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Using the Alliant Intercultural Competency Scale to Develop Behavioral Scenarios for Assessing
Sociocultural Awareness

An Honors College Project Presented to
the Faculty of the Undergraduate
College of Health and Behavioral Studies

James Madison University

by Catherine R. Fisher

July 20th, 2020

Accepted by the faculty of the Department of Psychology, James Madison University, in partial fulfillment of the requirements for the Honors College.

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Abstract

The current study used and developed situational scenarios based on the questions in the Alliant Intercultural Competency Scale (AICS) as a step toward developing a direct measure of James Madison University (JMU) psychology's sociocultural awareness course requirement.

Participants were first semester psychology students, who have yet to take the sociocultural course requirement, and seniors, who have fulfilled the requirement. The participants responded to the behavioral scenarios survey as well as an ethnocultural empathy survey, and other self-report measures of sociocultural awareness. I compared underclassmen and seniors' responses in order to assess the feasibility of this type of behavioral measure. Results showed some differences between first semester students and seniors provided information for future development of this behavioral assessment. Implications are discussed.

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Introduction

Sociocultural awareness or intercultural competence is defined as the understanding of differences in beliefs, attitudes, and values across cultures that influence human interaction (Griffith et al., 2016). Undergraduate psychology departments have begun incorporating sociocultural awareness into their core curricula. A major factor contributing to this shift came from the revised guidelines for the undergraduate psychology major released by the American Psychological Association (APA) in 2013. In these guidelines, the APA set forth five new comprehensive goals that all undergraduate psychology majors should achieve throughout their education and that all psychology programs should include in their curricula: 1) knowledge base in psychology; 2) scientific inquiry and critical thinking; 3) ethical and social responsibility in a diverse world; 4) communication, both written and oral; and 5) professional development, preparing students for their post-graduation endeavors (APA, 2013).

The objectives are separated into two comprehension levels, foundational and baccalaureate. A fundamental understanding should be achieved through the completion of foundation level psychology courses, whereas a baccalaureate understanding should be achieved by the time a student psychology major graduates (APA, 2013). Because proficiency in each of these goals is expected, it is important for psychology departments to measure the students' comprehension on each topic in order to assess whether it's effectively being taught.

In developing the new guidelines, the APA (2013) accepted critiques and explanations, from their followers, concerning the importance of sociocultural awareness within the undergraduate study of psychology in order to form their improved goals of diversity education. One of the most prominent changes regarding sociocultural awareness is the idea that it should be considered in all of the five domains and not just limited to its specified goal (APA, 2013).

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This indicates that while educating students on the other four domains, one should always consider diversity inclusion and its influence on the specific goal. For example, the second goal of scientific inquiry and critical thinking, a main objective is to recognize and understand how sociocultural factors may impact research (APA, 2013). In addition, the fifth APA (2013) goal of professional development emphasizes enhancing teamwork through successfully working in diverse environments.

In the field of psychology, developing sociocultural awareness is an integral part of becoming educated in psychology. The first reason being that we live in a diverse world filled with people from various economic, religious, educational, cultural, and countless other backgrounds (Smith, 2016). Therefore, if we are to understand the mind and behavior then we must understand how these varied backgrounds influence the human mind and behavior; however, this is not an easy task. The APA (2013) mentions how they originally struggled to incorporate sociocultural awareness into higher education due to its complexity. This may be a reason why a goal specifically for sociocultural awareness seems to have recently emerged, although the concept has been around for a while. The APA (2013) points the field of psychology's emphasis on developing sociocultural awareness to the idea that if educators support and welcome distinct cultures then their students will in turn become competent in diversity.

Furthermore, Barrett and colleagues mention how intercultural competence is not innate (2013). These researchers claim that in order to truly understand the concept humans must participate in sociocultural experiences and become educated on the subject. Through this, people not only absorb knowledge about diverse cultures, but also gain introspection (Barrett et

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al., 2013). Thus, supporting the importance of incorporating multicultural competence into higher education.

It is important to note that there has been very limited research on the relationship between sociocultural awareness and student grade point average. Therefore, it is unclear whether intercultural competence measures require a high-level of academic intelligence to successfully perform. The current study has the subgoal of addressing this gap in the literature in order to eliminate this possibility.

Ethical and Social Responsibility in a Diverse World (APA Goal 3)

As previously stated, the third overarching goal created by the APA is ethical and social responsibility in a diverse world. The APA (2013) revamped this goal of sociocultural awareness due to debate over how the discussion points were originally framed. Specifically, the issue stemmed from the discussion points promoting negative conflict in situations rather than promoting proposed resolutions. To address this, the APA reconstructed this goal to represent a more positive interpretation of sociocultural awareness and encourage diversity inclusion (APA, 2013).

The main foci of the restored goal include; 3.1) applying ethical standards to evaluate psychological science and practice, 3.2) building and enhancing interpersonal relationships, and 3.3) adopting values that build community at local, national, and global levels (APA, 2013). Each of these outcomes consist of specific foundation and baccalaureate indicators of competence that will later be discussed as they relate to the APA recommended measures of sociocultural awareness. Note that the APA (2013) does not deem any measures appropriate to effectively assess the ethical standards mentioned in outcome 3.1.

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The specific foundation (lowercase lettered) and baccalaureate (uppercase lettered) objectives for goal 3.2 of building and enhancing interpersonal relationships contain; 3.2a) describe the need for positive personal values in building strong relationships with others, 3.2A) exhibit high standards of positive personal values in interpersonal and work-related relationships, 3.2b) treat others with civility, 3.2B) promote civility in self and others, 3.2c) explain how individual differences, social identity, and worldview may influence beliefs, values, and interaction with others and vice versa, 3.2C) predict and explore how interaction across racial, ethnic, gender, and class divides can challenge conventional understanding of psychological processes and behavior, 3.2d) maintain high standards for academic integrity, including honor code requirements, and 3.2D) describe, explain, and uphold academic integrity within the context of psychology as a discipline and an academic profession (APA, 2013).

Adopting values that build community at local, national, and global levels, outcome 3.3, consists of the following foundation (lowercase lettered) and baccalaureate (uppercase lettered) indicators; 3.3a) identify aspects of individual and cultural diversity and the interpersonal challenges that often result from diversity and context, 3.3A) exhibit respect for members of diverse groups with sensitivity to issues of power, privilege, and discrimination, 3.3b) recognize potential for prejudice and discrimination in oneself and others, 3.3B) develop psychology-based strategies to facilitate social change to diminish discriminatory practices, 3.3c) explain how psychology can promote civic, social, and global outcomes that benefit others, 3.3C) pursue personal opportunities to promote civic, social, and global outcomes that benefit the community, 3.3d) describe psychology-related issues of global concern, 3.3D) consider the potential effects of psychology-based interventions on issues of global concern, 3.3e) articulate psychology's role in developing, designing, and disseminating public policy, 3.3E) apply psychological principles

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to a public policy issue and describe the anticipated institutional benefit or societal change, 3.3f) accept opportunity to serve others through civic engagement, including volunteer service, and 3.3F) seek opportunity to serve others through volunteer service, practica, and apprenticeship experiences (APA, 2013).

Overall the specific objectives of the third APA goal aim to promote ethical thinking, encourage diversity inclusion, and limit discrimination.

James Madison University's (JMU) Educational Goals

JMU's distinct General Education Program requires undergraduate students to complete courses from five different areas of study. Each area, or cluster, has specific learning goals for students to achieve upon completion and offers a variety of courses for students to choose from. These clusters include; 1) Skills for the 21st Century, 2) Arts and Humanities, 3) The Natural World, 4) Social and Cultural Processes, and 5) Individuals in the Human Community ("General Education", n.d.). For each of the five areas of study, there are two or three more detailed subgoals.

The dimension that focuses primarily on intercultural competence is Cluster 5, Individuals in the Human Community, specifically within the Sociocultural domain. This subgoal aims for students to develop critical thinking skills about human behavior and social interactions ("General Education", n.d.). The Sociocultural domain learning outcomes contain; a) understand how individual and sociocultural factors interact in the development of beliefs, behaviors, and experiences of oneself and others, b) discern the extent to which sources of information about the socio-cultural dimension are reputable and unbiased, and c) evaluate the extent to which the approach to, and uses of, psychosocial research are ethical and appropriate ("General Education", n.d.).

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Department of Psychology. Within JMU's psychology department there are overarching goals for the major that mirror the objectives set forth by the APA in 2013. However, in regards to the specific sociocultural awareness course requirement within the major, JMU has developed four unique objectives for students to achieve prior to graduating. These outcomes include; a) describe the sociocultural contexts that influence individual differences, b) explain how individual differences influence beliefs, values, and interactions with others and vice versa, c) explain how privilege, power, and oppression may affect prejudice, discrimination, and inequity, and d) recognize prejudicial attitudes and discriminatory behaviors that might exist in themselves and others. The aforementioned objectives were developed to reflect the distinctive experiences of JMU psychology students.

APA Recommended Measures of Sociocultural Awareness

In 2013, the APA Guidelines for the Undergraduate Psychology Major included nine suggested measures to examine the third comprehensive learning goal, ethical and social responsibility in a diverse world. Below each of these measures are discussed, along with their associated advantages and limitations.

Multicultural Awareness Knowledge and Skills Survey (MAKSS; D'Andrea, Daniels, Heck, 1990). This measure was conceptualized to evaluate educational strategies in multicultural counseling training. The study's aim was to determine which type of instruction elicited the most qualified individuals to conduct diversity counseling. The participants' perceptions of their level of multicultural counseling were assessed on the subscales of Awareness, Knowledge, and Skills. Although the MAKSS thoroughly accounts for the APA objective 3.3B, developing psychology-based strategies to facilitate social change to diminish discriminatory practices, its items lack in assessing beyond multicultural counseling competence.

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Global Awareness Profile (GAP; Corbitt, 1998). This scale was produced to assess respondents' level of global awareness across Asia, Africa, North America, South America, Europe, and the Middle East. The 126-item measure evaluates global awareness on the domains of Environment, Politics, Geography, Religion, Socioeconomics, and Culture. This measure does well in covering the APA indicator 3.3d, describing psychology-related issues of global concern, but it does not account for issues of local concern.

Color-Blind Racial Attitudes Scale (CoBRAS; Neville, Lilly, Duran, Lee, & Brown, 2000). This instrument was developed to examine color-blind racial attitudes—the idea that an individual's race is not reflected or observed during an interaction. The measure assesses responses on the factors of Unawareness to Racial Privilege, Institutional Discrimination, and Blatant Racial Issues. The CoBRAS supports the APA marker 3.3b of recognizing potential for prejudice and discrimination in oneself and others, but it lacks in assessing other culturally diverse factors outside of race.

Intercultural Development Inventory (IDI; Hammer, Bennett, & Wiseman, 2003). This survey was constructed to assess intercultural sensitivity and competence on the factors of Denial/ Defense, Reversal, Minimization, Acceptance/ Adaptation, and Encapsulated Marginality. The IDI excels in examining the APA objective 3.3A, exhibiting respect for members of diverse groups with sensitivity to issues of power, privilege, and discrimination. Although the survey's relative accessibility is limited to consumers, making it difficult to obtain.

Scale of Ethnocultural Empathy (SEE; Wang et al., 2003). This scale was produced to measure participants' empathy toward people of different racial and ethnic backgrounds. The 61-item survey is assessed on the dimensions of Empathetic Felling and Expression, Empathetic Perspective Taking, Acceptance of Cultural Differences, and Empathetic Awareness. The SEE

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successfully addresses the APA indicator 3.3b of recognizing potential for prejudice and discrimination in oneself and others, but researchers propose that direct behavioral analysis could add more breadth to its' scope (Wang et al., 2003). In addition, previous studies regarding this scale have shown a pattern of differences in response between males and females (Cundiff & Komarraju, 2008).

Munroe Multicultural Attitudes Scale Questionnaire (MASQUE; Munroe & Pearson, 2006). The 28-item survey was constructed to examine multicultural attitudes transformation. It was based on Bank's (1995) transformative framework for multicultural education and utilizes the domains of Know, Act, and Care. The MASQUE seems to overcome limitations set forth in previous measures by tackling the APA marker 3.3E, applying psychological principles to a public policy issue and describing the anticipated institutional benefit or societal change. Although this instrument does not fully assess a global view of sociocultural awareness.

Global Perspective Inventory (GPI; Braskamp, Braskamp, Merrill, & Engberg, 2013). This measure was conceptualized to evaluate holistic human learning and development. This is assessed through the subscales of Cognitive, Intrapersonal, and Interpersonal. The GPI is available to all populations, but primarily used by college students. This scale succeeds in assessing the APA indicator 3.3a of identifying aspects of individual and cultural diversity and the interpersonal challenge. However, there have been nine different versions of the GPI since its creation in order to increase reliability and internal consistency indicating that it may need further improvement.

Diverse Learning Environments survey (DLE; Hurtado & Guillermo- Wann, 2013). This instrument was developed to better comprehend the impact of diverse learning

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environments. The survey assesses campus climate for diversity measured on 13 dimensions, educational practices measured on two dimensions, and student outcomes measures on 11 dimensions. At the end of the core DLE measure, optional survey modules are included. This questionnaire emphasizes the APA objective 3.3e of articulating psychology's role in developing, designing, and disseminating public policy. The DLE is limited in that it assesses diversity only within college campuses and does not measure intercultural competence on a broader scale.

Other Measures of Sociocultural Awareness

Various psychological measures of sociocultural awareness that are not included in the APA's recommended measures have additionally been constructed. Below, these measures are discussed along with their associated advantages and limitations.

Multicultural Attitude Questionnaire (MAQ; Giles & Sherman, 1982). This instrument was developed in order to assess the multicultural attitudes of people who were training to become teachers. The measure examines responses on the dimensions of Family and Friends, Social Distance, Acceptance of Others, Opinions on Specific Groups, and Ethnic Composition. The MAQ successfully addresses the APA subgoal 3.2A of exhibiting high standards of positive personal values in interpersonal and work-related relationships, and succeeds in assessing an individual's attitudes on diversity characteristics. However, this measure lacks in assessing an individual's understanding or comprehension of multiculturalism.

Cross-Cultural World Mindedness Scale (CCWMS; Der-Karabetian, 1992). This questionnaire consists of 26 items that are rated on a 6-point Likert scale. It was created based on two existing measures to evaluate the relationship between world mindfulness, perceived nuclear threat, and anti-nuclear activism in ten different countries. The survey is assessed on the four

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subscales of Resource Sharing, Environmental Protection, World Citizenship, and Tolerance of Diversity. This measure supports the APA marker 3.3d, describing psychology-related issues of global concern. Although, the CCWMS focuses primarily on national politics as opposed to a broader sociocultural awareness.

Social Dominance Orientation survey (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994). The SDO was conceptualized to examine the degree of one's desire for group dominance. This is assessed on the two domains of Dominance and Anti-Egalitarianism, along with the original 16-itemed SDO. This survey successfully addresses the APA objective 3.3A of exhibiting respect for members of diverse groups with sensitivity to issues of power, privilege, and discrimination, but a floor effect has been found for this measure. Additionally, Pratto and colleagues' research showed significant gender response differences on the SDO with men scoring higher than women. (1997).

Miville-Guzman Universality-Diversity Scale (Miville et al., 1999). This measure was constructed to evaluate universal-diverse orientation, which is described as attitudes and awareness of the differences and similarities among groups of people. This survey emphasizes the APA objective 3.2c of explaining how individual differences, social identity, and worldview may influence beliefs, values, and interaction with others and vice versa. In addition, this scale examines attitudes towards diverse groups well, but researchers found issues with social desirability responding on this measure (Miville et. Al, 1999).

Culturally Diverse Experiences and Comfort Questionnaire (Eliason & Raheim, 2000). This instrument was developed to assess undergraduate nursing students' comfort and experience in working with clients from different cultural backgrounds. The 48-item questionnaire examined this criteria for 14 culturally diverse groups. Additional qualitative data

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was collected if the respondent indicated they would feel uncomfortable working with an individual from these groups. This measure does well in accounting for the APA indicator 3.2A, exhibiting high standards of positive personal values in interpersonal and work-related relationships. Although this measure covers a wide range of diverse cultural backgrounds, it fails to assess the intersectionality of these identities. In addition, the data collected regarding this survey may not be generalizable to society due to the only participants being pre-nursing undergraduates.

Transcultural Self-Efficacy Tool (Jeffreys, 2000). This measure was produced to evaluate nursing students' perceived confidence of performing transcultural skills on diverse clients. The 83-item survey assessed the dimensions of Cognitive, Practical, and Affective. This questionnaire successfully addresses the APA subgoal 3.2A of exhibiting high standards of positive personal values in interpersonal and work-related relationships. The Transcultural Self-Efficacy Tool also succeeds in assessing multicultural perceptions, but the findings may not be generalizable to non-nursing student populations.

Multiculturalism Experiences Questionnaire (MEQ; Narvaez & Hill, 2010). The 16-item scale was constructed to assess the relationship of multicultural experiences to moral judgement, mindsets, and closed-mindedness. The MEQ supports the APA objective 3.3b of recognizing potential for prejudice and discrimination in oneself and others. Furthermore, the measure does well accounting for experience, attitudes, and perceptions of culturally diverse individuals; but it is limited to ethnic and racial representation of individuals.

The Alliant Intercultural Competency Scale (AICS)

A popular self-report assessment of sociocultural awareness is the Alliant Intercultural Competency Scale. The AICS is a 53-item survey rated on a 7-point Likert scale. It measures the

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five domains of Knowledge, Communication, Attitudes, Professional Practice, and Negotiated Space (Henderson et al., 2015). This measure provides researchers with an outline to examine the various skills associated with professional practice on a local and global scale (Henderson et al., 2015). This is important because the ability to successfully educate students on both levels instead of just one had previously been seen as a challenge. This is indicative of why the researchers sought to assess intercultural competency with this measure (Henderson et al., 2015). In regards to the APA goals, the AICS emphasizes marker 3.3d of describing psychology-related issues of global concern.

Previous research on the AICS. Although the original developers of the AICS urged others to enhance or further investigate this measure, there is limited further research on the measure (Henderson et al., 2015). In 2016, Smith researched the psychometric properties of the revised version of the AICS (AICS- R), which was based on a prior framework of internal validity. The relationship between the AICS- R and various external measures of sociocultural awareness were examined (Smith, 2016). The results indicated a positive correlation between the AICS- R and both the MEQ and MASQUE. Additionally, Smith (2013) found a negative correlation between the AICS-R and the CoBRAS which indicates that respondents who scored high in intercultural competence were found to score low on racial adverse racial attitudes.

The findings of Smith's study encourage the use of the AICS- R to assess student understanding of sociocultural awareness in higher education (Smith, 2016). In addition, the AICS-R can be utilized to evaluate how effectively intercultural competency is being taught. Although there are many advantages to the AICS-R, there are limitations as well. Smith (2016) mentions the issues associated with reliance on self-report, such as response bias. It is suggested that in order to surpass the obstacles of self-report, further research could include a direct

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measure of sociocultural awareness for comparison purposes, and therefore, enhance the validity (Smith, 2016). The current study began this development of a direct measure.

Reliance on Self-Report

Social desirability bias. Self-report data, in which the participant responds to questions about themselves rather than another person responding for them or measuring behavior, are typically used for surveys, questionnaires, and interviews. Due to individuals responding for themselves, there is a tendency for social desirability bias, which is defined as an individuals' predisposition to answer questions in a socially acceptable or favorable way (King & Bruner, 2000). According to a study conducted by Van de Mortel (2008), 43% out of 14,275 studies had been influenced by social desirability responding. Because sociocultural awareness is ripe for social desirability bias, it would be helpful to use a measure that is less vulnerable to such bias.

Existing Direct Measures

Due to the issues previously mentioned with social desirability responding, it can be beneficial to utilize behavioral measures instead of indirect measures when conducting research. Existing types of direct measures are discussed below.

Vignette measures. Vignettes are brief situational scenarios that demand one to submerge themselves into the creative context presented (Krumhuber, Tsankova, & Kappas, 2018). There are various types of vignettes that are employed by researchers, such as audial, video, and text based. Krumhuber et al., (2018) described how each type of vignette requires respondents to answer as if they were in the hypothetical setting. This method decreases the likelihood of bias that is typically associated with self-report, because it reduces social desirability responding.

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Vignettes have been successfully utilized in research to assess sociocultural awareness. Krumhuber et al., (2018) examined participant responses to social and cultural norm violations by utilizing text-based vignettes, facial reactions, physiological responses, and the Scale of Ethnocultural Empathy. The results showed that the vignettes were sufficient in inducing physiological reactions, indicating that the scenarios were strong enough to stimulate emotions in the participants (Krumhuber et al., 2018). Because the vignettes are a direct measure, the chance of desirability response is more limited than in attitudinal measures. This study supports the strength of text-based, hypothetical scenarios in evaluating sociocultural awareness.

Situational Judgement Tests (SJT). Situational Judgement Tests are comprised of various vignettes that force participants to immerse themselves into a given scenario (Griffith, Wolfeld, Armon, Rios, & Liu, 2016). An example SJT question that would follow a given vignette is, “What would you do?” (Griffith et al., 2016). This question and many other queries found in SJT’s can be answered either by multiple choice responses or open-ended responses. Several studies show that SJTs have strong face, content, and criterion validity (Griffith et al., 2016). These tests can be a method of assessment for cultural awareness, although there has not been much research done on SJT’s examining intercultural competence.

Current Study

The purpose of the current study was to utilize situational scenarios based on the AICS in order to a) examine any differences in responses to these scenarios and in self-report attitudinal measures between first semester psychology students and graduating psychology students and b) determine if responses to the scenarios are related to self-report attitudinal measures of sociocultural awareness.

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Scenario construction. In the Spring of 2019, the research began the development of 10 situational scenarios based on survey questions from the AICS. First, 10 survey items were chosen from the AICS by careful review of which items would be the most realistic to develop scenarios from. Once the survey questions were finalized by the team, we discussed different situations that would accurately assess the AICS item.

In the Fall of 2019, the research team removed four scenarios due to time constraints on assessment day. Feedback from two psychology professors strengthened the remaining six scenarios. Each scenario was refined based on this feedback to improve conciseness and to reduce ambiguity. Two additional scenarios were removed due to skill redundancy. The following AICS questions were utilized to construct the final four scenarios:

1. *“I am skilled at..... Accommodating language differences to enhance communication between team members”*
2. *“I am skilled at discussing diversity issues related to.... Sexual Orientation”*
3. *“I am skilled at..... Fostering team member relationships”*
4. *“I am skilled at discussing diversity issues related to.... Social Class”*

Research questions. The following research questions were investigated in the current study:

Question 1: Do first semester psychology students respond differently than senior psychology students in regards to sociocultural awareness measures?

Question 2: Are the behavioral scenarios developed in this study able to distinguish different levels of intercultural competence?

Methods

Participants

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Undergraduate senior psychology students ($N=112$) participated during the required university-wide assessment day, which occurs once every year for the psychology department in February at JMU. Various surveys were administered on this day in order to assess whether the objectives of JMU's psychology department (which are the same as the APA goals) were adequately being met by the time students graduated. These senior participants have all taken or were currently taking a psychology course that fulfills the sociocultural awareness objective. Additional data were collected from first semester psychology majors ($N=40$) during their first class in the major, Psyc 210 (Psychological Statistics). Although these students have taken an introductory psychology course, they have not yet taken a psychology course that fulfills the sociocultural awareness requirement.

Demographics. The overall participants ($N=153$) included 128 females, 23 males, 1 who preferred not to respond, and one missing. This consisted of 26 freshmen, 9 sophomores, 5 juniors, 111 seniors, 1 graduate student, and 1 missing. In addition, the mean cumulative GPA of the participants was 3.25 (on a 4.0 scale) with a standard deviation of 0.46. Of this sample, 69.85% of students identified as white/Caucasian, 5.15% as Hispanic or Latinx, 13.97% as African American, 2.21% as Native American or American Indian, 5.88% as Asian or Pacific Islander, 2.21% as Middle Eastern, and 0.74% as "another ethnicity". Regarding sexual orientation 79.65% of participants identified as heterosexual, 3.54% as homosexual, 12.39% as bisexual, 1.77% as "another orientation", and 2.65% who preferred not to respond. In terms of ability/disability status, 4.24% of students reported having a sensory impairment, 8.47% with a learning disability, 3.39% with a long-term medical illness, 31.36% with a mental health disorder, 1.69% with a disability or impairment not listed, and 50.85% of students reported not identifying with a disability or impairment. As for political party affiliation, 42.86% of

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participants identified with the Democratic Party, 0.89% with the Green Party, 6.25% with the Libertarian Party, 12.50% with the Republican Party, 6.25% with the Socialist Party, 2.68% with “a party not listed”. Considering country of origin, 98.23% of participants were born in the United States, whereas 1.77% were born in foreign countries. All of the 153 participants indicated English as their primary language.

Materials

Scale of Ethnocultural Empathy (SEE). The Scale of Ethnocultural Empathy ($\alpha=.91$) is a 31-item self-report survey used to assess sociocultural awareness (see Appendix A). This is measured through the four factors of Empathetic Feeling and Expression, Empathetic Perspective Taking, Acceptance of Cultural Differences, and Empathetic Awareness (Wang et al., 2003).

Sample items from each subscale include:

Empathetic Feeling and Expression

- *“I share the anger of those who face injustice because of their racial and ethnic backgrounds.”*

Empathetic Perspective Taking

- *“It is easy for me to understand what it would feel like to be a person of another racial or ethnic background other than my own.”*

Acceptance of Cultural Differences

- *“I get impatient when communicating with people from other racial or ethnic backgrounds, regardless of how well they speak English.”*

Empathetic Awareness

- *“I can see how other racial or ethnic groups are systematically oppressed in our society.”*

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Items are rated on a one (strongly disagree) to seven (strongly agree) Likert scale. The 31 survey items were displayed to participants in a randomized order.

Social Dominance Orientation (SDO₇) survey. The SDO₇ is a 32-item self-report survey used to assess the degree of one's desire for group dominance (see Appendix B). This is measured through the original 16-item SDO created by Pratto and colleagues (1994) with the addition of two subdimensions, Dominance and Anti- Egalitarianism. Sample items from each domain include (Ho et al., 2015):

SDO

- *“Inferior groups should stay in their place.”*

Dominance

- *“An ideal society requires some groups to be on top and others to be on the bottom.”*

Anti- Egalitarianism

- *“Group equality should not be our primary goal.”*

Items are rated on a one (strongly oppose) to seven (strongly favor) Likert scale. The 32 survey items were displayed to participants in a randomized order.

Alliant Intercultural Competency Scale (AICS). The AICS is a 53-item self-report scale used to assess sociocultural awareness (see Appendix C). This is measured through the five domains of Knowledge, Communication, Attitudes, Professional Practice, and Negotiated Space (Henderson et al., 2015). The Cronbach's alpha values from Henderson and colleagues were as follows: Knowledge (.93), Communication (.94), Attitudes (.95), Professional Practice (.93), and Negotiated Space (.96). Items are rated on a one (strongly disagree) to seven (strongly agree) Likert scale. Sample items from each subscale include (Henderson et al., 2015):

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Knowledge

- *“I can explain thoroughly how... global influences can affect local ways of life.”*

Communication

- *“I am exceptionally skilled at discussing... sexual orientation issues and diversity.”*

Attitudes

- *“I am exceptionally skilled at... seeking out and learning from intercultural opportunities as a way of life.”*

Professional Practice

- *“I am exceptionally skilled at... Explaining professional ethics in my field from the perspectives of one other culture/country*

Negotiated Space

- *“I am exceptionally skilled at... Cultivating new professional relationships with people from diverse cultures.”*

Situational scenarios survey. The situational scenarios survey was a four-item open-ended response survey with each item correlating to a specific survey question on the AICS. AICS survey items from the Communication, Professional Practice, and Negotiated Space domains were employed. The scenarios were used as a direct measurement of sociocultural awareness as it pertains to the James Madison University’s psychology department course requirement. The following scenarios were utilized and were displayed to participants in a randomized order:

1. *“Your roommate is talking to you about a class that they are not doing well in. Your roommate is worried about failing the class and it is a required course for their*

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- major. The class is lecture based and your roommate says that they cannot understand the professor due to her accent. Because they cannot understand the professor, they do not want to go to her office hours. Explain your roommate's perspective and how they may proceed in solving this problem."*
2. *"Your friend is in medical school and says that they are opposed to gay relationships. They have previously expressed to you that they believe being gay is "wrong". One day your friend tells you that one of his patients is gay and it bothers him to treat this patient. Describe how you would respond to this situation and explain what advice you would give to your medical school friend."*
 3. *"You work in an office where team meetings are held often. Your boss tells you that they recently hired a deaf person who will be joining your team, along with their own sign language interpreter. Your team is concerned that the addition of a deaf person will complicate the efficiency of communication throughout the meetings. Describe the ways in which you and your fellow employees could effectively include the deaf person and their sign language interpreter in the conversation?"*
 4. *"Your two roommates, Emily and Sarah, are talking about applying for jobs after graduation. Many of these jobs require first having internship experience. Emily has accepted an unpaid internship for the summer, saying that her parents are covering her rent and living expenses. However, Sarah says that she can't afford to work over the summer for no pay. Both roommates say that it is difficult to get a job in their field without an internship. Explain the perspective of each of your roommates."*

Each participant's responses were analyzed by the research team for overall trends and keywords. Trends were defined as continual patterns found throughout each groups' responses.

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Keywords were established based on the words that appeared most often throughout each groups' responses. Note the research team was blind to the participant's student group when evaluating the data. The research team implemented exploratory comparisons of the data once the trends and keywords were recorded.

Demographics survey. A brief demographics questionnaire was included at the end of the surveys in order to collect participant information. Participants were asked to indicate their gender, year in college, cumulative GPA, race/ethnicity, sexual orientation, ability/disability status, political party affiliation, country of origin, and primary language .

Procedure

Administration. On JMU's assessment day, senior psychology students were randomly assigned to different computer labs (approximately 20 in each) in Miller Hall, Burruss Hall, and Jackson Hall. Each computer lab was proctored by either an undergraduate psychology student or a graduate psychology student. Participants completed an array of measures on an online survey tool (Qualtrics), including (in the following order) the situational scenarios, the AICS-R, the SEE, and the SDO survey. Participants were allotted 30 minutes to complete all four of the surveys.

In the Spring semester of 2020, first semester psychology participants completed the situational scenarios, the AICS-R, the SEE, and the SDO survey as an online homework assignment in their Psyc 210 (Psychological Statistics) course. Participants were allotted 30 minutes to complete these four measures utilizing an online survey tool (Qualtrics). Upon completion, students were redirected to a webpage where they entered their JMU e-ID in order to receive credit for the homework assignment. The student's identification number was not part of

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the published data collected in the current study, only the Psyc 210 professor and researcher had access to this information.

Results

Overall averages regarding scores on the AICS total, along with its subscales are shown in Figure 1. Additionally, overall average scores on the SEE total and its associated subscales are shown in Figure 4. SDO overall average scores are displayed in Figure 7, as well as its average subscale scores.

Predicting Ethnocultural Empathy

Multiple regression analysis was conducted to assess whether total scores on the SEE can be predicted based on student group, AICS total scores, and SDO subscale scores. See Table 1 for all of the items multiple regression statistics. The model with all four variables was found to be a statistically significant predictor of SEE total scores, $F(4,128)= 34.14$, $p < .01$. The R^2 value of .48 denotes how 48% of the variability can be explained by the model. Within the model, the AICS total scores displayed the strongest influence in predicting SEE scores ($\beta = .49$, $p < .01$). Student group and the SDO Anti- Egalitarian subscale were found to be statistically significant predictors of SEE scores ($ps < .01$). However, the SDO Dominance subscale was not a significant predictor of SEE scores ($p = .44$).

Student Group Differences

Independent samples I-tests were conducted to evaluate whether the average scores on each of the surveys and their associated subscales differed between student groups (senior psychology majors and first semester psychology majors). See Table 2 for all of the items means, standard deviations, and t-test values.

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AICS. First semester psychology students ($M = 5.15$, $SD = 0.72$) had significantly lower AICS total scores than senior psychology students ($M = 5.85$, $SD = 0.64$), $t(151) = -5.78$, $p < .01$. Scores on the Knowledge subscale indicated that first semester psychology students ($M = 5.28$, $SD = 0.86$) had significantly lower scores than senior psychology students ($M = 6.02$, $SD = 0.66$), $t(56) = -4.94$, $p < .01$. In addition, first semester psychology students ($M = 4.81$, $SD = 1.05$) had significantly lower Communication subscale scores than senior psychology students ($M = 5.43$, $SD = 1.00$), $t(151) = -3.30$, $p < .01$. Furthermore, first semester psychology students ($M = 5.65$, $SD = 0.83$) had significantly lower Attitude subscale scores than senior psychology students ($M = 6.27$, $SD = 0.62$), $t(56) = -4.34$, $p < .01$. Scores on the Professional Practice subscale indicated that first semester psychology students ($M = 4.84$, $SD = 0.98$) had significantly lower scores than senior psychology students ($M = 5.66$, $SD = 0.83$), $t(151) = -5.12$, $p < .01$. Thus, overall signifying that senior students responded on the AICS with higher self-reported intercultural competency. See Figure 2 for overall mean comparisons.

SEE. First semester psychology students ($M = 3.49$, $SD = 0.92$) had significantly lower Empathetic Perspective Taking scores than senior psychology students ($M = 3.84$, $SD = 0.94$), $t(151) = -2.06$, $p < .05$. However, there were no statistically significant differences found between first semester and seniors for the total SEE scores ($p > .287$). In addition, there were no statistically significant differences between student groups found for the Empathetic Feeling and Expression, Acceptance of Cultural Differences, and Empathetic Awareness ($ps > .28$). Bar graph comparisons for overall means are shown in Figure 5.

SDO. The SDO Anti-Egalitarianism subscale did not indicate a statistically significant difference between student groups ($p > .10$). Although, scores on the Dominance subscale indicated that first semester psychology students ($M = 2.51$, $SD = 1.01$) had significantly higher

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scores than senior psychology students ($M = 1.90$, $SD = 0.97$), $t(151) = 3.38$, $p < .01$.

Additionally, first semester psychology students ($M = 2.38$, $SD = 0.76$) had significantly higher SDO total scores than senior psychology students ($M = 1.94$, $SD = 0.84$), $t(151) = 2.91$, $p < .01$.

Thus, indicating that first semester psychology students responded on the SDO with a higher desire for group dominance. See Figure 8 for overall mean comparisons.

Gender Differences

Additionally, independent samples t -tests were conducted to evaluate whether the average scores on each of the surveys and their associated subscales differed between genders (male and female). Results for each items means, standard deviations, and t -test values are shown in Table 3.

AICS. The total AICS scores displayed no significant difference between males and females ($p > .50$). In addition, there were no statistically significant differences found for the subscales of Knowledge, Communication, Attitude, and Professional Practice between genders ($ps > .24$). Therefore, suggesting males and females responded on the AICS with similar intercultural competence. See Figure 3 for overall mean comparisons.

SEE. Males ($M = 4.21$, $SD = 0.74$) had significantly lower SEE total scores than females ($M = 4.76$, $SD = 0.57$), $t(149) = -4.09$, $p < .01$. In addition, males ($M = 4.12$, $SD = 0.92$) had significantly lower Empathetic Feeling and Expression subscale scores than females ($M = 4.88$, $SD = 0.63$), $t(26) = -3.80$, $p < .01$. Scores on the Acceptance of Cultural Differences subscale showed that males ($M = 4.92$, $SD = 0.92$) had significantly lower scores than females ($M = 5.44$, $SD = 0.52$), $t(25) = -2.65$, $p < .05$. Furthermore, males ($M = 4.43$, $SD = 1.05$) had significantly lower Empathetic Awareness subscale scores than females ($M = 5.23$, $SD = 0.70$), $t(26) = -3.53$, $p < .01$. Although, scores on the subscale of Empathetic Perspective Taking were not indicative

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of a significant difference between males and females ($p = .98$). Bar graph comparisons for overall means are shown in Figure 6.

SDO. Males ($M = 2.82, SD = 0.97$) had significantly higher SDO total scores than females ($M = 1.91, SD = 0.73$), $t(149) = 5.27, p < .01$. In addition, males ($M = 2.95, SD = 1.02$) had significantly higher Anti-Egalitarian subscale scores than females ($M = 1.88, SD = 0.74$), $t(149) = 3.48, p < .01$. Scores on the Dominance subscale showed that males ($M = 2.70, SD = 1.13$) had significantly higher scores than females ($M = 1.94, SD = 0.94$), $t(149) = 3.48, p < .01$. Thus, suggesting males responded on the SDO with a higher desire for group dominance than women. See Figure 9 for overall mean comparisons.

Relationships

Pearson's r correlations were run to assess the relationship, if one existed at all, between cumulative grade point average (GPA) and each of the three surveys including their associated subscales. Additionally, Pearson's r correlations were conducted to examine the relationship between the SEE total scores and each of the self-attitudinal measures of sociocultural awareness. See Table 4 for correlation coefficients.

Cumulative GPA. As anticipated all of the AICS scores, including scores on each subscale, were not statistically significantly correlated to cumulative GPA ($ps > .37$). Scores on the SEE and the associated subscales also displayed correlations to cumulative GPA that were not significant ($ps > .24$). Furthermore, the SDO total score and the two subscale scores did not demonstrate a statistically significant relationship to cumulative GPA ($ps > .61$).

SEE total scores. The Empathetic Feeling and Expression subscale scores were statistically significantly correlated to SEE total scores, $r(151) = .92, p < .01$. Scores on the Empathetic Perspective Taking subscale were significantly correlated to total SEE scores,

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$r(151) = .71, p < .01$. In addition, scores on the Acceptance of Cultural Differences subscale showed a statistically significant relationship to SEE total scores, $r(151) = .64, p < .01$.

Empathetic Awareness subscale scores were statistically significantly correlated to SEE total scores, $r(151) = .75, p < .01$

AICS total scores were statistically significantly correlated to SEE total scores, $r(151) = .56, p < .01$. Scores on the Knowledge subscale were significantly correlated to SEE total scores, $r(151) = -.39, p < .01$. In addition, scores on the Communication subscale were significantly correlated to SEE total scores, $r(151) = .48, p < .01$. Furthermore, the Attitudes subscale scores were significantly correlated to SEE total scores, $r(151) = .56, p < .01$. Scores on the Professional Practice demonstrated a statistically significant relationship to SEE total scores $r(151) = .48, p < .01$.

The SDO total scores were statistically significantly correlated to SEE total scores, $r(151) = -.52, p < .01$. Scores on the Anti-Egalitarian subscale were significantly correlated to total SEE scores, $r(151) = -.39, p < .01$. Additionally, the Doominance subscale scores were statistically significantly correlated to SEE total scores, $r(151) = -.55, p < .01$.

Situational Scenario Analysis

The research assessed the situational scenario responses with exploratory qualitative analysis. Various trends and keywords were examined for each student groups' responses in order to a) see if any types of trends appeared and b) to determine if there were differences in response between the two student groups. The complete list of scenario keywords and trends for senior psychology students can be found in Appendix D, whereas the keywords and trends for first semester psychology student can be found in Appendix E.

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Scenario #1: Professional Practice. Senior psychology students showed trends of unempathetic responses, relating to a personal experience, explaining the situation, and attempting to understand the students position. Some keywords included looking to other resources (teaching assistants, classmates, tutoring), sitting in the front of lecture, attending office hours, and reaching out to an academic advisor. One exemplary response is as follows: *“I have had the same experience. It can definitely be a challenge. I would suggest, at least trying once to go to his or her office hours. If indeed, the office hours prove to be ineffective, then there are other options. It is possible the individual could go to their advisor and they could direct them to other resources on campus. We have plenty of tutoring resources on campus that are helpful. Additionally, the individual could reach out to someone else in the class to work with on the class content. Overall, if the ability to teach effectively is in question, then perhaps that can be expressed through the teaching review. There are plenty of options, even though this seems like a large obstacle to face in a class.”*

First semester psychology students displayed trends of looking to other resources for help, switching classes or professors, and reaching out to the professor directly. A handful of keywords consisted of a frustrated roommate, emailing the professor, attending office hours, and fear of offending the professor. For example, the following was one response. *“The roommate does not understand their professor, and does not want to go her for help because of it. In order to solve the problem, the roommate could create study groups with their peers, find on-campus tutors, or try to read the textbook or other materials on their own so they can learn the content.”*

Scenario #2: Communication. Trends for senior psychology students consisted of giving personal examples as solutions, pointing out the doctors’ ethical violations, and explaining why the doctor should separate personal and professional beliefs. A few keywords

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that were found included changing careers, the Hippocratic oath, speaking with HR, and changing your friends' beliefs. An example response is as follows: *"I would explain to this individual that the personal life of their patients is of no concern to them. That this patient is a human being that they, in becoming a medical professional, have vowed to take care of. They need to treat all of their patients equally regardless of race, gender, and sexuality, and if they are unable to do so they should pursue a different field of study and practice."*

The trends for first semester psychology students comprised of utilizing this incident as a learning opportunity, the doctor is in the wrong profession, and one must disregard their personal opinions when treating a patient. A few keywords included immaturity, treating the patient with respect, the friend should not be a doctor, and the patient should reach out to other staff members. For example, the following was one response. *"I would tell my friend to put his/her patients sexuality aside as it has nothing to do with them, also I would encourage them to see the patient as an opportunity to learn and do good in the world."*

Scenario #3: Negotiated Space. Senior psychology students displayed the trends of stating the importance of inclusion, communicating with the deaf person directly, and presenting solutions involving written meeting notes. A selection of keywords comprised of learning basic sign language, fair treatment, sending out follow up emails, and being patient. For example, the following was one response. *"You could use visual aids to supplement communication between employees. This may include videos with subtitles, descriptive PowerPoints, or hard-copy handouts. If the leader of the meeting comes thoroughly prepared with detailed visual aids to his notes, then the only thing that the interpreter would have to relay to the deaf team member would be any questions from other employees that were not included in the prepared notes on that meeting. This method of communication will not only improve efficiency during meetings, but it*

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will also be more inclusive for every employee, rather than providing an exclusive special service to one.”

Trends for first semester psychology students consisted of treating the deaf person with respect and utilizing various resources in order to be more inclusive. Some keywords consisted of visual aids, eye contact with the deaf employee (as opposed to their interpreter), learning sign cues, and creating meeting outlines. An example response is as follows: *“My fellow employees and I could still talk to the deaf person and their interpreter without issue. We should still speak directly to the deaf person so they could feel included. We could also learn a few common phrases in sign language to make them feel more included in the workplace.”*

Scenario #4: Communication. The trends found for senior psychology students involved negative thoughts about Emily, empathy towards Sarah’s situation, and choosing sides between the two girls. A few keywords included university resources, socioeconomic status, Emily is privileged, and Sarah should continue to look for internships. An example response is as follows: *“For both Emily and Sarah, they both realize that they need to have some internship experience in order to get a job after graduation and in order to succeed in their career field. However, Emily is looking at getting an unpaid internship as no big deal because her family will be covering her expenses for her while she is working for no pay. Emily is privileged enough to be able to have this opportunity, while Sarah is not as lucky or privileged. This could potentially cause discourse in their relationship as roommates and friends because Emily may see that Sarah not accepting an offer for an unpaid internship as lazy and holding herself back.”*

First semester psychology students displayed trends of Emily being the more fortunate roommate, Sarah’s situation being the more difficult one, and Sarah financially lacking in the luxury Emily has. A selection of keywords included Sarah feeling trapped, naiveite of Emily,

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independency, and Sarah moving in with her parents. For example, the following was one response. *“Emily is fortunate to have parents who are able and willing to help her with finances through her internship, it is unfortunate that Sarah doesn't have the same luxury, she could attempt to participate in the internship along with having another job or try to negotiate with the employer and explain her situation.”*

Discussion

The purpose of this study was to construct and utilize behavioral scenarios based on the AICS in order to a) examine any differences in responses to these scenarios and in self-report attitudinal measures between first semester psychology students and graduating psychology students and b) determine if responses to the vignette-based scenarios are related to self-report attitudinal measures of sociocultural awareness. Evidence regarding the research questions, limitations, and future directions are discussed below.

Predicting Ethnocultural Empathy

In regards to the JMU psychology department, there was not an existing quantitative behavioral measure for assessing sociocultural awareness. Due to this, faculty had previously utilized the SEE to evaluate intercultural competence attitudes that the department hoped students would achieve prior to leaving JMU. Hence why the current study examined whether total scores on the SEE can be predicted based on student group, AICS total scores, and SDO subscale scores.

Student group, AICS total scores, and the SDO Anti-Egalitarian subscale scores were found to be significant predictors of the SEE total scores. AICS total scores displayed the strongest influence in predicting SEE total scores within the model. These results are supported by previous research where empathy was found to be a significant predictor of self-reported

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intercultural competence (Constantine, 2001). Additionally, the SDO results mimic prior research by being negatively correlated to empathy (Pratto et al., 1994). However, the SDO Dominance domain scores were not significant. This simply could be because the Dominance subscale did not provide a substantial amount of predictive capacity to the Anti-Egalitarian subscale, indicating there may have been some overlap.

Student Group Differences

To investigate whether there were any differences in response to self-attitudinal measures between first semester psychology students and graduating psychology students, average scores on the AICS, the SEE, and the SDO were examined. On all five dimensions of the AICS seniors performed significantly higher than first semester students, indicating that seniors responded to this survey with a higher-level of sociocultural awareness. These results support the JMU psychology departments' intended outcome for graduating seniors.

Results on the SEE showed that seniors scored significantly higher than first semester psychology students on the Perspective Taking domain. However, there were no significant differences found for scores on SEE total, the Empathetic Feeling and Expression subscale, the Acceptance of Cultural Differences subscale, and the Empathetic Awareness subscale. This outcome may have arisen due to a few possibilities. First, JMU psychology professors who teach sociocultural awareness courses could be overemphasizing the department goal to describe the sociocultural contexts that influence individual differences, within their curriculum. This objective is similar to the original definition of the Perspective Taking domain set forth by Wang and colleagues, "an effort to understand the experiences and emotions of people from different racial and ethnic backgrounds by trying to take their perspective in viewing the world" (2003). If this is the case then seniors may have scored higher than underclassmen in this area because they

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have been educated on how to understand others viewpoints while the first semester students have not.

In line with this, the APA in 2013 explained how the new guidelines were revamped in order to promote the importance of sociocultural awareness, specifically in perspective taking. The APA stated, “Incorporating the meaningful consideration of diversity promotes understanding of how people differ” (2013). Along with JMU’s goal a, this newly incorporated aim could be overemphasized within the psychology departments curriculum as well. Thus, leading to seniors scoring higher in this SEE dimension than underclassmen who have not yet taken these courses. Future research should investigate these possibilities by analyzing course syllabi and content matter.

As for the SDO, analyses revealed a significant difference in scores on SDO total and the Dominance subscale with seniors performing higher than first semester students. Although, there were no significant differences in response between student groups on the Anti-Egalitarian domain. There are a number of plausible factors to account for these results. The SDO data displayed an obvious floor effect with no group mean presenting higher than 2.51 on a seven-point Likert scale. Due to this, it is difficult to determine whether a difference in response truly occurred even though the results were significant. Moreover, the first semester students showed a higher range of variability in responses than the seniors indicating that the first semester group scores may not accurately represent the entire sample.

Gender Differences

As previously stated, prior research has discovered gender differences in response to the SEE, with women scoring significantly higher than men (Cundiff & Komarraju, 2008), and the SDO, with women scoring significantly lower than men (Pratto et al., 1997). Because of this the

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average scores on the self-report surveys, including the AICS, were evaluated for males and females respectively. As anticipated, there were no significant gender differences found for the AICS total and its' associated subscales scores.

Interestingly, results for gender differences on the SEE were the inverse results for student groups on the SEE. There were no significant differences between male and female scores on the SEE Perspective Taking domain. Although, women scored significantly higher than men on the SEE total, the Empathetic Feeling and Expression subscale, the Acceptance of Cultural Differences subscale, and the Empathetic Awareness subscale. These results are strengthened by identical findings discovered by Cundiff and Komarraju in 2008. Which brings forth the possibility that the prior results found between student group scores on the SEE may actually be due to gender differences, not class year differences. Furthermore, these results are supported by previous research that presented statistically significant gender differences for the SEE total and all of its' subscales, besides Empathetic Perspective Taking (Cundiff & Komarraju, 2008). Thus, supporting why the Empathetic Perspective Taking domain was the sole empathy measure to not display significant differences between males and females.

Results on the SDO showed that men scored significantly higher than women on all the dimensions as follows: total, Anti- Egalitarianism, and Dominance. These outcomes support the original research done by Pratto and colleagues regarding the SDO (1994). Additionally, evidence for the invariance hypothesis has been supported by further research by Pratto and colleagues in 1997. In this study, the research team found that men scored significantly higher than women on the SDO and that the SDO had the ability to account for sex differences in political ideology (Pratto et al., 1997). Furthermore, Sidanius' research in 2000 supported the

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current study's findings that men scored significantly higher in anti-egalitarianism and the SDO than women across all nationalities.

Correlations

GPA. As previously stated, existing research on the relationship between sociocultural awareness and student grade point average is quite limited. To investigate whether a relationship was present, correlations between cumulative GPA and each of the three surveys including their associated subscales were assessed. Results indicated that there were no significant correlations found between GPA and all of the surveys. Therefore, suggesting that these sociocultural awareness measures are not assessments of academic intelligence nor do they require an elevated aptitude level to successfully complete.

SEE total scores. Due to the SEE being utilized as a main measure of intercultural competence by JMU's psychology department, relationships between SEE total scores and each self-report measure were additionally analyzed. As expected, results showed statistically significant correlations for SEE total scores and all other dimensions. This supports previous research presented by Cundiff and Komarraju in 2008, with the total SEE significantly correlating to all four of its' subscales. These results are further strengthened by the prior research of Wang in 2003, which found a significant positive correlation between the SEE and a similar sociocultural awareness measure to the AICS, the M-GUDS. In addition, previous research findings of a significant negative correlation between the SDO and self-reported empathy (Pratto et al., 1994).

Situational Scenarios

Each of the four behavioral scenarios were examined for trends and keywords for both student groups respectively. Scenario #1, regarding a professor with a thick accent, showed that

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first semester psychology students feared offending their professor. Seniors did not display this same worry. This may be explained by seniors feeling more comfortable interacting with their professors. The majority of seniors are in their fourth year of college, so these students have most likely experienced working closely with professors or built relationships with faculty members. Whereas first semester psychology students are relatively new to college, so they may not have these same experiences under their belt.

Scenario #2 displayed a situation where a friend in the medical field did not want to provide treatment to a gay patient. First semester students responded overall with helpful advice on how to properly and professionally handle the situation. Senior responses, on the other hand, focused more on how this fictional friend would not be their friend in real life due to the friends' inability to provide unbiased treatment. It is unclear why these two groups responded differently in this scenario. Future research could build on this by assessing respondents sexual orientation and whether respondents have experienced a similar situation.

As for Scenario #3, in which a team meeting included a deaf person, first semester students exhibited responses aimed at developing alternative ways to specifically aid the deaf person such as including visual aids. While seniors stated that team meetings should run as planned regardless of who is present in the meeting because being deaf does not make someone any less of a person. Again, it is unclear why the trends for each student group differed and will require further research.

Scenario #4 involved two roommates with different economic situations who were searching for internships. Overall responses from underclassmen showed trends of Emily being more fortunate than Sarah, which puts Sarah in a more difficult position. Seniors exhibited patterns of being unempathetic towards Emily and calling her privileged. Seniors may feel more

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negative emotions towards Emily because they've experienced a similar situation before. During the summer prior to senior year, it is very common for students to apply to internship programs. These positions are typically competitive, difficult to secure, and unpaid. Therefore, seniors most likely know how it feels to be Sarah, so there could be a bias in response with this scenario.

As for the keyword of privilege, seniors may have an unconscious bias with utilizing this specific word as well. JMU's psychology department goal c, as previously mentioned, is explaining how privilege, power, and oppression may affect prejudice, discrimination, and inequality. This outcome is presented on all the syllabi of courses that fulfill the sociocultural awareness objective, so senior students have been exposed to the word privilege throughout their psychology education while underclassmen have not.

Although small differences between trends and keywords appeared in each scenario for the two student groups, there was not high variability in the range of responses. This can be seen in the attitudinal measures as well. Even though some statistically significant differences were found between seniors and first semester students, their respective means on the SEE and SDO surveys were very alike. These similarities can be observed when eyeing Figures 5 and 7. The low variability in range of responses may be attributed to the idea that students entering the psychology major already have a higher degree of empathy and sociocultural awareness than other college students. To further investigate this, future research could examine whether this trend is apparent for college students entering varying majors or if it can only be witnessed in the psychology major.

Since the behavioral scenarios are based on questions from the AICS, it is advantageous to compare both of these results directly. On each of the five AICS dimensions, seniors were found to score significantly higher than first semester students, indicating a high degree of

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differences between student groups. As for the scenarios, it was determined that there was low variability in responses between the two groups. There are many possibilities for why the AICS data displayed more differences between student groups than the scenarios. It could be that the two surveys are measuring very different behaviors, with the AICS tapping into a wider range of situations while the scenarios focus on more specific instances. Self-report is more generalizable by giving each respondent the opportunity to relate the questions to their own experiences. The behavioral scenarios do not offer the same breadth. In addition, the differences between the two surveys could also be attributed to senior mindsets. Their behavior and attitudes from the beginning of college to graduation may not have changed, but the seniors could feel more knowledgeable because after four years of education one should be.

Furthermore, one must consider the impact of Cluster 5 in JMU's general education program. This area of study includes a Sociocultural domain, which obliges all undergraduate students to complete a specific diversity course prior to graduating. Seniors have most likely satisfied this requirement already, while first semester psychology students have probably not. Therefore, suggesting that seniors have been previously exposed to worldly topics that could heighten their sociocultural awareness; this may be another reason as to why differences were found between the AICS and scenarios for student groups. However, it may also be attributed to seniors falsely believing that they are more interculturally competent than they were before because of completing the Cluster 5 course, even though their attitudes and behaviors may not actually have changed.

It is difficult to pinpoint the correct explanation for why differences in response were observed for the AICS and situational surveys between seniors and first semester psychology

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students. For this, future research would have to examine all of the possibilities mentioned in order to narrow it down.

Limitations and Future Research

Although this study found differences in response for each of the surveys between seniors and first semester students, there are multiple limitations that should be addressed. In regards to demographics, the university and major of study for all participants was limited to JMU and psychology. Additionally, the class year of participants was narrow in scope with an overrepresentation of seniors. While this is due to the study's specific focus on JMU's psychology department assessment day, it still presents the issue of lacking in generalizability. Future research should assess students from all class years, all majors, and a diverse set of universities.

Similarly, the aforementioned sociocultural awareness courses were not analyzed individually for each student. It is unknown how many psychology courses fulfilling the sociocultural requirement were taken by each participant. In addition, it is undetermined how many Cluster 5 courses fulfilling the sociocultural requirement were taken by each student. Furthermore, it is unknown which of the numerous course options were selected. Therefore, it is difficult to suggest what classes could be enabling the significant differences in response to the surveys between seniors and first semester psychology students. Future research should investigate which sociocultural courses were completed by participants and compare this to the students self-attitudinal survey scores.

Regarding the survey findings for student group and gender, there are a few suggestions for future research. Considering the SEE results specifically, and as previously touched on, the varying results for each variable seem to arise out of gender differences and not student group

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differences. To investigate this proposed relationship further research should assess the interaction effect of student group and gender differences. Therefore, offering clearer and more concrete evidence to support or reject this claim.

In terms of the behavioral scenarios construction, there are a few limitations to acknowledge. It was suggested prior that the scenarios may be too broad. The four scenarios utilized in this study each offer a unique situation with little room for varying interpretations. Participants do not have the same ability to relate the scenario question to their own distinct experiences like they do with the more general AICS questions. Similarly, the scenarios may lack in incorporating the breadth of each AICS question. For example, Scenario #4 is intended to represent the question, “*I am exceptionally skilled at... Cultivating new professional relationships with people from diverse cultures*” although a deaf person, as depicted in the scenario, does not encompass all people from diverse cultures. Future research should aim at editing these scenarios or developing new ones that can more accurately mirror items from the AICS.

Lastly, there was not a formal rubric utilized to determine excellent versus poor responses on the situational scenarios. Since this was an exploratory study with newly constructed scenarios, there was not a specific coding procedure laid out to simply follow. Analyzing the trends and keywords from student responses was a major step toward developing coding guidelines for the scenarios in the future, but it did provide very much evidence to support the usage of scenarios in assessing sociocultural awareness. Further research should present the behavioral scenarios to professors who teach sociocultural awareness courses and have them provide example responses for excellent, moderate, and poor. Collectively examining these three

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separate responses would be a step in the right direction toward creating a formal rubric for the scenarios.

Conclusion

The current exploratory study aimed to utilize situational scenarios based on the AICS in order to a) examine any differences in responses to these scenarios and in self-report attitudinal measures between first semester psychology students and graduating psychology students and b) determine if responses to the scenarios are related to self-report attitudinal measures of sociocultural awareness.

Through the evidence brought forth in this thesis, it is challenging to confidently state whether these objectives were met. One could argue that there were differences in responses to the scenarios and self-report measures between student groups, but it is simply too early in the research process to definitively tell. This can additionally apply to determining if the responses to the scenarios are related to several self-report measures of sociocultural awareness. However, this study does take a step towards filling a gap in the literature surrounding intercultural competence. Further research examining how to effectively develop a direct measure for sociocultural awareness should be conducted. This would build on the research presented on this thesis in order to provide a behavioral measure for the JMU psychology department to utilize on assessment day. More broadly, the construction of a successful assessment for this particular area of study could be implemented at universities across the country to examine students' cultural attitudes and hopefully aid in cultivating a higher degree of sociocultural awareness in future generations.

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Appendix A

Scale of Ethnocultural Empathy (SEE)

Items

Empathic Feeling and Expression

30. When I hear people make racist jokes, I tell them I am offended even though they are not referring to my racial or ethnic group.
21. I don't care if people make racist statements against other racial or ethnic groups. (R)
16. I rarely think about the impact of a racist or ethnic joke on the feelings of people who are targeted. (R)
23. When other people struggle with racial or ethnic oppression, I share their frustration.
14. I feel supportive of people of other racial and ethnic groups, if I think they are being taken advantage of.
12. I share the anger of those who face injustice because of their racial and ethnic backgrounds.
26. I share the anger of people who are victims of hate crimes (e.g., intentional violence because of race or ethnicity).
11. When I know my friends are treated unfairly because of their racial or ethnic backgrounds, I speak up for them.
15. I get disturbed when other people experience misfortunes due to their racial or ethnic backgrounds.
3. I am touched by movies or books about discrimination issues faced by racial or ethnic groups other than my own.
22. When I see people who come from a different racial or ethnic background succeed in the public arena, I share their pride.
17. I am not likely to participate in events that promote equal rights for people of all racial and ethnic backgrounds. (R)
9. I seek opportunities to speak with individuals of other racial or ethnic backgrounds about their experiences.
13. When I interact with people from other racial or ethnic backgrounds, I show my appreciation of their cultural norms.
18. I express my concern about discrimination to people from other racial or ethnic groups.

Empathic Perspective Taking

19. It is easy for me to understand what it would feel like to be a person of another racial or ethnic background other than my own.
31. It is difficult for me to relate to stories in which people talk about racial or ethnic discrimination they experience in their day to day lives. (R)
28. It is difficult for me to put myself in the shoes of someone who is racially and/or ethnically different from me. (R)
4. I know what it feels like to be the only person of a certain race or ethnicity in a group of people.
6. I can relate to the frustration that some people feel about having fewer opportunities due to their racial or ethnic backgrounds.

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29. I feel uncomfortable when I am around a significant number of people who are racially/ethnically different than me. (R)
2. I don't know a lot of information about important social and political events of racial and ethnic groups other than my own. (R)

Acceptance of Cultural Differences

10. I feel irritated when people of different racial or ethnic backgrounds speak their language around me. (R)
1. I feel annoyed when people do not speak standard English. (R)
5. I get impatient when communicating with people from other racial or ethnic backgrounds, regardless of how well they speak English. (R)
27. I do not understand why people want to keep their indigenous racial or ethnic cultural traditions instead of trying to fit into the mainstream. (R)
8. I don't understand why people of different racial or ethnic backgrounds enjoy wearing traditional clothing. (R)

Empathic Awareness

25. I am aware of how society differentially treats racial or ethnic groups other than my own.
24. I recognize that the media often portrays people based on racial or ethnic stereotypes.
20. I can see how other racial or ethnic groups are systematically oppressed in our society.
7. I am aware of institutional barriers (e.g., restricted opportunities for job promotion) that discriminate against racial or ethnic groups other than my own.

Note. Reverse-scored items are indicated (R).

Appendix B

Social Dominance Orientation (SDO)

Items

SDO

1. We should strive to make incomes as equal as possible. (R)
 2. Group equality should be our ideal. (R)
 3. It's OK if some groups have more of a chance in life than others.
 4. To get ahead in life, it is sometimes necessary to step on other groups.
 5. We should do what we can to equalize conditions for different groups. (R)
 6. It's probably a good thing that certain groups are at the top and others are at the bottom.
 7. Inferior groups should stay in their place.
 8. We would have fewer problems if groups were treated more equally. (R)
 9. It would be good if groups could be equal. (R)
 10. In getting what you want, it is sometimes necessary to use force against other groups.
 11. All groups should be given an equal chance in life. (R)
 12. If certain groups stayed in their place, we would have fewer problems.
 13. We should strive for increased social equality. (R)
 14. Sometimes other groups must be kept in their place.
 15. Some groups of people are simply inferior to other groups.
 16. No one group should dominate in society. (R)
-

Dominance

1. Some groups of people must be kept in their place.
 2. It's probably a good thing that certain groups are at the top and other groups are at the bottom.
 3. An ideal society requires some groups to be on top and others to be on the bottom.
 4. Some groups of people are simply inferior to other groups.
 5. Groups at the bottom are just as deserving as groups at the top. (R)
 6. No one group should dominate in society. (R)
 7. Groups at the bottom should not have to stay in their place. (R)
 8. Group dominance is a poor principle. (R)
-

Anti- Egalitarianism

9. We should not push for group equality.
10. We shouldn't try to guarantee that every group has the same quality of life.
3. It is unjust to try to make groups equal.
4. Group equality should not be our primary goal.
5. We should work to give all groups an equal chance to succeed. (R)
6. We should to what we can to equalize conditions for different groups. (R)
7. No matter how much effort it takes, we ought to strive to ensure that all groups have the same chance in life. (R)
8. Group equality should be our ideal. (R)

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Note. Reverse-scored items are indicated (R).

Appendix C

Revised version of Alliant Intercultural Competency Scale (AICS-R)

Items

Knowledge

I can explain how...

1. Human diversity leads to many different cultural ways of life
 2. Social, political, and historical events shape diverse cultural identities
 3. Global events can affect local ways of life
 4. How my culture and/or country of origin fits into a global context
 5. Local political, cultural, and/or technological change in one culture affects cultures around the world
 6. Someone from another culture may view my culture
 7. Different aspects of identity combine to create different experiences (e.g. sexual identity and race combine to create different experiences)
 8. People in others cultures perceive equality, opportunity, and human rights differently than I do
 9. The social, political, and historical events in my country have affected my perceptions of diversity
 10. The distribution of power and privilege varies across cultures and /or countries
-

Communication

I am skilled at discussing diversity issues related to

11. Race and ethnicity
 12. Nationality
 13. Ability and disability
 14. Social class
 15. Gender identity
 16. Religion
 17. Sexual orientation
 18. Language
-

Attitudes

I am able to...

19. Understand my values, beliefs, and communication style may come across to people from other cultures/countries.
20. Adapt my assumptions about diverse ways of life in different cultures/countries
21. Seek out and learn from intercultural opportunities as a way of life
22. Respond with openness when I encounter unfamiliar ways of life in different cultures/countries
23. Demonstrate an appreciation of unfamiliar ways of life in different cultures/countries
24. See my intercultural competency growth as a lifelong process
25. Confront stereotypes, prejudice, or racism in social situations

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Professional Practice

I am skilled at ...

26. Explaining human rights issues from the perspective of another culture/country
27. Using intercultural information to solve problems in my field
28. Accommodating how people from diverse cultures may think, analyze, and process information differently
29. Incorporating an atmosphere of intercultural cooperation to my work/school setting
30. Being flexible with how people from diverse cultures may approach their school/work (working pace, attendance, participation, solutions to problems)
31. Understanding how global events relate to local problems in my field
32. Understanding that people of diverse cultures may use language in different ways to express their ideas

Negotiated Space

I am skilled at ...

33. Building trust and cooperation among team members of diverse cultures
34. Making decisions that people from different backgrounds can agree with
35. Helping resolve misunderstandings in diverse groups
36. Adapting my communication style and vocabulary for people from different cultures
37. Developing new professional relationships with people from diverse cultures
38. Explaining issues from team members' different cultural perspectives
39. Finding solutions that maintain a balance between team members' diverse worldviews
40. Fostering team member relationships
41. Tolerating periods of confusion as team members of diverse cultures work together to approach and solve problems
42. Understanding how my own cultural heritage may challenge group trust and cooperation
43. Accommodating language differences to enhance communication between team members
44. Explaining the dynamics of power and privilege that may be complicating the team process
45. Putting priority on team member relationships when working through difficult issues on a project

Note. Reverse-scored items are indicated (R).

Appendix D

Senior scenario responses

Scenario #1

Keywords:

- Office hours/ one on one
- Email professor
- Look to other resources
 - SSC, Tas, classmates, textbook, online resources, professor who teaches another section
- Sit in the front row of lecture
- Ask professor for additional visual aids
- Review material before class
- Reach out to academic advisor/ department head
- Avoid the issue/ class
- Speak to someone with the same accent

Trends:

- Try to understand the students position/put yourself in their shoes
- Provide personal experiences
- Explain what is occurring in scenario
- Lack of empathy responses
 - “calm down”, “get over it”

Scenario #2

Keywords:

- Took the Hippocratic oath
- Doctor needs to unbiased
- Friend chose the wrong field/should change careers
- Find new doctor
- Go to HR and get training/business help
- They wouldn't be my friend
- Trying to change your friend's opinions/ beliefs

Trends:

- Giving personal examples
- Ethical issues with not treating gay patients
- Doctor needs to separate personal and professional beliefs

Scenario #3

Keywords:

- Waiting for the interpreter to actually interpret things to the deaf person/ be patient
- Don't slow down for the interpreter
- Learn some basic sign language (go to a classes)
- Meet with the interpreter and deaf person before the meeting.
- Follow up emails

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- Treat them like any other employee

Trends:

- Make sure to communicate with the person that is deaf and not the interpreter
- Importance of inclusion
- Have words written on PowerPoint, board, notes before/during meeting

Scenario #4

Keywords:

- Go to their university and ask for resources that might help with unpaid internship
- Sarah is looking at short term benefits
- Unnecessary to have an internship to get a job
- Just keep trying to get a paid internship
- Sarah is at a disadvantage
- Impact on their friendship
- Get involved in the major in other ways
- Victims of the system
- Emily is privileged
- Socioeconomic status

Trends:

- Thinking negatively about Emily
- Feeling sorry for Sarah's situation
- Choosing sides between the two girls
- Relate themselves to girls positions

Appendix E

First semester scenario responses

Scenario #1

Keywords:

- The roommate is frustrated
- The roommate is feeling stressed
- Go to SSC
- Attend office hours
- She doesn't think the office hours will help
- Ask a student to share their notes with her
- Fearful of offending the professor
- Email the professor

Trends:

- Look for a tutor, TA, or go to one of the learning centers
- Switch classes/switch to a different professor
- Go to the professor and be honest

Scenario #2

Keywords:

- Do not be a doctor
- Be more accepting/open minded
- Grow up/stop being immature
- Have them tell the patient to find another doctor for better treatment
- Treat them with respect/like you would anyone else
- Reach out to other staff members
- Explain why sexual orientation is not a choice

Trends:

- You cannot consider your opinions when treating someone
- Doctor is in the wrong field of work
- Doctor should use this as a learning opportunity

Scenario #3

Keywords:

- Take initiative to learn important sign cues
- Make sure their perspective is heard
- Treat them like a regular human being
- Respect
- Grow from the situation and become a better team
- Communicate and cooperate
- Adding extra time to meetings to talk slower for interpreter (patience)
- Visual aids
- Eye contact with deaf person
- Type out outlines before meetings

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Trends:

- Treating the deaf person with respect
- Utilize different resources and actions to be inclusive

Scenario #4

Keywords:

- Sarah could do both work and an internship
- Emily doesn't understand the difficult of financial responsibility
- Emily is naive
- Sarah might have to work 2 jobs over the summer
- Sarah is more independent
- Sarah could have gone to live with her parents to save the money
- Emily thinks internship is more important than her expenses
- Sarah should figure out a financial plan based on the internship
- Sarah feels more stress
- Sarah can get paying job after internship
- Sarah feels more trapped

Trends:

- Emily will have an easier time due to financial ability and has more opportunities/more fortunate
- Sarah does not have the same luxury as Emily
- Sarah's situation is harder with more stress

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Tables

Table 1. *Multiple regression statistics for predicting SEE total scores.*

Predictors	<i>B</i>	<i>SE B</i>	β
Model 1			
Student group	.12	.12	.09
Model 2			
Student group*	-.26	.11	-.18
AICS total**	.55	.06	.64
Model 3			
Student group**	-.26	.10	-.19
AICS total**	.42	.06	.49
SDO Anti-Egalitarian**	-.26	.05	-.37
SDO Dominance	-.04	.05	-.06

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

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Table 2. Means, Standard Deviations, and t-test results for comparisons between student groups.

Dependent Variable	Mean(<i>SD</i>) First semester	Mean(<i>SD</i>) Seniors	<i>t</i>	<i>df</i>	<i>p</i>	95% CI of Mean Difference
AICS Knowledge	5.28(0.86)	6.02(0.66)	-4.94	56	< .00	[-1.04, .44]
AICS Communication	4.81(1.05)	5.43(1.00)	-3.30	151	< .00	[-.62, .19]
AICS Attitude	5.65(0.83)	6.27(0.62)	-4.34	56	< .00	[-.91, -.34]
AICS Professional	4.84(0.98)	5.66(0.83)	-5.12	151	< .00	[-1.14, -.50]
AICS Total	5.15(0.72)	5.85(0.64)	-5.78	151	< .00	[-.94, -.46]
SEE Feeling	4.72(0.69)	4.78(0.74)	-0.44	151	.66	[-.32, .21]
SEE Perspective	3.49(0.92)	3.84(0.94)	-2.06	151	.04	[-.70, -.01]
SEE Acceptance	5.31(0.55)	5.35(0.77)	-0.28	151	.78	[-.30, .22]
SEE Awareness	5.07(0.80)	5.14(0.82)	-0.47	151	.64	[-.37, .22]
SEE Total	4.58(0.57)	4.71(0.65)	-1.07	151	.29	[-.35, .10]
SDO Anti-Egalitarian	2.23(0.79)	1.98(0.91)	1.67	151	.10	[-.05, .59]
SDO Dominance	2.51(1.01)	1.90(0.97)	3.38	151	< .00	[.25, .97]
SDO Total	2.38(0.76)	1.94(0.84)	2.91	151	< .00	[.15, .73]

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Table 3. Means, Standard Deviations, and t-test results for comparisons across genders

Dependent Variable	Mean(SD) Male	Mean(SD) Female	<i>t</i>	<i>df</i>	<i>p</i>	95% CI of Mean Difference
AICS Knowledge	5.77(0.88)	5.82(.77)	-0.32	149	.75	[-.41, .29]
AICS	5.26(1.17)	5.25(1.02)	0.04	149	.97	[-.46, .48]
Communication						
AICS Attitudes	5.94(0.96)	6.14(0.69)	-0.95	26	.35	[-.63, .23]
AICS Professional	5.23(1.08)	5.47(0.91)	-1.13	149	.26	[-.66, .18]
AICS Total	5.56(0.87)	5.67(0.69)	-0.68	149	.50	[-.44, .21]
SEE Feeling	4.12(0.92)	4.88(0.63)	-3.80	26	< .00	[-1.17, -.35]
SEE Perspective	3.75(0.69)	3.76(1.00)	-0.03	149	.98	[-.43, .42]
SEE Acceptance	4.92(0.92)	5.44(0.52)	-2.65	25	< .05	[-.93, -.12]
SEE Awareness	4.43(1.05)	5.23(0.70)	-3.53	26	< .00	[-1.27, -.33]
SEE Total	4.21(0.74)	4.76(0.57)	-4.09	149	< .00	[-.82, .29]
SDO Anti-Egalitarian	2.95(1.02)	1.88(0.74)	5.95	149	< .00	[.71, 1.42]
SDO Dominance	2.70(1.13)	1.94(0.94)	3.48	149	< .00	[.33, 1.20]
SDO Total	2.82(0.97)	1.91(0.73)	5.27	149	< .00	[.57, 1.26]

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Table 4. *Pearson's r correlation coefficients for all measures and cumulative GPA*

Items	Cumulative GPA	SEE Total
AICS Knowledge	.008	.386*
AICS Communication	.056	.477*
AICS Attitudes	-.031	.535*
AICS Professional	.074	.480*
AICS Total	.038	.557*
SEE Feeling	.080	.920*
SEE Perspective	.078	.707*
SEE Acceptance	.057	.643*
SEE Awareness	.092	.750*
SEE Total	.096	---
SDO Anti-Egalitarian	-.041	-.393*
SDO Dominance	-.016	-.548*
SDO Total	-.031	-.524*
Cumulative GPA	---	.096

* $p < .01$

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Figures

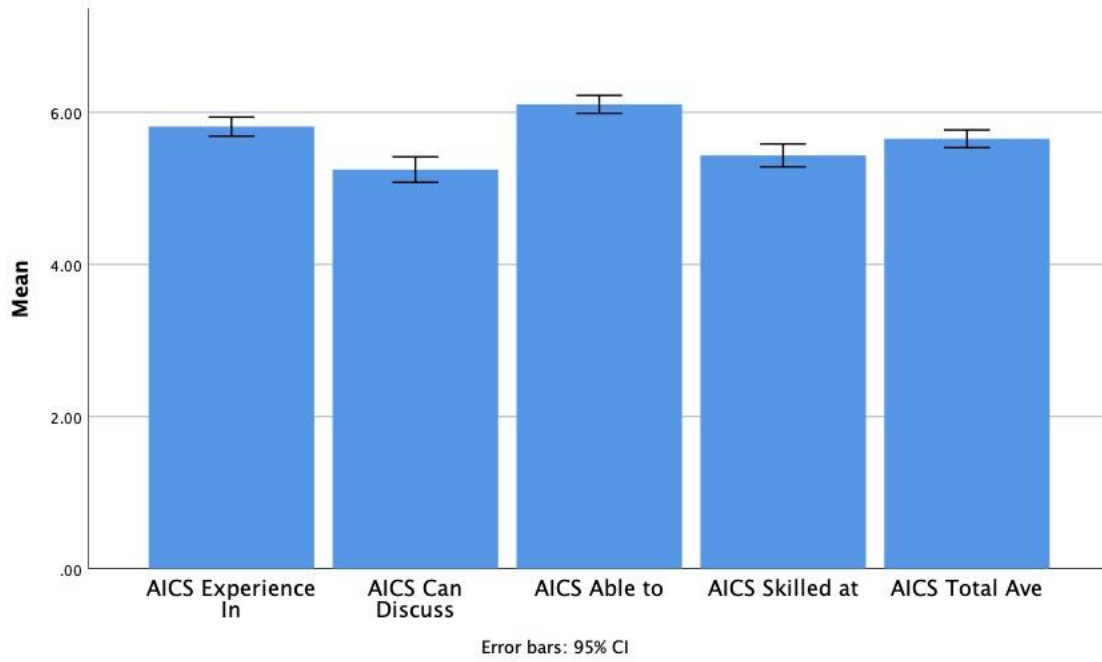


Figure 1. Bar graph for overall AICS means.

BEHAVIORAL ASSESSMENT OF SOCIOCULTURAL AWARENESS

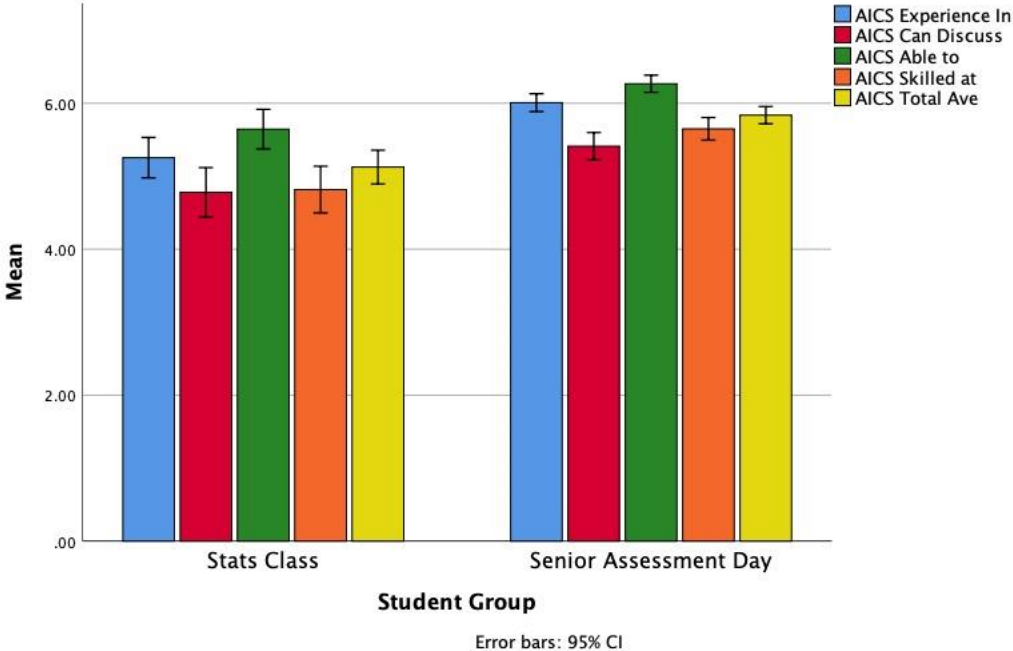


Figure 2. Bar graph for AICS mean comparisons across student groups.

BEHAVIORAL ASSESSMENT OF SOCIOCULTURAL AWARENESS

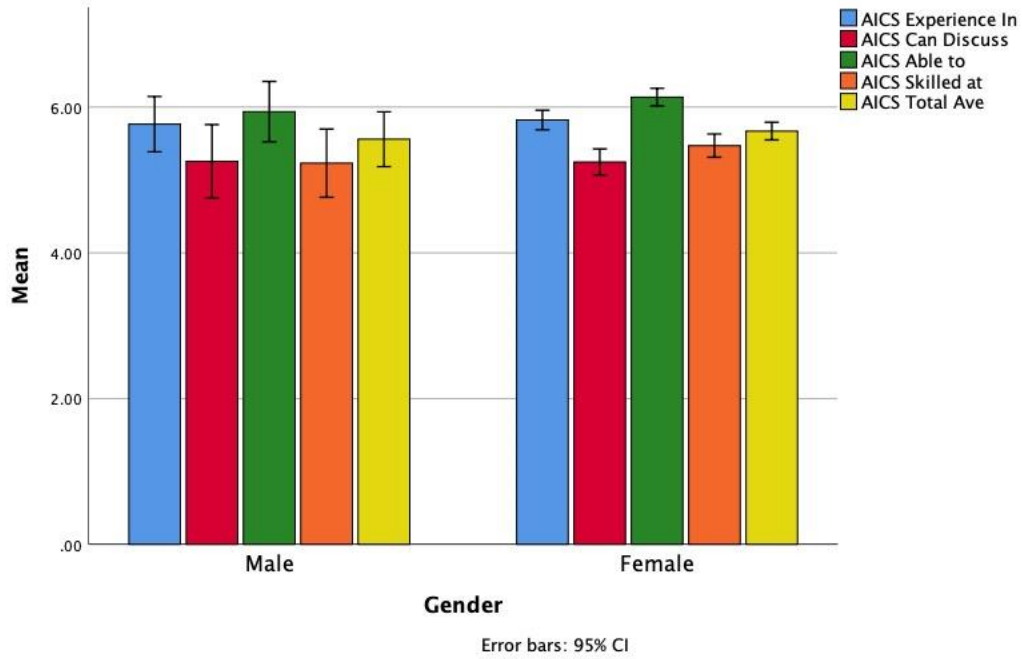


Figure 3. Bar graph for AICS mean comparisons across genders.

BEHAVIORAL ASSESSMENT OF SOCIOCULTURAL AWARENESS

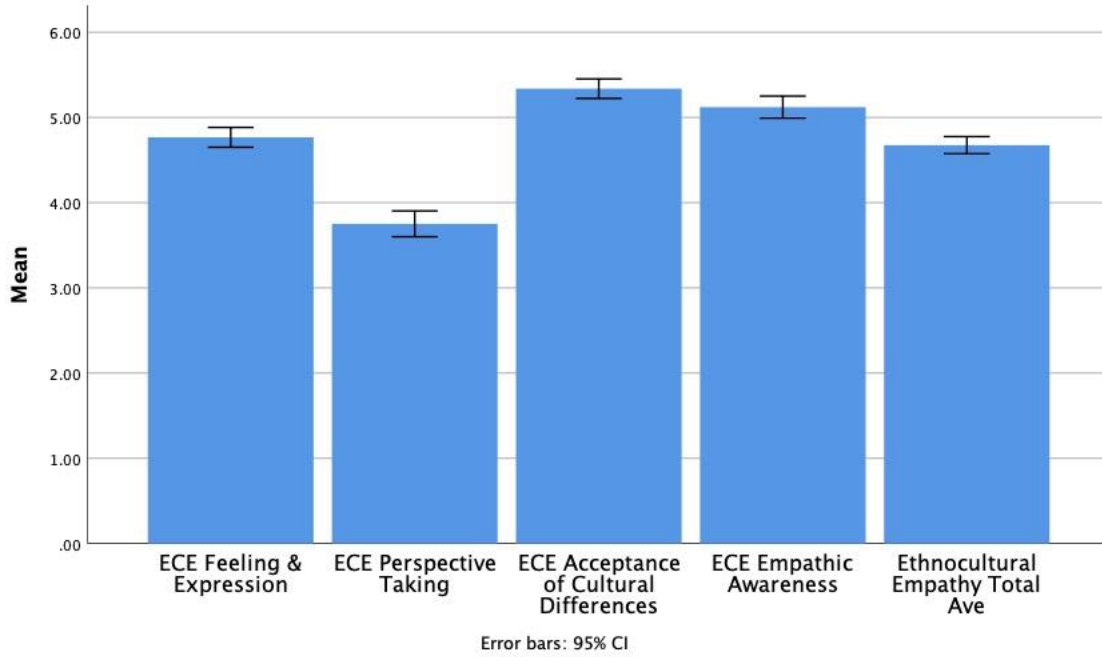


Figure 4. Bar graph for overall SEE means.

BEHAVIORAL ASSESSMENT OF SOCIOCULTURAL AWARENESS

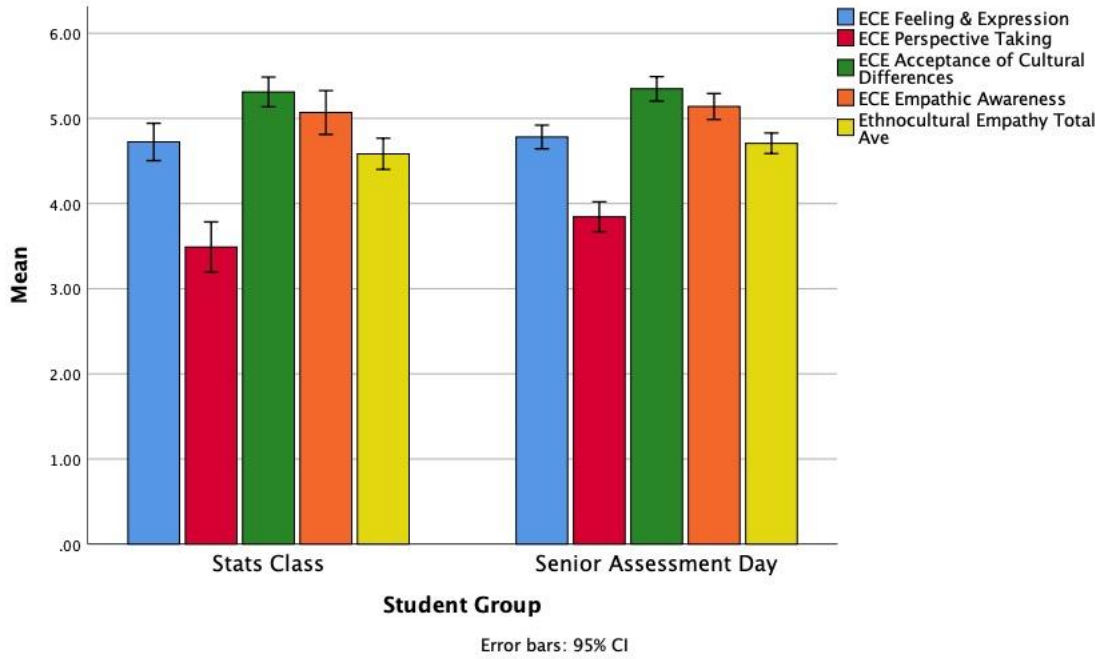


Figure 5. Bar graph for SEE mean comparisons across student groups.

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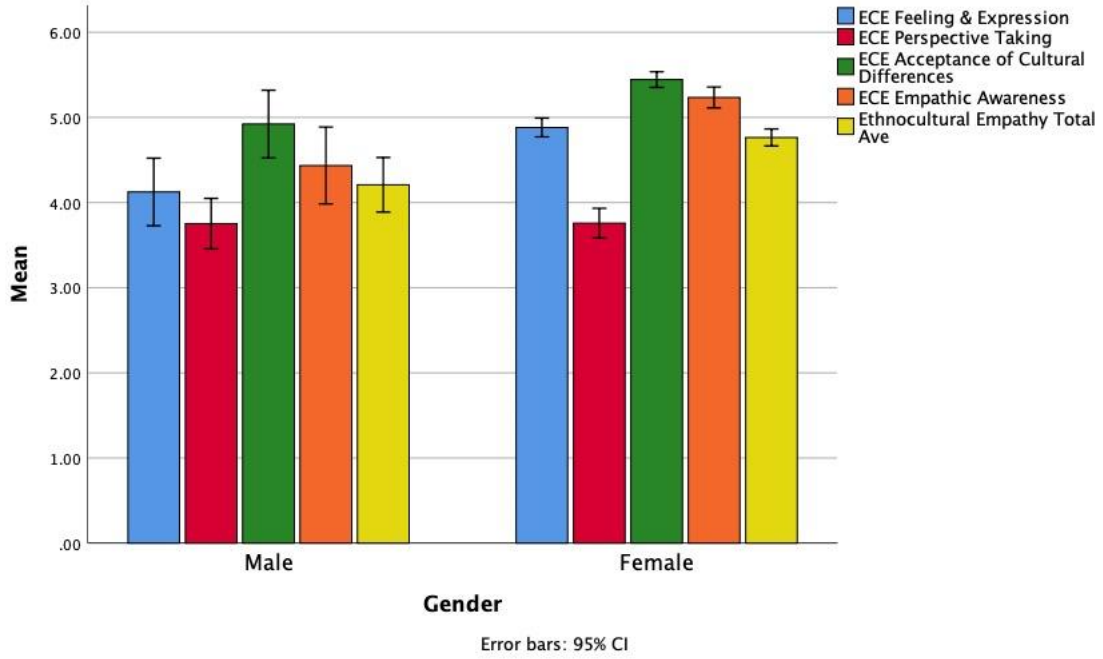


Figure 6. Bar graph for SEE mean comparisons across genders.

BEHAVIORAL ASSESSMENT OF SOCIOCULTURAL AWARENESS

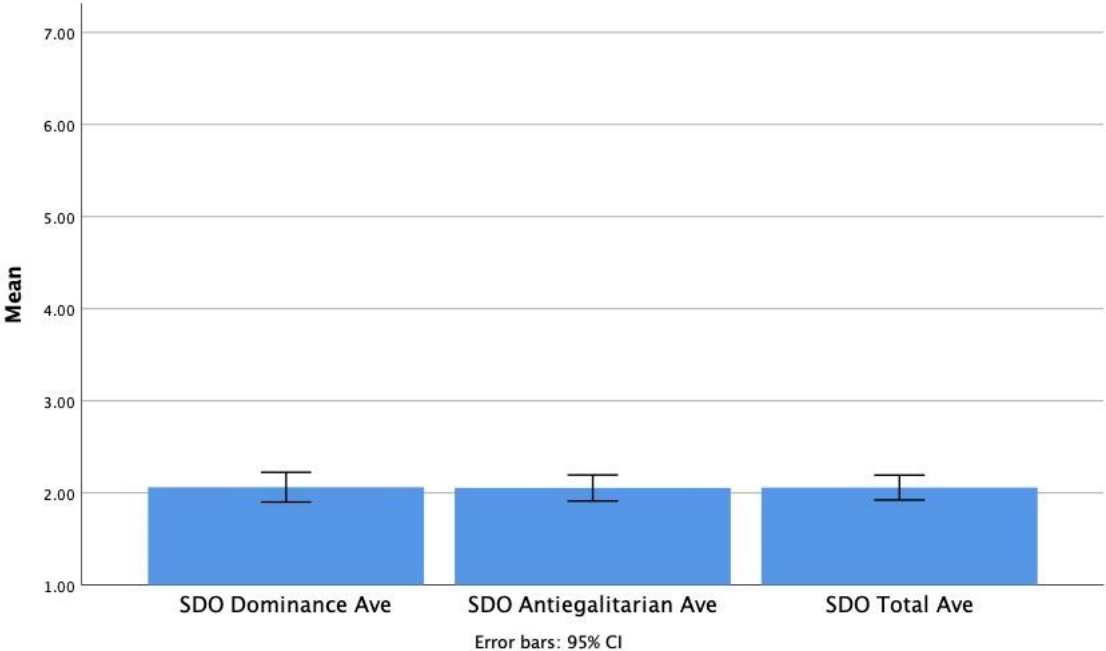


Figure 7. Bar graph for overall SDO means.

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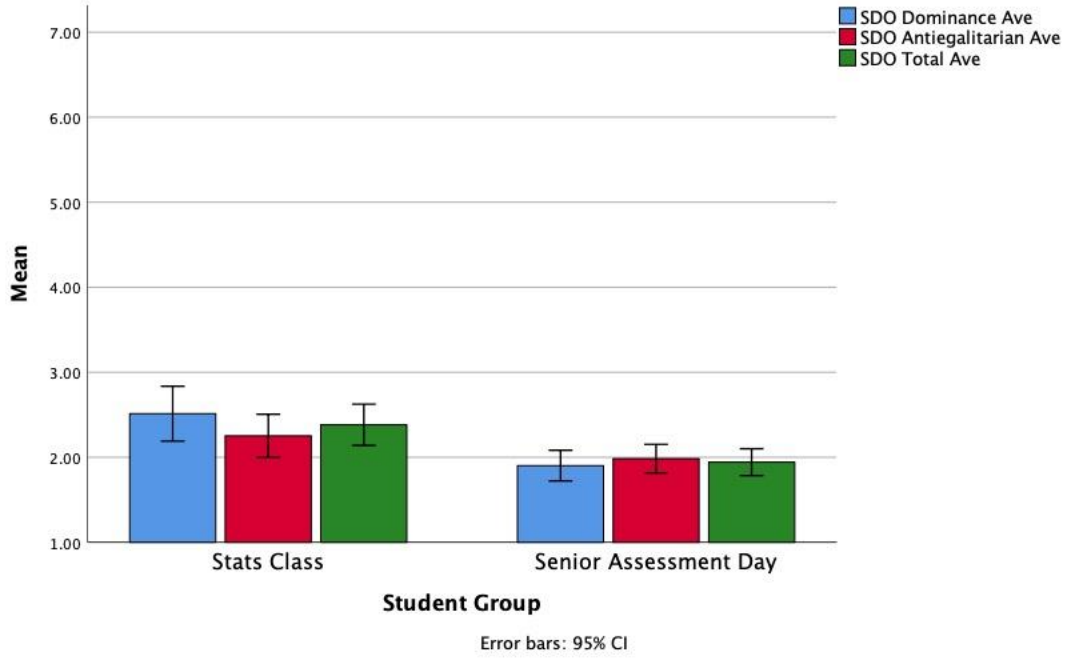


Figure 8. Bar graph for SDO mean comparisons across student groups.

BEHAVIORAL ASSESSMENT OF SOCIOCULTURAL AWARENESS

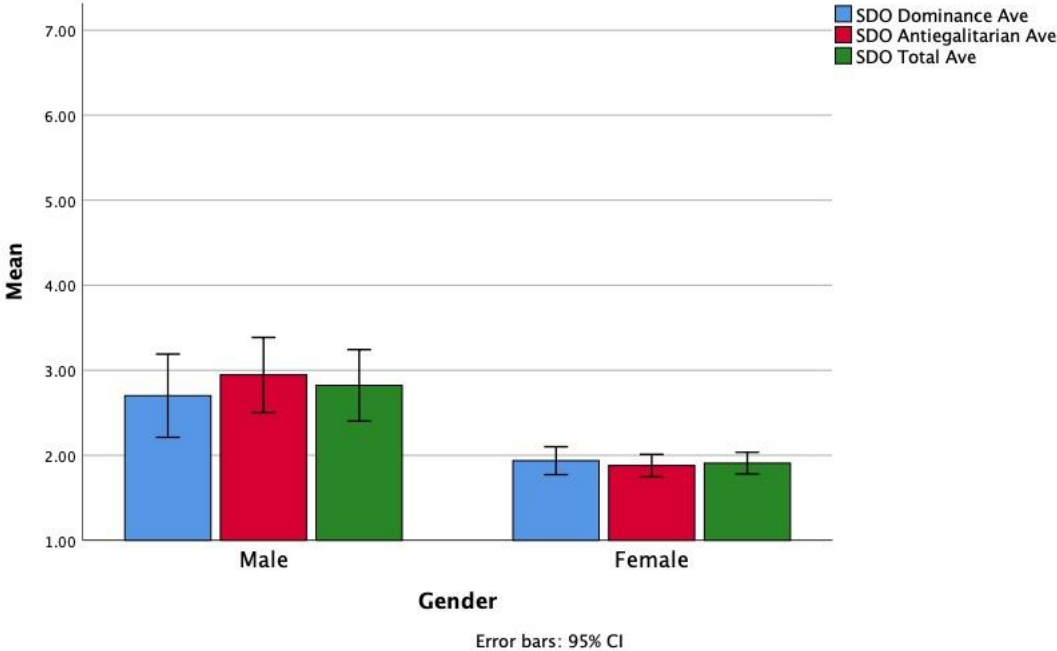


Figure 9. Bar graph for SDO mean comparisons across genders.