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THE ROLE OF COMMUNITY INVOLVEMENT IN ETHNIC DISCRIMINATION
AND DEPRESSION SYMPTOMS AMONG ETHNIC MINORITY COLLEGE
STUDENTS

by

Jaclyn Pachicano, B.A.

A Thesis submitted to the Faculty of the Graduate School,
Marquette University,
in Partial Fulfillment of the Requirements for
the Degree of Master of Science

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ABSTRACT
THE ROLE OF COMMUNITY INVOLVEMENT IN ETHNIC DISCRIMINATION
AND DEPRESSION SYMPTOMS AMONG ETHNIC MINORITY COLLEGE
STUDENTS

Jaclyn Pachicano, B.A.

Marquette University, 2021

Over the past two decades, there has been an increase in racial and ethnic minorities attending college (Davis & Fry, 2019). Unfortunately, racial and ethnic minority students are at higher risk for depression symptoms and are less likely to seek out services to address these symptoms (Hope et al., 2018). A possible contributing factor to elevated depression symptoms in this population is exposure to racial and ethnic discrimination, which has repeatedly been linked to increased depression symptoms (Araújo & Borrell, 2006; Chou et al., 2012). Previous literature suggests that community involvement may serve as a buffer or a pathway for the negative consequences of experiences of discrimination given its connection to positive social and mental health outcomes (Earnshaw et al., 2016; Hull et al., 2008; Solomon et al., 1987). The purpose of the current study was to better understand the role of community involvement in the relationship between discrimination and depression symptoms among racial and ethnic minority college students.

This study included 204 racial and ethnic minority students recruited from a predominately White university in the Midwest. Participants completed self-report questionnaire measures. Moderation analyses via OLS regressions and simple mediation analyses were calculated with PROCESS, which tests indirect effects with bootstrapping. Community involvement did not moderate the relationship between discrimination and depression. However, community involvement mediated the relationship between overt discrimination and depression (Effect = $-.664$, 95% CI = -1.611 , $-.031$). Community involvement also mediated the relationship between racial and ethnic microaggressions and depression (Effect = $-.63$, 95% CI = -1.36 , $-.058$).

Community involvement served as a mediator between experiences of discrimination (i.e., microaggressions and overt) and depression symptoms. These findings suggest that elements of community involvement may be important in alleviating the negative mental health outcomes experienced by racial and ethnic minority students given its ability to link experiences of discrimination and depression symptoms. Theoretical and practical implications are discussed.

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The Role of Community Involvement in Ethnic Discrimination and Depression Symptoms among Ethnic Minority College Students

Over the past two decades, there has been a 17% increase in racial and ethnic minorities attending college, with the number of Latinx students doubling over this time (Davis & Fry, 2019). Unfortunately, racial and ethnic minority students are at high risk for depression and are unlikely to seek out services to address these symptoms (E. C. Hope et al., 2018). A possible contributing factor to elevated depression symptoms in racial and ethnic minority students is exposure to racial and ethnic discrimination (Araújo & Borrell, 2006; Chou et al., 2012; Hwang & Goto, 2008). *Racial and ethnic discrimination* refers to unfair treatment attributed to one's race or ethnicity (Contrada et al., 2001). Exploring the link between racial and ethnic discrimination and mental health is particularly important within a college-context given that college educated individuals report more lifetime experiences of discrimination (81%) in comparison to racial and ethnic minorities with a high school education or less (69%) (Anderson, 2019). Since avoiding racial and ethnic discrimination is beyond individual control, it is crucial to find ways to foster positive mental health by combating and minimizing the negative psychological outcomes associated with racial and ethnic discrimination.

Previous studies suggest that community involvement is linked to positive social and mental health outcomes (Earnshaw et al., 2016, p. 201; Hull et al., 2008; Sellers et al., 2006). Community involvement includes participation in community service, informal helping, religious or cultural groups, youth organizational work, athletics, and social or political action (Pancer et al., 2007). Specifically, in racial and ethnic minorities, community involvement is associated with fewer depression symptoms, positive

academic outcomes, and increased social support (Cardoso & Thompson, 2010; Fredricks & Simpkins, 2012; Hull et al., 2008). A few studies have proposed that community involvement could serve a role in influencing negative mental health outcomes associated with racial and ethnic discrimination such as depression, anxiety, and stress (E. C. Hope et al., 2018; Hull et al., 2008). However, the research that has explored the relations between racial and ethnic discrimination, community involvement, and mental health has focused on limited populations, primarily adolescents and immigrant families (Cardoso & Thompson, 2010; Fredricks & Simpkins, 2012; Hull et al., 2008). The proposed study aims to fill this research gap by sampling racial and ethnic minority college students at a predominately-white institution (PWI) and examining the role of community involvement in the relationship between racial and ethnic discrimination and depression symptoms, with the expectation that community involvement will either mediate and/or moderate the relationship between racial and ethnic discrimination¹ and depression symptoms. These findings will illuminate how participation in the community can play a part in combating the harmful consequences of racial and ethnic discrimination from a mental health standpoint.

Racial and Ethnic Discrimination

Discrimination is a broad term that encompasses many experiences ranging from intentional violence to subconscious behaviors. The current study defines discrimination as “unfair treatment attributed to one’s ethnicity. Most often, it has been studied as behavior that emanates from members (or institutions) of the dominant White majority and is directed at African Americans and members of other ethnic minority groups”

¹ While there are many forms of discrimination, including discrimination based on gender, age, and ability, the term “discrimination” in this paper will refer exclusively to racial and ethnic discrimination.

(Contrada et al., 2001, p. 1777). While *racial* discrimination has been applied primarily to the experiences of African Americans, *racial and ethnic* discrimination includes people from any racial or ethnic minority group. Discrimination can manifest in overt ways, such as hate crimes, violence, or being denied services because of one's race or ethnicity, or it can manifest in more subtle forms such as microaggressions, which will be discussed later in further detail.

With the increasing number of racial and ethnic minority students attending college, more research should be dedicated to further exploration of their experiences on college campuses. As previously reported, African Americans with some or more college education report higher rates of experiencing lifetime discrimination, but they also report higher rates of discrimination on a *daily basis* (17%) compared to African Americans with a high school education or less (9%), making the college experience an important context in which to examine discrimination (Anderson, 2019). People of various racial and ethnic minority groups report consistently high rates of experiencing discrimination. Results from a study of 153 African Americans indicated that 100% of the sample reported experiencing racial discrimination within their lifetime and 98.1% reported experiencing racial discrimination within the past year (Landrine & Klonoff, 2016). Another study, looking specifically at African American students in U.S. doctoral programs (n = 174) reported 989 experiences of racial discrimination in the sample over a span of two weeks, which is an average of one encounter every other day (Burrow & Ong, 2010). While African Americans typically report the highest rates of experiences with discrimination, studies support that the majority of Latinx, Asian American, and other ethnic minority college students express experiencing discrimination across a

variety of settings, including social and academic settings (Hwang & Goto, 2008; Juang et al., 2016; Tynes et al., 2008). A study conducted by Juang and colleagues (2016) concluded that 75% of racial and ethnic minority college students have experienced at least one instance of overt discrimination on campus, with no significant difference between ethnic groups. Even in online settings, students with racial and ethnic minority identities experience more discrimination (Tynes et al., 2008, 2013). These studies demonstrate that discrimination in college settings is both widespread and a daily experience faced by many students.

Recently, researchers have begun to focus on a subtle form of everyday discrimination classified as microaggressions. *Microaggressions* can be defined as “brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial [or ethnic] slights and insults” towards racial and ethnic minorities (Sue et al., 2007, p. 271). The previous section focused on overt discrimination, and although microaggressions are a type of discrimination, they are significantly different from overt forms because they are often ambiguous, difficult to notice, and can be framed as well-intentioned (Torres & Taknint, 2015). Microaggressions can come in a multitude of forms and can occur in any environment. Some examples include professors not calling on racial and ethnic minority students in class, assuming African American or Latinx students do not plan on attending college, or assuming laziness is the only reason why racial and ethnic minority students are not succeeding. Microaggressions usually stem from assuming something about a person solely based on their race or ethnicity or ignoring the role that race and ethnicity play in daily life (Sue et al., 2007). In a community sample of 113 Latinx adults, people

reported on average experiencing one microaggression within the past six months (Torres & Taknint, 2015). The current study explores both overt discrimination and microaggressions, given the previously stated high prevalence rate of discrimination and the relative novelty of the exploration of microaggressions.

The prevalence of discrimination is evident in college environments, both in-person and online (Tynes et al., 2013). One study examining the amount of microaggressions experienced by racial and ethnic minority students found that there was no difference between racial and ethnic groups regarding the amount of microaggressions they experience (Nadal, Wong, et al., 2014). The study expanded by saying common experiences included being treated as inferior to others, being criminalized, being exoticized, and feeling invisible due to lack of representation (Nadal, Wong, et al., 2014). Studies have also shown that racial and ethnic minority students experience overt discrimination not only in person, but also online, which in turn impacts their in-person lives and how they view the racial climate of the college campus (Tynes et al., 2008, 2013). Earlier studies show that most racial and ethnic minority students experience both overt discrimination and microaggressions during their college experience. Building on this research, there is consistent support that indicates there is a link between experiences of overt discrimination and microaggressions and depression symptoms, which will be detailed in the following sections (Nadal, Wong, et al., 2014; Sellers et al., 2006).

Depression in Racial and Ethnic Minority Groups

The National Institute of Mental Health (NIMH) reported that among U.S. adults, 16.2% of African Americans, 15.2% of Latinxs, and 14.5% of Asian Americans experienced a mental health disorder within the previous year (National Institute of

Mental Health, 2019b). People between the ages of 18 and 25 reported the highest prevalence of mental health disorders at 25.8% (National Institute of Mental Health, 2019b). More specifically, 17.3 million U.S. adults have experienced at least one major depressive episode, with the highest prevalence being among college-aged students (National Institute of Mental Health, 2019a). A meta-analytic review of depression reported that while lifetime prevalence of depression was not significantly different from European Americans, Latinxs tended to report significantly higher symptom levels (Menselson et al., 2008). Within the college context, racial and ethnic minority college students report higher levels of personal dissatisfaction, depressive symptoms, and social isolation when compared to their European American peers (E. C. Hope et al., 2018). A study by Nadal and colleagues (2014) highlighted that low self-esteem is linked to higher levels of hopelessness and suicidal ideation, which are strongly linked to depression (Abramson et al., 1989; Lamis et al., 2016). The connection between low self-esteem, hopelessness, and suicidal ideation could be particularly troublesome for racial and ethnic minority students. Previous research suggests that experiences of discrimination are inversely related to self-esteem, therefore linking experiences of discrimination with a key factor that contributes to depression symptoms (Nadal, Wong, et al., 2014). The strong relations between discrimination and contributing factors to depression symptoms, such as low self-esteem, suggest that discrimination could also be a key contributing factor to the elevated levels of depression symptoms in racial and ethnic minority students at PWIs.

Discrimination and Depression

A substantial amount of research has supported the link between discrimination and depression symptoms in a variety of settings among racial and ethnic minority populations (E. C. Hope et al., 2018; Hudson et al., 2016; Juang et al., 2016). In a study of 186 Latinx and Asian American college students, results indicated that both groups appraised experiences of discrimination as stressful, and had several negative psychological outcomes, including higher psychological distress, suicidal ideation, state and trait anxiety, and depression (Hwang & Goto, 2008). A review article that focused on existing literature addressing discrimination and mental health outcomes in Latinxs concluded that the most frequent mental health outcomes related to discrimination are depression symptoms and high stress (Araújo & Borrell, 2006). When interviewing 3012 California-based Mexicans, discrimination was found to be directly related to depression for individuals ranging from age 18 to 59, regardless of if they were born in the United States or Mexico (Finch et al., 2000). In a study assessing discrimination across groups of Asian Americans, Latinxs, and African Americans (N = 4,539) through diagnostic interviews, discrimination was significantly associated with multiple psychological disorders. All ethnic groups had significant endorsements of major depressive disorder, panic disorder with agoraphobia, agoraphobia without a history of panic disorder, and post-traumatic stress disorder (Chou et al., 2012). In a study of 2,137 African American adults, Hudson and colleagues (2016) found that people with higher levels of education reported higher incidences of discrimination and that higher reports of discrimination were related to higher odds of having depression. This study highlights the unique relationship between higher education and experiences of discrimination, meriting more

research attention on racial and ethnic minority students who pursue higher education. Finally, research focused on Latinx people in emerging adulthood (ages 18-25) reported that higher rates of discrimination were related with higher levels of depressive symptoms in an online survey study of 1,084 undergraduate students across the United States (Cano et al., 2016). Despite age, gender, SES, or other minority status, people who are part of racial and ethnic minority groups vastly experience discrimination and report high levels of depressive symptoms. Given the strength and consistency of this relationship, it is important to examine factors that may help to explain the link between discrimination and depression or weaken this relationship.

Community Involvement

Community involvement may have a role in the relationship between discrimination and depression symptoms. Many activities can be considered community involvement, but for the sake of the current study, community involvement will refer to participation in community service, informal helping (such as caring for a sick relative), attending religious or cultural groups, youth organizational work, athletics, and social or political action (Pancer et al., 2007). Because of the broad definition and the many reasons why people initially get involved in their communities, the current study focuses on community involvement in general instead of specific activities to examine how overall community involvement relates to mental health. As discussed in the following sections, there is empirical evidence to support that community involvement could function as a moderator or a mediator. As such, the current study examines community involvement both as a moderator and mediator to better understand how to best conceptualize this construct.

Since mediation and moderation provide different explanations regarding the nature of community involvement in relation to other variables, it is helpful to have a strong understanding of the distinction between the two models. A moderator is a third variable that influences the direction and/or strength of a relationship between a predictor and an outcome (Baron & Kenny, 1986; Wu & Zumbo, 2007). Simply put, it answers the questions of “when” or “for whom” are two variables related. Wu & Zumbo (2007) compare a moderator to a dimming effect on a light switch which adjusts the strength or amount of lighting. In the context of community involvement, a moderation model would explain whether the relationship between discrimination and depression is different for people with varying levels of community involvement. Put another way, it will determine if community involvement buffers the relationship between discrimination and depression.

Alternatively, a mediator is a third variable that explains the relationship between the predictor and outcome or the “why” and “how” a relationship happens (Baron & Kenny, 1986). Similar to a sequence of dominos, the predictor is associated with the mediator and the mediator predicts the outcome (Wu & Zumbo, 2007). In the context of community involvement, support for a mediation model would indicate that experiences of discrimination lead to community involvement, which in turn impacts an individual’s depression symptoms. More specifically, it is anticipated that higher levels of discrimination will be associated with higher levels of community involvement, which, in turn, will be related to lower levels of depression.

Community Involvement as a Moderator

Previous literature on moderating the relationship between discrimination and mental health has largely focused on constructs like ethnic identity, self-esteem, and avoidance (Christophe et al., 2019; Nadal, Wong, et al., 2014; Zvolensky et al., 2016). Overall, research has emphasized moderators that exacerbate the relationship. In addition to exploring what adds risk, it is equally important to explore what factors buffer the relationship between discrimination and depression. In comparison to their European American peers, racial and ethnic minority students are less likely to seek out mental health services and therefore should be equipped with other resources and skills to help protect themselves against negative mental health outcomes that are associated with experiences of discrimination (E. C. Hope et al., 2018). While there is very limited research looking at general community involvement as a moderator for discrimination and depression, there is related empirical evidence for different types of social support/involvement as moderators for different types of discrimination and depression symptoms (M. O. Hope et al., 2017; Sanchez et al., 2019). Community involvement can potentially serve as an extension of previous research by providing students with an environment in which they can increase social support, improve their self-esteem, or strengthen their sense of ethnic identity.

Community involvement is connected to multiple social and psychological benefits for racial and ethnic minorities (Fredricks & Simpkins, 2012). Often, people will get involved in their community to make friends, participate in an activity at which they think they are good, or to connect with their culture (Fredricks & Simpkins, 2012). A literature review also found that for African American and Latinx youth, there is a

positive correlation between community involvement and outcomes such as academic success, psychological and social adjustment, and better responses to discrimination (Fredricks & Simpkins, 2012). Similarly, a systematic review of resilience in Latinx immigrant families found a relation between community involvement, positive physical and mental health, less social isolation, and increased cultural connection (Cardoso & Thompson, 2010). For Latinx immigrant youth, community involvement was linked to better dealing with distress from discrimination and acculturation (Cardoso & Thompson, 2010). Fredricks and Simpkins (2012) assessed the benefits of community involvement for racial and ethnic minority youth. They found that racial and ethnic minority youth are less likely to participate in community activities in comparison to their European American counterparts. This finding is meaningful, because it shows that racial and ethnic minorities may not be participating in key activities that could improve their mental health. These literature reviews highlight how community involvement is related to positive psychological well-being, such as decreased distress, psychological and social adjustment, and decreased social isolation.

There is empirical evidence to suggest that community involvement may predict positive mental health outcomes for African American and Latinx youth more so than for their European American counterparts (Hull et al., 2008). Hull and colleagues (2008) conducted a longitudinal study to examine the relationship between community involvement, ethnicity, neighborhood disadvantage, and mental health. Their results from over 7,000 European American, African American, and Latinx youth showed that community involvement served as a protective factor for mental health, including decreased depression symptoms (Hull et al., 2008). More specifically, non-sport

extracurricular activities predicted positive well-being for African American youth and religious activities predicted well-being for Latinx youth more so than they did for European American youth (Hull et al., 2008). The study suggests that community involvement equips people with support and resources to handle distress unique to racial and ethnic minorities, such as discrimination, that are linked to depression symptoms and poor mental health.

Research on discrimination, community involvement, and depression is notably less for racial and ethnic minority college students. A recent study by Hope and colleagues (2018) explored how political activism—a form of community involvement—moderates the relationship between experiences of microaggressions and mental health outcomes. The sample included African American and Latinx first year college students at a PWI and discovered that higher levels of participation in political activism served as a protective factor between microaggressions and depression symptoms in Latinx students, but not for African American students (E. C. Hope et al., 2018). This complex finding indicates that more research is necessary to adequately understand the role that community involvement has in moderating the relationship between discrimination and depression symptoms.

Community Involvement as a Mediator

The current study's interest in exploring community involvement as a mediator for the relationship between discrimination and depression draws off Branscombe and colleagues' (1999) rejection-identification model. The model suggests that minority group identification mediates the relationship between discrimination and psychological well-being by enhancing psychological well-being (Branscombe et al., 1999; Schmitt et

al., 2002, 2003). While there is a strong relationship between discrimination and negative psychological well-being, the rejection-identification model emphasizes the relationship between minority group identification and positive psychological well-being.

Branscombe and colleagues theorized that experiencing discrimination from the dominant social group results in people resenting and distancing themselves from the dominant group. This creates a need to find a different social group with which people can align. For racial and ethnic minorities, this is often other people with the same racial or ethnic background (Branscombe et al., 1999; Ramos et al., 2012). According to the rejection-identification model, a strong identification with the minority group is related to positive psychological well-being. In the current study, the rejection-identification model is used as a framework to examine if community involvement can have a similar mediating role as minority group identification. The next section highlights ways in which community involvement has mediated the relationship between various stressors and psychological well-being.

While there is no research specifically examining general community involvement as a mediator between discrimination and depression, there are a handful of related studies that support the possibility of community involvement functioning as a mediator in this context. When examining social involvement as a mediator of experiencing a natural disaster and the related psychological outcomes, Solomon and colleagues (1987) found that social involvement can be beneficial based on the level of involvement. High demands from social networks were related to higher depression symptoms for women and higher alcohol abuse symptoms in men. However, a mid-range level of social involvement and support was linked to positive psychological outcomes,

including decreased somatization (Solomon et al., 1987). In other words, social involvement was beneficial at a moderate level, but high levels of social involvement can be overwhelming. Similarly, in a sample of Hurricane Katrina survivors, pre-hurricane social support mediated the relationship between natural disaster exposure and distress symptoms common to psychological disorders (Lowe et al., 2010). While discrimination and natural disasters are very different experiences, both of them are stress-inducing and related to negative psychological outcomes (Branscombe et al., 1999; Lowe et al., 2010; Solomon et al., 1987). In the context of the current study, previous research suggests that community involvement may be a beneficial mediator for reducing depression, specifically at mid-levels of involvement.

There is evidence to support community involvement as a mediator in other minority groups that face discrimination and related negative psychological outcomes. When examining community involvement in men who have sex with men (MSM), community involvement emerged as a promising mediator for MSM and depression (Suryawanshi et al., 2016). Specifically, community involvement and feeling like a member of a group was related with lower levels of depression symptoms for men who identified as MSM (Suryawanshi et al., 2016). However, this result was contingent on experiences of violence. For people who had not experienced any violence due to their sexuality, the mediation effect of community involvement was stronger (Suryawanshi et al., 2016). This suggests that community involvement may serve as a mediator for discrimination experienced by racial and ethnic minority students and depression.

Purpose of the Study

Expanding on the established empirical literature, the current study examines community involvement as both a moderator and a mediator to better understand the best way to conceptualize its role in the relationship between discrimination and depression. Since there is still only a small body of research dedicated to discrimination, community involvement, and depression in the context of the college experience, the current study examines racial and ethnic minority college students at a PWI from any racial or ethnic minority group and year of undergraduate studies. As mentioned earlier, there has been an increase in racial and ethnic minority students attending college in the past two decades, making it imperative to research their experiences in predominately-white environments (Davis & Fry, 2019).

Additionally, most research has focused on either overt discrimination or microaggressions, whereas the current study includes measures for both forms of discrimination to gain a better understanding of how different experiences of discrimination relate to community involvement and depression symptoms. Finally, studies have generally examined a specific kind of community involvement like political activism (E. C. Hope et al., 2018) or after-school involvement (Hull et al., 2008). This study will use a general measure of community involvement to include the various activities in which people engage.

The goal of the current study is to expand on the limited research and illuminate how racial and ethnic minority college students can better combat the negative mental health outcomes related to discrimination. Discrimination seems to be an unfortunate inevitability of life as a racial and ethnic minority. However, community involvement

may be a way to allow racial and ethnic minority students more agency by serving as a mediator or protective factor in the relationship between discrimination and depression symptoms. Exploring whether community involvement functions as a moderator or a mediator may prove to be empowering for students by equipping them with a way to address depression symptoms on their own.

Aim 1: To explore the ability of overt discrimination and microaggressions to predict depression symptoms among racial and ethnic minority college students.

Hypothesis 1a states overt discrimination will predict depression symptoms above and beyond demographic variables. Consistent with the empirical literature, we predict that individuals who report experiencing more instances of overt discrimination will also endorse higher levels of self-reported depression symptoms. Similarly, *hypothesis 1b* states that experiences of microaggressions will predict depression symptoms above and beyond demographic variables. Again, we predict that individuals who report experiencing more instances of microaggressions will also endorse higher levels of self-reported depression symptoms.

Aim 2: To explore the ability of community involvement to predict depression symptoms in racial and ethnic minority college students.

Hypothesis 2 states that community involvement will predict depression symptoms above and beyond demographic variables. Since there is evidence that indicates community involvement is related to positive mental health and social outcomes, we anticipate that community involvement will predict lower self-reported depression symptoms.

Aim 3: To examine the ability of community involvement to moderate and/or mediate the relationship between discrimination and depression symptoms. Since aim 3 is exploratory in nature, we do not have any specific hypotheses. However, we anticipate that community involvement will have a protective role in the relationship between discrimination and depression symptoms for racial and ethnic minority college students at a PWI.

Method

Participants

Participants included 204 racial and ethnic minority college students from a Midwestern university. Students were recruited through undergraduate psychology courses and were compensated with course credit upon completion. In the sample, 146 participants self-identified as women, 55 as men, one as transgender, one as intersex, and one as non-binary. The majority of participants self-identified as Hispanic/Latinx ($n = 84$, 41.2%), followed by Asian/Pacific Islander ($n = 62$, 30.4%), African American/Black ($n = 45$, 22.1%), Middle Eastern ($n = 6$, 2.9%), other ($n = 6$, 2.9%), and Native American/American Indian ($n = 1$, .5%). For nativity, 164 (80.4%) participants were born in the United States, 39 (19.1%) were born in other countries, and one (.5%) participant did not provide nativity information. The mean age of the sample was 19.15 ($SD = 1.26$) with a range of 18 to 25. Over half of the participants were in their first year of their undergraduate studies ($n = 118$, 57.8%), about a quarter were in their second year ($n = 50$, 24.5%), followed by third year ($n = 25$, 12.3%), and fourth year ($n = 11$, 5.4%). The majority of the sample reported their annual household income being more than \$75,000 ($n = 72$, 35.3%), followed by an income between \$50,000 and \$75,000 ($n = 39$, 19.1%),

between \$35,000 and \$50,000 ($n = 38$, 18.6%), between \$20,000 and \$35,000 ($n = 33$, 16.2%), between \$10,000 and \$20,000 ($n = 13$, 6.4%), and under \$10,000 ($n = 6$, 2.9%). Three (1.5%) participants did not report annual household income information.

Measures

Overt Discrimination. The Brief-Perceived Ethnic Discrimination Questionnaire (BPEDQ; Brondolo et al., 2005) was used to assess experiences of racial and ethnic discrimination during one's lifetime. The BPEDQ is a 17-item survey, shortened from the original PEDQ, and uses a Likert-scale to measure responses regarding how frequently a person has experienced instances of racial and ethnic discrimination from a score of 1 *never* to 5 *very often*. Higher scores indicate that an individual has experienced more racial and ethnic discrimination. Responses are scored by taking the overall mean of the scores to express lifetime discrimination. The questionnaire also consists of the four following subscales: ethnicity-related social distancing, stigmatization, workplace/school discrimination, and harassment, which includes threat and aggression (Brondolo et al., 2005). To score each individual subscale, the mean is taken for the corresponding responses.

The BPEDQ is specifically intended for use with participants of any racial and ethnic background, while many other discrimination scales were developed specifically for African Americans. This specific measure was chosen for this study because it was developed to assess racial and ethnic discrimination among college students, it includes a broad range of experiences with racial and ethnic discrimination, and it has been used in the past to assess how racial and ethnic discrimination relates to physical health, negative affect, and racial climate on college campuses (Brondolo et al., 2008, 2011; Pieterse et

al., 2010). Compared to the Perceived Racism scale (PRS; McNeilly et al., 1996), a well-established measure, the BPEDQ showed good convergent validity with a correlation of ($r = .61, p < .001$) in a sample of African American students and a correlation of ($r = .57, p < .001$) in a sample of Latinx students (Brondolo et al., 2005). The Cronbach's alpha for the current study was .917.

Microaggressions. The Racial and Ethnic Microaggressions Scale (REMS; Nadal, 2011) is a 45-item measure that uses a Likert-scale to assess how many times people have experienced specific types of microaggressions in the past six months. The scale ranges from 0 *I did not experience this event* to 5 *I experienced this event 5 or more times in the past 6 months*. Scores are calculated by computing the overall mean. The REMS has been used in numerous studies with diverse populations including African Americans, Asian Americans, Latinxs, Multiracial individuals, and racial and ethnic minority college students (Nadal, Mazzula, et al., 2014; Nadal, Wong, et al., 2014; Torres & Taknint, 2015). Subscales include: (1) assumptions of inferiority, (2) second-class citizen and assumptions of criminality, (3) microinvalidations, (4) exoticization/assumptions of similarity, (5) environmental microaggressions, and (6) workplace and school microaggressions. To check for concurrent validity, the REMS was compared to the Daily Life Experiences-Frequency scale (DLE-F), a self-report measure of the impact racism has on one's personal life. Results showed significant correlations between the REMS and the DLE-F scale ($r = .698, N = 253, p < .001$), indicating good concurrent validity (Nadal, 2011). In the current study, the Cronbach's alpha coefficient was .933.

Depression. Depression symptoms were measured using The Brief Center for Epidemiological Studies – Depression Scale (BCES-D; Kohout, Berkman, Evans, & Cornoni-Huntley, 1993). This is a ten-question measure that asks about different components of depression. Participants rate their symptoms from the past week on a Likert-scale that ranges from 0 *Rarely or none of the time* to 3 *Most or all of the time*. Scores are calculated by computing the overall sum, with higher scores indicating higher endorsement of depression symptoms. Any score equal to or over 10 is considered depressed. This measure was chosen for the study because it is widely used among researchers and has been used with diverse populations in the past (Driscoll & Torres, 2013; Torres, 2010). Research has shown that the BCES-D has good internal consistency among the general population and Latinx populations and that it is comparable to the full version of the measure (Grzywacz et al., 2006; Radloff, 1977). The Cronbach's alpha coefficient for the current study was .786.

Community Involvement. Community involvement was measured by the short form of the Youth Inventory of Involvement (YIOI; Pancer, Pratt, Hunsberger, & Alisat, 2007) which assesses the extent of engagement in different forms of community activities. The short form of the measure consists of 6 questions about different areas of involvement and asks participants to use a Likert-scale to indicate how frequently they participated in the activities in the past year. The scale ranges from 1 *you never did this kind of thing* to 5 *you did this kind of thing a lot* (YIOI; Pancer, Pratt, Hunsberger, & Alisat, 2007). Overall scores are obtained by calculating the mean of the total responses, with higher scores indicating more involvement. Pancer and colleagues deemed the individuals with the highest engagement activists, while the people with the lowest

engagement were labeled uninvolved. The long form of the YIOI has been used in the past with college students, Latinx samples, and African American samples (E. C. Hope et al., 2016; Kirshner & Ginwright, 2012). Research has shown that the internal consistency for the long form of the measure is excellent and has good test-retest reliability (Pancer et al., 2007). Pancer and colleagues (2007) also reported that the internal consistency of the subscales were generally good with Cronbach's alpha's usually .70 or above. Little information is available on the psychometrics of the short form of the YIOI. The Cronbach's alpha coefficient for the current study was .627.

Inventory of Involvement Factor Analysis

To better understand the function of community involvement in the relationship between discrimination and mental health outcomes, we performed an exploratory factor analysis (EFA) on the community involvement measure (IOI). The IOI includes a broad range of community activities, which makes it a comprehensive measure, but more difficult to specifically define community involvement. Due to the low Cronbach's Alpha coefficient for the measure (.627), and the limited information regarding the psychometrics of the short form, the EFA is also a way to see if splitting the measure into subscales offers a more psychometrically sound measure of community involvement.

Six items related to community involvement were factor analyzed using principal component analysis with Varimax rotation and Kaiser normalization. The analysis revealed two factors above an eigenvalue of 1.0 and explaining a total of 56.26% of the variance. Factor 1 was labeled *Politics and Activism* due to the high loadings by the following items: Political activities (e.g., attended meetings of a political club or party, worked on a political campaign); Social activism (e.g., attended a demonstration,

collected signatures for a petition drive, contacted a public official about a social issue, attended meetings of an organization devoted to social change). The first factor explained 37.36% of the variance. The second factor that emerged was labeled *Community Service and Team Activities* and included high loadings by the following items: Community service (e.g., worked as a volunteer, helped organize neighborhood or community events); Organized sports (e.g., participated as a team member in a sports league or club). The second factor explained 18.86% of the variance. The KMO and Bartlett's Test of Sphericity both indicate that the set of variables are adequately related for factor analysis ($KMO = .71, p < .001$). Crossloadings should be minimized to ensure that factors are distinct from each other. Costello & Osborne (2005) suggest a crossloading is significant when an item loads at .32 or higher on two factors. The factor analysis revealed that two IOI items were cross-loaded and therefore removed from the final two factors. The results suggest that there are two clear factors or subscales among racial and ethnic minority college students—one of politics and activism related activities, and one of community service and sports. The *Politics and Activism* subscale had a Cronbach's Alpha coefficient of .459 and the *Community Service and Team Activities* subscale had a Cronbach's Alpha coefficient of .373. Both coefficients show that the subscales are below what is typically considered to be internally consistent. Thus, the subscales were not used in any further analyses.

Procedure

The current study is a secondary data analysis of data collected between Fall 2017 and Spring 2019. As previously stated, participants were all racial and ethnic minority students at a private, predominately white university in the Midwest. The study was an

online survey that required about 45-60 minutes for the participants to complete. The participants took the survey in a university computer lab at a designated time. Once they were screened to ensure they identified as a student of color or racial and ethnic minority, and were at least 18 years old, they were given a piece of paper with a URL address on it and directed to a computer so they could begin the survey using Qualtrics software. Multiple students were in the room at the same time, but they worked privately and independently. An undergraduate research assistant was always in the room in case of any questions or complications. Once the participants finished, they were compensated with course credit and given information for mental health resources due to the potential sensitive nature of the questions. All procedures were approved by the host institution's IRB.

Results

Data Screening

Prior to analysis, variables of interest (experiences of overt discrimination, microaggressions, community involvement, and depression) were examined to determine the accuracy of data entry, missing values, and determination of multivariate assumptions, including linearity, normality, multicollinearity, and homoscedasticity. Analysis of missing data revealed that no variable was missing 5% or more of the data. No significant outliers were identified, thus no data was omitted or winsorized. All variables of interest were examined for normality as suggested by Tabachnick and Fidell (2016). Histograms were created for each study variable and skewness and kurtosis values were obtained. To determine if a variable violated normality and, thus, was a candidate for transformation, skewness and kurtosis values were divided by their standard

error. Data were considered significantly kurtotic or skewed if the obtained z-score was less than -3.29 or greater than 3.29, as suggested by Tabachnick and Fidell (2016). No variable was significantly kurtotic.

Experiences of microaggressions and overt discrimination were significantly positively skewed, meaning that most of the responses were in the lower half of the distribution. Due to this, transformed variables were used in the main analyses and are reported in the results. Earlier studies on experiences of microaggressions show that while many people experience microaggressions, the average per individual can be one microaggression within six months (Torres & Taknint, 2015). This suggests that it is common for individuals to report low rates of microaggressions, especially when given a time restraint, and a normal distribution should not be expected. Similarly, with experiences of discrimination, previous research in college samples exhibit a range of reports of overt discrimination from 17% to 100% (Anderson, 2019; Landrine & Klonoff, 2016). While most of the earlier research on college samples has high reports of overt discrimination, other factors might contribute to lower levels of reporting in some samples such as location of the university.

Finally, all variables were examined for multicollinearity. A correlation matrix was created for all variables of interested. None of the variables had a correlation above 0.80, which is an accepted diagnostic cut-off for multicollinearity (Vatcheva et al., 2016). Results for the correlation matrix can be found in Table 1.

Preliminary Analyses

Following data screening, descriptive statistics and correlations were conducted for each study variable. Overall, participants reported a mean score of 9.91 for depression

symptoms, which is just below what the scale considers depressed. As previously discussed, both reports of microaggressions and overt discrimination fell into the lower half of the distribution, indicating infrequent experiences of discrimination. The mean report of community involvement was 2.76, indicating a moderate level of community involvement in the past year. Full results can be found in Tables 1 and 2. Mean differences were assessed using an independent sample t-tests to assess for significant differences across gender (men, women) and one-way analyses of variance (ANOVAs) to determine if there were any variations across race (African American/Black, Hispanic/Latinx, Asian/Pacific Islander) on the variables of interest. To account for multiple group comparisons, the Bonferroni correction ($p < .007$) was implemented to determine statistical significance for these preliminary analyses. No significant differences were observed among men and women. One-way ANOVAs revealed significant differences among racial groups for two of the variables of interest. The analysis of variance show that African American/Black ($M = 1.29$, $SD = .889$) and Hispanic/Latinx ($M = 1.01$, $SD = .694$) participants reported significantly more experiences of microaggressions in comparison to Asian/Pacific Islander participants ($M = .697$, $SD = .487$), $F(2, 188) = 9.81$, $p < .001$. Similarly, the analysis of variance showed that African American/Black ($M = 1.90$, $SD = .71$) and Hispanic/Latinx ($M = 1.78$, $SD = .671$) participants experienced significantly more instances of overt discrimination in comparison to Asian/Pacific Islander participants ($M = 1.48$, $SD = .461$), $F(2, 188) = 6.74$, $p < .001$. Additionally, a 2 x 3 ANOVA was conducted to assess differences among the main gender and racial groups. The cell sizes were not distributed equally for this analysis, indicating that the results should be interpreted with caution. The results showed

that there were no significant mean differences among the study variables when accounting for gender and race. The analysis of variance showed the following interaction effects on the study variables: overt discrimination, $F(2,188) = 2.93, p = .056$; microaggressions, $F(2,188) = .403, p = .669$; community involvement, $F(2,188) = .209, p = .812$; and depression, $F(2,188) = .127, p = .881$.

Hypothesis 1

Hypothesis 1 consisted of two components and stated that (a) overt discrimination (BPEDQ) and (b) microaggressions (REMS) would predict depression symptoms (BCES-D). To test Hypothesis 1, two separate hierarchical regressions were conducted for overt discrimination and microaggressions. At step 1, we included race and age as control variables. A spearman's rank-order correlation determined a statistically significant relationship between race and depression ($r_s(204) = .162, p = .021$) and a Pearson's Correlation determined a statistically significant relationship between age and depression ($r(196) = .152, p = .034$). At step 2, discrimination and microaggressions were added, respectively.

Hypothesis 1a. For the first hierarchical regression, the age and race variables included in step 1 explained 3.1% of the variance in depression, $F(2,193) = 3.1, R^2 = .031, p = .048$; age was a significant predictor ($p = .029$). In step 2, the addition of overt discrimination was significant and explained an additional 15.4% of variance after controlling for demographic variables, R^2 change = .154, F change = $F(1,192) = 36.4, p < .001$. The total variance accounted for by the model was 18.5%, $F(3,192) = 14.6, R^2 = .185, p < .001$. These results indicate support for hypothesis 1a showing that overt discrimination significantly predicts depression symptoms (see Table 3).

Hypothesis 1b. For the second hierarchical regression, race and age were entered in step 1 and explained 3.1% of the variance in depression, $F(2,193) = 3.1$, $R^2 = .031$, $p = .048$; age was a significant predictor ($p = .029$). In step 2, microaggressions accounted for an additional 10.9% of variance in depression after controlling for demographic variables and was a significant predictor, R^2 change = .109, F change = $F(1,192) = 24.24$, $p < .001$. The total variance accounted for by the model was 14%, $F(3,192) = 10.39$, $R^2 = .14$, $p < .001$. These results indicate support for hypothesis 1b showing that microaggressions predict depression (see Table 4).

Hypothesis 2

Hypothesis 2 states that higher community involvement (IOI) will predict fewer depression symptoms. A hierarchical regression was conducted and included race and age as control variables at step 1 explaining 3.1% of the variance in depression, $F(2,193) = 3.1$, $R^2 = .031$, $p = .048$; age was a significant predictor ($p = .029$). In step 2, community involvement was not a significant predictor and accounted for an additional .1% of variance in depression after controlling for demographic variables, R^2 change = .001, F change = $F(1,192) = .277$, $p = .599$. The total variance accounted for by the model was 3.2%, $F(3,192) = 2.15$, $R^2 = .032$, $p = .096$. These results do not indicate support for hypothesis 2 because it shows that community involvement does not significantly predict depression symptoms (see Table 5).

Aim 3

Aim 3 consisted of two components to explore the role of community involvement in the relationship between discrimination and depression symptoms. Specifically, aim 3 is to determine the role of community involvement as a moderator

(3a, 3b) or mediator (3c, 3d) in the relationship between discrimination (overt discrimination and microaggressions) and depression symptoms. A moderation analysis via OLS regressions was used to test aim 3a and 3b. The PROCESS macro SPSS add-on was used to conduct the moderator analysis instead of the traditional procedures developed by Baron and Kenny (Baron & Kenny, 1986; Hayes, 2012). PROCESS provides additional information on the moderation analysis, corrects construct bias, reduces Type I error, and does not require the centering of continuous variables. Mediation analyses were conducted using mediator procedures and bootstrapping suggested by Preacher & Hayes (2004). Bootstrapping avoids complications caused by asymmetries and nonnormality through sampling with replacement (Preacher & Hayes, 2004). The indirect effect is considered significant if zero is not included in the 95% confidence interval (Preacher & Hayes, 2004). In all analyses, age and race were controlled.

Moderator Analyses

Aim 3a. The first analysis examined community involvement as a moderator between overt discrimination and depression. Overt discrimination significantly predicted depression symptoms ($b = 12.47, p = .03$) but community involvement did not ($b = .282, p = .91$). The variables accounted for 20% of the variance in depression symptoms, $F(5,190) = 9.64, R^2 = .20, p < .001$. The interaction term was not significant ($b = -.903, p = .636$) and did not add significant variance, R^2 change = .0009, $F(1,190) = .224, p = .636$. Community involvement did not moderate the relationship between overt discrimination and depression. Full results are in Table 6.

Aim 3b. The second analysis examined community involvement as a moderator between microaggressions and depression. Microaggressions did not significantly predict depression symptoms ($b = 5.53, p = .074$) nor did community involvement ($b = -.951, p = .382$). The variables accounted for 16% of the variance in depression symptoms $F(5,190) = 7.21, R^2 = .159, p < .001$. The interaction term was not significant ($b = -.049, p = .964$) and did not add any significant variance, R^2 change = .000, $F(1,190) = .002, p = .964$. Community involvement did not moderate the relationship between microaggressions and depression. Full results are in Table 7.

Mediator Analyses

Aim 3c. Aim 3c examined community involvement as a mediator between overt discrimination and depression symptoms. The mediator analyses revealed that the overall model was statistically significant accounting for 18% of the variance, $R^2 = .185, F(3,192) = 14.57, p < .001$. Overt discrimination significantly predicted depression symptoms, $t = 6.36, p < .001$. Tests of the indirect effects show that overt discrimination significantly predicted community involvement $t = 3.12, p = .002$, which, in turn was significantly related to depression symptoms, $t = -1.96, p = .052$. The bootstrapped unstandardized indirect effect was $-.664$ (95% CI = $-1.611, -.031$). This analysis supports community involvement as a mediator for the relationship between overt discrimination and depression symptoms. Increased experiences of overt discrimination predicts higher community involvement, which in turn is related to lower depression symptoms (see Figure 1).

Aim 3d. Aim 3d examined community involvement as a mediator between microaggressions and depression symptoms. The mediator analyses revealed that the

overall model was statistically significant accounting for 14% of the variance, $R^2 = .14$, $F(3,192) = 10.39$, $p < .001$. Microaggressions significantly predicted depression symptoms, $t = 5.37$, $p < .001$. Tests of the indirect effects show that overt discrimination significantly predicted community involvement $t = 4.28$, $p < .000$, which, in turn was significantly related to depression symptoms, $t = -2.12$, $p = .035$. The bootstrapped unstandardized indirect effect was $-.63$ (95% CI = $-1.36, -.058$). This analysis supports community involvement as a mediator for the relationship between microaggressions and depression symptoms. Increased experiences of microaggressions predicts higher community involvement, which in turn is related to lower depression symptoms (see Figure 2).

Discussion

With the increase of racial and ethnic minority students attending college, their frequent experiences of discrimination, and high reports of depression symptoms, it is essential to research ways to improve their mental health in the college environment (Anderson, 2019; Davis & Fry, 2019; Hwang & Goto, 2008). Community involvement has empirical evidence to support that it could function as a moderator or mediator in the relationship between discrimination and depression symptoms, predicting lower depression symptoms (Fredricks & Simpkins, 2012; E. C. Hope et al., 2018; Solomon et al., 1987; Suryawanshi et al., 2016). The current study analyzed community involvement as a moderator and a mediator to better understand how to best conceptualize the construct in the relationship between discrimination and depression symptoms.

The first aim of the study was to explore the ability of overt discrimination and microaggressions to predict depression symptoms among racial and ethnic minority

students. Hypothesis 1 stated that both (a) overt discrimination and (b) microaggressions would predict depression symptoms above and beyond demographic variables. Consistent with our predictions, greater reporting of both overt discrimination and microaggressions predicted higher levels of depression symptoms. These results are consistent with previous research focusing on the experiences of undergraduate racial and ethnic minority students. There is strong empirical support linking greater experiences of discrimination with higher levels of depression symptoms (Cano et al., 2016; Hudson et al., 2016; Hwang & Goto, 2008; Juang et al., 2016). An empirical review on discrimination and health indicates that negative emotional reactions related to discrimination can lead to changes in physiological reactions and health behaviors, which can increase the risk of negative mental and physical health (Williams et al., 2019). Simply anticipating experiences of discrimination is related to negative health outcomes, including anticipatory stress, rumination, vigilance, depression symptoms, and sleep difficulties (Williams et al., 2019).

The second aim of the study was to explore the ability of community involvement to predict depression symptoms in racial and ethnic minority college students. Hypothesis 2 stated that community involvement would predict depression symptoms above and beyond demographic variables. More specifically, it was anticipated that greater community involvement would result in lower levels of depression symptoms. This hypothesis was not supported by the results. Community involvement did not significantly predict depression symptoms. This was an unexpected result since previous research on community involvement and mental health supports that higher levels of community involvement predicts positive mental health outcomes, including lower

depression symptoms (Cardoso & Thompson, 2010; Fredricks & Simpkins, 2012). However, the environment and context of previous research may explain why there are differences in results. Earlier empirical studies have largely been with different samples, such as Latinx immigrants or racial and ethnic minority youth in low-income communities (Cardoso & Thompson, 2010; Fredricks & Simpkins, 2012; Hull et al., 2008). Furthermore, other research studies focused on specific types of community involvement such as political involvement or involvement organized through after-school activities (Fredricks & Simpkins, 2012; E. C. Hope et al., 2018). The current study explores voluntary general community involvement in racial and ethnic minority college students. The differences in environment and experiences of the study populations could account for the differences in results. One significant finding from this analysis was that age emerged as a significant predictor of depression. Older students reported greater depression symptoms. This suggests that age differences may be important to examine when exploring the relationship between discrimination and depression symptoms. Due to the sample size of the current study, we were unable to incorporate age differences into the analyses.

The third aim of the study was to examine community involvement as a moderator and mediator in the relationship between discrimination and depression symptoms. Community involvement did not moderate the relationship between overt discrimination and depression or the relationship between microaggressions and depression. In other words, community involvement did not serve as a buffer for experiences of discrimination and depression symptoms in individuals with higher levels of community involvement. In the current sample of participants, moderation did not

appear to be the best model to conceptualize the role of general community involvement in the relationship between discrimination and depression.

However, when exploring the potential mediating role of community involvement, community involvement mediated the relationship between overt discrimination and depression symptoms and the relationship between microaggressions and depression symptoms. Racial and ethnic minority students who experienced higher levels of overt discrimination and microaggressions also reported greater involvement in their community, which was linked to lower levels of depression. These results indicate that community involvement may be a pathway to show how experiences of discrimination are linked to depression symptoms.

To further understand the mediating role of community involvement, it is imperative to examine the salience of the different facets of community involvement. The current study used the aforementioned rejection-identification model as a framework to assist in conceptualizing community involvement (Branscombe et al., 1999). In the rejection-identification model, experiences of discrimination and psychological well-being is mediated by ingroup identification. Earlier research using the rejection-identification model supports that developing one's racial or ethnic identity or increasing one's identification with the rejected identity group links increased experiences of discrimination with lower reports of negative psychological outcomes (Schmitt et al., 2002; Yip, 2018). Using the rejection-identification model framework in the current study, community involvement could serve to increase ingroup racial or ethnic identification. The mediational findings suggest that negative psychological consequences, like depression, that are associated with discrimination could be partly due

to a lack of community involvement. Students who engage less in their community may not have access to many opportunities to develop their racial or ethnic identity, which in turn contributes to poorer mental health outcomes.

Another element of community involvement is social support. In addition to connecting with one's culture, people tend to get involved in their community for access to social support and resources (Fredricks & Simpkins, 2012). As seen in previous research, social support has the ability to mediate the relationship between discrimination or stressful events and psychological well-being (Kondrat et al., 2018; Lowe et al., 2010; Solomon et al., 1987). An alternative way to explain the mediational findings could be that depression symptoms associated with discrimination are partly due to a lack of social support. That is, the benefits of community involvement, such as social support, may not be available to students with lower engagement, which, in turn, contribute to poorer mental health outcomes.

From a clinical perspective, the current study provides insight for potential areas of prevention and intervention for racial and ethnic minority college students. Given that over half of the sample from the current study consisted of first-year undergraduate students, universities should specifically develop programs to encourage and aid first-year students to engage in the community in various ways. Creating accessible ways for students to get involved could enhance their racial or ethnic identity and bolster their social support, which would in turn contribute to lower depression symptoms. Equipping racial and ethnic minority students with opportunities to get involved could be a type of prevention to address the high levels of depression symptoms often reported by racial and ethnic minority students (E. C. Hope et al., 2018). Regarding intervention, the

mediational findings suggest that therapists should encourage community involvement, especially when using a behavior-focused therapy approach with racial and ethnic minority college students experiencing discrimination and depression symptoms.

Limitations

The current study had several limitations. The majority of the sample identified as women (71%), indicating that the results may reflect the experiences of women more than men. The sample is from a single private university in the Midwest; therefore, the results cannot be generalized to the experiences of all racial and ethnic minority students on college campuses. The location of the university, diversity of the campus and surrounding area, and the private or public status of the university are some examples of factors that can contribute to differing experiences for college students. Another limitation is that over half of the sample was in their first year of undergraduate studies while only 5% were in their fourth year of undergraduate studies. This distribution limited the study's ability to examine how progress through college might have influenced the role of community involvement in the relationship between experiences of discrimination and depression symptoms. Additionally, all the measures were self-report, which may have presented challenges for the items that required remembering experiences that happened over a long period of time. Furthermore, the correlational and cross-sectional design of the study does not allow for causal conclusions to be made when interpreting mediational findings. Longitudinal studies are needed to further support the sequence of events eluded to in the mediational model. Finally, the Inventory of Involvement, used to measure community involvement, had a marginally acceptable reliability coefficient. Because of this, the results should be interpreted with caution.

Future Directions

The current study provides promising support for community involvement as a mediator in the relationship between discrimination and depression symptoms. Future studies should further examine the different types of community involvement to explore their mediational abilities. Given the support for a mediational model, future studies should also incorporate the rejection-identification model as a framework by including measures of ethnic-identity, ingroup identification, and social support to examine how these constructs relate to community involvement.

As the social climate of the country changes with the COVID-19 pandemic, other avenues of discrimination and sources of community involvement should be explored. Empirical studies show that racial and ethnic minority students experience significant online discrimination in addition to in-person discrimination (Tynes et al., 2008, 2013). An increasing number of universities are utilizing an online learning format, which may present new challenges for racial and ethnic minority college students that merit examination.

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Appendix A

Table 1.

Descriptive Statistics and Correlations for Study Variables.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Gender	1.7	0.5	--	-.06	.03	-.21**	-.01	.04	.07	.05
2. Age	19.2	1.3	--	--	-.03	.03	.08	.08	-.09	.15*
3. Race	2.5	1.4	--	--	--	-.15*	-.09	-.03	.01	.16*
4. Annual Income	4.5	1.4	--	--	--	--	-.09	-.18**	.03	-.11
5. Microaggressions	0.95	0.7	--	--	--	--	--	.72**	.23**	.33**
6. Overt Discrimination	1.7	0.6	--	--	--	--	--	--	.20**	.39**
7. Community Involvement	2.8	0.8	--	--	--	--	--	--	--	-.05
8. Depression	9.9	5.2	--	--	--	--	--	--	--	--

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

Spearman correlations are reported for gender and race.

Table 2.

Means, Standard Deviations, and One-Way Analyses of Variance in Study Variables.

Measure	African American		Hispanic		Asian American		<i>F</i> (2,188)	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Microaggressions	1.3	0.9	1	0.7	0.7	0.5	9.81*	.09
Overt Discrimination	1.9	0.7	1.8	0.7	1.5	0.5	6.74*	.07
Community Involvement	2.7	0.9	2.6	0.7	2.9	0.8	2.10	.02
Depression	8.8	4.7	11	5.6	9.2	4.9	3.54	.04

Note. * = significant at the alpha 0.05 level

Table 3.

Hierarchical Regression Analysis for Variables Predicting Depression.

Variables	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Race	0.347	0.27	.09	0.46	0.25	.12
Age	0.648	0.29	.16*	0.53	0.27	.13
Overt Discrimination				9.15	1.52	.39**
R^2		.03			.18	
F for change in R^2		3.09			36.37	

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

Table 4.

Hierarchical Regression Analysis for Variables Predicting Depression.

Variables	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Race	0.35	0.27	.09	0.49	0.26	.13
Age	0.65	0.29	.16*	0.54	0.28	.13
Microaggressions				4.77	0.97	.33**
R^2	.03			.14		
F for change in R^2	3.09			24.23		

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

Table 5.

Hierarchical Regression Analysis for Variables Predicting Depression.

Variables	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Race	0.35	0.27	.09	0.35	0.27	.09
Age	0.65	0.29	.16*	0.63	0.30	.15*
Community Involvement				-0.25	0.48	-.04
R^2		.03			.03	
F for change in R^2		3.09			0.28	

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

Table 6.

Regression Examining Community Involvement as a Moderator between Overt Discrimination and Depression Symptoms

Variable	<i>B</i>	<i>SE B</i>	<i>95% CI</i>
Overt Discrimination	12.47*	5.81	1.01 – 23.93
Community Involvement	0.28	2.49	-4.62 – 5.18
Overt Discrimination X Community Involvement	-0.90	1.91	-4.66 – 2.86
<i>R</i> ²	.20		

Note. * $p < 0.05$, ** $p < .01$.

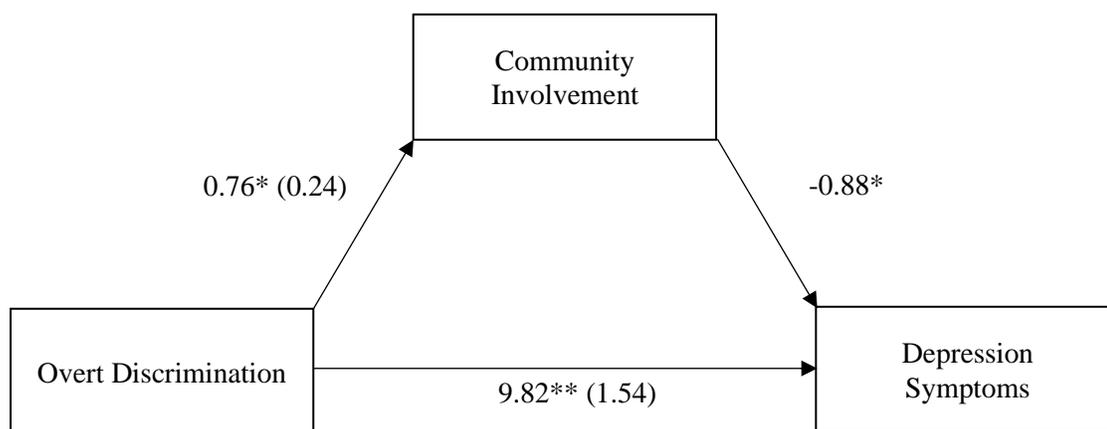
Table 7.
*Regression Examining Community Involvement as a Moderator between
 Microaggressions and Depression Symptoms*

Variable	<i>B</i>	<i>SE B</i>	<i>95% CI</i>
Microaggressions	5.53	3.08	-0.54 – 11.61
Community Involvement	-0.95	1.08	-3.09 – 1.19
Microaggressions X Community Involvement	-0.05	1.08	-2.17 – 2.07
<i>R</i> ²	.16		

Note. * $p < 0.05$, ** $p < .01$.

Figure 1.

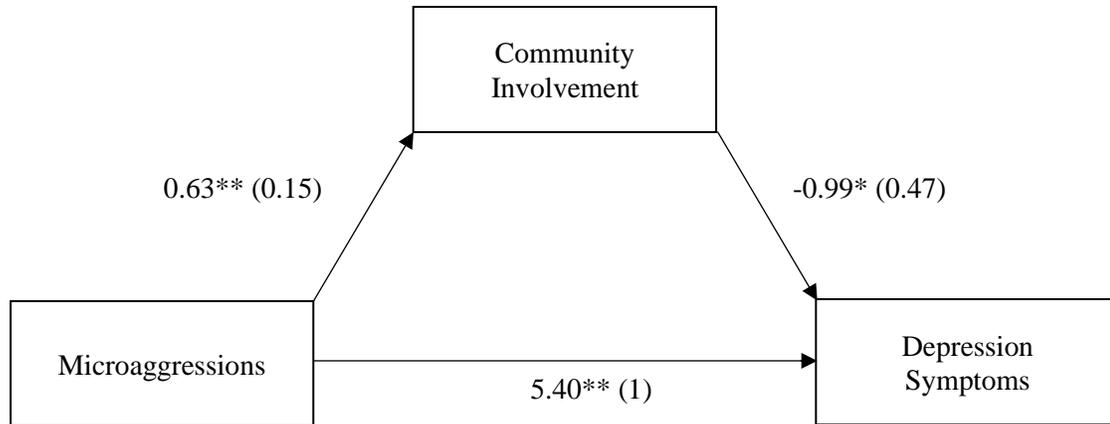
The mediating role of community involvement on the relationship between overt discrimination and depression symptoms



Note. Unstandardized beta weights for the relationship between overt discrimination and depression symptoms as mediated by community involvement. The standard error is in parentheses. * $p < .05$, ** $p < .001$

Figure 2.

The mediating role of community involvement on the relationship between microaggressions and depression symptoms



Note. Unstandardized beta weights for the relationship between microaggressions and depression symptoms as mediated by community involvement. The standard error is in parentheses. * $p < .05$, ** $p < .001$

Appendix B

Brief PEDQ

Think about your **ethnicity/race**. What **group** do you belong to? **Do you think of yourself as:** Asian? Black? Latino? White? Native American? American? Caribbean? Irish? Italian? Korean? Another group?

YOUR ETHNICITY/RACE: _____

How often have any of the things listed below happened to you, **because of your ethnicity?**

BECAUSE OF YOUR ETHNICITY/RACE ...

A. <u>How often...</u>	Never	Sometimes	Very Often		
1. Have you been treated unfairly by teachers, principals, or other staff at school?	1	2	3	4	5
2. Have others thought you couldn't do things or handle a job?	1	2	3	4	5
3. Have others threatened to hurt you (ex: said they would hit you)?	1	2	3	4	5
4. Have others actually hurt you or tried to hurt you (ex: kicked or hit you)?	1	2	3	4	5
5. Have policemen or security officers been unfair to you?	1	2	3	4	5
6. Have others threatened to damage your property?	1	2	3	4	5
7. Have others actually damaged your property?	1	2	3	4	5
8. Have others made you feel like an outsider who doesn't fit in because of your dress, speech, or other characteristics related to your ethnicity?	1	2	3	4	5
9. Have you been treated unfairly by co-workers or classmates?	1	2	3	4	5

BECAUSE OF YOUR ETHNICITY/RACE ...

<u>How often...</u>	Never	Sometimes			Very Often
10. Have others hinted that you are dishonest or can't be trusted?	1	2	3	4	5
11. Have people been nice to you to your face, but said bad things about you behind your back?	1	2	3	4	5
12. Have people who speak a different language made you feel like an outsider?	1	2	3	4	5
13. Have others ignored you or not paid attention to you?	1	2	3	4	5
14. Has your boss or supervisor been unfair to you?	1	2	3	4	5
15. Have others hinted that you must not be clean?	1	2	3	4	5
16. Have people not trusted you?	1	2	3	4	5
17. Has it been hinted that you must be lazy?	1	2	3	4	5

The subscales are as follows:

Exclusion: 8,11,12,13

Workplace discrimination: 1,2,9,14

Stigmatization: 5, 10, 15, 16, 17

Threat and harassment: 3,4,6,7

REMS

Think about your experiences with race/ethnicity. Please read each item and think of how many times this event has happened to you in the **PAST SIX MONTHS** because of race/ethnicity.

		<u>How often because of race/ethnicity?</u>					
		0 = Never					
		1 = 1 time					
		2 = 2 times					
		3 = 3 times					
		4 = 4 times					
		5 = 5 or more times					
1.	I was ignored at school or work because of my race/ethnicity.	0	1	2	3	4	5
2.	Someone's body language showed they were scared of me, because of my race/ethnicity.	0	1	2	3	4	5
3.	Someone assumed that I spoke a language other than English.	0	1	2	3	4	5
4.	I was told that I should not complain about race/ethnicity.	0	1	2	3	4	5
5.	Someone assumed that I grew up in a particular neighborhood because of my race/ethnicity.	0	1	2	3	4	5
6.	Someone avoided walking near me on the street because of my race/ethnicity.	0	1	2	3	4	5
7.	Someone told me that she or he was colorblind.	0	1	2	3	4	5
8.	Someone avoided sitting next to me in a public space (e.g., restaurants, movie theaters, subways, buses) because of my race/ethnicity.	0	1	2	3	4	5
9.	Someone assumed that I would not be intelligent because of my race/ethnicity.	0	1	2	3	4	5
10.	I was told that I complain about race/ethnicity too much.	0	1	2	3	4	5
11.	I received substandard service in stores compared to customers of other racial/ethnic groups.	0	1	2	3	4	5
12.	I observed people of my race/ethnicity in prominent positions at my workplace or school.	0	1	2	3	4	5
13.	Someone wanted to date me only because of my race/ethnicity.	0	1	2	3	4	5
14.	I was told that people of all racial groups experience the same obstacles.	0	1	2	3	4	5
15.	My opinion was overlooked in a group discussion because of my race/ethnicity.	0	1	2	3	4	5
16.	Someone assumed that my work would be inferior to people of other racial/ethnic groups.	0	1	2	3	4	5
17.	Someone acted surprised at my scholastic or professional success because of my race/ethnicity.	0	1	2	3	4	5
18.	I observed that people of my race/ethnicity were the CEOs of major corporations.	0	1	2	3	4	5
19.	I observed people of my race/ethnicity portrayed positively on television.	0	1	2	3	4	5
20.	Someone did not believe me when I told them I was born in the US.	0	1	2	3	4	5
21.	Someone assumed that I would not be educated because of my race/ethnicity.	0	1	2	3	4	5
22.	Someone told me that I was "articulate" after she/he assumed I wouldn't be.	0	1	2	3	4	5

Think about your experiences with race/ethnicity. Please read each item and think of how many times this event has happened to you in the **PAST SIX MONTHS** because of race/ethnicity.

		<u>How often because of race/ethnicity?</u>
		0 = Never
		1 = 1 time
		2 = 2 times
		3 = 3 times
		4 = 4 times
		5 = 5 or more times
23.	Someone told me that all people in my racial/ethnic group are all the same.	0 1 2 3 4 5
24.	I observed people of my race/ethnicity portrayed positively in magazines.	0 1 2 3 4 5
25.	An employer or co-worker was unfriendly or unwelcoming toward me because of my race/ethnicity.	0 1 2 3 4 5
26.	I was told that people of color do not experience racism anymore.	0 1 2 3 4 5
27.	Someone told me they “don’t see color.”	0 1 2 3 4 5
28.	I read popular books or magazines in which a majority of contributions featured people from my racial/ethnic group.	0 1 2 3 4 5
29.	Someone asked me to teach them words in my “native language.”	0 1 2 3 4 5
30.	Someone told me that they do not see race/ethnicity.	0 1 2 3 4 5
31.	Someone clenched her/his purse or wallet upon seeing me because of my race/ethnicity.	0 1 2 3 4 5
32.	Someone assumed that I would have a lower education because of my race/ethnicity.	0 1 2 3 4 5
33.	Someone of a different racial/ethnic group has stated that there is no difference between the two of us.	0 1 2 3 4 5
34.	Someone assumed that I would physically hurt them because of my race/ethnicity.	0 1 2 3 4 5
35.	Someone assumed that I ate food associated with my race/ethnicity/culture every day.	0 1 2 3 4 5
36.	Someone assumed that I held a lower paying job because of my race/ethnicity.	0 1 2 3 4 5
37.	I observed people of my race portrayed positively in movies.	0 1 2 3 4 5
38.	Someone assumed that I was poor because of my race/ethnicity.	0 1 2 3 4 5
39.	Someone told me that people should not think about race/ethnicity anymore.	0 1 2 3 4 5
40.	Someone avoided eye contact with me because of my race/ethnicity.	0 1 2 3 4 5
41.	I observed that someone of my race/ethnicity is a government official in my state.	0 1 2 3 4 5

42.	Someone told me that all people in my racial/ethnic group look alike.	0	1	2	3	4	5
43.	Someone objectified one of my physical features because of my race/ethnicity.	0	1	2	3	4	5
44.	An employer or co-worker treated me differently than White co-workers.	0	1	2	3	4	5
45.	Someone assumed that I speak similar languages to other people in my race/ethnicity.	0	1	2	3	4	5

CES-D

- 0 Rarely or None of the Time (Less than 1 day)
- 1 Some or a Little of the Time (1-2 days)
- 2 Occasionally or a Moderate Amount of Time (3-4 days)
- 3 Most or All of the Time (5-7 days)

During the past week:

- _____ 1) I felt depressed.
- _____ 2) I felt that everything I did was an effort.
- _____ 3) My sleep was restless.
- _____ 4) I was happy.
- _____ 5) I felt lonely.
- _____ 6) People were unfriendly.
- _____ 7) I enjoyed life.
- _____ 8) I felt sad.
- _____ 9) I felt that people disliked me.
- _____ 10) I could not get "going."

Inventory of Involvement (Short Form)

The following is a list of different kinds of school, community and political activities that people can get involved in. For each type of activity, please use the following scale to indicate how much you did of this kind of thing over the past year.

- 0 – you never did this kind of thing
- 1 – you did this kind of thing once or twice
- 2 – you did this kind of thing a few times
- 3 – you did this kind of thing a fair bit
- 4 – you did this kind of thing a lot

- ___ political activities (e.g., attended meetings of a political club or party, worked on a political campaign)
- ___ community service (e.g., worked as a volunteer, helped organize neighbourhood or community events)
- ___ social activism (e.g., attended a demonstration, collected signatures for a petition drive, contacted a public official about a social issue, attended meetings of an organization devoted to social change)
- ___ informal helping (e.g., visited or helped out people who were sick, took care of other families' children on an unpaid basis, helped people who were new to the country)
- ___ religious and cultural activities (e.g., participated in a church-connected group, in an ethnic club or organization, participated in a choir or theatre group)
- ___ organized sports (e.g., participated as a team member in a sports league or club)