant differences were noted for awareness ($p < .05$) and knowledge ($p < .001$). Programs of study with higher mean ratings demonstrated higher levels of cultural competence. Sampling from programs varied greatly so to better understand these differences, programs were grouped and reanalyzed.

Table 28

One-Way ANOVA Results for Program of Study

Dependent Variables	*df*	*MS*	*F*	*p*	η^2
Awareness					
Between Groups	11	102.71	1.90	.04*	.05
Within Groups	191	53.94			
Knowledge					
Between Groups	11	39.23	5.41	<.001**	.19
Within Groups	194	7.25			
Skills					
Between Groups	11	39.28	.91	.53	-.01
Within Groups	191	43.10			

Note. *$p < .05$, **$p < .001$

Four groups were created to condense programs of study including physician (physician and physician assistant), nursing, mental health (counseling, psychology, social work, and public health), and allied health (physical therapy, occupational therapy, speech-language pathology, athletic training, and medical lab science). Means and standard deviations are presented in Table 29 for Awareness, Knowledge, and Skill. The means and standard deviations for the overall MAKSS-HC are presented in Appendix G. Results of the one-way ANOVA are presented in Table 30.

Table 29

Program of Study Groups Means Comparison for Awareness, Knowledge, and Skills

	Awareness			Knowledge			Skills		
Variable	*N*	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
Program of Study Groups									
Physician	60	43.78	7.08	58	19.75	2.91	61	39.46	6.34
Nursing	31	46.78	7.46	33	18.42	2.18	31	39.19	5.33
Mental Health	31	49.45	7.06	32	21.06	2.59	31	39.19	6.13
Allied Health	81	44.20	7.45	83	18.22	3.06	80	39.20	7.22

Table 30

One-Way ANOVA Results for Program of Study Groups

Dependent Variables	*df*	*MS*	*F*	*p*	η^2
MAKSS-HC					
Between Groups	3	616.35	3.59	.02*	.04
Within Groups	193	171.88			
Awareness					
Between Groups	3	291.68	5.50	.001**	.06
Within Groups	199	53.05			
Knowledge					
Between Groups	3	75.60	9.48	<.001**	.11
Within Groups	202	7.98			
Skills					
Between Groups	3	54.89	1.29	.28	.00
Within Groups	199	42.71			

Note. *$p < .05$, **$p < .001$

Results suggest that participants from mental health programs have higher levels of cultural competence. Significant differences among groups were noted for the overall MAKSS-HC, $F(3, 193) = 3.59$, $MS = 616.35$, $p < .05$, $\eta^2 = .04$, and for the subscales of awareness, $F(3, 199) = 5.50$, $MS = 291.68$, $p < .001$, $\eta^2 = .06$, and knowledge, $F(3, 202) = 9.48$, $MS = 75.60$, $p < .001$, $\eta^2 = .11$. A medium effect size was noted for the overall MAKSS-HC and awareness subscale, and a large effect size for the knowledge subscale. No significant differences were noted for the skills subscale.

Post-hoc *t*-tests using a Tukey alpha adjustment was conducted to confirm significantly higher levels of MAKSS-HC for mental health (*M* = 109.65, *SD* = 13.06) compared to allied health (*M* = 109.65, *SD* = 13.91). Post-hoc *t*-tests confirmed significantly higher levels of awareness for mental health (*M* = 49.45, *SD* = 7.06) compared to physician (*M* = 43.78, *SD* = 7.08), and allied health (*M* = 44.20, *SD* = 7.45). Significant differences for knowledge were also confirmed with post-hoc *t*-tests with significantly higher levels of knowledge for mental health (*M* = 21.06, *SD* = 2.59) compared to nursing (*M* = 18.42, *SD* = 2.18), and allied health (*M* = 18.22, *SD* = 3.06). Higher levels were also noted for physicians (*M* = 19.75, *SD* = 2.91) compared to allied health (*M* = 18.22, *SD* = 3.06).

Lastly, an independent samples *t*-test and one-way ANOVAs were conducted to investigate differences between the year participants were in the program and whether they had had cultural competence education or not. These findings are presented in Tables 31 and 32.

Table 31

One-Way ANOVA Results for Year in Program

Dependent Variables	*df*	*MS*	*F*	*p*	η^2
MAKSS-HC					
Between Groups	4	359.52	2.04	.09	.02
Within Groups	174	176.54			
Awareness					
Between Groups	4	142.52	2.53	.04*	.03
Within Groups	180	56.25			
Knowledge					
Between Groups	4	23.38	2.70	.03*	.04
Within Groups	183	8.67			
Skills					
Between Groups	4	117.40	2.85	.03*	.04
Within Groups	199	42.71			

Note. *$p < .05$

Significant findings were found for the year participants were in their respective programs. The further they were in their program the higher their levels of cultural awareness,

$F(4, 174) = 2.53$, $MS = 142.52$, $p < .05$, $\eta^2 = .03$, knowledge $F(4, 183) = 2.70$, $MS = 23.38$, $p < .05$, $\eta^2 = .04$, and skills $F(4, 199) = 2.85$, $MS = 23.38$, $p < .05$, $\eta^2 = .04$. A medium effect size was noted for all three subscales. No statistical difference was noted between overall MAKSS-HC and year in the program.

Post-hoc *t*-tests using a Tukey alpha adjustment confirmed significantly higher levels of awareness for 4th year in program ($M = 47.80$, $SD = 8.12$) compared to 1st year in program ($M = 43.09$, $SD = 8.13$). Significantly higher levels of knowledge were identified for 1st year in program ($M = 19.80$, $SD = 2.60$) compared to 4th year in program ($M = 17.74$, $SD = 3.97$). Additionally, significantly higher levels of skills were noted for 4th year in program ($M = 42.12$, $SD = 4.99$) compared to 1st year in program ($M = 37.95$, $SD = 7.49$).

Table 32

Independent Samples t-test for Cultural Competence Education

Subscale Variables	Larger number means	Yes	No	*t-value*	*df**	*p*	*d*
MAKSS-HC	Increased CC	104.65	99.33	-1.60	189	.11	-.40
Awareness	Increased CC	45.47	42.72	-1.473	194	.14	-.36
Knowledge	Increased CC	19.30	17.72	-2.140	197	.03*	-.53
Skills	Increased CC	39.78	38.89	-.545	194	.60	-.14

Note. *$p < .05$

Independent samples *t*-tests for cultural competence education found statistical differences for knowledge. Participants who had received cultural competence education ($M = 19.29$, $SD = 2.90$) had significantly higher levels of cultural knowledge ($p < .05$) than those who had not received cultural competence education ($M = 17.72$, $SD = 3.69$). Chapter V discusses these findings further.

Summary

This chapter reported the results for each of the three research questions postulated in this study. The analyses involved a number of statistical tests aimed to answer these research

questions. Exploratory factor analysis was employed to investigate the construct validity of the MAKSS-HC and for comparison to the original MAKSS-C. Results indicated inconsistencies between the subscales of awareness and knowledge during comparison. Using the MCC model, items of the MAKSS-HC were each analyzed using the model to guide interpretation. The resulting three-factor solution demonstrates good construct validity and reliability.

The results further suggest that there is a predictive relationship between coursework emphasis and student engagement and levels of cultural competence. This suggests that there is a correlation between incorporation of cultural competence into curricula and levels of cultural competence. Demographic comparisons had several statistically significant findings. Chapter V expands on these findings.

CHAPTER V

DISCUSSION

The purpose of this study was to complete a factor analysis of the MAKSS-HC and to examine correlations of the instrument with the NSSE, as well as to examine demographic variables and significant differences with scores on the MAKSS-HC. There is an established need for a cultural competence instrument that is accessible and relevant to various healthcare programs/professions in order to better assess cultural competence. There has been limited empirical research of cultural competence instruments that meet this need, and to the researcher's knowledge, this study is the first to modify the original MAKSS-C to be generalizable to multiple healthcare professions and complete a factor analysis to test for construct validity. The study also sought to investigate an identified need for institutional/organizational support in the development of cultural competence. Regression analysis was employed to determine if there were predictive relationships between institutional support (predictor) with level of cultural competence (outcome). To the researcher's knowledge, there has not been a study of this kind that utilized a well-established survey instrument such as the NSSE to investigate this identified need. This study also explored differences between demographics and scores of the MAKSS-HC in order to better understand directions for future research. The Multicultural counseling competence (MCC) model was used to guide the development of research questions. Structural equation modeling was used to guide data analysis. Specifically, exploratory factor analysis was used to evaluate construct validity of the MAKSS-HC.

This chapter provides a summary of the previous four chapters, followed by a discussion of each research question that was addressed in this study. Interpretations of results, recommendations, and connections to prior research are provided within each discussion topic. The conclusion to this dissertation is comprised of a discussion of the implications for healthcare programs, limitations identified in the study, and proposed future directions for research.

Dissertation Summary

Chapter I introduced the need for developing a cultural competence survey instrument that could be used by multiple healthcare programs/professions. It was asserted that while there are many cultural competence assessments, there are very few validated ones. There are even fewer assessments that can be accessed easily and without significant cost. It was also asserted that if there was an easily accessible cultural competence assessment grounded in a theoretical framework that demonstrated good psychometric properties, this would assist in decreasing health disparities. A validated cultural competence measure has the potential to impact how programs assess cultural competence curricula and improve education in this area to ensure more culturally competent healthcare professionals.

A synthesis of relevant literature was presented in Chapter II. First, demographic information of the U.S. and healthcare professionals was presented to establish the significant difference in the overall diverse demographics of the U.S. and limited diversity in healthcare professions. Second, health disparities were reviewed and examined to establish: (a) an understanding of what health disparities are, (b) an increased awareness of how minoritized populations experience poor health outcomes, and (c) identification of lack of cultural competence by healthcare professionals leading to health disparities. Second, literature on the importance of increasing cultural competence to improve health disparities was explored and

established the foundational constructs of developing cultural competence. Third, cultural competence assessment literature examined the need for an accessible cultural competence measure that is generalized to multiple healthcare professions. Lastly, Chapter II explained the MCC theoretical framework and the framework for data analysis utilized for this research study.

Chapter III described the methodology used for this study. Specifically, this study used an EFA of the MAKSS-HC to evaluate construct validity and reliability. The MAKSS-HC was then used to investigate a predictive relationship between institutional support and levels of cultural competence, as well as the significant differences between demographic data and levels of cultural competence. This was a quantitative, cross-sectional study design that occurred at an upper Midwest university. Students enrolled in medicine and health science programs at the university were invited to participate in the study in the fall semester of 2021. The survey instrument used in this study was composed of the MAKSS-HC and the NSSE: Inclusiveness and Engagement of Cultural Diversity module. Descriptive statistics, EFA, and analysis procedures were presented.

Results from the current study were presented in Chapter IV. The MAKSS-HC three-factor solution that was determined to be most parsimonious in Chapter III was interpreted using the MCC and then compared to the original MAKSS-C. Further data analysis consisted of a series of statistical tests focused on exploring correlations and predictive relationships between the MAKSS-HC and the NSSE and demographics.

In this final chapter, unique and significant findings are presented within the context of each research question. In addition to these findings, interpretations, recommendation, and connections with prior research are also discussed. The chapter concludes by identifying significant implications, limitations, and suggestions for future research.

Research Questions

Question 1: *Will the Revised Multicultural Awareness, Knowledge, Skills Survey – Healthcare Edition (MAKSS-HC) Demonstrate Validity and Reliability Similar to the Original MAKSS-C?*

To answer this first research question, exploratory factor analysis of the MAKSS-HC was completed. A three-factor solution was determined to be most interpretable. Thirty-seven of the original 60 items were retained accounting for 45% of the variance. Item loadings were strong (all loadings were greater than .35), and internal reliability was found to be sufficient for all scales (α = .80 to .90). After factor analysis was completed, the MAKSS-HC was compared to the original MAKSS-C and then to the MAKSS-CE-R.

When comparing the factors of the MAKSS-HC with the original MAKSS-C, there were noticeable differences for the subscales of awareness and knowledge. These differences could be attributed to several factors. First, the original MAKSS-C has been criticized for lacking empirical evidence (Kim et al., 2003; Kumas-Tan et al., 2007). Further investigation of the scale was warranted in order to examine how items would load onto factors. Items from the original subscales of awareness and knowledge cross-loaded with each other which suggested that these items may not be measuring the constructs they were intended to measure. This finding of an inverse relationship has been identified in the literature and was even noted in the original development of the MAKSS-C (D'Andrea et al., 1991; Kim et al., 2003; Kumas-Tan et al., 2007). Using the MCC model to interpret how items loaded onto factors during the EFA, it was suggested that items could be interpreted differently than originally intended on the MAKSS-C and the MAKSS-CE-R. By employing EFA methods to evaluate the MAKSS-HC, it was possible to first determine the most parsimonious factor solution and then to analyze each item that loaded onto the factors to gain a better understanding of what they were representing. Using

the MCC model, awareness and knowledge factors were interpreted based on what the items represented in the theoretical model. Subjectivity of questions in quantitative measures has been identified as a concern (Kumas-Tan et al., 2007). Using the theoretical model that the original MAKSS-C was based on provided a framework to interpret factor loadings. The data extraction methods used for this study assisted in controlling for subjective interpretation of items and factors and used objective interpretation guided by the MCC.

To explore this research question even further, this study attempted to replicate findings of Kim et al.'s (2003) study which were presented in Chapter IV. The rationale for replication was due to the inconsistencies in the awareness and knowledge subscales and how these items loaded. Kim et al. (2003) had somewhat similar findings with the inverse relationship between the two subscales. However, the study used different data extraction methods.

This study was not able to replicate findings by Kim et al. (2003). This could have been due to differences in sample sizes. This research study had a larger sample size (n = 267) than the study by Kim et al. (2003) (n = 188). In general, N should never be less than 100, and ideally a study should have ten participants per number of items. This would have required a sample size of 600 participants. However, it has been identified that these rules of thumb are not valid and that there are other determinants in adequate sampling (MacCallum et al., 1999). Level of communality plays a critical role in determining adequate sample size (MacCallum et al., 1999). Average communalities for the MAKSS-HC were .39 for the PAF and .47 for the PCA. Communalities were not available in the study by Kim et al. (2003), but it is assumed that they would have been similar to those identified in the current study. MacCallum et al. (1999) stated that when communalities are low (< .5) but there is high over-determination of factors (more than three to four items per factor), sample sizes greater than 100 are required. It is also stated

that with low communalities, a small number of factors, and only a few items per factor, a sample of more than 300 is needed (MacCallum et al., 1999). Based on this, the sample size for both the MAKSS-HC and MAKSS-CE-R factor analyses should have represented good recovery of population factors. Nevertheless, the higher the sample size for factor analysis the more stable the factor solution (MacCallum et al., 1999). For this reason, results may have been difficult to replicate due to the lower sample size that was used by Kim et al. (2003) with a difference of nearly 80 participants. It is more likely that the study was unable to be replicated due to the data extraction methods utilized.

Difficulty replicating studies using PCA has been noted as an issue with using this method of data extraction (Preacher & MacCallum, 2003). Fabrigar et al. (1999) assert that PCA is not exploratory factor analysis, because it does not explain correlations among measured variables and rather accounts for variance in the measured variables (Fabrigar et al., 1999). EFA using PAF and oblique rotation is the preferred method for identifying common factors that make up correlations among measured variables (Fabrigar et al., 1999; Preacher & MacCallum, 2003). In the attempt to replicate the study by Kim et al. (2003), this study completed an additional factor analysis using the PCA data extraction method outlined by the authors for further comparison.

Findings suggested that the EFA using PAF methods of the MAKSS-HC demonstrated the best factor solution. This was supported in the findings of the factor analysis. The MAKSS-CE-R only accounted for 29.8% variance of the original MAKSS-C. The PCA conducted in this study of the MAKSS-HC accounted for 42.9% variance, and the PAF accounted for 44.6% of the variance. Percentage of variance should ideally be within the range of 40-70%. As noted in the study by Kim et al. (2003), only 30% of the items accounted for percentage of variance. The

determined three-factor solution using PAF demonstrated that an adequate percentage of variance was represented, factor loadings were strong, and internal reliability was good. Overall, results of the EFA using PAF and oblique rotation methods were superior to other analyses in this study.

The main issue that was noted during factor analysis, and in comparison to the original MAKSS-C, was that many items did not load or cross-loaded. They were removed from further analysis. Further examination was conducted on the initial factors loadings, which are presented in Appendix F, in order to examine questions that were removed during the factor analysis to gain a better understanding for potential reasons that these items did not load or cross-loaded.

Several items cross-loaded during factor analysis including Kn23, Kn25, Kn29, Sk43 and Sk50. Items Kn23 and Kn29 loaded higher on the Skills subscale while similar items loaded on the awareness subscale. Kn23 and Kn29 measured participant's knowledge of the terms prejudice and racism. Kn25 loaded higher on the knowledge subscale while similar items loaded on the awareness subscale. This item measured participant's knowledge of unconscious bias. These items were removed from analysis due to the loadings, however further investigation of these terms and level of knowledge related to these terms is warranted to further examine whether they are more related to the MCC constructs of knowledge and skills. Additionally, items Sk43 and Sk50 were removed during EFA.

Item Sk43 cross-loaded between the awareness and skills subscales and measured participants comfort level with identifying culturally sensitive evaluation methods. Sk50 similarly loaded higher on the awareness subscale compared to the skills subscale and was related to understanding of research related to health disparities. Having the awareness of culturally relevant assessments and body of research related to health disparities is imperative in

the developmental process of gaining cultural competence, as well as the skill to implement culturally relevant assessments and the skill of disseminating existing research of health disparities into practice. Further examination of these items in comparison to the constructs of the MCC is warranted, as well as assessing the item structure for subjectivity.

In regards to the knowledge subscale, several items were removed that directly related to the knowledge construct of the MCC. Item Kn35 measured participant's knowledge of historical racism and marginalization and the effects on educational attainment of minoritized populations in comparison to the White population. Item Kn38r measured participant's knowledge of providing culturally appropriate care to each client rather than providing the same care regardless of race. Item Aw16r measured participant's knowledge of providing culturally sensitive care rather than expecting client's to conform to the Westernized healthcare system and values. Developing cultural competence requires an understanding of the oppression, racism, and discrimination experienced by minoritized populations (Sue et al., 1982). Furthermore, knowledge of Western health values and having the awareness and knowledge to not assume all cultures have those same values related to health is essential in providing culturally competence care. Cultural blindness has serious implications in the provision of healthcare services. Assuming that everyone wants to be treated the same disregards cultural differences (Sue et al., 1982). Though these items aligned with the MCC model, these items were removed during analysis because they did not correlate as expected. This could be due to the subjectivity with how the questions were written, a common issue with self-report measures (Kumas-Tan et al., 2007). If participants did not have sufficient knowledge or awareness of these topics, that would not necessarily imply that the items would not load onto factors. Rather, it would suggest that there may have been too much subjectivity and that the items themselves should be reconsidered

or revised. For example, item Aw16r states, “How would you react to the following statement? It is most important for clients to understand and conform to the culture of the healthcare system.” This item could be viewed in multiple ways. It could be viewed that it is important for all client’s to understand the healthcare system which is referred to as health literacy, and have knowledge of what treatments and recommendations are being prescribed. A participant may agree that a client should understand and conform to the culture of the healthcare system if this is how they interpreted the item, or they may disagree if they understand that individual values of health and wellness should be taken into consideration when developing a plan with each client. Another example of subjectivity is item Kn38 which states, “Clients from different ethnic/cultural backgrounds should be given the same treatments that White mainstream clients receive.” The use of “treatments” could mean the way in which one treats another and argue that obviously everyone deserves to be treated with respect. Treatment could also mean the intervention modalities chosen in which case one treatment modality does not fit all cultural groups (Sue et al., 1982). For this reason, items that were removed during EFA warranted further analysis for subjectivity.

Overall, the MAKSS-HC did not demonstrate similar results for the subscales of awareness and knowledge but did demonstrate similar results for the skills subscale. Multiple items were removed during EFA that warrant further investigation of item structure as many items are lengthy and subjective. In addition, items that were removed during factor analysis should be interpreted based on the MCC model in order to ensure the constructs of the model are being represented in the measure.

Question 2: Do Higher Scores on the MAKSS-HC Predict Higher Scores on the NSSE?

This research question was answered through linear correlations and multiple regression analyses. Research has indicated that organizational/institutional support is needed in order to support the development of cultural competence (Betancourt et al., 2002; Balcazar et al., 2009; Dzau et al., 2017; Oikarainen, 2019). Though research has identified this as a need, there is not sufficient research to support this need. Permission was obtained to use a well-established survey that specifically focuses on institution support and student engagement. Institutional support includes coursework emphasis, institution emphasis, institution support, and student engagement.

This study found that coursework and student engagement were better predictors of cultural competence than support or emphasis by the institution. Correlation and multiple regression analyses revealed that the education students receive and their engagement in culturally diverse experiences are predictive of their level of cultural competence. The more education they receive, the higher their level of cultural competence. Similarly, the more culturally diverse experiences students have, the higher their level of cultural competence. It was anticipated that institution emphasis and support would have been predictors of cultural competence as well, but this was not supported by the findings. One hypothesis is that this could be due to this study being conducted during the Covid-19 pandemic. Many culturally diverse organizations have not had the presence on campus that they did prior to the pandemic due to restrictions for in-person activities. It is hypothesized that students in general have felt disconnected from their institutions during the pandemic. However, during dissemination of the findings it was discovered that more cultural diversity opportunities are currently being offered at this Midwest university than previously offered. Educational opportunities for programs and individual faculty to learn and implement cultural diversity into curriculums are routinely

offered. In addition, organizations for culturally diverse groups have grown in number at this university as well as talks and speakers on culturally relevant topics including difficult conversations related to historical racism and marginalization. Based on this knowledge, it is hypothesized that institutional emphasis of increasing cultural diversity has had a greater influence on coursework emphasis with programs and faculty engaging in the educational opportunities and adjusting curriculums to be more culturally inclusive. It is also suggested that though culturally diverse experiences have continuously increased at this university that students are not aware of what all is available to them for culturally diverse experiences and support.

Question 3: Are there Significant Interactions between Demographic Data and Scores of the MAKSS-HC?

Independent samples *t*-tests and one-way ANOVAs were used to answer this research question. It was hypothesized that more significant differences would have been noted than results revealed. The main significant difference noted was that persons of color demonstrated higher levels of overall cultural competence and higher levels of awareness and knowledge. There were no significant differences noted for gender, age, income groups, or geographic region. There was a significant difference noted for participants from micropolitan populations having higher levels of knowledge in comparison small town and rural populations.

In addition, participants from mental health programs had statistically significant higher scores for overall MAKSS-HC in comparison and allied health participants. Significantly higher levels of awareness were noted for mental health in comparison to physician and allied health. Significant differences for knowledge were noted with mental health compared to nursing and allied health, as well as with physician compared to allied health. One rationale for these findings is that the original MAKSS-C was written for counseling students, which could have contributed to previous knowledge of this measure (D'Andrea et al., 1991). Higher levels of cultural

competence could also be due to counseling and psychology programs emphasizing cultural competence in curricula. One hypothesis of these findings would be to examine student motivation in correlation to levels of cultural competence. It is hypothesized that since the development of cultural competence is a lifelong process which requires active engagement in developing self-awareness, knowledge and skill that personal motivators may impact the level to which one achieves in developing cultural competence. Examining research related to healthcare students' academic motivation would be beneficial to further explore this hypothesis. Furthermore, having a greater knowledge of how cultural competence is presented and emphasis in these respective programs would provide greater insight to these findings.

Lastly, significant differences for year in program were noted with 1st year in program participants having higher levels of knowledge than 4th year in program participants. These findings are counterintuitive to the developmental process of gaining cultural competence. It brings to question whether students enter their respective programs with greater knowledge of cultural issues and differences due to global studies courses that many programs require for admissions, or if greater emphasis on cultural competence is implement early in programs. This finding is concerning in the fact that knowledge related to cultural competence decreases as one progresses through their respective program and brings light to a potential factor in the healthcare workforce lacking cultural competence. These findings warrant further investigation to better understand how programs are providing cultural competence education including methods and amount of coursework.

Implications

The findings noted throughout this chapter have several implications for healthcare programs. Educational opportunities on creating culturally inclusive curriculums should be

utilized by healthcare programs whether these opportunities are offered at their university or outside of the university. Coursework emphasis was one of the predictors of levels of cultural competence and it is important for programs to evaluate what is currently being offered related to culturally competent care and how it can be improved upon. In addition, student engagement was predictive of levels of cultural competence and it would be beneficial for programs to consider how service learning opportunities or other culturally diverse experiences may be incorporated into curriculums. Healthcare programs should also be mindful that cultural knowledge decreases as one progresses through their program of study. It would be beneficial to evaluate their own program, and look for ways to promote attainment and even further develop of cultural knowledge along with awareness and skills. Transparency of efforts to increase cultural inclusivity would be valuable to discuss with students along with sharing the efforts provided by the university. Overall, implications of this study suggest healthcare programs are intentional about providing cultural competence education and ensuring that it is incorporated throughout the curriculum using various methods.

The MAKSS-HC has potential to assess cultural competence at an aggregate level but requires further exploration. This study was an initial step in examining the measure and exploring what each factor was measuring. Aspects of the three constructs of the MCC model were not represented in the final three-factor solution and this requires further attention. A factor solution of the MAKSS-HC that has a more even representation of items per factor as well as a more even representation of the constructs of the MCC that is psychometrically robust has the potential to provide a measure that is accessible and can be used among healthcare. It would also be beneficial to examine wording of items and adjust for subjectivity and length, as well as to

explore items that are repetitive of constructs of the MCC model to decrease the number of items.

Limitations

There were several limitations to this study. The first limitation was that this study was conducted at only one university in the upper Midwest. There was limited diversity in the population sampling which potentially impacted results. Another limitation was in gathering demographic data on the types of cultural competence education that students had received. Open-ended questioning was used for all demographic information which made it difficult to interpret and categorize cultural competence education. Inconsistencies with how cultural competence education is provided has been identified as an issue, and this inconsistency was apparent with the responses provided by participants (Betancourt et al., 2005; Jongen et al., 2018; Lie et al., 2010). In the future, it would be recommended, due to the vast inconsistencies in how education is provided, that demographic questions related to this are more targeted and provide ranges. Another limitation of the study was that it was conducted during a pandemic. These limitations influence the generalizability of this study.

Future Research

Future research exploring the items that were removed during EFA is warranted. It is recommended that all removed items are evaluated based on the MCC model. Items should be evaluated for subjectivity and length and rewritten as appropriate. It would be beneficial to explore a more evenly weighted factor solution as limited items remained on the knowledge subscale in comparison to the awareness and skills subscale. It is recommended that additional exploratory factor analysis is completed after examining all of the removed items and rewriting items for subjectivity and length.

Further research is warranted to determine methods of cultural competence education that positively correlate with levels of cultural competence along with amount of education that is provided. Another direction for research would be to examine student motivation and levels of cultural competence. If student motivations differ based on program of study, this may explain differences in levels of cultural competence.

APPENDICES

Appendix A

Institutional Review Board Approval

Table 33

Summary of IRB Submissions.

IRB Submission	Date of Approval	Purpose / Outcome
Initial IRB Submission	10/02/2021	Approval/Initiate study
Amendment	10/16/2021	Continued approval granted

Figure 6

Institutional Review Board (IRB) Approval Communication

UND UNIVERSITY OF NORTH DAKOTA UND.edu

Division of Research & Economic Development
Office of Research Compliance & Ethics

Principal Investigator: Virginia Elizabeth Clinton-Lisell
Protocol Title: Analysis of the Multicultural Awareness, Knowledge, Skills Survey - Healthcare Edition
Protocol Number: IRB0003966
Protocol Review Level: Exempt 2
Approval Date: 10/02/2021
Expiration Date: 10/01/2024

The application form and all included documentation for the above-referenced project have been reviewed and approved via the procedures of the University of North Dakota Institutional Review Board.

If you need to make changes to your research, you must submit an amendment to the IRB for review and approval. No changes to approved research may take place without prior IRB approval.

This project has been approved for 3 years, as permitted by UND IRB policies for exempt research. You have approval for this project through the above-listed expiration date. When this research is completed, please submit a termination request to the IRB.

Sincerely,

Michelle L. Bowles, M.P.A., CIP
she/her/hers
Director of Research Assurance & Ethics
Office of Research Compliance & Ethics
Division of Research & Economic Development
University of North Dakota
Technology Accelerator, Suite 2050
4201 James Ray Drive Stop 7134
Grand Forks, ND 58202-7134

Figure 7

Institutional Review Board (IRB) Amendment Communication

Division of Research & Economic Development
Office of Research Compliance & Ethics

Principal Investigator: Virginia Elizabeth Clinton-Lisell
Protocol Title: Analysis of the Multicultural Awareness, Knowledge, Skills Survey - Healthcare Edition
Protocol Number: IRB0003966
Protocol Review Level: Exempt 2
Approval Date: 10/16/2021
Expiration Date: 10/01/2024

The amendment and all included documentation for the above-referenced project have been reviewed and approved via the procedures of the University of North Dakota Institutional Review Board.

You have approval for this project through the above-listed expiration date. When this research is completed, please submit a termination request to the IRB.

Sincerely,

Michelle L. Bowles, M.P.A., CIP
she/her/hers
Director of Research Assurance & Ethics
Office of Research Compliance & Ethics
Division of Research & Economic Development
University of North Dakota
Technology Accelerator, Suite 2050
4201 James Ray Drive Stop 7134
Grand Forks, ND 58202-7134

Appendix B

Codebook

Name	**Item**
SexNum	What is your gender identity? (1) Female, cisgender female, she/her, cis-female (2) Male, he/him/his, cisgender male
AgeGrp	What is your age? (1) 20-21 (2) 22-23 (3) 24-27 (4) 28+
Race_Ethnicity	What is/are your racial/ethnic identity/identities? (1) Caucasian, white (2) African American, Black, Haitian American (3) Latino (4) American Indian, Alaskan Native, Native American, Indigenous (5) Asian, Filipino, Chinese (6) 2 or more races
Rurality	What is the approximate population size of where you grew up? (1) Rural – less than 2,500 (2) Small town – 2,500 – 9,999 (3) Micropolitan – 10,000 – 49,000 (4) Metropolitan – greater than 50,000
IncGrp	What was your approximate household income when you were growing up? (1) < $60,000 (2) $60,000 - < $100,000 (3) $100,000 - < $125,000 (4) > $125,000

Region	What geographical region are you from? (1) West (2) Midwest (3) Northeast (4) Southeast (5) Southwest
PoS	What is your program of study? (1) Physician (2) Physician assistant (3) Nursing (4) Counseling (5) Psychology (6) Social work (7) Public health (8) Physical therapy (9) Occupational therapy (10) Speech-language pathology (11) Athletic training (12) Medical laboratory sciences (13) Other
YrProg	What year are you in the program? (1) 1st year (2) 2nd year (3) 3rd year (4) 4th year (5) 5th year (6) Other
CCEd	Have you received education related to cultural competence in your program? (1) Yes (2) No

MAKSS-HC

Name	**Item**
Aw1	Culture is not external but is within the person. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

Aw2	One of the potential negative consequences about gaining information concerning specific cultures is that individuals might stereotype members of those cultural groups according to the information that they have gained. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Aw3	At this time in your life, how would you rate yourself in terms of understanding how your cultural background has influenced the way you think and act? (1) Very limited (2) Limited (3) Fairly aware (4) Aware
Aw4	At this point in your life, how would you rate your understanding of the impact of the way you think and act when interacting with persons from different cultural backgrounds? (1) Very limited (2) Limited (3) Fairly aware (4) Aware
Aw5	How would you react to the following statement? While healthcare enshrines the concepts of desiring to help others, treating each client fairly and equally, and doing no harm; it has continually underserved large groups of people. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Aw6	In general, how would you rate your level of awareness regarding different cultural groups and systems? (1) Very limited (2) Limited (3) Fairly aware (4) Aware
Aw7	The healthcare professions have failed to meet the health needs of minoritized groups. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

Aw8	At the present time, how would you generally rate yourself in terms of being able to accurately compare your own cultural perspective with that of a person from another culture? (1) Very limited (2) Limited (3) Fairly aware (4) Aware
Aw9	What is your comfort level in distinguishing cultural nuances of body language and communication styles in multicultural interactions? (1) Very limited (2) Limited (3) Fairly aware (4) Aware
Aw10	Stress and misunderstanding often result when ambiguous terminology is used in healthcare interactions with persons from differing cultural backgrounds. (1) Very limited (2) Limited (3) Fairly aware (4) Aware
Aw11r	Quality of healthcare would be enhanced if healthcare professionals would consciously adopt universal definitions of normality and treat everyone the same regardless of cultural background. (4) Strongly Disagree (3) Disagree (2) Agree (1) Strongly Agree
Aw12r	The criteria of level of adherence to treatment, level of independence carrying out treatment recommendations, and initiative to improve health are important outcome measures during healthcare visits. (4) Strongly Disagree (3) Disagree (2) Agree (1) Strongly Agree
Aw13r	Even in healthcare interactions with clients of differing cultural backgrounds, basic implicit concepts such as “fairness” and “health”, are not difficult to understand. (4) Strongly Disagree (3) Disagree (2) Agree (1) Strongly Agree

Aw14r	Promoting client's independence in evaluation and treatment interventions is usually a safe goal to strive for in most healthcare situations. (4) Strongly Disagree (3) Disagree (2) Agree (1) Strongly Agree
Aw15r	While a person's natural support system (i.e., family, friends, ect.) plays an important role in the healing process, the healthcare professionals' treatment recommendations result in better health outcomes. (4) Strongly Disagree (3) Disagree (2) Agree (1) Strongly Agree
Aw16r	How would you react to the following statement? It is most important for clients to understand and conform to the culture of the healthcare system. (4) Strongly Disagree (3) Disagree (2) Agree (1) Strongly Agree
Aw17	Healthcare professionals need to change not just the content of what they think, but also the way they handle this content if they are to accurately account for the complexity of culture and individual interpretations of culture. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Aw18	Health conditions vary with the culture of the client. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Aw19	How would you rate your understanding of "cultural safety" in terms of evaluation, goals, and treatment plan of working with culturally different clients? (1) Very limited (2) Limited (3) Fairly aware (4) Aware

Aw20	There are some basic interpersonal skills that are applicable to create positive outcomes regardless of the client's cultural background. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
	At the present time, how would you rate your understanding of the following terms?
Kn21	Culture (1) Very limited (2) Limited (3) Good (4) Very good
Kn22	Ethnicity (1) Very limited (2) Limited (3) Good (4) Very good
Kn23	Racism (1) Very limited (2) Limited (3) Good (4) Very good
Kn24	Microaggression (1) Very limited (2) Limited (3) Good (4) Very good
Kn25	Unconscious bias (1) Very limited (2) Limited (3) Good (4) Very good
Kn26	Cultural humility (1) Very limited (2) Limited (3) Good (4) Very good
Kn27	Ethnocentrism (1) Very limited (2) Limited (3) Good (4) Very good

Kn28	Pluralism (1) Very limited (2) Limited (3) Good (4) Very good
Kn29	Prejudice (1) Very limited (2) Limited (3) Good (4) Very good
Kn30	Critical consciousness (1) Very limited (2) Limited (3) Good (4) Very good
Kn31	Transcultural (1) Very limited (2) Limited (3) Good (4) Very good
Kn32	Cultural encapsulation (1) Very limited (2) Limited (3) Good (4) Very good
Kn33	Q48 What do you think of the following statement? Traditional, complementary, and integrative medicine have similar intentions and goals for the client. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Kn34	Differential treatment in the provision of health services is not necessarily thought to be discriminatory with consideration of cultural differences. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Kn35	In the early grades of formal schooling in the United States, the academic achievement minoritized groups such as African Americans, Latinos, and

	American Indians is close to parity with the achievement of White mainstream students. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Kn36	Research indicates that in the early elementary school grades girls and boys achieve about equally in mathematics and science. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Kn37	Most of the immigrant and minoritized ethnic groups in Europe, Australia, and Canada face problems similar to those experienced by minoritized ethnic groups in the United States. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Kn38	Clients from different ethnic/cultural backgrounds should be given the same treatment/interventions that White mainstream clients receive. (4) Strongly Disagree (3) Disagree (2) Agree (1) Strongly Agree
Kn39	The difficulty with the U.S. healthcare system is its implicit bias in favor of integration to the dominant culture. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Kn40	There is a lack of diversity in healthcare professions. (1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
Sk41	How would you rate your ability to conduct an effective evaluation or follow up visit / treatment session with a person from a cultural background significantly different from your own? (1) Very limited (2) Limited (3) Good (4) Very good

Sk42	How would you rate your ability to effectively assess the health needs of a person from a cultural background significantly different from your own? (1) Very limited (2) Limited (3) Good (4) Very good
Sk43	How well would you rate your ability to identity culturally sensitive formal and informal evaluation strategies? (1) Very limited (2) Limited (3) Good (4) Very good
Sk44	In general, how would you rate yourself in terms of being able to effectively deal with biases, discrimination, and prejudices directed at you in an interaction with a client? (1) Very limited (2) Limited (3) Good (4) Very good
Sk45	How well would you rate your ability to accurately identify culturally biased assumptions as they relate to your professional training? (1) Very limited (2) Limited (3) Good (4) Very good
Sk46	How well would you rate your comfort level discussing a client's cultural beliefs and values as part of the intervention process? (1) Very limited (2) Limited (3) Good (4) Very good
Sk47	In general, how would you rate your ability to effectively communicate with a client who speaks limited or no English? (1) Very limited (2) Limited (3) Good (4) Very good
Sk48	How would you rate your ability to identify unique cultural characteristics of a client who comes from a cultural group different from your own? (1) Very limited (2) Limited (3) Good (4) Very good

Sk49	How would you rate your ability to identify the strengths and weaknesses of formalized tests in terms of their use with persons from different cultural/racial/ethnic backgrounds? (1) Very limited (2) Limited (3) Good (4) Very good
Sk50	How would you rate your understanding of research related to health disparities and causes of disparities? (1) Very limited (2) Limited (3) Good (4) Very good
Sk51	In general, how would you rate your skill level in terms of being able to provide appropriate healthcare services to culturally different clients? (1) Very limited (2) Limited (3) Good (4) Very good
Sk52	How would you rate your ability to effectively consult with another health professional concerning the health needs of a client whose cultural background is significantly different from your own? (1) Very limited (2) Limited (3) Good (4) Very good
Sk53	How would you rate your ability to effectively secure information and resources to better serve culturally different clients? (1) Very limited (2) Limited (3) Good (4) Very good
Sk54	How would you rate your ability to accurately assess the health needs of women? (1) Very limited (2) Limited (3) Good (4) Very good
Sk55	How would you rate your ability to accurately assess the health needs of men? (1) Very limited (2) Limited (3) Good

	(4) Very good
Sk56	How well would you rate your ability to accurately assess the health needs of older adults? (1) Very limited (2) Limited (3) Good (4) Very good
Sk57	How well would you rate your ability to accurately assess the health needs of gay, lesbian, or bisexual clients? (1) Very limited (2) Limited (3) Good (4) Very good
Sk58	How well would you rate your ability to accurately assess the health needs of transgender or non-binary clients? (1) Very limited (2) Limited (3) Good (4) Very good
Sk59	How well would you rate your ability to accurately assess the health needs of persons with a disability? (1) Very limited (2) Limited (3) Good (4) Very good
Sk60	How well would you rate your ability to accurately assess the health needs of persons who come from very poor socioeconomic backgrounds? (1) Very limited (2) Limited (3) Good (4) Very good

NSSE:

Name	**Item**
Coursework Emphasis Construct: During the current school year, how much has your *coursework* emphasized the following?	
Ce1	Developing the skills necessary to work effectively with people from various backgrounds (1) Very little (2) Some (3) Quite a bit (4) Very much

Ce2	Recognizing your own cultural norms and biases (1) Very little (2) Some (3) Quite a bit (4) Very much
Ce3	Sharing your own perspectives and experiences (1) Very little (2) Some (3) Quite a bit (4) Very much
Ce4	Exploring your own background through projects, assignments, or programs (1) Very little (2) Some (3) Quite a bit (4) Very much
Ce5	Learning about other cultures (1) Very little (2) Some (3) Quite a bit (4) Very much
Ce6	Discussing issues of equity or privilege (1) Very little (2) Some (3) Quite a bit (4) Very much
Ce7	Respecting the expression of diverse ideas (1) Very little (2) Some (3) Quite a bit (4) Very much
Institution Emphasis Construct: How much does your institution emphasize the following?	
Ie1	Demonstrating a commitment to diversity (1) Very little (2) Some (3) Quite a bit (4) Very much

Ie2	Providing students with the resources needed for success in a multicultural world (1) Very little (2) Some (3) Quite a bit (4) Very much
Ie3	Creating an overall sense of community among students (1) Very little (2) Some (3) Quite a bit (4) Very much
Ie4	Ensuring that you are not stigmatized because of your identity (racial/ethnic, gender, religious, sexual orientation, etc.) (1) Very little (2) Some (3) Quite a bit (4) Very much
Ie5	Providing information about anti-discrimination and harassment policies (1) Very little (2) Some (3) Quite a bit (4) Very much
Ie6	Taking allegations of discrimination or harassment seriously (1) Very little (2) Some (3) Quite a bit (4) Very much
Ie7	Helping students develop the skills to confront discrimination and harassment (1) Very little (2) Some (3) Quite a bit (4) Very much
Institutional Support Construct: How much does your institution provide a supportive environment for the following forms of diversity?	
Is1	Racial/ethnic identity (1) Very little (2) Some (3) Quite a bit (4) Very much

Is2	Gender identity (1) Very little (2) Some (3) Quite a bit (4) Very much
Is3	Economic background (1) Very little (2) Some (3) Quite a bit (4) Very much
Is4	Political affiliation (1) Very little (2) Some (3) Quite a bit (4) Very much
Is5	Religious affiliation (1) Very little (2) Some (3) Quite a bit (4) Very much
Is6	Sexual orientation (1) Very little (2) Some (3) Quite a bit (4) Very much
Is7	Disability status (1) Very little (2) Some (3) Quite a bit (4) Very much
Student Engagement Construct: During the current school year, about how often have you done the following?	
Se1	Attended events, activities, or presentations that reflect an appreciation for diverse groups of people (1) Very little (2) Some (3) Quite a bit (4) Very much

Se2	Participated in the activities of centers related to specific groups (racial-ethnic, cultural, religious, gender, LGBT, etc.) (1) Very little (2) Some (3) Quite a bit (4) Very much
Se3	Participated in a diversity-related club or organization (1) Very little (2) Some (3) Quite a bit (4) Very much
Se4	Participated in a demonstration for a diversity-related cause (rally, protest, etc.) (1) Very little (2) Some (3) Quite a bit (4) Very much
Se5	Reflected on your cultural identity (1) Very little (2) Some (3) Quite a bit (4) Very much

Appendix C

Qualtrics™ Survey

Dissertation survey

Start of Block: Informed consent

Q1 Informed Consent Form
Title of Project: Analysis of the Multicultural Awareness, Knowledge, Skills Survey – Healthcare Edition

Principal Investigator: Jessa Hulteng, jessa.hulteng@und.edu

Advisor: Dr. Virginia Clinton-Lisell, (701) 777-5793, virginia.clinton@und.edu

Purpose of the Study:
The purpose of this research is to evaluate the reliability and validity of a modified cultural competence measure and also to gain a greater understanding of the cultural competence education students have received throughout their programs of study and how you have felt support in diversity and inclusion activities throughout your time in college.

Procedures to be followed:
If you decide to take part in this research study, you will open the Qualtrics link that is provided in the email and complete the survey. There are three sections to the survey. First section, demographic information. Second, the modified cultural competence measure. Third, a measure of student engagement in culturally diverse experiences through education and other activities on campus.

The survey will take approximately 15 minutes to complete. There is a total of 96 multiple choice questions. If you do not wish to answer a question, you are able to skip over the question. Risks:
There are no risks in participating in this research beyond those experienced in everyday life.

Benefits:
It is not expected that you will personally benefit from this research. Possible benefits to others include future knowledge gained from the research. Duration: It will take about 15 minutes to complete the questions.

Statement of Confidentiality:
The survey does not ask for any information that would identify who the responses belong to. Therefore, your responses are recorded anonymously. If this research is published, no information that would identify you will be included since your name is in no way linked to your responses. If you choose to enter the raffle for one of the gift cards, your information will not be recorded as part of the data analysis and will be kept separate through the Qualtrics system.

All survey responses that we receive will be treated confidentially and stored on a secure server. However, given that the surveys can be completed from any computer (e.g., personal, work, school), we are unable to guarantee the security of the computer on which you choose to enter your responses. As a participant in our study, we want you to be aware that certain "key logging" software programs exist that can be used to track or capture data that you enter and/or websites that you visit.

Right to Ask Questions:
The researchers conducting this study Jessa Hulteng. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact Jessa Hulteng at jessa.hulteng@und.edu or Dr. Virginia Clinton-Lisell, (701) 777-5793, virginia.clinton@und.edu during the day.

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at (701) 777-4279 or UND.irb@UND.edu. You may contact the UND IRB with problems, complaints, or concerns about the research. Please contact the UND IRB if you cannot reach research staff, or you wish to talk with someone who is an informed individual who is independent of the research team.

General information about being a research subject can be found on the Institutional Review Board website “Information for Research Participants” http://und.edu/research/resources/human-subjects/research-participants.html

Compensation:
You will not receive compensation for your participation. You have the option of entering a drawing for one of 10- $20 Visa gift cards at the end of the survey. If you choose to enter the drawing your personal information will not be linked to your responses on the survey.

Voluntary Participation:
You do not have to participate in this research. You can stop your participation at any time. You may refuse to participate or choose to discontinue participation at any time without losing any benefits to which you are otherwise entitled.

You do not have to answer any questions you do not want to answer.

You must be 18 years of age older to participate in this research study.

Completion and return of the survey implies that you have read the information in this form and consent to participate in the research.

Please keep this form for your records or future reference.

Q2 I have read, understood, and printed a copy of, the above consent form and desire of my own free will to participate in this study.

- ○ Yes (1)
- ○ No (2)

Skip To: End of Survey If I have read, understood, and printed a copy of, the above consent form and desire of my own free wil... = No

End of Block: Informed consent

Start of Block: Demographics

Q3 The following questions are intended to gather some background information. Please answer as many as possible, but you may skip any questions that you do not wish to answer.

Q4 What is your gender identity?

_____

Q5 What is your age?

_____

Q6 What is/are your racial/ethnic identity/identities?

_____

Q7 What is the approximate population size of where you grew up?

_____

Q8 What was your approximate household income when you were growing up?

_____

Q114 What geographical region are you from?

- ○ West (1)
- ○ Midwest (2)
- ○ Northeast (3)
- ○ Southeast (4)
- ○ Southwest (5)

Q9 What is your program of study?

- ○ Physician (1)
- ○ Physician Assistant (2)
- ○ Nursing (3)
- ○ Counseling (4)
- ○ Psychology (5)
- ○ Social Work (6)
- ○ Public Health (7)
- ○ Physical Therapy (8)
- ○ Occupational Therapy (9)
- ○ Speech-Language Pathology (10)
- ○ Athletic Training (11)
- ○ Medical Laboratory Sciences (12)
- ○ Other (13) _____

Q10 What year are you in the program?

- ○ 1st Year (1)
- ○ 2nd Year (2)
- ○ 3rd Year (3)
- ○ 4th Year (4)
- ○ 5th Year (5)
- ○ Other (6) _____

Q11 Have you received education related to cultural competence in your program?

- ☐ Yes (1)
- ☐ No (2)

Q12 How many courses/lectures have you received related to cultural competence?

_____

Q13 What topics related to cultural competence were covered in the courses/lectures? Please give a brief description in the box below.

_____

End of Block: Demographics

Start of Block: MAKSS-HC Awareness

Q14 The next set of questions will measure your perceived level of cultural competence.

Q15 Culture is not external but is within the person.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)

Q16 One of the potential negative consequences about gaining information concerning specific cultures is that individuals might stereotype members of those cultural groups according to the information that they have gained.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)

Q17 At this time in your life, how would you rate yourself in terms of understanding how your cultural background has influenced the way you think and act?

- ○ Very Limited (1)
- ○ Limited (2)
- ○ Fairly Aware (3)
- ○ Aware (4)

Q18 At this point in your life, how would you rate your understanding of the impact of the way you think and act when interacting with persons from different cultural backgrounds?

- ○ Very Limited (1)
- ○ Limited (2)
- ○ Fairly Aware (3)
- ○ Aware (4)

Q19 How would you react to the following statement? While healthcare enshrines the concepts of desiring to help others, treating each client fairly and equally, and doing no harm; it has continually underserved large groups of people.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)

Q20 In general, how would you rate your level of awareness regarding different cultural groups and systems?

- Very Limited (1)
- Limited (2)
- Fairly Aware (3)
- Aware (4)

Q21 The healthcare professions have failed to meet the health needs of minoritized groups.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)

Q22 At the present time, how would you generally rate yourself in terms of being able to accurately compare your own cultural perspective with that of a person from another culture?

- Very Limited (1)
- Limited (2)
- Fairly Aware (3)
- Aware (4)

Q23 What is your comfort level in distinguishing cultural nuances of body language and communication styles in multicultural interactions?

- Very Limited (1)
- Limited (2)
- Fairly Aware (3)
- Aware (4)

Q24 Stress and misunderstanding often result when ambiguous terminology is used in healthcare interactions with persons from differing cultural backgrounds.

- ○ Very Limited (1)
- ○ Limited (2)
- ○ Fairly Aware (3)
- ○ Aware (4)

Q25 Quality of healthcare would be enhanced if healthcare professionals would consciously adopt universal definitions of normality and treat everyone the same regardless of cultural background.

- ○ Strongly Disagree (4)
- ○ Disagree (3)
- ○ Agree (2)
- ○ Strongly Agree (1)

Q26 The criteria of level of adherence to treatment, level of independence carrying out treatment recommendations, and initiative to improve health are important outcome measures during healthcare visits.

- ○ Strongly Disagree (4)
- ○ Disagree (3)
- ○ Agree (2)
- ○ Strongly Agree (1)

Q27 Even in healthcare interactions with clients of differing cultural backgrounds, basic implicit concepts such as “fairness” and “health”, are not difficult to understand.

- ○ Strongly Disagree (4)
- ○ Disagree (3)
- ○ Agree (2)
- ○ Strongly Agree (1)

Q28 Promoting client's independence in evaluation and treatment interventions is usually a safe goal to strive for in most healthcare situations.

- ○ Strongly Disagree (4)
- ○ Disagree (3)
- ○ Agree (2)
- ○ Strongly Agree (1)

Q29 While a person's natural support system (i.e., family, friends, ect.) plays an important role in the healing process, the healthcare professionals' treatment recommendations result in better health outcomes.

- ○ Strongly Disagree (4)
- ○ Disagree (3)
- ○ Agree (2)
- ○ Strongly Agree (1)

Q30 How would you react to the following statement? It is most important for clients to understand and conform to the culture of the healthcare system.

- ○ Strongly Disagree (4)
- ○ Disagree (3)
- ○ Agree (2)
- ○ Strongly Agree (1)

Q31 Healthcare professionals need to change not just the content of what they think, but also the way they handle this content if they are to accurately account for the complexity of culture and individual interpretations of culture.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)

Q32 Health conditions vary with the culture of the client.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)

Q33 How would you rate your understanding of “cultural safety” in terms of evaluation, goals, and treatment plan of working with culturally different clients?

- ○ Very Limited (1)
- ○ Limited (2)
- ○ Good (3)
- ○ Very Good (4)

Q34 There are some basic interpersonal skills that are applicable to create positive outcomes regardless of the client’s cultural background.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)

End of Block: MAKSS-HC Awareness

Start of Block: MAKSS-HC Knowledge

Q35 At the present time, how would you rate your understanding of the following terms?

Q36 Culture

- ○ Very Limited (1)
- ○ Limited (2)
- ○ Good (3)
- ○ Very Good (4)

Q37 Ethnicity

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q38 Racism

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q39 Microaggression

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q40 Unconscious Bias

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q41 Cultural Humility

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q42 Ethnocentrism

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q43 Pluralism

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q44 Prejudice

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q45 Critical Consciousness

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q46 Transcultural

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q47 Cultural Encapsulation

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q48 What do you think of the following statement? Traditional, complementary, and integrative medicine have similar intentions and goals for the client.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)

Q49 Differential treatment in the provision of health services is not necessarily thought to be discriminatory with consideration of cultural differences.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)

Q50 In the early grades of formal schooling in the United States, the academic achievement minoritized groups such as African Americans, Latinos, and American Indians is close to parity with the achievement of White mainstream students.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)

Q51 Research indicates that in the early elementary school grades girls and boys achieve about equally in mathematics and science.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)

Q52 Most of the immigrant and minoritized ethnic groups in Europe, Australia, and Canada face problems similar to those experienced by minoritized ethnic groups in the United States.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)

Q53 Clients from different ethnic/cultural backgrounds should be given the same treatment/interventions that White mainstream clients receive.

- ○ Strongly Disagree (4)
- ○ Disagree (3)
- ○ Agree (2)
- ○ Strongly Agree (1)

Q54 The difficulty with the U.S. healthcare system is its implicit bias in favor of integration to the dominant culture.

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Agree (3)
- ○ Strongly Agree (4)

Q55 There is a lack of diversity in healthcare professions.

- Strongly Disagree (1)
- Disagree (2)
- Agree (3)
- Strongly Agree (4)

End of Block: MAKSS-HC Knowledge

Start of Block: MAKSS-HC Skills

Q56 How would you rate your ability to conduct an effective evaluation or follow up visit / treatment session with a person from a cultural background significantly different from your own?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q57 How would you rate your ability to effectively assess the health needs of a person from a cultural background significantly different from your own?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q58 How well would you rate your ability to identity culturally sensitive formal and informal evaluation strategies?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q59 In general, how would you rate yourself in terms of being able to effectively deal with biases, discrimination, and prejudices directed at you in an interaction with a client?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q60 How well would you rate your ability to accurately identify culturally biased assumptions as they relate to your professional training?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q61 How well would you rate your comfort level discussing a client's cultural beliefs and values as part of the intervention process?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q62 In general, how would you rate your ability to effectively communicate with a client who speaks limited or no English?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q63 How would you rate your ability to identify unique cultural characteristics of a client who comes from a cultural group different from your own?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q64 How would you rate your ability to identify the strengths and weaknesses of formalized tests in terms of their use with persons from different cultural/racial/ethnic backgrounds?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q65 How would you rate your understanding of research related to health disparities and causes of disparities?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q66 In general, how would you rate your skill level in terms of being able to provide appropriate healthcare services to culturally different clients?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q67 How would you rate your ability to effectively consult with another health professional concerning the health needs of a client whose cultural background is significantly different from your own?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q68 How would you rate your ability to effectively secure information and resources to better serve culturally different clients?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q69 How would you rate your ability to accurately assess the health needs of women?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q70 How would you rate your ability to accurately assess the health needs of men?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q71 How well would you rate your ability to accurately assess the health needs of older adults?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q72 How well would you rate your ability to accurately assess the health needs of gay, lesbian, or bisexual clients?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q73 How well would you rate your ability to accurately assess the health needs of transgender or non-binary clients?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q74 How well would you rate your ability to accurately assess the health needs of persons with a disability?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

Q75 How well would you rate your ability to accurately assess the health needs of persons who come from very poor socioeconomic backgrounds?

- Very Limited (1)
- Limited (2)
- Good (3)
- Very Good (4)

End of Block: MAKSS-HC Skills

Start of Block: NSSE

Q76 The next set of questions will ask about your experiences related to inclusiveness and engagement with cultural diversity.

Q77 During the current school year, how much has your coursework emphasized the following?

Q78 Developing the skills necessary to work effectively with people from various backgrounds

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q79 Recognizing your own cultural norms and biases

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q80 Sharing your own perspectives and experiences

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q81 Exploring your own background through projects, assignments, or programs

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q82 Learning about other cultures

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q83 Discussing issues of equity or privilege

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q84 Respecting the expression of diverse ideas

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q85 How much does your institution emphasize the following?

Q86 Demonstrating a commitment to diversity.

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q87 Providing students with the resources needed for success in a multicultural world.

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q88 Creating an overall sense of community among students.

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q89 Ensuring that you are not stigmatized because of your identity (racial/ethnic, gender, religious, sexual orientation, etc.).

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q90 Providing information about anti-discrimination and harassment policies.

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q91 Taking allegations of discrimination or harassment seriously.

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q92 Helping students develop the skills to confront discrimination and harassment.

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q93 How much does your institution provide a supportive environment for the following forms of diversity?

Q94 Racial/ethnic identity

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q95 Gender identity

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q96 Economic background

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q97 Political affiliation

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q98 Religious affiliation

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q99 Sexual orientation

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q100 Disability status

- Very Much (4)
- Quite a Bit (3)
- Some (2)
- Very Little (1)

Q101 During the current school year, about how often have you done the following?

Q102 Attended events, activities, or presentations that reflect an appreciation for diverse groups of people

- Very Often (4)
- Often (3)
- Sometimes (2)
- Never (1)

Q103 Participated in the activities of centers related to specific groups (racial-ethnic, cultural, religious, gender, LGBT, etc.)

- Very Often (4)
- Often (3)
- Sometimes (2)
- Never (1)

Q104 Participated in a diversity-related club or organization

- Very Often (4)
- Often (3)
- Sometimes (2)
- Never (1)

Q105 Participated in a demonstration for a diversity-related cause (rally, protest, etc.)

- Very Often (4)
- Often (3)
- Sometimes (2)
- Never (1)

Q106 Reflected on your cultural identity

- Very Often (4)
- Often (3)
- Sometimes (2)
- Never (1)

End of Block: NSSE

Start of Block: Raffle

Q107 Would you like to enter the raffle to win a $20 VISA gift card? Your response will still remain anonymous.

- Yes (1)
- No (2)

Display This Question:

If Would you like to enter the raffle to win a $20 VISA gift card? Your response will still remain a... = Yes

Q108 Provide the following information

- First name (1) _____
- Last name (2) _____
- Email (3) _____

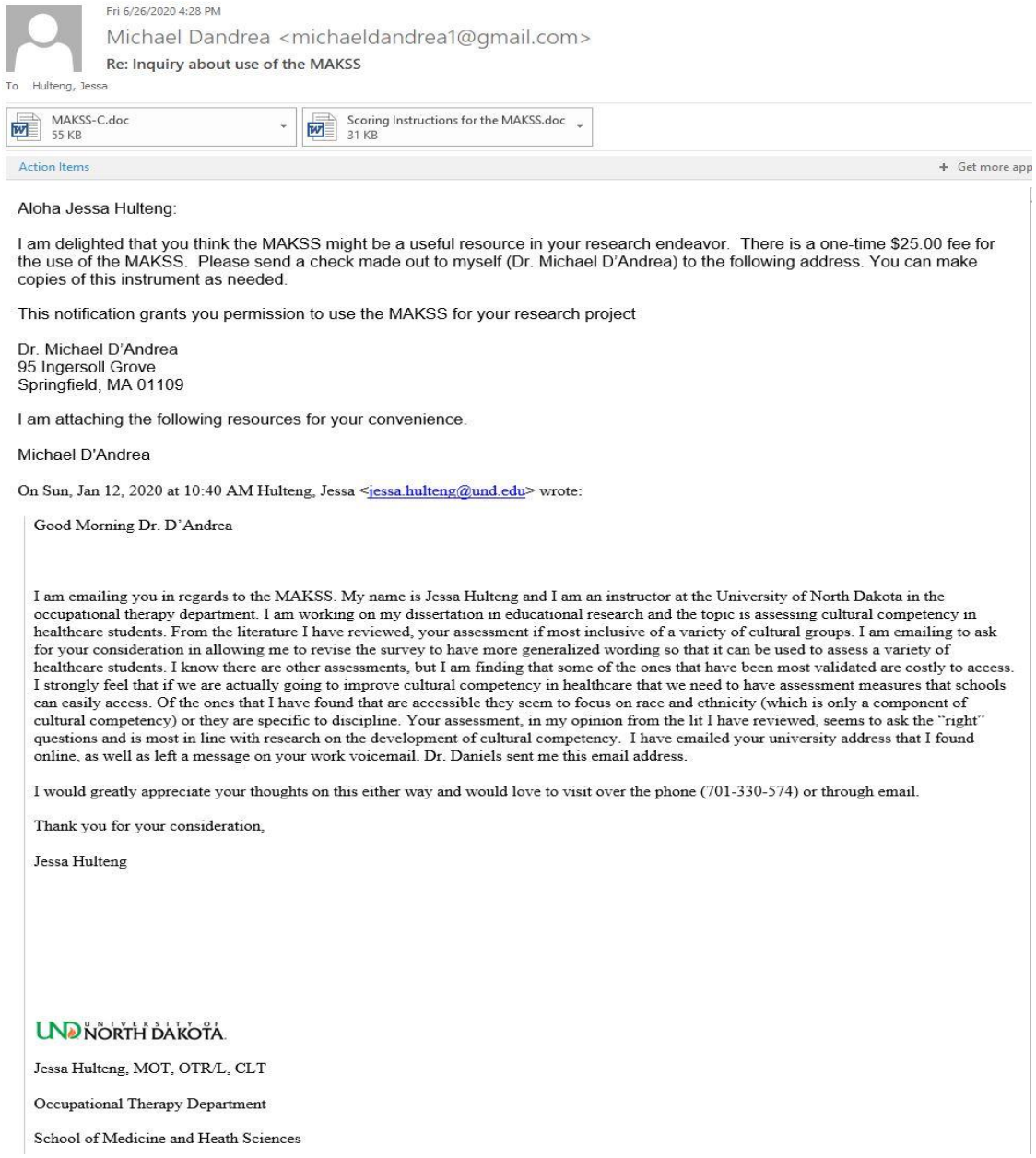
End of Block: Raffle

Appendix D

Permissions

Figure 8

Permission for MAKSS-C



Fri 6/26/2020 4:28 PM

Michael Dandrea <michaeldandrea1@gmail.com>

Re: Inquiry about use of the MAKSS

To Hulteng, Jessa

MAKSS-C.doc 55 KB

Scoring Instructions for the MAKSS.doc 31 KB

Action Items + Get more app

Aloha Jessa Hulteng:

I am delighted that you think the MAKSS might be a useful resource in your research endeavor. There is a one-time $25.00 fee for the use of the MAKSS. Please send a check made out to myself (Dr. Michael D'Andrea) to the following address. You can make copies of this instrument as needed.

This notification grants you permission to use the MAKSS for your research project

Dr. Michael D'Andrea
95 Ingersoll Grove
Springfield, MA 01109

I am attaching the following resources for your convenience.

Michael D'Andrea

On Sun, Jan 12, 2020 at 10:40 AM Hulteng, Jessa <jessa.hulteng@und.edu> wrote:

> Good Morning Dr. D'Andrea
>
> I am emailing you in regards to the MAKSS. My name is Jessa Hulteng and I am an instructor at the University of North Dakota in the occupational therapy department. I am working on my dissertation in educational research and the topic is assessing cultural competency in healthcare students. From the literature I have reviewed, your assessment if most inclusive of a variety of cultural groups. I am emailing to ask for your consideration in allowing me to revise the survey to have more generalized wording so that it can be used to assess a variety of healthcare students. I know there are other assessments, but I am finding that some of the ones that have been most validated are costly to access. I strongly feel that if we are actually going to improve cultural competency in healthcare that we need to have assessment measures that schools can easily access. Of the ones that I have found that are accessible they seem to focus on race and ethnicity (which is only a component of cultural competency) or they are specific to discipline. Your assessment, in my opinion from the lit I have reviewed, seems to ask the "right" questions and is most in line with research on the development of cultural competency. I have emailed your university address that I found online, as well as left a message on your work voicemail. Dr. Daniels sent me this email address.
>
> I would greatly appreciate your thoughts on this either way and would love to visit over the phone (701-330-574) or through email.
>
> Thank you for your consideration,
>
> Jessa Hulteng
>
> UND UNIVERSITY OF NORTH DAKOTA
>
> Jessa Hulteng, MOT, OTR/L, CLT
>
> Occupational Therapy Department
>
> School of Medicine and Heath Sciences

Figure 9

Permission for NSSE: Inclusiveness and Engagement with Cultural Diversity

NSSE Topical Modules
Item Usage Agreement

The National Survey of Student Engagement's topical modules are copyrighted. The copyrights are owned by The Trustees of Indiana University and use of survey items from these sources is prohibited without prior written permission from Indiana University. When fully executed, this Agreement constitutes written permission from the University for the party named below to use survey items from the following module(s):

- Inclusiveness and Engagement with Cultural Diversity

In consideration of the mutual promises below, the parties hereby agree as follows:

1) The University hereby grants **Jessa Hulteng**("Licensee") a nonexclusive, worldwide, irrevocable license to use, reproduce, distribute, publicly display and perform, and create derivatives from, in all media now known or hereafter developed, the item(s) listed in the Proposal Form attached as Exhibit A, solely for the purpose of including such item(s) in the survey activity described in Exhibit A, which is incorporated by reference into this Agreement. This license does not include any right to sublicense others. This license only covers the survey instrument, time frame, population, and other terms described in Exhibit A. Any different or repeated use of the item(s) shall require an additional license.

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3) In exchange for the license granted in section 1, Licensee agrees:

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   b) on the survey form itself, and in all publications or presentations of data obtained through the licensed item(s), to include the following citation: "[Selected/All] items used with permission from the National Survey of Student Engagement, Copyright 2001-21 The Trustees of Indiana University";

4) This Agreement expires on 11/15/2021.

The undersigned hereby consent to the terms of this Agreement and confirm that they have all necessary authority to enter into this Agreement.

For The Trustees of Indiana University:

Indiana University Center for Postsecondary Research • School of Education
201 N. Rose Ave. • Bloomington, IN 47405
Phone: (812) 856-5824 • Fax: (812) 856-5150 • E-mail: nsse@indiana.edu • nsse.indiana.edu
Last Revised February 2, 2021

NSSE
national survey of
student engagement

Alexander C. McCormick
2021.09.13 18:36:19 -04'00'

Alexander C. McCormick
Director
National Survey of Student Engagement

Date

For Licensee:

Jessa Hulteng
Doctoral Student in Educational Research
University of North Dakota
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9-7-21
Date

Dr. Virginia Clinton-Lisell
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University of North Dakota
virginia.clinton@und.edu

9-7-21
Date

Appendix E

Changes to the MAKSS-HC

Changes made to original survey questions

Aw5: Original item: How would you react to the following statement? While counseling enshrines the concepts of freedom, rational thought, tolerance of new ideas, and equality, it has frequently become a form of oppression to subjugate large groups of people.

MAKSS-HC: How would you react to the following statement? While healthcare enshrines the concepts of desiring to help others, treating each client fairly and equally, and doing no harm; it has continually underserved large groups of people.

Changed for wording to be inclusive of core values of healthcare across disciplines. Kosgeroglu et al. (2009) found in a study of healthcare students' motivation that there was a common theme of students having an innate desire to help others. Another common theme is that students do not want to do harm onto a client (Kosgeroglu et al. 2009).

Aw7: Original item: The human service professions, especially counseling and clinical psychology, have failed to meet the mental health needs of ethnic minorities.

MAKSS-HC: The healthcare professions have failed to meet the health needs of minoritized groups.

Changed for wording to healthcare professions.

Aw9: Original item: How well do you think you could distinguish "intentional" from "accidental" communication signals in a multicultural counseling situation?

MAKSS-HC: What is your comfort level in distinguishing cultural nuances of body language and communication styles in multicultural interactions?

Changed for wording to be inclusive of body language and communication styles. Research has identified the importance of understanding and mastering interpersonal communication with clients from varying cultural backgrounds (Awaad, 2003). Also changed to take into consideration reading level of the wording and to be more universally understandable.

Aw10: Original item: Ambiguity and stress often result from multicultural situations because people are not sure what to expect from each other.

MAKSS-HC: Stress and misunderstanding often result when ambiguous terminology is used in healthcare interactions with persons from differing cultural backgrounds.

Changed for wording and structure of sentence. Dickie (2004) identifies that using ambiguous terminology can often be misinterpreted depending on cultural background if the terminology is rooted in Westernized values and beliefs.

Aw11r: Original item: The effectiveness and legitimacy of the counseling profession would be enhanced if counselors consciously supported universal definitions of normality.

MAKSS-HC: Quality of healthcare would be enhanced if healthcare professionals would consciously adopt universal definitions of normality.

Changed for wording. Dickie (2004) asserts that universal definitions of normality do not take into account cultural values and beliefs.

Aw12r: Original item: The criteria of self-awareness, self-fulfillment, and self-discovery are important measures in most counseling sessions.

MAKSS-HC: The criteria of level of adherence to treatment recommendations, level of independence carrying out treatment, and initiative to improve health are important outcome measures during healthcare visits.

Changed for wording and to correlate with research of self-awareness and the need for critical consciousness (Dao et al., 2017; Kumagai & Lypson, 2009; Paul et al., 2014). This item is exploring the level of self-awareness and critical consciousness has to understand how cultural values of health vary and that adherence and independence are Westernized values of health.

Aw13r Original item: Even in multicultural counseling situations, basic implicit concepts such as “fairness” and “health”, are not difficult to understand.

MAKSS-HC: Even in healthcare interactions with clients of differing cultural backgrounds, basic implicit concepts such as “fairness” and “health”, are not difficult to understand.

Changed for wording. Dickie (2004) indicates that interactions are interpreted differently based on cultural background, experiences and values and it cannot be assumed that concepts are universally understood.

Aw14r: Original item: Promoting a client’s sense of psychological independence is usually a safe goal to strive for in most counseling situations.

MAKSS-HC: Promoting client’s independence in evaluation and treatment interventions is usually a safe goal to strive for in most healthcare situations.

Changed for wording. Though healthcare professionals often have the goal for client's to be independent with treatments, this is a Westernized view of health. Collectivist cultures may not have this goal or value independence in the sense of Westernized cultures (Dickie, 2004).

Aw15r: Original item: While a person's natural support system (i.e., family, friends, etc.) plays an important role during a period of personal crisis, formal counseling services tend to result in more constructive outcomes.

MAKSS-HC: While a person's natural support system (i.e., family, friends, etc.) plays an important role in the healing process, the healthcare professionals' treatment recommendations result in better health outcomes.

Changed for wording to be generic to healthcare disciplines.

Aw16r: Original item: How would you react to the following statement? In general, counseling services should be directed toward assisting clients to adjust to stressful environmental situations.

MAKSS-HC: How would you react to the following statement? It is most important for clients to understand and conform to the culture of the healthcare system.

Changed for wording. This item references cultural blindness and assuming all cultures should conform to Westernized healthcare values (Cross et al., 1989; Sue et al., 1982).

Aw17: Original item: Counselors need to change not just the content of what they think, but also the way they handle this content if they are to accurately account for the complexity in human behavior.

MAKSS-HC: Healthcare professionals need to change not just the content of what they think, but also the way they handle this content if they are to accurately account for the complexity of culture and individual interpretations of culture.

Changed for wording to be generic to healthcare disciplines.

Aw18: Original item: Psychological problems vary with the culture of the client.

MAKSS-HC: Health conditions vary with the culture of the client.

Changed for wording from psychological problems to health conditions.

Aw19: Original item: How would you rate your understanding of the concept of 'relativity' in terms of the goals, objectives, and methods of counseling culturally different clients?

MAKSS-HC: How would you rate your understanding of "cultural safety" in terms of evaluation, goals, and treatment plan of working with culturally different clients?

Changed for wording and to align with research. Cultural relativity is considered to be an individual's perceptions and beliefs related to health. Cultural safety is the practice of collaborating with a client to develop a treatment plan that takes into consideration the individuals cultural values and beliefs.

Kn21- 32: Several words were changed for current terminology used in cultural competence, and terms that have been identified as areas for healthcare professionals to increase knowledge and awareness.

Kn33: Original item: What do you think of the following statement? Witch doctors and psychiatrists use similar techniques.

What do you think of the following statement? Traditional, complementary, and integrative medicine have similar intentions and goals for the client.

MAKSS-HC: What do you think of the following statement? Traditional, complementary, and integrative medicine have similar intentions and goals for the client.

Changed for wording to be generic to healthcare disciplines.

Kn34: Original item: Differential treatment in the provision of mental health services is not necessarily thought to be discriminatory.

MAKSS-HC: Differential treatment in the provision of health services is not necessarily thought to be discriminatory with consideration of cultural differences.

Changed for wording to be generic to healthcare disciplines.

Kn40: Original item: Racial and ethnic persons are under-represented in clinical and counseling psychology.

MAKSS-HC: Racial and ethnic persons are underrepresented in clinical and counseling psychology.

Wording was changed in response to literature that asserts an issue with quantitative measures is that ethnocentrism and racism are portrayed as issues only affecting minoritized populations, and more specifically directed toward race and ethnicity (Kumas-Tan et al., 2007). This item was changed to “There is a lack of diversity in healthcare professions”. Changing the item this way focuses more on the over-representation of White, Western European healthcare professionals (Kumas-Tan et al., 2007).

Sk41: Original item: How would you rate your ability to conduct an effective counseling interview with a person from a cultural background significantly different from your own?

MAKSS-HC: How would you rate your ability to conduct an effective evaluation or follow up visit / treatment session with a person from a cultural background significantly different from your own?

Changed for wording to be generic to healthcare disciplines.

Sk43: Original item: How well would you rate your ability to distinguish Aformal and informal@ counseling strategies?

MAKSS-HC: How well would you rate your ability to identity culturally sensitive formal and informal evaluation strategies?

Changed for wording to be generic to healthcare disciplines.

Sk44: Original item: In general, how would you rate yourself in terms of being able to effectively deal with biases, discrimination, and prejudices directed at you by a client in a counseling setting?

MAKSS-HC: In general, how would you rate yourself in terms of being able to effectively deal with biases, discrimination, and prejudices directed at you in an interaction with a client?

Changed for wording to be generic to healthcare disciplines.

Sk46: Original item: How well would you rate your ability to discuss the role of Amethod@ and Acontext@ as they relate to the process of counseling?

MAKSS-HC: How well would you rate your comfort level discussing a client's cultural beliefs and values as part of the intervention process?

Changed for wording to be generic to healthcare disciplines.

Appendix F

Factor Loadings and Communalities Based on Exploratory Factor Analysis

Table 34

Factor Loadings and Communalities Based on Exploratory Factor Analysis

	F1	F2	F3	h^2
Sk57. How well would you rate your ability to accurately assess the health needs of gay, lesbian, or bisexual clients?	.198	-.010	**-.561**	.792
Sk41. How would you rate your ability to conduct an effective evaluation or follow up visit / treatment session with a person from a cultural background significantly different from your own?	.333	-.301	**-.442**	.767
Sk58. How well would you rate your ability to accurately assess the health needs of transgender or non-binary clients?	.301	-.095	**-.431**	.762
Sk42. How would you rate your ability to effectively assess the health needs of a person from a cultural background significantly different from your own?	.255	-.278	**-.587**	.760
Kn29. At the present time, how would you rate your level of understanding of the following term? “Prejudice”	.384	.289	-.449	.760
Kn22. At the present time, how would you rate your level of understanding of the following term? “Ethnicity”	**.499**	.146	-.256	.722
Sk51. In general, how would you rate your skill level in terms of being able to provide appropriate healthcare services to culturally different clients?	.252	-.120	**-.622**	.707

Table 34 continued

	F1	F2	F3	h^2
Kn21. At the present time, how would you rate your level of understanding of the following term? "Culture"	**.518**	.201	-.208	.704
Aw7. The healthcare professions have failed to meet the health needs of minoritized groups.	.131	**.682**	-.033	.690
Sk52. How would you rate your ability to effectively consult with another health professional concerning the health needs of a client whose cultural background is significantly different from your own?	.143	.011	**-.585**	.688
Kn28. At the present time, how would you rate your level of understanding of the following term? "Pluralism"	**.768**	-.051	.232	.676
Sk56. How well would you rate your ability to accurately assess the health needs of older adults?	-.036	-.097	**-.675**	.670
Sk59. How well would you rate your ability to accurately assess the health needs of persons with a disability?	.148	-.153	**-.600**	.664
Kn24. At the present time, how would you rate your level of understanding of the following term? "Microaggression"	**.528**	.294	-.301	.659
Sk45. How well would you rate your ability to accurately identify culturally biased assumptions as they relate to your professional training?	.397	.148	**-.405**	.649
Kn27. At the present time, how would you rate your level of understanding of the following term? "Ethnocentrism"	**.529**	.082	-.032	.641
Sk43. How well would you rate your ability to identity culturally sensitive formal and informal evaluation strategies?	.456	-.127	-.345	.641
Sk55. How would you rate your ability to accurately assess the health needs of men?	.140	-.037	**-.539**	.641
Kn23. At the present time, how would you rate your level of understanding of the following term? "Racism"	.299	.282	-.430	.640
Kn40. There is a lack of diversity in healthcare professions.	.186	**.582**	.192	.640

Table 34 continued

	F1	F2	F3	h^2
Aw19. How would you rate your understanding of "cultural safety" in terms of evaluation, goals, and treatment plan of working with culturally different clients?	**.528**	-.018	-.169	.639
Kn31. At the present time, how would you rate your level of understanding of the following term? "Transcultural"	**.645**	.080		.638
Kn30. At the present time, how would you rate your level of understanding of the following term? "Critical consciousness"	**.673**		.042	.635
Sk53. How would you rate your ability to effectively secure information and resources to better serve culturally different clients?	.322	.018	**-.439**	.634
Sk48. How would you rate your ability to identify unique cultural characteristics of a client who comes from a cultural group different from your own?	**.427**	-.100	-.212	.631
Kn26. At the present time, how would you rate your level of understanding of the following term? "Cultural humility"	**.717**	.079	.021	.626
Sk49. How would you rate your ability to identify the strengths and weaknesses of formalized tests in terms of their use with persons from different cultural/racial/ethnic backgrounds?	**.482**	-.050	-.277	.621
Aw8. At the present time, how would you generally rate yourself in terms of being able to accurately compare your own cultural perspective with that of a person from another culture?	**.480**	.048	-.184	.620
Sk46. How well would you rate your comfort level discussing a client's cultural beliefs and values as part of the intervention process?	.153	.164	**-.485**	.614
Kn32. At the present time, how would you rate your level of understanding of the following term? "Cultural encapsulation"	**.622**	-.183	.061	.609
Sk60. How well would you rate your ability to accurately assess the health needs of persons who come from very poor socioeconomic backgrounds?	.088	-.012	**-.620**	.602

Table 34 continued

	F1	F2	F3	h^2
Aw5. How would you react to the following statement? While healthcare enshrines the concepts of desiring to help others, treating each client fairly and equally, and doing no harm; it has continually underserved large groups of people.	.099	**.591**	-.029	.595
Aw9. What is your comfort level in distinguishing cultural nuances of body language and communication styles in multicultural interactions?	**.452**	-.060	-.179	.592
Sk50. How would you rate your understanding of research related to health disparities and causes of disparities?	.371	.153	-.307	.585
Kn39. The difficulty with the U.S. healthcare system is its implicit bias in favor of integration to the dominant culture.	.179	**.530**		.579
Kn25. At the present time, how would you rate your level of understanding of the following term? "Unconscious bias"	.265	.388	-.309	.572
Sk54. How would you rate your ability to accurately assess the health needs of women?	.034	.043	**-.559**	.572
Aw3. At this time in your life, how would you rate yourself in terms of understanding how your cultural background has influenced the way you think and act?	**.470**	.253	-.050	.552
Aw4. At this point in your life, how would you rate your understanding of the impact of the way you think and act when interacting with persons from different cultural backgrounds?	**.454**	.161	-.090	.551
Kn38. (R) Clients from different ethnic/cultural backgrounds should be given the same treatments that White mainstream clients receive.	.021	.360	.236	.549
Sk44. In general, how would you rate yourself in terms of being able to effectively deal with biases, discrimination, and prejudices directed at you in an interaction with a client?	.305	-.085	-.307	.528
Aw17. Healthcare professionals need to change not just the content of what they think, but also the way they handle this content if they are to accurately account for the complexity of culture and individual interpretations of culture.	-.043	**.552**	-.136	.526

Table 34 continued

	F1	F2	F3	h^2
Aw13. (R) Even in healthcare interactions with clients of differing cultural backgrounds, basic implicit concepts such as "fairness" and "health", are not difficult to understand.	-.152	.244	.237	.521
Kn35. In the early grades of formal schooling in the United States, the academic achievement of minoritized groups such as African Americans, Latinos, and American Indians is close to parity with the achievement of White mainstream students.		-.404	-.046	.519
Aw14. (R) Promoting client's independence in evaluation and treatment interventions is usually a safe goal to strive for in most healthcare situations.	.097	.029	.183	.510
Aw6. In general, how would you rate your level of awareness regarding different cultural groups and systems?	**.460**	.020	-.088	.498
Kn36. Research indicates that in the early elementary school grades girls and boys achieve about equally in mathematics and science.	.062	-.294		.495
Aw12. (R) The criteria of level of adherence to treatment recommendations, level of independence carrying out treatment, and initiative to improve health are important outcome measures during healthcare visits.	.201	-.160	.253	.487
Sk47. In general, how would you rate your ability to effectively communicate with a client who speaks limited to no English?	.308	-.123	-.147	.482
Aw11. (R) Quality of healthcare would be enhanced if healthcare professionals would consciously adopt universal definitions of normality and treat everyone the same regardless of cultural background.	-.181	.314	-.038	.461
Kn33. What do you think of the following statement? Traditional, complementary, and integrative medicine have similar intentions and goals for the client.	.213	-.140	-.144	.432
Aw16. (R) How would you react to the following statement? It is most important for clients to understand and conform to the culture of the healthcare system.	-.084	**.551**	-.023	.423

Table 34 continued

	F1	F2	F3	h^2
Aw20. There are some basic interpersonal skills that are applicable to create positive outcomes regardless of the client's cultural background.	-.025	.257	-.321	.422
Aw18. Health conditions vary with the culture of the client.		.287	.022	.419
Aw10. Stress and misunderstanding often result when ambiguous terminology is used in healthcare interactions with persons from differing cultural backgrounds.	.306	.292	-.123	.413
Aw15. (R) While a person's natural support system (i.e., family, friends, etc.) plays an important role in the healing process, the healthcare professionals' treatment recommendations result in better health outcomes.	.152	.245	.179	.387
Aw1. Culture is not external but is within the person.	.063	-.219	.017	.377
Kn34. Differential treatment in the provision of health services is not necessarily thought to be discriminatory with consideration of cultural differences.	.179	-.023	.037	.370
Kn37. Most of the immigrant and minoritized ethnic groups in Europe, Australia, and Canada face problems similar to those experienced by minoritized ethnic groups in the United States.	.166	-.117	-.048	.355
Aw2. One of the potential negative consequences about gaining information concerning specific cultures is that individuals might stereotype members of those cultural groups according to the information that they have gained.	.047	.062		.330
Eigenvalues	13.25	4.76	2.86	
% of variance	22.09	7.93	4.77	
Cumulative %	22.08	30.02	34.79	

Appendix G

Factor Loadings and Communalities Based on Exploratory Factor Analysis

Table 35

General Demographic Means Comparisons for Overall MAKSS-HC

Variable	N	M*	SD
Race			
White	166	103.03	13.25
Person of Color	30	109.83	12.93
African American	1	115.00	-
Latino	1	103	-
American Indian/Alaskan Native	11	112.45	12.64
Asian	5	108.00	12.45
2 or more races	12	108.33	14.88
Gender			
Male	31	100.26	12.86
Female	162	104.60	13.42
Age Range			
20-21	43	102.70	14.22
22-23	65	101.54	13.37
24-27	57	105.88	12.02
28+	32	107.91	13.74
Rurality			
Rural	41	101.85	12.93
Small town	29	104.14	11.42
Micropolitan	39	104.62	12.27
Metropolitan	83	104.65	14.91
Income Group			
< $60,000	34	110.21	14.93
$60,000 to < $100,000	52	103.69	13.15
$100,000 to < $125,000	46	102.57	12.08
> &125,000	46	102.57	12.08
Geographical Region			
West	15	102.67	12.09
Midwest	172	103.90	13.20
Northeast	1	128.00	-
Southeast	3	111.67	2.89
Southwest	3	98.67	28.29

Note. *Higher number indicates greater level of cultural competence.

Table 36

Demographics Related to Program of Study Means Comparison for Overall MAKSS-HC

Variable	N	M	SD
Program of Study			
Physician	46	103.13	13.07
Physician Assistant	12	102.58	8.11
Nursing	31	107.10	12.82
Counseling	6	112.33	14.81
Psychology	2	113.50	4.95
Social Work	15	107.00	14.02
Public Health	8	111.63	12.14
Physical Therapy	18	97.78	14.33
Occupational Therapy	41	103.46	14.48
Speech-Language Pathology	3	103.33	13.32
Athletic Training	4	92.25	19.29
Medical Lab Science	11	102.63	7.74
Year in Program			
1st Year	70	100.89	14.80
2nd Year	56	105.34	11.54
3rd Year	22	103.45	14.53
4th Year	26	108.15	11.38
5th Year	5	110.40	12.38
Cultural Competence Education			
Yes, received CC education	173	104.65	13.58
No, had not received CC education	18	99.3	11.45

Table 37

Program of Study Groups Means Comparison for Overall MAKSS-HC

Variable	N	M	SD
Program of Study Groups			
Physician	58	103.02	12.15
Nursing	31	107.10	12.82
Mental Health	31	109.65	13.06
Allied Health	77	101.43	13.91

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