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**ETHNICITY, CULTURE, AND MENTAL HEALTH AMONG COLLEGE
STUDENTS OF MIDDLE EASTERN HERITAGE**

by

HASTI ASHTIANI RAVEAU

THESIS

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

of the degree of

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Approved by: Rita J. Casey, Ph.D.

Advisor

Date

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CHAPTER 1 INTRODUCTION

Introduction

National surveys suggest that depression and suicide in college students are major and growing issues in the United States (ACHA-NCHA, 2009; Mahmoud et al., 2012; Twenge et al., 2010). Based on findings from the American College Health Association-National College Health Assessment (ACHA-NCHA, 2000, 2008), the rate of university students reporting a diagnosis of depression has increased from 10% in 2000 to 18% in 2008. In the 2009 ACHA-NCHA survey, comprised of 80,121 students in 206 North American postsecondary institutions, 43% acknowledged feeling so depressed at least once in the past school year that it was difficult for them to function, and 62.1% felt hopeless at least once in the past year. In addition to the rising depression rates, suicide is currently the third-leading cause of death for this population (Wilcox et al., 2010; NCHS, 2010). In 2009, 9.0% of college students reported that they had seriously considering suicide at least once in the past school year (ACHA-NCHA, 2009).

Depression, with its associated difficulties, does not exist in isolation from other aspects of students' lives. Students with psychological problems tend to underachieve in their classes (O'Connor, 2001). They are also more likely to smoke cigarettes, abuse alcohol, and use substances, which are destructive methods of coping with depression (Cranford, Eisenberg, & Serras, 2009; Weitzman, 2004). Clearly, mental health is a critical factor in university student academic performance and success (Eisenberg et al., 2007), thus mental health professionals at college campuses should make a greater attempt to educate college students about mental disorders, including how to detect a problem, and possible sources of help.

Despite the evidence that depression is a significant mental health problem for college students, the lack of treatment and adequacy of what care is available are major problems for American colleges and universities (Eisenberg & Chung, 2012; Wang et al., 2005; Furr et al. 2001). Inadequate mental health services on college campuses could contribute to American university students' high rates of depression, and particularly explain why only a small portion of students with depression and other psychological disorders seek and utilize mental health services (Furr et al., 2001; Garlow et al., 2008). Studies of national college samples indicate that only 10 to 25% of students who are psychologically distressed obtain counseling (ACHA-NCHA, 2009; Gallagher, 2004; Eisenberg & Chung, 2012; Rosenthal & Wilson, 2008). Explanations for the gap between the need for services and the low rates of service seeking are varied. Common explanations are primarily thought to be the characteristics of the students, including a lack of perceived need among the students who are distressed, being unaware of availability of services, being doubtful about effectiveness of counseling, coming from low socioeconomic background, or belonging to a racial/ethnic minority group (Eisenberg, Golberstein, & Gollust, 2007). However, the paucity of research on the quality of care that colleges and universities offer to students and the lack of factual information about factors that contribute to students' underutilization of counseling services, make it challenging to implement and provide effective treatments that reduce or eliminate mental health problems.

The high rates of depression and suicide in American university students can be related to several factors. College students are typically under a great deal of stress and face many life changes, yet lack adequate coping skills due to their young age (Sun et al., 2010; Furr et al., 2001). The transition from home to college campus, being away from friends and family, can be a very challenging experience. Students often lose or are away from their previous support

systems and have to adapt to a new environment that is very different (Credé & Niehorster, 2012). Many young adults are struggling to explore and consolidate their identities (Dyson & Renk, 2006). Furthermore, most students are under a great deal of pressure to perform well academically and feel a great deal of distress when they have problems in these areas. Unsuccessful adjustment to these life changes and stressors can lead to psychological problems (Mahmoud et al, 2012; Sun et al., 2010) such as depression, even to the point of suicidal ideation (Cukrowicz et. al, 2011; Furr et al., 2001; Garlow et al., 2008). Given that depression is an ongoing and rising problem in United States' college students, it is essential for researchers to study this population in order to find effective to of prevent depression in students and improve the treatment of depression when it cannot be prevented.

Depression in Middle Eastern Descent College Students

Although research on mental health and depression in college students is increasing, students of Middle Eastern descent have been given little attention in this research, similar to the low levels of attention given to other minority groups. In this study, the term “Middle Eastern descent” refers to individuals of Western Asia (e.g. Saudi Arabia, Lebanon, Iran, Jordan, etc.) and Northern Africa (e.g. Egypt, Libya, Morocco), including those of Arab, Persian, Turkish, and Berber descent. Unfortunately, the U.S. Department of Commerce, and thus the U.S. Census, considers Middle Eastern descent persons as Caucasian or White (U.S. Department of Commerce Bureau of the Census, 2011), which is a miscategorization. This often causes misleading research results (Abdullah & Brown, 2011), and has added to the lack of knowledge about this important group among U.S. college students. Although no published study to date has investigated prevalence of depression in this population in U.S, Amer and Hovey's (2012) study of 601 Arab Americans from 35 U.S. states found significantly higher levels of anxiety and depression within

this population compared to standardized samples and other minority groups' community samples (Amer & Hovey, 2012).

Stigma and Help-Seeking Attitudes

Unfortunately, there is evidence that negative attitudes about seeking mental health services are common in Middle Eastern culture as well as other minority groups in America (Abdullah, 2011; Boghosian, 2012; Abdullah & Brown, 2011; Aloud & Rathur, 2009; Buser, 2009). For example, African Americans have higher levels of mistrust of the mental health system (Snowden, 2001), and more negative attitudes about the efficacy of professional treatment than Caucasian Americans (Nickerson, Helms, & Terrel, 1994), and are less likely than Caucasian Americans to seek mental health treatment (Buser, 2009). These attitudes are mostly influenced by cultural beliefs about psychological problems, lack of familiarity with professional psychological services, perceived societal mental health stigma, low familial support for seeking treatment, and the use of amateur indigenous services (Boghosian, 2012; Aloud & Rathur, 2009).

Mental health stigma is defined by negative attitudes toward people with a psychological disorder (Corrigan, 2004; Masuda & Boone, 2011). According to research by Fischer and Turner (1970), authors of the *Attitudes Toward Seeking Professional Psychological Help Scale*, such attitudes are multidimensional. They include identification of the need for professional psychological treatment, the level of stigma tolerance linked to professional psychological treatment, awareness that persons have of their own psychological problems, and the trust and confidence that is held for mental health professionals' skills and abilities (Fisher & Turner, 1970).

Individuals with less favorable help-seeking attitudes typically prefer to receive assistance from primary care providers or prefer to use informal indigenous services (e.g.

religious counselors) rather than going to a mental health professional (Young et al., 2001). Many choose to deny or remain quiet about their illness rather than seek any type of services. Unfortunately, health professionals in primary care as well as religious counselors have difficulty recognizing, diagnosing, and treating psychiatric disorders effectively. Several studies have found that inadequate training in diagnosing depression and recognizing suicide risk cause most cases of depression to remain undetected in primary care (Mitchell, 2010; Kitts & Goldman, 2012). This is a reason many individuals are not referred to mental health professionals, so they receive incorrect or no treatment for their condition. This leads to continuing suffering and pain.

In Middle Eastern views of mental health disorders, the body and mind are seen as one entity and are not viewed separately (Abdullah & Brown, 2011). Therefore, most people suffering from a psychological disorder do not see the value of consulting a mental health specialist and simply seek services from their primary health doctor. Consulting with a psychologist would imply that their symptoms are severe and untreatable, which would bring shame to an individual's entire family (Erickson & Al-Timimi, 2001). Furthermore, people with mental health disorders are largely viewed very negatively by the society. Such individuals are often thought to be dangerous, immature, or possessed by evil spirits (Hamdan-Mansour & Wardam, 2009; Al-Darmaki & Sayed, 2009).

If these typical Middle Eastern attitudes hold true for college students of Middle Eastern background, many individuals that would greatly benefit from receiving adequate psychological services are not seeking treatment. They most likely do not believe in the effectiveness of psychotherapy, do not want to be labeled, and do not want to bring shame to their family. Therefore, in contrast to students of the nation's majority population, who tend to endorse help-seeking behaviors more positively, Middle Eastern descent students with depression and

other mental illnesses are more likely to continue suffering from their condition and remain untreated. Research is needed to better understand the factors associated with such attitudes. Further research is required to explore mental illness stigma among students of Middle Eastern culture, including the role it plays in seeking mental health services. It is also important for practitioners, researchers, and policy makers to reach out to college students, especially from minority groups, and educate them about depression, reduce general stigma attached to therapy, and clarify the benefits of professional therapies to treat depression.

Ethnic Identity and Pride

Previous research findings show that individuals who are high in ethnic identity have a strong sense of commitment and belonging to their ethnic group, feel positively about their group, and behave in ways that indicate involvement with their ethnic group (Roberts et al., 1999; Avery et al., 2007). Persons who are high on ethnic pride enjoy spending time with other individuals from the same ethnic background; engage in cultural traditions and activities; practice cultural beliefs such as mannerism, speak their native language, regularly eat the food and listen to the music that belongs to their ethnic background, and feel proud of being an active member of their ethnic community. These positive feelings, attitudes, and behaviors should lead to collective self-esteem, stronger mental health, and less likelihood of having psychological problems. Previous research on African Americans confirm this expectation, showing that a strong, positive ethnic identity serves as a protective role among minorities by moderating the relationship between discriminatory experiences and psychological health (Williams et al., 2012).

Nonetheless, the role of ethnic identity and cultural pride on psychological wellbeing has only been studied in a few minority groups. Even in this small body of research, considerable

variation appears to be present among and within different ethnic groups. Thus, we have only a hint of understanding of this topic. Also, very little is known about contextual or relational matters that could explain the link between ethnic identity and depression. The studies that have investigated the role of ethnic identity in anxiety and depression among African Americans have found higher levels of ethnic identity to be associated with reduced anxiety and depressive symptoms (McDermott & Samson, 2005; Gray, Carter, & Silverman, 2011; Williams et al., in press). Another study done in the U.S. found that Latino adults who were exploring and carrying out actions that focused on ethnic pride were also more strongly discriminated against, which brought them greater psychological distress. However, in this same study, ethnic identity commitment appeared to protect Latinos from covert discrimination, contributing to mental health problems (Torres, Yznaga, & Moore, 2011).

Minority persons in the United States generally have a stronger sense of ethnic identity than citizens who think of themselves as belonging to the majority, sometimes referred to as European Americans (Phinney, 1992; Roberts et al., 1999). Data also show that ethnic identity plays a less significant role in majority Americans' psychological wellbeing, as they are reminded of their ethnicity less often than minority persons. Thus, ethnic identity may serve a different function with respect to mental health among minority individuals compared to persons of the majority. In addition, different minority groups should not be viewed as having similar mental health needs, beliefs, or attitudes, simply because they are distinct from the majority.

In conclusion, even though overt ethnic identity exploration among individuals from minority cultures in America can increase the likelihood of discrimination, it appears that higher commitment to their ethnic identity can protect them from the damaging effects of distress and anxiety caused by discrimination. Thus, strong cultural identity could serve as a protective factor

against depression in Middle Eastern Americans and other minority college students (Roberts et al., 1999; Sparrold, 2003; Avery et al., 2007; Williams et al., in press). In this case, colleges and universities can help individuals with depression, and perhaps mitigate effects of discrimination on campuses, by providing interventions that include campus activities to increase ethnic pride and identity in ethnicity among students.

No study to date has investigated the relationship between ethnic identity and mental health, specifically among college students of Middle Eastern culture in America. Being under-identified or misidentified in official demographic reports, this population's status is largely absent or hidden in studies of mental health and ethnicity. This is why it is essential for researchers to distinguish Middle Eastern descent college students from Caucasian college students as well as students of the minority identity. Depression of college students is an important mental health problem in campuses, and students of Middle Eastern heritage deserve more deliberate inclusion and study, along with aspects of their culture and attitudes about psychological problems that could influence the recognition and treatment of depression.

Current Aims

The primary aims of the current study were to examine depression symptoms of college students from three specific backgrounds in the United States, namely, Middle Eastern, African American, and Caucasian American. The study aimed to explore the relations among ethnic identity and how that predicts attitudes about seeking mental health services.

Research on depression in minority college students, especially those who are less likely to seek help from professional mental health services, could provide greater insight into the students' current needs. If the expectations of this project are correct, policy makers should

attempt to raise awareness of psychological disorder and empirically supported treatments among college student populations that lack trust and knowledge concerning the effectiveness of psychological treatments. Furthermore, it could result in the implementation of better depression treatments and interventions for minority individuals, through empirically supported interventions as well as other counseling programs and services provided to students through their colleges and universities.

Primary Research Questions

Ethnic group differences on negative attitudes toward seeking mental health services.

The first aim of the study was to explore negative attitudes toward help-seeking for psychological problems, among Middle Eastern descent, African American, and Caucasian students. Based on the results of previous research, we expected that the students from the minority groups in this project would express greater negative attitudes for seeking psychological services compared to the students from the majority U.S. population.

Ethnic group differences on depression symptoms. The second aim was to draw a contrast between college students from Middle Eastern cultures versus African Americans versus those from the majority culture of the United States, such as Caucasian students. Rates of depression symptoms were predicted to be higher among Middle Eastern descent and African American descent students than among students of the majority U.S. culture.

Ethnic identity and symptoms of depression. The final aim of this study was to investigate the relations between level of depression symptoms and ethnic identity of college students. It was expected that within-group differences in rates of depression would be seen, such that individuals within a specific culture who had stronger ethnic identity would have fewer depression symptoms, than individuals in the same culture who had a weaker ethnic identity.

This expectation was based on findings of previous research on several different minority populations, which found stronger ethnic identity to be correlated with lower symptoms of depression and better psychological well-being.

CHAPTER 2 METHODS

Participants

In order to determine the appropriate sample size, effect sizes were calculated based on two previous studies that were conducted at Wayne State University on female college students of different ethnic identities. Comparisons were made in terms of percentages and sample sizes for participants high in depressive symptoms, that is, with scores greater than or equal to 16 on the Center for Epidemiologic Studies-Depression Scale (CES-D). The two studies were conducted in contiguous, but non-overlapping, periods of time. The general formula used to determine the expected effect sizes was $d = (M1 - M2)/\text{pooled SD}$ of the two groups, which generated effect sizes moderate in size. The most conservative sample size was picked for this study, with $\alpha = .05$ and $\text{power} = .80$, indicating that we should seek at least 60 participants per ethnic group.

The participants were 430 university students who participated in this study to partially fulfill a requirement for a psychology class or to gain some other academic credit. Of the original sample of college students, 106 participants were excluded after data screening for several reasons: 17 were univariate outliers on variables (MEIM-R, ATSPPH-SF, CES-D, MC-SDS, duration to complete online surveys), 10 lacked identification of their ethnic identity, 52 did not meet the ethnicity criteria (e.g., different ethnicity, bi-racial, multi-racial), 23 had a significant amount of missing data on the main variables (mainly seen in the data collected from the online survey system), and 4 did not meet the age criteria. Missing data and outliers were mostly seen in the data collected through the online survey system, and therefore a refection of method of data collection. The final sample included 324 college students for whom complete data were available.

The ethnic composition of the sample was 40.7% Caucasian American ($n = 132$), 32.1% African American ($n = 104$), and 27.2% Middle Eastern American ($n = 88$), thus achieving the overall target for each ethnic group. Female participants represented the majority of the Caucasian American (62.1%; $n = 82$), African American (64.4%; $n = 67$), and Middle Eastern American (60.2%; $n = 53$) participants. A total of 44.8% ($n = 145$) of the participants completed the surveys in the research laboratory, 51.2% ($n = 166$) of the participants completed the surveys through the online survey system, and 4.0% ($n = 13$) completed the surveys at a student association meeting. Mean age for the total sample was 21.01 years ($SD = 3.21$). Independent t -tests indicated no differences between the responses of the participants completing the questionnaires in the research lab versus the participants completing the online questionnaires on the ethnic identity measure (MEIM-R), $F(1, 309) = .290, p = .591$, the attitudes toward seeking mental health services measure (ATSPPH-SF), $F(1, 309) = .473, p = .492$, and the depression measure (CES-D), $F(1, 309) = .814, p = .368$.

In terms of generation status, 2.3% of the Caucasian participants reported being immigrants (born in a country outside the United States), 8.3% reported being 1st generation (born in the United States, parents born in a different country), 15.2% reported being 2nd generation (both they and their parents were born in the United States; grandparents born in a different country), and 74.3% reported being 3rd generation or beyond. Of the African Americans, 2.9% reported being immigrants, 0% reported being 1st generation, 5.8% reported being 2nd generation, and 91.3% reported being 3rd generation or beyond. Among the Middle Eastern American participants, 29.5% reported being immigrants, 55.7% reported being 1st generation, 9.1% reported being 2nd generation, and 1.1% reported being 3rd generation or beyond. Of the Middle Eastern Americans, 39.8% reported speaking English and Arabic at

home, whereas 22.7% reported speaking only English at home and 35.2% reported speaking only Arabic at home. Moreover, 14.8% visited their homeland at least every other year, 15.9% once 4 to 5 years, 28.4% once 8 to 11 years, and 33% reported that they never visit their homeland. Lastly, 36.4% moved to America due to employment or to have financially secured future, 22.7% for war or political reasons, 3.4% for religious freedom, and 30.7% for other reasons.

Procedure

Students enrolled in psychology undergraduate courses at Wayne State University registered to participate in the study through the university's online SONA System. The system screened the students and determined their eligibility for the study, by asking them to identify their cultural/ethnic background. Students self-identifying within the included groups then registered online for the study. The students fitting any of the groups made an appointment to learn more about the project, gave their informed consent, and completed study activities. The participants spent one appointment at a WSU campus laboratory. At that visit, students were given information to help them decide whether or not to provide consent to participate.

Students who choose to participate completed the questionnaires. After the questionnaires were completed, participants were given a chance to ask questions about the project, and were given a brochure about depression in college students. If they were enrolled in a course that granted research credit points toward their undergraduate psychology courses, they were given 1.5 credits for their participation in this project.

Students who completed the online surveys through the university's online SONA System were also screened to determine their eligibility for the study. Students self-identifying within the included groups then completed the questionnaires online. After the questionnaires were completed, they were automatically given 1 credit for their participation in this project. The

thirteen students who completed the surveys at the Muslim Student Association were given a brochure about depression in college students but were not compensated for their participation.

Measures

Demographics characteristics. This questionnaire requested the participants to provide information about their gender, age, and years of education. These data were used to see whether they varied systematically with the measures of psychological problems and attitudes about seeking behavior, as listed below.

Ethnic identity. The Multigroup Ethnic Identity Measure-Revised (MEIM-R; Phinney & Ong, 2007) was used to assess ethnic identity of the participants, including their practices, affirmation of typical cultural beliefs, sense of belonging, and commitment to their ethnic/cultural heritage (refer to Table 2 for descriptive results and reliability). It contains 6 items (3 assessing exploration, 3 assessing commitment), that were adapted from The Multigroup Ethnic Identity Measure by Phinney (1992), such as “I have a strong sense of belonging to my own ethnic group” and “I understand pretty well what my ethnic group membership means to me”. The response options are on a 5-point scale; from *strongly disagree* (1) to *strongly agree* (5), with 3 as a neutral position. The measure also asks about generation status in the U.S., and the culture/ethnicity of the participant, their parents, and their grandparents. It also inquires about the first language that is spoken in the participant’s home.

Factor analysis of participant data established two components (commitment and exploration) among the Middle Eastern college students and African American college students. However, it only established one component among the Caucasian college students, indicating that this measure might not capture ethnic identity among majority individuals as it is intended to measure. The measure had good internal consistency among the entire sample in this study ($\alpha =$

.89 total, $\alpha = .84$ for commitment, $\alpha = .87$ for exploration). More specifically, data from Middle Eastern college students had Cronbach's alpha coefficient of .84 ($\alpha = .82$ for commitment, $\alpha = .87$ for exploration), data from African American college students had Cronbach's alpha coefficient of .85 ($\alpha = .78$ for commitment, $\alpha = .88$ for exploration), and data from Caucasian students had Cronbach's alpha coefficient of .89 ($\alpha = .86$ for commitment, $\alpha = .84$ for exploration).

Negative attitudes toward seeking mental health services. Individual's level of openness to seeking treatment for emotional problems and their sense of value and need for seeking psychological treatment was measured with the Attitude Toward Seeking Professional Psychological Help Scale – Short Form (ATSPPH-SF; Fischer & Farina, 1995). The 10-item questionnaire is based on the original 29-item version developed by Fischer & Turner (1970) (see Table 2 for descriptive statistics and reliability from each group). It includes items such as “I would obtain professional help if I had severe emotional problems” and “Psychotherapy would not have value for me”. The response options are on a 4-point scale; from *strongly disagree* (0) to *strongly agree* (3). Higher scores on this measure indicate more positive treatment attitudes, which Elhai, Schweinle, & Anderson (2007) found it to be associated with less treatment-related stigma, and greater intentions to seek treatment in the future. The measure was related to the recent use of psychological treatment and recent treatment intensity (e.g. visit counts) (Elhai, Schweinle, & Anderson, 2007).

The measure had acceptable internal consistency among the participants in this study ($\alpha = .73$). More specifically, data from Middle Eastern college students had Cronbach's alpha coefficient of .66, African American college students responses had Cronbach's alpha coefficient of .75, and the data from Caucasian college students had Cronbach's alpha coefficient of .77.

Given the lower alpha from the responses from the Middle Eastern college students, items on the ATSPPH-SF were further analyzed to determine whether a particular item was not understood well within this population. Item four “*A person who copes without seeing professional help is admirable*” had low inter-item correlations with most items, correlations ranging from -.19 to .27. Moreover, Cronbach’s Alpha increased slightly if (.69) Item 4 was deleted from the measure. After reviewing this item, it is possible that the Middle Eastern college students did not fully understand the question, or had a different way of interpreting the item.

Depression. The Center for Epidemiologic Studies-Depression Scale (CES-D) was used to measure symptoms of depression over the previous week (see Table 2 for descriptive statistics and reliability from each group). The instrument includes 20 items, with response options on a 4-point scale, from *rarely or none of the time* (1) to *most or all of the time* (4). The items are statements about feelings or behaviors related to depression, such as “I felt sad” and “My sleep was restless.” Positive items are reversed scored, with overall scores indicating the presence of more symptoms of depression. The CES-D items were selected from a pool of items from previously validated depression scales (e.g. Beck, Ward, Mendelson, Mock, & Erbaugh, 1961; Dahlstrom & Welsh, 1960; Gardner, 1968; Raskin, Schulterbrandt, Reatig, & McKeon, 1969; Zung, 1965). The CES-D is one of the most widely used instruments to screen for depression. It has been used with persons of many heritages and cultures in the U.S. as well as other countries. There is evidence that different individuals can manifest different types of symptoms. For example, persons of lower socioeconomic status and individuals from minority cultures in America tend to report more physical symptoms, whereas people of higher socioeconomic status tend to report more affective symptoms.

The measure had good internal consistency among the participants in this study ($\alpha = .89$). More specifically, the data from Middle Eastern college students had Cronbach's alpha coefficient of .89, the data from African American college students had Cronbach's alpha coefficient of .86, and the data from Caucasian college students had Cronbach's alpha coefficient of .91.

Social desirability. The Marlowe-Crowne Social Desirability Scale (MC-SDS; Crowne & Marlowe, 1960) was used to measure respondents' tendency to present themselves in a more positive light than reality would indicate, in order to manage how they are perceived by others (see Table 2 for descriptive statistics and reliability from each group). The purpose of this instrument is to allow deliberate consideration of the extent to which participant responses on other measures are influenced by a desire to be perceived very positively. Also, previous research on social desirability has found significant cultural differences in response bias that may be attributed to differences in the dominated cultural dimensions of people's country of origin (Middleton & Jones, 2000). We used the 15-item version that was adapted from 33 items that constitute the final form of the MC-SDS. Examples of item included in the measure are "I never hesitate to go out of my way to help someone in trouble" and "I like to gossip at times". The response options are on a 7-point scale, from *completely false* (1) to *completely true* (7), with 4 as a neutral position.

MC-SDS's internal consistency as observed among the participants in this study was .62, which is in the questionable range. However, this could be due to the nature of the measure and the items that it contains. This instrument was used to account for the relative influence of social desirability on student responses, if it did vary systematically with their depression scores or any other of the central measures of this study, e.g. ethnic identity, help-seeking attitudes. Thus, even

with lower reliability that is ideal, a decision was made to keep the data from this instrument in the study as a possible covariate, with caution in its use. More specifically, responses from Middle Eastern college students had Cronbach's alpha coefficient of .73, responses from African American college students had Cronbach's alpha coefficient of .58, and responses from Caucasian college students had Cronbach's alpha coefficient of .54. Further investigation of the African American and Caucasian groups indicates that deleting Item 1 "*I never hesitate to go out of my way to help someone in trouble*" would raise Cronbach's alpha coefficient to .60 and .59, respectively. It is possible that this generation college students of African American and Caucasian background do not place as much emphasis on being presented socially desirable.

Hypotheses and Data Analyses

Hypothesis one. Middle Eastern descent college students and African American college students will have higher degrees of negative attitudes and stigma toward seeking mental health services than Caucasian American students. Previous studies have suggested that persons of minority groups are more inclined to have negative views about psychological treatment and toward the individuals that seek treatment to reduce or eliminate their mental illnesses. Middle Eastern descent individuals suffering from psychological problems have a tendency to be ashamed of seeing a mental health professional or admit to others that they have a problem. They also feel less favorably about people suffering from mental disorders (Erickson & Al-Timimi, 2001; Hamdan-Mansour & Wardam, 2009; Al-Darmaki & Sayed, 2009). Moreover, African Americans' negative attitudes regarding help-seeking behaviors have caused them to underutilize psychological services and seek mental health treatment less often than Caucasian Americans (Buser, 2009; Gray, 2010).

Hypothesis two. Higher levels of depression symptoms will be found among Middle Eastern descent and African American students than will be observed in Caucasian college students. This effect could be mediated by greater negative attitudes toward seeking mental health services. Figure 1 illustrates the hypothesized model. Previous studies have suggested that Middle Eastern descent individuals in the United States are at increased risk of being targets of prejudice and discrimination (Awad, 2010; Cavanaugh 2004; Gandara, 2006), which has been found to be related to psychological and physiological illnesses (Williams & Mohammed, 2009). Although one study of Arab Americans found significantly higher levels of depression compared to standardized samples and community samples of other minority groups (Amer & Hovey, 2012), to date, no published study has investigated prevalence of depression in the Middle Eastern population in U.S.

Hypothesis three. Middle Eastern descent college students and African American college students who are high on ethnic identity will report fewer symptoms of depression, and students low on ethnic identity will report greater symptoms of depression. Having a sense of pride in one's ethnicity and culture could increase positive feelings and greater self-esteem in minority groups. Moreover, ethnic identity can buffer Middle Eastern descent students and African American students from stress caused by discrimination, which could lead to depression and other mental health problems.

CHAPTER 3 RESULTS

Preliminary Analysis

Statistical analyses were conducted on the data obtained from the 324 participants to test the three original hypotheses that were derived from the essential questions of the study. Prior to those analyses, however, preliminary examinations of the data were conducted, and descriptive statistics calculated for every central variable, for each ethnic group. Means and standard deviations of all measures by ethnic group and gender are presented in Table 3, Table 4, Table 5, and Table 6.

Several of the demographic and cultural characteristics were analyzed to check for any significant correlations with depression, ethnicity, ethnic identity, and attitudes toward seeking mental health services. Among these were gender, age, years of obtained education, number of hours working per week if currently employed, household income, generation status, language spoken at home, and frequency of visiting one's Middle Eastern homeland. It was important to consider these variables to determine whether they should be included in subsequent analyses.

Table 7 contains correlations for central variables. Among the Middle Eastern American sample, gender was negatively correlated with negative attitudes regarding seeking mental health services (ATSPPH-SF) ($r = -.225, p < .05$), as Middle Eastern men endorsed more negative attitudes than Middle Eastern women. In the African American sample of college students, older students were significantly higher on ethnic identity (MEIM-R) ($r = .276, p < .01$), and younger students had greater negative attitudes toward seeking mental health services (ATSPPH-SF) ($r = -.235, p < .05$). Moreover, gender was negatively correlated with negative attitudes about seeking mental health services ($r = -.329, p < .01$), indicating that African American men endorsed more

negative attitudes than African American women. Lastly, among the Caucasian college students, there was a negative correlation between age and attitudes toward seeking mental health services (ATSPPH-SF) ($r = -.296, p < .01$), indicating that younger students had greater negative attitudes toward help-seeking behavior. There was a significant correlation between gender and attitudes toward seeking mental health services ($r = -.271, p < .01$) and depression symptoms (CES-D) ($r = .197, p < .05$), indicating that Caucasian men endorsed more negative attitudes about seeking mental health services than Caucasian women, and Caucasian women endorsed more symptoms of depression than Caucasian men.

Ethnicity and Attitudes Toward Seeking Mental Health Services

A one-way analysis of covariance (ANCOVA) was conducted to see whether Middle Eastern, African American, and Caucasian college students differ significantly on negative attitudes regarding seeking mental health services, controlling for age, gender, and social desirability. Results indicate that the homogeneity-of-regression assumption with regard to the interaction between the age and ethnicity in the prediction of attitudes toward seeking mental health services was met. The interaction was not significant, $F(2, 318) = .706, p = .494$. Also, the assumption of homogeneity of variance for the one-way ANCOVA was met, $F(2, 321) = .267, p = .766$.

Results indicate that the homogeneity-of-regression assumption with regard to the interaction between gender and ethnicity in the prediction of attitudes toward seeking mental health services was met, $F(2, 318) = .479, p = .620$. Also, the assumption of homogeneity of variance for the one-way ANCOVA was met, $F(2, 321) = .744, p = .476$.

Results indicate that the homogeneity-of-regression assumption with regard to the interaction between social desirability and ethnicity in the prediction of attitudes toward seeking

mental health services was met, $F(2, 317) = .898$ $p = .408$. Also, the assumption of homogeneity of variance for the one-way ANCOVA was met, $F(2, 320) = 1.274$ $p = .281$.

The results of the analysis indicated a statistically main effect of ethnicity on negative attitudes toward seeking mental health services after controlling for social desirability, age, and gender, $F(2, 317) = 3.471$, $p = .032$ (refer to Table 11). Follow-up tests were conducted to evaluate pairwise differences among the adjusted means for ethnicity. The results from the three pairwise comparisons showed that Middle Eastern students ($M = 12.35$) had significantly higher scores on attitudes toward seeking mental health services than Caucasian ($M = 10.87$) students (Standard Error = .64, $p = .009$). Caucasian student did not differ on their scores on attitudes toward seeking mental health services than African American ($M = 11.24$) students (Standard Error = .61, $p = .25$). Middle Eastern student did not differ on their scores on attitudes toward seeking mental health services than African American students (Standard Error = .67, $p = .15$) (see Table 12).

Group Differences on Depression Symptoms

Percentages of students within ethnic groups who had a total CES-D score of 16 or more were calculated. Results showed that 26% of the Middle Eastern American college students, 33% of the African American college students, and 46% of the Caucasian college students had scores greater than or equal to 16 on the CES-D. ANCOVA was used to test whether higher levels of depression symptoms were found among Middle Eastern and African American students than were observed in Caucasian students, controlling for social desirability and gender. No significant differences were found between the groups on CES-D scores, $F(2, 318) = .974$, $p = .379$ (refer to Table 13). Due to these results, the planned mediator analysis was not calculated to

assess negative attitudes toward seeking psychological help when predicting depression in these groups.

Linear regression analyses were used to determine the relationship between negative attitudes toward seeking mental health services and symptoms of depression in each ethnic group. Gender was entered into the model on the first step of each regression. Ethnicity served as the independent variable with scores from the CES-D serving as the dependent variable. Results indicated that greater negative attitudes about seeking mental health services in Middle Eastern student was associated with greater endorsement of symptoms of depression, $R^2 = .077$, $F(2, 85) = 3.56$, $t = 2.371$, $p = .033$ (see Table 14). The relationship was not seen among the African American, $R^2 = .031$, $F(2, 101) = 1.610$, $p = .205$, or the Caucasian students, $R^2 = .043$, $F(2, 129) = 2.864$, $p = .061$ (see Table 15 and Table 16).

Ethnic Identity and Symptoms of Depression

A linear regression was conducted to see whether Middle Eastern college students high on ethnic identity (MEIM-R) reported fewer symptoms of depression (CES-D), and students low on ethnic identity reported greater symptoms of depression. On the first step of regression age, gender, and social desirability were entered into the model. Ethnic identity served as the independent variable with scores from CES-D serving as the dependent variable. The non-significant results indicated that there was no relationship between participants' endorsed symptoms of depression and their level of ethnic identity, $R^2 = .026$, $F(4, 82) = .557$, $t = -1.91$, $p = .694$ (see Table 16).

A linear regression was conducted to see whether African American college students high on ethnic identity would report fewer symptoms of depression, and students low on ethnic

identity would report greater symptoms of depression. On the first step of regression age, gender, and social desirability were entered into the model. Ethnic identity served as the independent variable with scores from CES-D serving as the dependent variable. The non-significant results indicated no relationship between the African American students' depressive symptoms and ethnic identity, $R^2 = .08$, $F(4, 99) = 2.147$, $t = -1.91$, $p = .081$ (see Table 17).

A linear regression was conducted to see whether Caucasian college students high on ethnic identity reported fewer symptoms of depression, and students low on ethnic identity would report greater symptoms of depression. On the first step of regression age, gender, and social desirability were entered into the model. Ethnic identity served as the independent variable with scores from CES-D serving as the dependent variable. Interestingly, the results were statistically significant, indicating that Caucasian college students with higher ethnic identity reported lower endorsement of depressive symptoms, with ethnic identity accounting for 8.3% of the variance in depression scores, $R^2 = .083$, $F(4, 127) = 2.87$, $t = -2.328$, $p = .026$ (refer to Table 18).

An additional analysis was conducted to evaluate whether the three ethnic groups significantly differed on the MEIM-R measure. The one-way ANCOVA test showed the three ethnic groups differed on their level of ethnic identity when controlling for social desirability and age, $F(2, 318) = 23.809$, $p = .000$. Pairwise comparisons indicated that Middle Eastern ($M = 23.84$, $SD = .50$) and African American ($M = 22.32$, $SD = .46$) college students were higher on ethnic identity than Caucasian ($M = 19.50$, $SD = .41$) college students, $p = .000$, $p = .000$, respectively. In addition, Middle Eastern students were higher on ethnic identity than African American students, $p = .019$ (see Table 19).

CHAPTER 4 DISCUSSION

This study assessed the impact of negative attitudes toward seeking mental health services and ethnic identity on depression symptoms in Middle Eastern American college students, in comparison to African American and Caucasian college students.

Main Results

Depression. Although it was hypothesized that minority college students would have higher levels of depression symptoms than Caucasian students, no significant differences were found among these groups. Therefore, the original hypothesis regarding negative attitudes about seeking mental health services mediating the relationship between ethnicity and depression could not be tested. This unexpected result could be due to the sample size, the nature of the university, or not adequately accounting for the effects of other variables that could impact depression symptoms in minority students. It is also possible that our sample is shedding light on a rise in depression specific to Caucasian college students.

Further analysis indicated a relationship between negative attitudes about seeking psychological help and level of depression in the Middle Eastern participants, such that people with stronger negative attitudes reported more depression symptoms. It could be that individuals who have highly negative attitudes toward psychological disorders and receiving mental health services are less likely to seek help in order to avoid the label of mental illness and the stigma they associate with such problems. Furthermore, such individuals tend to lack trust in the effectiveness of psychological services and see little value in investing their time in such treatments (Komiya, Good, & Sherrod, 2000). Their low likelihood of seeking help from mental health care professionals could prevent these individuals from treating their psychological

disorders, which could lead to increased severity in mental illness. It would be essential for future research to assess frequency of service use in the Middle Eastern population to evaluate whether the relationship between negative attitudes toward seeking mental health services influences lack of service use, which in turn influences depression.

Overall, 42% of the entire sample reported being high on symptoms of depression during the past two weeks, which is consistent with the 2009 ACHA-NCHA survey, as 43% of that representative college sample acknowledged feeling so depressed at least once in the past school year to the degree that it was difficult for them to function. Although our results project rates greatly higher than desired for our nation's college students' mental health, it sheds light on an important issue that has continued to be neglected by policy makers. When we think about college students, we tend to picture young adults in a positive environment dedicated to learning and growth, free of significant problems or worries. Although college students are resilient in many aspects, their mental health is an essential contributor to their academic performance. Depression is a disorder that impacts mood, level of interest in pleasant activities, motivation, concentration, and energy level. Consequently, college students suffering from depression are likely to have difficulty concentrating on their coursework. They will have less motivation and energy to complete their work and perform well in their courses. Ultimately, they will find it hard to perform well academically. It is possible that many mistake their depression for lack of motivation or interest for school and lack of energy and concentration, which could cause them to not address their depression properly.

Attitudes toward help-seeking behavior. Previous studies have found that persons of minority groups are more inclined than nonminority individuals to have negative views about psychological treatment and the individuals who seek such treatment (Buser, 2009, Nickerson,

Helms, & Terrel, 1994, Snowden, 2001). As expected, we found that Middle Eastern college students had more negative attitudes toward seeking mental health services than African American and Caucasian students. Middle Eastern descent individuals suffering from psychological problems have a tendency to be ashamed to admit to others that they have a problem or see a mental health professional (Erickson & Al-Timimi, 2001). They also feel less favorable toward people suffering from mental disorders (Hamdan-Mansour & Wardam, 2009; Al-Darmaki & Sayed, 2009). Their negative attitudes about help-seeking behavior most likely cause them to underutilize psychological services, thus seeking mental health treatment less often than African Americans and Caucasians. This is a trend that has been seen in African Americans and other minority groups who have negative attitudes concerning seeking mental health services (Buser, 2009; Gray, 2010). However, in contrast to most other studies, we found that African American and Caucasian college students were similar in their attitudes on mental health services. This could be a sample characteristic unique to Wayne State University, but also a reflection of African American students being enrolled in a psychology course. Previous research indicates a lack of trust in efficacy of psychological treatment, rather than fear of stigma and shame, among the African American culture (Nickerson, Helms, & Terrel, 1994; Snowden, 2001). By exposure to psychology courses, one could assume a reduction in people's ambiguity about whether or not such services really work. This could help improve negative attitudes about seeking psychological services.

Depression and ethnic identity. As expected, we found that college students of Middle Eastern and African American descent have stronger ethnic identity than Caucasian college students. We had predicted that the Middle Eastern descent and African American college students who were strong in their ethnic identity would report fewer symptoms of depression,

compared to students weak in their ethnic identity. This hypothesis was based on the idea that having pride in one's ethnicity and culture could increase positive feelings and self-esteem in minority groups, and this, in turn, would promote better mental health (McDermott & Samson, 2005; Gray, Carter, & Silverman, 2011). Positive ethnic identity has been shown to buffer minority personal from stress caused by discrimination, which otherwise could lead to depression and other mental health problems (Torres, Yznaga, & Moore, 2011; Williams et al., 2012). However, in our study we found stronger ethnic identity did not significantly predict symptoms of depression in students from Middle Eastern and African American descent, after controlling for effects of gender, age, and social desirability. These results are inconsistent with previous findings, as research has shown a significant negative relationship between ethnic identity and depression with various minority groups (Gray, Carter, & Silverman, 2011; McDermott & Samson, 2005; Mossakowski, 2003; Sparrold, 2003; Torres, Yznaga & Moore, 2011; Umaña-Taylor & Updegraff, 2007; Williams et al., 2012).

An examination of the zip code of the Middle Eastern students showed that 63% of the sample resides in Dearborn, a nearby city that has the highest population of Arab Americans in Michigan. It is possible that the Middle Eastern college students residing in an ethnic dense neighborhood are less likely to experience discrimination, reducing the importance of ethnic identity on mental health well being. Furthermore, cultural and contextual factors could be impacting these findings, such as preferring and relying on nonpsychological help for dealing with stress and mental illness (e.g., familial members, close friends, and community members). The non-significant results could also be explained by factors that we did not measure. For example, it is possible that by controlling for important variables such as perceived discrimination or acculturation the relationship between ethnic identity and depression would be

significant among these two minority groups. Interestingly, the expected relationship was found in the Caucasian sample, indicating that Caucasian students with stronger ethnic identity reported fewer depressive symptoms. These significant results are inconsistent with previous findings (Williams et al., 2012). It is possible that Caucasian students who attend diverse universities, such as Wayne State University, are more aware of their ethnic identity, making it an important factor in predicting their psychological well-being.

Gender. Although the three ethnic groups did not significantly differ on depressive symptoms, Caucasian female students reported significantly higher symptoms of depression than male students. Our result is consistent with previous reports, as women tend to endorse higher rates of depression than men (Piccinelli & Wilkinson, 2000). In addition, male college students had greater negative attitudes about seeking mental health services than female college students. This suggests that men are less apt to seek psychological help if needed. This is likely due to their negative attitudes about openness concerning psychological problems and could also indicate that men are more likely to under-report depression symptoms if they have them. These results raise the issue of whether male college students suffering from depression and other psychological problems will seek and receive psychological help they need to alleviate their suffering and improve their functioning. It also reflects a social issue, indicating that mental health stigma continues to be passed down socially to males in the American society.

Limitations

Despite some important findings, the present study is limited in ways common to self-report research. First, the data were correlational and correlations only suggest possible relationships versus cause-and-effect type of interpretations. Future studies may want to look at

statistical procedures that are not correlational in nature in order to help identify variables that do have a direct effect on the attitudes toward seeking mental health services, ethnic identity, and depression in minority samples. In addition, it would be important to measure additional variables, such as acculturation, perceived discrimination, level of religiosity, actual help-seeking behavior, and the intention to use psychological services, or the relationship between actual help-seeking behavior and the attitudes toward seeking psychological services. Furthermore, future studies could experimentally account for negative attitudes about seeking mental health services, ethnic identity, or the variables that impact them to clarify the causal relationship among these events or suggest interventions to modify them. One way this could be done is through longitudinal research; providing students with interventions geared towards increasing ethnic identity or reducing stigma towards mental health services to predict reduction in symptoms of depression.

Second, the participants in this study were from a public university that is known for its diverse student body (48% White, 32% African American, 6% Middle Eastern, 3.5% Hispanic; enrollment during Winter of 2010); therefore, caution should be taken when generalizing results to other minority college students, such as African American college students from predominantly White universities, predominantly African American universities, and also students from private universities, or community colleges. Although there is a paucity of research on the mental health of Middle Eastern Americans, the sample from this study was a college sample, and the results may therefore vary with a client sample, such as older individuals or children. It is essential for future research to include nonstudent populations in order to better understand the mental health of Middle Eastern Americans. Furthermore, these findings were derived from a single state university located in an urban area of the midwestern United States.

The university culture, the availability and promotion of psychological services, and counseling center outreach activities might have been confounding factors that we could not account for.

Although the measures we used in this study were previously used to assess minority individuals, such as African Americans, Asian Americans, and Latino/Hispanic Americans, the validity and reliability of these scales have not been fully tested across a variety of ethnic groups. In addition, the internal consistency of the ATSPPH-SF measure was lower than desired among the Middle Eastern American college students, while the internal consistency of the MC-SDS suggests the possibility of not being a valid measure for college students of African American and Caucasian groups. Although both ATSPPH-SF and MC-SDS are attitude measures and therefore a lower internal consistency is not unusual, future studies should investigate these variables by using different sound measures.

Fourth, students participated in this study in order to fulfill a requirement for a psychology course, which may have resulted in a biased sample with regard to attitudes toward people with psychological disorders. This indicates that they were likely to have some level of exposure to information about psychological disorders or psychological services that may not be true of other students. Greater knowledge of these topics could change attitudes that hinder recognition and appropriate help-seeking behavior. Therefore, our sample of students does not represent the greater student body of the university. In the future, studies that investigate mental health of college students should attempt to recruit participants from various academic backgrounds aside from psychology. This would ensure a better representative of college students in America, and would also indicate whether college students from specific majors differ in their need for mental health services.

Lastly, the present study grouped all Middle Eastern American students together into one category. As the label “Middle Eastern” refers to people who are from, or whose parents or grandparents originated in a variety of countries with possible different cultural values and practices (e.g., Iran, Turkey, Lebanon, Egypt), creating one group labeled “Middle Eastern American” is likely to obscure important variability within the group. Because the Middle East includes many different races, religions, and cultures, future research should evaluate regional differences in this population.

Implications

Attitudes toward seeking mental health services and ethnic identity among Middle Eastern and African American college students have important implications for policy makers, college counseling center staff and therapists, and parents. The findings from this study emphasize the importance of increasing college students’ awareness and knowledge of symptoms of depression and other psychological disorders. They also promote the importance of knowing when to seek services to those policy makers who plan to fund psychological services for students. This can be done through better educating students about psychological problems and advertising where to get help on campus during freshman and new student orientation. As college students transition from young adults into adulthood, it increasingly becomes their responsibility to evaluate and be aware of their health and be knowledgeable of the necessary steps one must take to insure psychological well being. Colleges and universities could educate their students about the impact of stress on mental health, and how depression could affect their academic performance.

Targeting groups of students at risk for psychological disorders, especially those that are least likely to seek help, such as men and minority students, is another way universities and policy makers could address this problem. This could be done by reaching out to students organizations geared towards minorities. Colleges and universities can contribute further to students' well being by providing healthy eating options at the university's cafeterias and by forming programs at their recreation centers to promote regular exercise. Several studies have found that regular physical exercise and healthy eating can help reduce depression and anxiety (Carek, Laibstain, & Carek, 2011; Jacka et al., 2010; Kuczmarski et al., 2010; Ströhle, 2009).

Policy makers should implement programs that educate parents of high school and college students about the possible stress of college life. High schools could offer classes geared towards the transition to college. Parents can prepare their teenagers for the transition to college by openly discussing their children's concerns and fears, and helping them learn ways to reduce stress, cope with peer pressure, and seek social support. Furthermore, parents can have regular conversations with their college students about staying healthy, using support services on campus, staying alert to stress, anxiety and negative emotions. Parents who suspect that their college student is struggling can encourage their children to connect with a mental health professional on campus.

Intervention-prevention programs built into schools that work toward reducing mental health stigma from an early age could help reduce negative attitudes about seeking services. Normalizing the idea of seeing a mental health professional to reduce bad mood or anxiety; openly talking about various psychological disorders such as Post Traumatic Stress Disorder, Generalized Anxiety Disorder, Major Depression, Eating Disorders, etc.; and discussing what types of help mental health professionals can provide could reduce stigma and negative attitudes

and address any ambivalence students could have about the effectiveness of psychological treatment. Mental health professionals should find ways to educate the public about warning signs for psychological problems in college students that indicate possible need to be treated by a mental health professional. Mental health professionals should also communicate to the public about the effectiveness of mental health treatment in order to improve expectations about the benefits of psychological services. By reducing people's ambiguity about whether or not such services really work, we would be able to increase help seeking behavior in the public.

Lastly, the association between ethnic identity and improved psychological well-being for minorities is something important for college and university counseling centers to take into account when working with minority and multi-ethnic clients. Ethnic identity not only helps improve self-esteem, but it also serves as a protective factor against the negative effects of racial discrimination. Mental health professionals should always assess students' level of ethnic identity. Although this may not be the case with every minority client, having a poorly developed ethnic identity, or having conscious or unconscious negative attitudes toward one's ethnicity and culture are risk factors that could be addressed in treatment. Clinicians should also find ways to educate themselves about different cultures, especially if a certain population is prevalent in their area. Furthermore, clinicians could promote exploration and growth of ethnic identity by encouraging ethnic pride, discussing what clients find positive about their culture, what they enjoy about their ethnic group, and ways to get involved in traditional ethnic activities.

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TABLES AND FIGURES

Table 1

Participant Characteristics by Ethnicity

	Middle Eastern	African American	Caucasian
<i>N</i> (female)	88 (53)	104 (67)	132 (82)
Mean Age	21.09	21.42	20.64
Years of Education	14.60	14.23	13.99
Immigration Status			
% Immigrants	29.5%	2.9%	2.3%
% First Generation	55.7%	0.0%	8.3%
% Second Generation	9.1%	5.8%	15.2%
% Third Generation	1.1%	91.3%	74.3%
Language Spoken at Home			
Speak English and Arabic at Home	39.8%	NA	NA
Speak only English at Home	22.7%	NA	NA
Speak only Arabic at Home	35.2%	NA	NA
Frequency Visiting Homeland			
At Least Every Other Year	14.8%	NA	NA
Once 4 to 5 Years	15.9%	NA	NA
Once 8 to 11 Years	28.4%	NA	NA
Never	33.0%	NA	NA
Reason for Move to America			
Financial/Employment	36.4%	NA	NA
Political/War	22.7%	NA	NA
Religious Freedom	3.4%	NA	NA
Other	30.7%	NA	NA

Table 2

Means and Standard Deviations of Measures

	MEIM-R	ATSPPH-SF	CES-D	MC-SDS
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Middle Eastern	23.89 (3.81)	12.35 (4.58)	15.60 (1.13)	61.59 (12.97)
African American	22.29 (4.21)	11.24 (5.10)	15.56 (9.42)	59.78 (10.48)
Caucasian	19.48 (5.49)	10.87 (5.17)	17.24 (11.14)	60.05 (9.54)

Note. MEIM-R = Multigroup Ethnic Identity Measure; ATSPPH-SF = Attitude

Toward Seeking Professional Psychological Help Scale – Short Form; CES-D =

Center for Epidemiologic Studies-Depression Scale; MC-SDS = Marlowe-Crowne

Social Desirability Scale.

Table 3

Means and Standard Deviation of MEIM-R by Ethnic Group x Gender

	Middle Eastern M (SD)	African American M (SD)	Caucasian American M (SD)
Male	24.26 (3.54)	23.05 (3.98)	20.28 (5.71)
Female	23.63 (3.95)	21.87 (4.30)	18.99 (5.32)
Total	23.89 (3.81)	22.29 (4.21)	19.48 (5.49)

Note. MEIM-R = Multigroup Ethnic Identity Measure-Revised

Table 4

Means and Standard Deviation of ATSPPH-SF by Ethnic Group x Gender

	Middle Eastern M (SD)	African American M (SD)	Caucasian American M (SD)
Male	13.63 (4.50)	13.49 (5.44)	12.66 (5.56)
Female	11.57 (4.41)	10.00 (4.48)	9.78 (4.61)
Total	12.38 (4.56)	11.24 (5.10)	10.87 (5.17)

Note. ATSPPH-SF = Attitude Toward Seeking Professional Psychological Help Scale – Short Form

Table 5

Means and Standard Deviation of CES-D by Ethnic Group x Gender

	Middle Eastern M (SD)	African American M (SD)	Caucasian American M (SD)
Male	13.94 (10.57)	15.11 (7.82)	14.44 (9.62)
Female	16.70 (10.64)	15.81 (10.20)	18.95 (11.71)
Total	15.60 (10.64)	15.56 (9.42)	17.24 (11.14)

Note. CES-D = Center for Epidemiologic Studies-Depression Scale

Table 6

Means and Standard Deviation of MC-SDS by Ethnic Group x Gender

	Middle Eastern M (SD)	African American M (SD)	Caucasian American M (SD)
Male	64.50 (10.58)	61.38 (9.95)	60.58 (9.73)
Female	59.83 (14.42)	58.90 (10.73)	59.73 (9.47)
Total	61.59 (12.97)	59.78 (10.48)	60.05 (9.54)

Note. MC-SDS = Marlowe-Crowne Social Desirability Scale.

Table 7

Overall Correlations Among Central Variables

Variables	1	2	3	4	5	6
Ethnicity	—					
Gender	.03	—				
MEIM-R	.03	-.11	—			
ATSPPH-SF	.06	-.28**	-.06	—		
CES-D	.02	.13*	-.20**	.09	—	
MC-SDS	.06	-.11*	.14*	-.11*	-.05	—

Note. * $p < .01$, ** $p < .001$

Table 8

Correlations Among Central Variables Among Middle Eastern College Students

Variables	1	2	3	4	5
Gender	—				
MEIM-R	-.08	—			
ATSPPH-SF	-.23*	-.06	—		
CES-D	.13	-.05	.21*	—	
MC-SDS	-.18	.17	-.25*	-.12	—

Note. * $p < .01$, ** $p < .001$

Table 9

Correlations Among Central Variables Among African American College Students

Variables	1	2	3	4	5
Gender	—				
MEIM-R	-.14	—			
ATSPPH-SF	-.33**	-.21*	—		
CES-D	.04	-.23*	.15	—	
MC-SDS	-.11	.12	-.13	.04	—

Note. * $p \leq .05$, ** $p \leq .01$

Table 10

Correlations Among Central Variables Among Caucasian College Students

Variables	1	2	3	4	5
Gender	—				
MEIM-R	-.12	—			
ATSPPH-SF	-.27*	-.06	—		
CES-D	.20*	-.23*	.01	—	
MC-SDS	-.04	.12	-.01	-.06	—

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

Table 11

Analysis of Co-Variance for Attitude Toward Seeking Mental Health Services by Ethnicity

Source	SS	df	MS	F
Age	422.44	1	422.44	19.81**
Gender	684.15	1	684.15	32.08**
Social Desirability	117.64	1	117.64	5.52*
Ethnicity	148.05	2	148.05	3.47*
Error	6760.84	317	21.33	

Note. * $p \leq .05$; ** $p \leq .001$

Table 12

Pairwise Comparisons of Attitude Toward Seeking Mental Health Services by Ethnicity

Group	Mean	Adjusted Mean	Adjusted Mean Differences ($X'_i - X'_k$)		
			1.	2.	3.
1. Middle Eastern	12.35	12.39	_____		
2. African American	11.24	11.41	.15	_____	
3. Caucasian	10.87	10.71	.009	.25	_____

Table 13

Analysis of Co-Variance for Depression by Ethnicity

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Gender	548.60	1	548.60	5.04*
Social Desirability	46.61	1	46.61	.428
Ethnicity	211.92	2	211.92	.97
Error	34595.44	318	108.79	

Note. * $p \leq .05$

Table 14

Negative Attitudes Toward Seeking Mental Health Services related to Symptoms of Depression in Middle Eastern College Students

Variable	Model 1			Model 2			Zero-Order <i>r</i>
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>ATSPPH</i>
Gender	2.76	2.31	.13	3.99	2.31	.18	-.225*
ATSPPH				.59	.25	.25*	
R^2		.02			.08*		
<i>F</i>		1.42			3.56*		

Note. * $p < .05$.

Table 15

Negative Attitudes Toward Seeking Mental Health Services related to Symptoms of Depression in African American College Students

Variable	Model 1			Model 2			Zero-Order <i>r</i>
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>ATSPPH</i>
Gender	.70	1.94	.04	1.87	2.03	.10	-.329**
ATSPPH				.34	.19	.18	
R^2		.001			.031		
<i>F</i>		.13			1.61		

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

Table 16

Negative Attitudes Toward Seeking Mental Health Services related to Symptoms of Depression in Caucasian College Students

Variable	Model 1			Model 2			<i>r</i>
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	
Gender	4.51	1.97	.20	4.90	2.05	.21	-.271**
ATSPPH				.14	.19	.06	
R^2		.039			.043		
<i>F</i>		5.26*			2.86		

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

Table 17

Ethnic Identity related to Symptoms of Depression in Middle Eastern College Students

Predictor	Depression Symptoms						
	R^2	ΔR^2	B	S.E. B	Beta	t	p
Step 1	.03	-.01					
Age			.16	.40	.05	.41	.68
Gender			2.36	2.41	.11	.98	.22
Social Desirability			-.08	.09	-.09	-.85	.40
Step 2	.03	-.02					
Ethnic Identity			-.07	.31	-.02	-.21	.83

Note. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table 18

Ethnic Identity related to Symptoms of Depression in African American College Students

Predictor	Depression Symptoms						
	R^2	ΔR^2	B	S.E. B	Beta	t	p
Step 1	.05	.02					
Age			-.59	.38	-.22	-2.13	.04
Gender			.49	1.93	.03	.03	.80
Social Desirability			.10	.09	.11	.12	.30
Step 2	.08	.04					
Ethnic Identity			-.43	.23	-.19	-.19	.06

Note. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table 19

Ethnic Identity related to Symptoms of Depression in Caucasian College Students

Predictor	Depression Symptoms						
	R^2	ΔR^2	B	S.E. B	Beta	t	p
Step 1	.04	.02					
Age			-.17	.31	-.05	-.55	.58
Gender			4.58	1.99	.20	2.30	.02
Social Desirability			-.05	.10	-.05	-.52	.61
Step 2	.08*	.05*					
Ethnic Identity			-.41	.18	-.20	-2.33	.021

Note. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Table 20

Analysis of Co-Variance for Ethnic Identity by Ethnicity

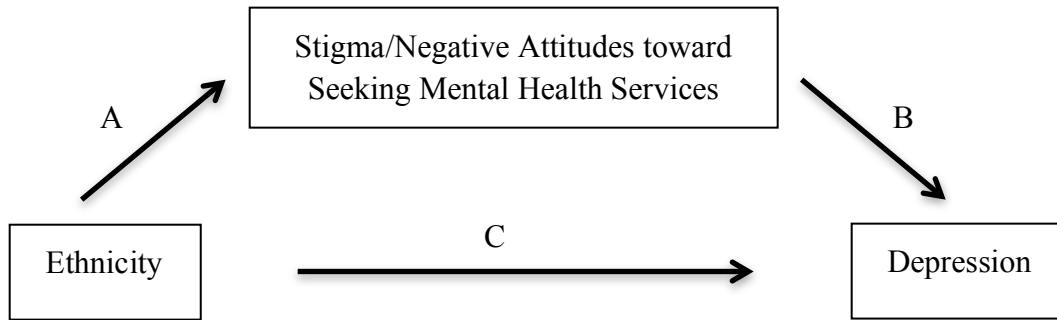
Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Age	106.18	1	106.18	4.96	.027
Social Desirability	88.25	1	88.25	4.12	.043
Ethnicity	1019.39	2	509.70	23.81	.000
Error	6807.52	318	21.41		

Table 21

Pairwise Comparisons of Ethnic Identity by Ethnicity

Group	Mean	Adjusted Mean	Adjusted Mean Differences ($X'_i - X'_k$)		
			1.	2.	3.
1. Middle Eastern	23.91	23.84	_____		
2. African American	22.29	22.24	.019	_____	
3. Caucasian	19.48	19.56	.000	.000	_____

Figure 1. Hypothesis 1: Relationship between Ethnicity and Depression, Mediated by Stigma and Negative Attitudes Toward Seeking Mental Health Services



ABSTRACT**ETHNICITY, CULTURE, AND MENTAL HEALTH AMONG COLLEGE STUDENTS
OF MIDDLE EASTERN HERITAGE**

by

HASTI ASHTIANI RAVEAU**December 2013****Advisor:** Dr. Rita Casey**Major:** Psychology (Clinical)**Degree:** Master of Arts

Depression is a significant mental health issue in American college students. However, as is the case for other minority students, this topic has been little studied in students of Middle Eastern background. Stigma and negative attitudes toward seeking mental health services are a big part of Middle Eastern culture, which reduces the chances that this population will seek treatment when they need it. In addition, it is important to study the relationship between ethnic identity and psychological functioning, because ethnic identity could serve as a protective factor against depression in persons of Middle Eastern descent. A strong cultural identity is thought to have that effect for persons of other minority groups in this country. The current study explored depression symptoms in Middle Eastern, African American, and Caucasian college students. No group differences were found in level of depression symptoms. As expected, Middle Eastern college students had more negative attitudes toward seeking mental health services than African American and Caucasian students. Among the African Americans and Caucasians, stronger ethnic identity was associated with lower presence of depression symptoms when controlling for gender, age, and social desirability; however, this relationship was not significant among the Middle Eastern and African American students. Research on minority college students could

provide greater insight into their current needs, allowing policy makers to implement appropriate interventions for minority individuals. These findings indicate that Middle Eastern students may have characteristics related to their mental health that are not well represented by most research in the more commonly studied ethnic groups among American college students.

AUTOBIOGRAPHICAL STATEMENT

Hasti Ashtiani Raveau was born on February 8th 1989, in Tehran, Iran. She moved to the United States of America at the age of 13 with her parents and younger brother. She attended Troy Athens High School and graduated in May of 2007. She entered Wayne State University as a full-time undergraduate student in August of 2007 and received the degree of Bachelor of Arts, Psychology Honors in May of 2011. During her time at WSU as an undergraduate student she conducted research in both Dr. Marjorie Beeghly and Dr. Annmarie Cano's laboratories. She gained several authorships on posters. She completed the undergraduate research training program at the Merrill-Palmer Skillman Institute under the mentorship of Dr. Marjorie Beeghly and Dr. Sarah Raz. She was the vice-president of Psi Chi Honors Society and completed her honors thesis on father involvement and child outcomes in African American families, with Dr. Beeghly as her advisor.

In 2011 she was accepted as a graduate student at the Wayne State University, where she majored in Clinical Psychology under the mentorship of Dr. Rita Casey. During her time in the program she has presented two papers at two international conferences and won an award for a first authored poster at the 2011 Graduate Poster Day. In addition to conducting her own master's thesis project, she has continued to work on an intervention study on military families, with Dr. Katherine Rosenblum from the University of Michigan as the PI of the study. She is currently the graduate research assistant of Dr. Erika Bocknek, working on various research projects on emotion regulation in toddlers and family processes.