Summer 2024

Testing a Model of Ethnic/Racial Discrimination, Ethnic Identity, and Adult Attachment in College Students

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TESTING A MODEL OF ETHNIC/RACIAL DISCRIMINATION, ETHNIC IDENTITY, AND ADULT ATTACHMENT IN COLLEGE STUDENTS

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A Dissertation Submitted to the Graduate Faculties of
Eastern Virginia Medical School
Norfolk State University
Old Dominion University
in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

CLINICAL PSYCHOLOGY

VIRGINIA CONSORTIUM PROGRAM IN CLINICAL PSYCHOLOGY
August 2023

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ABSTRACT

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Ethnic/racial minoritized Americans encounter a disproportionate amount of discrimination throughout their lifetime that often has negative effects on their well-being and mental health. Although the impact of discrimination on symptoms of depression and substance use has been widely studied, understanding of the mechanisms through which these associations exist are still largely unknown. From the perspective of the Cultural Development and Psychopathology Framework, the effects of discrimination on psychopathology (i.e., depression symptoms and alcohol use) are likely mitigated by normative developmental processes. One such developmental outcome that has been determined to partially mediate the impact of cultural stressors (i.e., ethnic/racial discrimination) on psychopathology is adult romantic attachment dimensions (i.e., anxious, avoidant). Indeed, recent research indicated adult romantic attachment dimensions partially mediated the relationship of discrimination and depression symptoms in ethnic/racial minoritized individuals. Because of this finding, it has been further suggested that other variables are likely involved in the relationship between discrimination and psychopathology in ethnic/racial minorities. Towards this end, this dissertation sought to (1) examine the relationship between discrimination and depression symptoms and alcohol use, (2) replicate recent work and determine whether adult romantic attachment dimensions (i.e., anxious, avoidant) serve to mediate the association between discrimination and depression

symptoms and alcohol use, (3) examine whether ethnic/racial identity (ERI) serves to moderate the discrimination-attachment-depression/alcohol use associations among ethnic/racial minoritized individuals, 4) and explore any differences in these outcomes that may exist between three ethnic/racial minority groups (i.e., Black/African American, Hispanic, and East Asian). The total sample consisted of 3,353 ethnic/racial minority college students.

Results indicated that adult romantic attachment dimensions mediated the positive associations of ethnic/racial discrimination and depression symptoms and alcohol use. Ethnic/racial identity moderated the association between ethnic/racial discrimination and anxious adult romantic attachment, the association between ethnic/racial discrimination and avoidant adult romantic attachment, and the relationship between ethnic/racial discrimination and alcohol use. Further, it was found that ethnic/racial minority college students with greater ethnic/racial identity reported less depression symptoms and alcohol use. Suggestions for prevention and intervention methods to mitigate the negative impact of ethnic/racial discrimination, and the fostering of more positive social dynamics are discussed.

This dissertation is dedicated to my family whose steadfast love and support have kept me rooted in my purpose throughout my journey. To my friends, for uplifting me with their persistent encouragement and understanding as I traversed the peaks and valleys of this process. To all those who have inspired me, illuminating the path before me to this milestone. Your faith in me has fueled my tenacity to persevere on this less traveled road. I also dedicate this dissertation in memory of my TARDIS lab partner Julie C. Rodil, MA, who welcomed me and helped me feel at home in academia. Additionally, I dedicate this dissertation in loving memory of my dear friend Ebony Kadira Hills-Branch. Your friendship since elementary school, to our years at Florida A&M University, and on into adulthood kept me inspired and motivated throughout this process. Your friendship reminds me to find laughter and joy in all that I do. Finally, to everyone, family, friends, supervisors, mentors, professors and all who have been influential in my life and academic journey, in heaven and on earth, this body of work is the culmination of the collective energies. I thank God for grace and mercy in my carrying out of His will.

“The door has been slammed!”

ACKNOWLEDGEMENTS

I would like to express my sincerest gratitude to my research mentor, Dr. Alan Meca, for his guidance, support, and feedback throughout this process. I am forever grateful for the research home in the TARDIS Lab you welcomed me into. Your expertise, patience, and faith in my abilities have been essential to sculpting this work.

I am immensely thankful to the members of my dissertation committee, Dr. Andrew S. Franklin, Dr. Jennifer Flaherty, and Dr. James F. Paulson for your scholarly feedback, insightful suggestions, and nurturing guidance that has helped refine this research and supported my growth throughout my training.

I am appreciative to the Virginia Consortium Program in Clinical Psychology – Eastern Virginia Medical School, Norfolk State University, and Old Dominion University for the provision of resources and facilities that were fundamental to the conducting of this research.

I am thankful to my cohort, the United Front, my lab partners, and classmates who have supported and encouraged me throughout this process. I am appreciative for the brainstorming conversations, the shared knowledge, the social activities, the food, fun and moral support.

I am grateful to all those involved in the MUSIC study from which the data for this research was derived. To the participants, I am thankful for your willingness to engage in research to support progress in the field and the greater society.

Lastly, I would like to acknowledge the work and effort my mom and dad put forth in supporting me emotionally and financially in completing this process. To my sister, thank you for the motivational talks and reminding me from which we come. To my aunt, thank you for all

the prayers and ensuring I have the means to get where I need to be to complete this research. To my uncle and aunt, thank you for the loving support and helping me stay grounded in my faith.

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CHAPTER I

INTRODUCTION

Ethnic/racial minoritized individuals in the United States are faced with many unique experiences that majority persons do not encounter. Even prior to conception, the health and wellbeing of minoritized persons can be affected by negative experiences including racism, discrimination, and segregation (Lehrner & Yehuda, 2018). Many of these events and their deleterious effects have largely been minimized in research (Coll et al., 1996); and moreover, overly generalized. The impact of one's life experiences, both positive and negative, are likely influenced by various factors unique to each individual. Generations of ethnic/racial minoritized individuals have consistently adapted to ensure that they and their offspring not only survive but thrive in a society that was created using their energies and talents, but not created with their wellbeing in mind.

The positive relationships between discrimination and psychopathology, including anxiety, depression, substance use, and suicide, have been described in existing literature (Ayers, 2021; Chou et al., 2012; Donovan et al., 2013; Pichardo et al., 2021; Polanco-Roman et al., 2019). What continues to be less clear is what the unique effects of ethnic/racial discrimination on psychopathology are, as well as, what potential mechanisms underlie these associations, and what individual factors may buffer the negative effects of this cultural stressor. I offered that individuals' understanding of relationships, rooted in early childhood experiences (i.e., attachment behaviors) and maintained throughout the lifespan, represent an important mechanism of change. Informed by the cultural development and psychopathology framework (Causadias, 2013), I proposed that experiences of ethnic/racial discrimination undermine relational attachment dimensions established through normative developmental processes and

give way to depression symptoms and alcohol use. Additionally, I suggested that ethnic/racial identity serves as a protective factor by buffering the negative influences of ethnic/racial discrimination. Towards this end, this dissertation sought to (1) examine the relationship between discrimination and symptoms of depression and alcohol use, (2) replicate recent work and determine whether anxious and avoidant attachment serve to mediate the association between discrimination and depression symptoms and alcohol use, (3) examine whether ethnic identity serves to moderate the discrimination-attachment-depression/alcohol use associations among ethnic/racial minoritized emerging adults, 4) explore any differences in these outcomes that may exist between three ethnic/racial minority groups (i.e., Black, Hispanic, and East Asian).

I focused on emerging adults for a number of reasons. First, emerging adulthood has been conceptualized as the fork in the road of divergent psychosocial pathways where an individual's choices can lead towards positive or negative outcomes that can be less dependent on earlier life experiences (Schwartz, 2016). As such, it is a unique time of identity development and contemplation about life that can be influenced by an individual's experiences within the new and broader social culture. Second, during this time, individuals may experience increased worry and distress about how their choices may affect their future trajectory (Côté, 2014), leading to thoughts of, "I just can't" (Meca et al., 2022). Considering the psychological burden that can be experienced in making such critical choices without the previous supports and structure provided by caregivers during childhood and adolescence (Schwartz, 2016), individuals may develop mental health problems that can exacerbate the uncertainty that many experience during this in-between time (Arnett, 2000; SAMSHA, 2017). Third, with increased independence and resources, as well as life stressors, individuals may rely on maladaptive coping behaviors such as alcohol and substance use, risky sexual behaviors, and drunk driving, which are most commonly

seen among college age individuals (Chou et al., 2005; SAMSHA, 2017, 2021); however, for ethnic/racial minorities, such behaviors often lead to more negative outcomes than their non-Hispanic White peers may experience (Boutrin &Williams, 2021; Chartier & Caetano, 2010).

Conceptualizing Emerging Adulthood

Emerging Adulthood represents the transition between adolescence and young adulthood in which individuals begin to explore new life roles, independence, and ideals (Arnett, 2000). Arnett (2000) hypothesized that as a result of society's transition to a post-industrial world, technology, information-based careers, and advances in medicine have resulted in individuals seeking post-secondary education and training, creating a delay in the transition into full adult roles of marriage, parenthood, and professional careers (Arnett et al., 2014; Côté, 2000; Côté & Bynner, 2008). Emerging adulthood is distinct from adolescence in that between the ages of 10-18 individuals experience puberty, rely heavily on their caregivers' support, and are enrolled in secondary school, immersed in a social culture of their peers (Arnett, 2000). As individuals enter a more independent and less structured life, filled with possibilities, they engaged in a dynamic process of contemplation and exploration, that imparts a level of instability and heterogeneity which is discrete from the permanence of commitment associated with young adulthood and adulthood (Arnett, 2000; Arnett et al., 2014).

It has also been noted that this dynamic life stage encompasses the extension of identity exploration, which has historically been described as a process occurring in adolescence (Arnett, 2000; Arnett et al., 2014; Erikson, 1950). Still remaining similar in focus (Erikson, 1950), emerging adulthood is defined as a period of self-examination in which individuals contemplate adult commitments related to work, romantic relationships, and personal ideals (Arnett, 2007; Arnett et al., 2014). The consequences for this decision process can result in mental health issues

such as anxiety and depression due to the uncertainty of one's ability to achieve their desired commitments independently (Meca et al., 2022; Schwartz, 2016). Additionally, instability in love and work, which may be involuntary, can confer a lack in social and financial support that may deleteriously affect an individual's mental and emotional wellbeing (Arnett et al., 2014).

Although this largely self-focused stage of life may cause some to feel uncertain or in-between regarding who they are, many remain hopeful and optimistic about the possibilities that life holds for them, and any associated psychopathology resolves as commitments are made (Arnett, 2010; Arnett et al., 2014). Indeed, the establishment and maintenance of a positive perspective for one's sense of self and healthy relationships, likely imparts protection against the negative effects of life stress during this critical period (Schwartz, 2016); however, for some, as I detailed below, psychopathology may be unrelenting due to impediments in an individual's normative developmental processes.

Historical Context of Emerging Adulthood

Around the time in which the data for this study was collected (i.e., between September 2008 – October 2009; Castillo & Schwartz, 2013), emerging adults were encountering unprecedented social circumstances. For example, the United States was experiencing the collapse of the housing marking, which gave rise to a historic recession, the first African American U.S. President, Barack Obama, was elected, and a surge of smart devices and phones, were hitting the consumer market, revolutionizing how individuals socialize and obtain new information. Additionally, for emerging adults attending college, tragic events such as the Virginia Tech massacre, gave rise to increasing concern about mental health, and the lack of culturally informed care systems available. Indeed, several researchers noted a rise in the number of students seeking mental health care, an increase in the severity of the psychological and

emotional symptoms that college students were endorsing, and a greater number of students who had been prescribed psychiatric medications (Bushong, 2009; Gallagher, 2009, 2011; Gallagher et al., 2000). Furthermore, as a likely consequence of limited adaptive coping methods, researchers and clinicians also described an increase in students' abuse of alcohol, illicit substances, and other risky behaviors that could lead to irrevocable harm (Castillo & Schwartz, 2013). Thus, although the data used for this study primarily represents a snapshot in time, the trends observed also likely speak to the current and future effects of the unique stressors that emerging adults encounter.

Psychopathology in Emerging Adulthood

The life changes, confusion, and subsequent stress that present during emerging adulthood can be unrelenting and unbearable for some. Consequentially, psychopathology may develop imparting distress and dysfunction on the lives of some who find this period difficult to navigate. In this section I will focus on two particularly prevalent and impactful sequalae of challenges experienced during this time, persistence of which can have detrimental long-term effects.

Depression in Emerging Adulthood

Depression is characterized by the experience of low or depressed mood, and a loss of pleasure or interest in previously enjoyed activities for at least two weeks (American Psychological Association [APA], 2013). Along with several other symptoms that can impact one's daily functioning, depression may lead to decreased motivation and self-esteem, problems with attention, and more severely, self-injury, and suicidal ideation and behaviors (Lejuez et al., 2011). Depression is known to be one of the leading causes of disability in individuals over the age of 18 years (World Health Organization [WHO], 2022) and has been linked to higher levels

of mortality, secondary to suicide, and increase the burden of difficulty to manage comorbid health problems (Kessler & Bromet, 2013; Siu et al., 2016). In addition to the personal toll that depression has on an individual, it has also been shown to negatively impact work productivity (Goetzel et al., 2004; Greenberg et al., 2003; Stewart et al., 2003; Kessler & Bromet, 2013), academic performance (Awadalla et al., 2020; Deroma et al., 2009), and interpersonal relationships (Hammen et al., 2005). Additionally, it has been associated with difficulties in life role transitions, and an increased risk of alcohol and substance dependence (Hasin et al., 2005).

Prevalence. Depression is one of the most frequently diagnosed mental health disorders that has been linked to high rates of mortality and morbidity (Kessler & Bromet, 2013; Liu et al., 2019). Globally, more than 264 million people experience depression, making it the 3rd highest rated diagnosis for *Years Living with Disorder* (Global Burden of Disease Study 2017, 2018). In 2020, it was estimated that 14.8 million or roughly 6% of adults in the United States, aged 18 or older, experienced at least one episode of depression during the previous year (National Institutes of Mental Health [NIMH], 2022). Moreover, it is estimated that approximately 21.0 million adults (8.4%) experience at least one depressive episode in their lifetime (NIMH, 2022). Recent data suggests that the overall national prevalence rate of depression decreased from 2017 to 2020; however, the prevalence rate of depression is still highest among adults between the ages of 18-25 years. Indeed, the average age of onset for depression is approximately 22.7 years in the U.S. (Kessler & Bromet, 2013). Moreover, in 2017, the NIMH (2019) reported a 13.1% 12-month prevalence rate for adults between the ages of 18-25 years, whereas in 2020, this statistic increased to approximately 17%, with individuals reporting having multiple races at approximately 15.9% (NIMH, 2022).

Among college-attending emerging adults, depression was also found to be one of the most frequently endorsed mental health issues (Center for Collegiate Mental Health [CCMH], 2019). Over a 12-month period, a substantial number of college students endorsed numerous symptoms of depression including, hopelessness (52%), extreme stress (56%), loneliness (63%), sadness (67%), and mental exhaustion (88%) (American College Health Association [ACHA], 2018). Perhaps even more alarming is that over the course of 1 year, approximately 42% of college students endorsed experiencing depression that was so severe it was challenging to function, and 12% reported suicidal ideation (ACHA, 2018). The increasingly high rates of depression experienced by individuals within this age range suggests a need for a broader perspective in understanding the contributing factors in the development of depression symptoms than has already been highlighted in the literature.

Ethnic/Racial Differences in Depression. Considering the high prevalence rates described above, it is evident that depressive disorders impact a broad range of populations. Indeed, of those adults reporting at least one depressive episode in their lifetime, non-Hispanic Whites have consistently had the highest prevalence rates (9.5%) when compared to ethnic/racial minoritized individuals (NIMH, 2022). Whereas the prevalence rates of depression are lower in ethnic/racial minoritized adults (Hispanic 7%, Black 7%, Asian 4.2%; NIMH, 2022), epidemiological research has indicated lower rates of mental health treatment seeking behavior. Moreover, ethnic/racial minoritized individuals are also less likely to have access to and receive quality care for depression (Alegria et al., 2008). Additionally, whereas the national rates of suicide were noted to have decreased between 2018 and 2020, from 14.2 to 13.5 per 100,000 people (Kochanek et al., 2020), recent research has indicated a rise in the rates of suicide among ethnic/racial minorities (Ramchand et al., 2021). Indeed, a 30% increase in the rate of suicide for

African Americans and a 16% increase for Asians were reported, thus, underscoring the need for a greater understanding of what influences have contributed to this trend in ethnic/racial minoritized populations.

Alcohol Use

In the United States, alcohol use is a common method of coping, socializing, and sensation seeking (Cooper et al., 1995). The Centers for Disease Control and Prevention (CDC, 2022) describes a standard drink as one containing 0.6 ounces of pure alcohol, with the daily recommendation for moderate alcohol consumption for women being no more than 1 standard drink per day, and for men, no more than 2 standard drinks per day (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2020). Many individuals who excessively drink alcohol on occasion may not endure the same level of functional impairment as those with alcohol use disorder; however, the social and economic burden of excessive alcohol use still results in numerous physical and mental health problems. Alcohol accounts for over 3 million deaths per year worldwide (WHO, 2022). Further, the CDC estimates alcohol resulted in 140,000 deaths per year between 2015 – 2019 in the U.S. (CDC, 2022). Indeed, 1 in 10 deaths in U.S. adults, aged 20-64, occurs because of excessive alcohol consumption and approximately $249 billion or $2.05 per drink was spent in 2010 on alcohol (CDC, 2022).

Prevalence. Based on this definition, it was estimated in the 2019 National Survey on Drug Use and Health that approximately 85.6% of adults, aged 18 and older, have consumed alcohol during their lifetime. Moreover, approximately 69.5% endorsed drinking alcohol within the past year, and between 51-54.9% reported consuming alcohol during the last month (NIAAA, 2022). Excessive drinking encompasses binge drinking behaviors, defined as 4 or more standard drinks on one occasion for women, and 5 or more standard drinks on one occasion for men,

which is the most common type of excessive drinking. Additionally, excessive drinking includes heavy drinking behaviors, which the CDC (2022) defines as 8 or more standard drinks for women in one week, and 15 or more drinks for men within one week. While approximately 25.8% of adults, aged 18 and older, endorsed engaging in binge drinking during the last month and 6.3% reported engaging in heavy drinking during the last month (NIAAA, 2022), most individuals who drink alcohol excessively are not alcoholics nor alcohol dependent (CDC, 2022).

Alcohol Use Trends in Ethnic/Racial Minorities. Similar to the overall national trends, the excessive use of alcohol in ethnic/racial minorities has also significantly increased in recent years (Barbosa et al., 2021). The NIAAA (2006) reported that Hispanics were found to have one of the highest rates of risky drinking behaviors across ethnic/racial minorities. Additionally, Hispanics, across genders, were reported to engage in the highest rates of daily heavy drinking (Chartier & Caetano, 2010). Further, whereas Whites have been noted to be more likely to have a history of alcohol use disorder and dependence than Blacks and Hispanics (Hasin et al., 2007), once individuals have become dependent on drinking, Blacks and Hispanics have been reported to have greater rates of repeated and enduring alcohol dependence (Dawson et al., 2005). Although it remains that ethnic/racial minorities drink alcohol at lower rates than non-Hispanic Whites, they are more likely to experience deleterious effects of alcohol use and develop alcohol use disorder; further, they are less likely to seek and have access to quality treatment for alcohol use (Chartier & Caetano, 2010; SAMHSA, 2022). For example, Miles et al. (2020) reported minorities are more likely to travel farther to access care due to a lower density of services within their community and limited access to services that are culturally sensitive. Additionally, on accessing treatment, Hispanics persons were noted to have endorsed more severe symptoms than White individuals (Miles et al., 2020).

In contrast, while access to care is limited, minority dense communities have been reported to have greater access to alcohol sources, more alcohol related advertisement, and disproportionate policing practices leading to more severe consequences (e.g., searches, ticketing, arrests) (Miles et al., 2020). As an extension of community related disparities, Hispanics had one of the highest percentages of imprisonment due to driving under the influence/driving while intoxicated (DUI/DWI; Carson, 2021). Additionally, ethnic/racial minorities also incur higher rates of complications (e.g., monetary loss and privilege restrictions) for DUI/DWI, and beyond the immediate consequences, including long term impacts on government assistance for housing and food, scholarships, education, employment, insurance, and interpersonal relationships occur (Kagawa et al., 2021).

Beyond the disparities in social consequences of alcohol use, drastically worse health related outcomes occur in minorities because of institutionalized racism (Chartier & Caetano, 2010; Zemore et al., 2018). Blacks have been noted to have higher incidences of alcohol related hypertension (Holmes, Jr. et al., 2019), increased rates of throat cancer and pancreatic disease (Charteir & Caetano, 2010), and greater mortality as a result of alcohol related cancers (Caetano et al., 2014; Chartier et al., 2013). Indeed, Black, and Hispanic individuals have been reported to be at greater risk of incurring liver related problems (Charteir & Caetano, 2010; Flores et al. 2008), and Hispanics have been shown to have the highest prevalence of chronic liver disease and cirrhosis, which are known leading causes of death nationally (National Health Interview Survey, 2018).

Although Asian Americans have consistently demonstrated lower rates of use than other minorities, they are still disproportionately impacted by some alcohol-related consequences (Caetano et al., 2014). For example, Asian Americans with increased alcohol use may be at

greater risk for esophageal cancer (Zemore et al., 2018). Additionally, Asians were found to have the highest incidence rates of hepatocellular carcinoma, which alcohol use increases the risk of (Balogh et al., 2016). Moreover, Asians were also reported to have the highest rates of death per 100,000 people due to hepatocellular carcinoma (Juon et al., 2014). Lastly, Black, Asian, and Hispanic women were found to be significantly more likely to continue heavy alcohol use than White women after becoming pregnant (Tenkku, 2009), placing them at greater risk for pregnancy, birth, and neonatal problems (Washio et al., 2016). Indeed, such disparities in alcohol use and treatment contributes to increased fetal alcohol spectrum disorders in Blacks (Russo et al. 2004); thus, imparting ongoing negative consequences on future generations.

Summary

Taken together, depression and alcohol use problems for emerging adults remain a consistent area of concern as epidemiological rates increase (SAMHSA, 2020). These problems, as indicated above, may be worse in ethnic/racial minorities as they are less likely to seek treatment and receive quality care (Alegria et al., 2008; Chartier & Caetano, 2010). Further, the sequela associated with these problems (i.e., cardiovascular disease, arrests, substance use disorders, and sexually transmitted diseases) may be more detrimental than those experienced non-Hispanic Whites (Boutrin & Williams, 2021; Chartier & Caetano, 2010; Hamilton & Morris, 2015). Although many factors may contribute to alcohol use and symptoms of depression, discrimination has been noted to significantly impact ethnic/racial minorities, contributing to both mental and physical health problems (Keum & Cano, 2021; Keum & Choi, 2022; Martin et al., 2003; Tran et al., 2010). Additionally, whereas alcohol use and depression have been noted to cooccur, variances in emotional and cognitive styles support investigating them as distinct outcomes (Venanzi et al., 2022). Indeed, symptoms of depression can be viewed as an internal

upregulation process, such that an individual may engage in greater cognitive rumination when stressed, while alcohol use, on the other hand, can be viewed as cognitively downregulating behavior, one that has been associated with lower levels of thought reappraisal. Further, Venanzi et al. (2022) noted that individuals with lower tolerance for uncertainty endorsed greater depression while individuals with higher tolerance for uncertainty reported increased alcohol use. These disparities in the emotional and cognitive processes occurring in response to stress, underscore the differing propensities that may predict increased depression symptoms and alcohol use; therefore, supporting their treatment as independent distal outcomes in the investigation into the underlying mechanisms of their associations with ethnic/racial discrimination. Greater understanding of which, may unearth methods of prevention and intervention of their development.

Ethnic/Racial Discrimination

Discrimination has been characterized as the unfair or unjust treatment of others based on their membership to socially constructed groups such as gender, race, ethnicity, social class, etc., leading to systematic disadvantages (Dovidio et al., 2008; Dovidio & Gaertner, 1986; Harrell, 2000; Pachter et al., 2010; Thoits, 2010; Yip, 2018). It is often rooted in negative beliefs and attitudes and associated with harmful actions and behaviors towards others based on their outward appearance and cultural lineage (Pachter et al., 2010). Ethnic/racial discrimination may present on an individual level within the context of stereotyping – the upholding of prevailing images or mental conceptualizations of an ethnic/racial group to which all group members are believed to conform to, or a larger, social level such as institutional racism – patterns of actions, methods, rules, regulations, and guidelines that function within social organizations to punish, hinder, weaken, abuse, and manipulate ethnic/racial minorities (Better, 2008). Institutionalized

racism is often used to capture ethnic/racial discrimination that occurs at a systemic, or whole system level (e.g., hospitals, school, criminal justice organizations) and at a structural level (e.g., policies, practices, and procedures) (Braveman et al., 2022). For the purposes of this study, I primarily reference ethnic/racial discrimination, as the actions of the majority ethnic/racial group (i.e., non-Hispanic White), which are intricately interwoven into the social structures and institutions in the United States and numerous other countries, that have adverse and differential effects on members of minority ethnic/racial groups (Hope et al., 2015; Krieger 1999; Williams et al., 2003; Yip, 2018).

Prevalence of Ethnic/Racial Discrimination

Discrimination based on one's race and/or ethnicity has been shown to impact a large proportion of minoritized individuals (Fischer et al., 2000). In a recent study, Pew Research Center [PRC] (2019) found that approximately 76% of Black and Asian respondents, and 58% of Hispanics reported that they have experienced discrimination because of their race. Moreover, discrimination has been shown to contribute to gaps across all structures of society and life (e.g., health, education, socioeconomic) (Morgan et al., 2018), such that 52% of Blacks and 24% of Hispanics reported that their race has hurt their ability to get ahead in life (PRC, 2019). Within the context of employment, U.S. Equal Employment Opportunity Commission (EEOC) reported 61,331 discrimination charges during the 2021 fiscal year (Matthews et al., 2021). Although many often go unreported, of those documented by the EEOC, 20,908 (34.1%) were based on race; 6,213 (10.1%) were based on national origin; and 3,516 (5.7%) were based on color; moreover, this data does not account for charges filed at the state or local level; therefore, it represents only a portion of this ongoing problem that impacts minorities mentally, physically, and financially (Matthews et al., 2021).

The Impact of Ethnic/Racial Discrimination

Ethnic/racial discrimination may present in a variety of forms (e.g., microaggressions, stereotypes, segregation, trauma, over policing) across all settings (e.g., universities, hospitals, places of employment, government agencies); thus, making it a pervasive and unrelenting experiences that ethnic/racial minorities are plagued with enduring. Ethnic/racial minorities are persistently encumbered by the time and cognitive and emotional energy expended in the perpetual understanding, analyzing, and measuring of ethnicity and race-based interactions every day; moreover, the extent of which most members of the majority ethnic/racial group (i.e., non-Hispanic White) will likely never experience nor genuinely understand (Evans & Feagin, 2015; Feagin, 2006). Indeed, if one considers that the average person in the U.S. starts each day at a 100% energy level, and expends approximately 50% on everyday problems, the other 50% can be used on creative endeavors. In contrast, for minoritized individuals, 25% of the 50% of energy remaining after accounting for the expenditure on everyday problems, must be used to endure existing as an ethnic/racial minority; thus, only 25% of one's energy remains for creative endeavors (Evans & Feagin, 2015).

In essence, ethnic/racial discrimination is a pervasive life stressor (Williams & Mohammed, 2009) that persistently handicaps minoritized persons' life experiences. As a result, many ethnic/racial minorities exist in a state of imperceptible despondency from a life inflicted with daily occurrences of unfair and unjust treatment (Feagin, 2006). Moreover, ethnic/racial minorities, particularly African Americans, must bear the physical, emotional, and cognitive weight of the collective knowledge of slavery, police brutality, and genocide inflicted upon them since the birth of this nation (Evans & Feagin, 2015). Indeed, whereas trauma is defined as direct or vicarious exposure to actual or threatened experiences that may result in loss of life, injury, or

sexual assault (APA, 2013), some experiences of ethnic/racial discrimination embody cultural trauma (Alexander, 2004), the effects of which can confer harm across generations (Lehrner et al., 2018). Additionally, for individuals subjected to traumatic experiences of ethnic/racial discrimination serious mental health problems, including posttraumatic stress disorder may occur. For example, in a sample of 793 Asian Americans, 951 Hispanic Americans, and 2,795 African Americans, perceived ethnic/racial discrimination was related to the development of a several mental health disorders including major depressive disorder and posttraumatic stress disorder (Chou et al., 2012). Furthermore, whereas existing research has suggested more than half of Americans experience at least one traumatic event during their lifetime, it has been described that ethnic/racial minorities have a higher likelihood of experiencing traumatic events, particularly those that are racially and ethnically motivated (Boyraz et al., 2015). Yet, despite our understanding of the impact that ethnic/racial discrimination can impart, the traumatic-stress related sequelae are often underappreciated clinically and in research; thus, increasing the chance of long-term harm (Ayers, 2021). Undeniably, ethnic/racial discrimination is intertwined into individuals' sociocultural environments such that it can overtly and covertly impact an individual's mental health (Chae et al., 2010; Cook et al., 2017; Harrell, 2000; Romero et al., 2007; Saleem et al., 2020) and physical health (Abramson et al., 2015; Williams et al., 2019), and access to healthcare (Nelson, 2002), education (Pachter et al., 2010; Umaña-Taylor, 2016) and employment (Williams et al., 2019). Moreover, for ethnic/racial minorities, their development and overall life experience, occurs within the social context of discrimination, racism, and prejudice imparting influences, some of which have yet to be unmasked (Coll et al., 1996).

In essence, discrimination has been conceptualized by some as an interpersonal symptom of racism which can impact an individual via direct or indirect exposure of witnessed events, nonverbal behaviors, and vocalized expressions (Boyd et al., 2020; Harrell, 2000; Williams & Mohammed, 2009). Not surprisingly, ethnic/racial discrimination has been associated with the development of physical problems including hypertension and risky behavior (e.g., alcohol use); mental health issues such as depression, anxiety, and trauma-related symptoms; functional problems like decreased work, scholastic, and parenting performance; and loss of social and spiritual connectedness (Harrell, 2000; Pascoe & Richman, 2009; Thomas et al., 2006; Williams & Mohammed, 2009). Further, findings from a study of Latinas (Sawyer et al., 2012) and another on Latinx college students (Pichardo et al., 2021) both suggested that not only has the experience of ethnic/racial discrimination led to a number of physical (i.e., poor sleep quality, decreased sleep efficiency, and cardiovascular responsiveness) and psychological problems (i.e., depression and psychological stress), but the hypervigilance associated with the potential chance of experiencing discrimination was noted as a predictor of several psychological and physical health outcomes. Indeed, for ethnic/racial minorities, the traumatic impact of experiences of discrimination may destroy an individual's or cultural group's perception of well-being, such that damage to their memories imparts permanent change to their future identity (Alexander, 2004). In essence, the experience of discrimination and the traumatic-stress response (i.e., hypervigilance) associated with it have been shown to lead to several physical and mental health problems (Pichardo et al., 2021; Sawyer et al., 2012). Below, I provide a review of research focused on the links between discrimination with depression and alcohol use.

Discrimination and Psychopathology

In a meta-analysis of 107 studies investigating the association of discrimination with mental health problems, 69% or 345 of 500 statistical analyses have demonstrated a positive association in ethnic/racial minorities (Pascoe & Richman, 2009). Chou et al. (2012) completed a study with 793 Asian Americans, 951 Hispanic Americans, and 2,795 African Americans and found that ethnic/racial discrimination was associated with major depressive disorder and several other mental health issues. Similarly, Romero et al. (2007) indicated that discrimination was associated with depression and anxiety in a sample of ethnic/racial minorities. Other research studies have also linked ethnic/racial discrimination with the experience of symptoms of depression (Hudson et al., 2016; Madubata et al., 2018), and consequentially increased suicidal ideation (Walker et al., 2014). Moreover, Clark et al. (1999) has suggested that the psychological stress response elicited by discrimination can have not only transient mental health problems, but also long-term consequences.

Ethnic/racial discrimination has also been associated with high-risk behaviors such as smoking, substance use, risky sexual behaviors, disordered eating, and reckless driving (Sawyer et al., 2012); moreover, it has been associated with heavy and hazardous drinking (Desalu et al., 2019; Gilbert & Zemore, 2016). Indeed, in previous research, ethnic/racial minorities, particularly African Americans, have endorsed drinking alcohol as an effective method of coping with life stress (Martin et al., 2003), such as that associated with the experience of ethnic/racial discrimination (Pittman & Kaur, 2018). In a recent longitudinal study of 311 Asian American college students, 79% of which reported experiencing racial discrimination within the last year, increased experience of racial discrimination was associated with increased drinking to cope with negative affect, and indirectly with drinking related problems 1 year later (Le & Iwamoto, 2019).

Additionally, for non-U.S. born immigrant minorities, ethnic/racial discrimination has also been found to be positively associated with substance use (Tran et al., 2010). Specifically, it was found that perceived ethnic/racial discrimination was positively associated with African-born Black immigrants' days of drinking, Hispanic/Latino immigrants' days of binge drinking, and Southeast Asian immigrants' smoking status; thus, highlighting that ethnic/racial discrimination has substantial negative implications for minorities (Tran et al., 2010).

Beyond individual studies, several meta-analyses have documented the links between discrimination and alcohol use. For example, in a meta-analysis of 27 studies, racial discrimination was positively associated with alcohol consumption, risky drinking, and negative alcohol related outcomes among Blacks (Desalu et al., 2019). Another meta-analysis of 71 papers conducted by Gilbert & Zemore (2016) not only found a positive association between racial discrimination and increased alcohol use, alcohol-related problems, and alcohol use disorder risk, but the authors also noted that the majority of papers reviewed from the U.S. used African American samples; thus, highlighting the lack of research using samples from other ethnic/racial minority groups (e.g., Asian, Hispanic/Latin-x).

Further, as communication and social interaction continues to evolve, the pervasive experiences of ethnic/racial discrimination have been noted to extend into online platforms causing similar negative consequences such as risky alcohol use among Black, Asian, and Hispanic adults in the U.S. (Keum & Cano, 2021). Moreover, disparities in help-seeking behaviors and the quality of care received, maintains the gap in many health and well-being outcomes for minorities (Chartier & Caetano, 2010). Acknowledging that ethnic/racial discrimination has been identified as a social determinant of mental and physical health outcomes and disparities (Abramson et al., 2015; Harrell, 2000; Williams et al., 2019), it is

imperative that the unique underlying mechanisms of these associations be thoroughly investigated to elucidate potential targets of intervention. Towards that end, I turn our attention to a Cultural Development and Psychopathology framework as a guiding framework prior to reviewing cognitive vulnerability and attachment theory.

Theoretical Overview

Cultural Development and Psychopathology Theoretical Framework

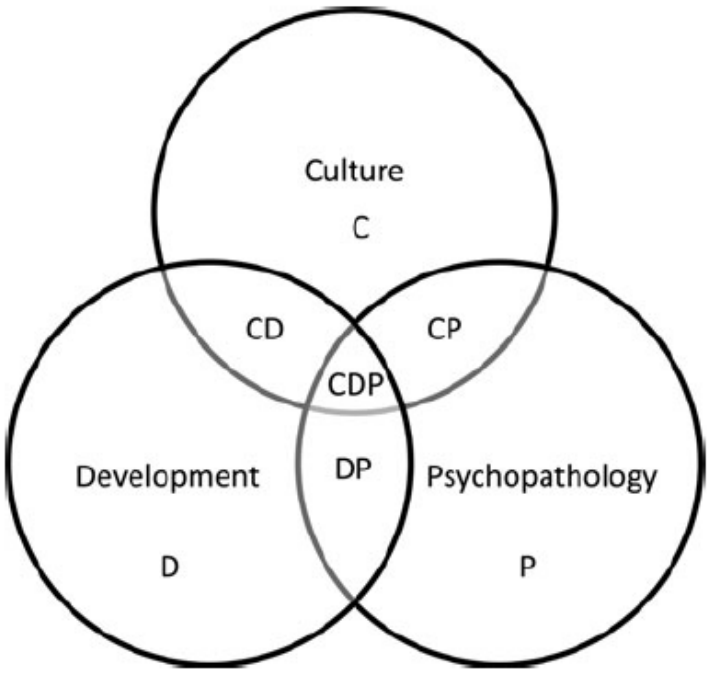
Considering the association between the experience of discrimination and the appearance of depression that has been previously established (Cook et al., 2017; Fowler et al., 2013; Mikulincer & Shaver, 2012; Romero et al., 2020), examination of the pathway by which this association occurs may help to shed light onto potential methods of prevention and intervention to the development of depression symptoms, and thereby its sequelae (i.e., suicide, substance use, and risky behavior) (Harris, 2003; Hope et al., 2015; Polanco-Roman et al., 2019; Ramchand et al., 2021). Additionally, by understanding the underlying pathways between the association of discrimination and alcohol use in ethnic/racial minorities, methods of more adaptive coping may be unearthed that may help diminish the upward trend in alcohol use by ethnic/racial minorities.

Towards this end, I drew on Causadias's cultural development and psychopathology framework (2013) as a way of framing my investigation of potential mechanisms that explain the detrimental impact of discrimination (see Figure 1). Causadias's cultural development and psychopathology framework (2013) proposes that the connection between culture, development, and psychopathology can provide understanding of how cultural processes at the individual and social levels, influence normative developmental processes, and by extension, psychopathology. Looking through the lens of Causadias's framework (2013), the development of

psychopathology (i.e., depression, alcohol use) appears to extend beyond isolated deviations from normal behavior within the individual, and instead represent the outcomes of an integrative and dynamic, multilevel developmental process, that is also shaped by biological and environmental factors interwoven with race, ethnicity, and culture broadly (Cicchetti & Natusaki, 2014). Consistently, previous research has described the role that cultural events and practices play in the formation of adaptive and maladaptive behaviors (Serafica & Vargas, 2006). As such, this approach allows for consideration of communal-level cultural experiences that help sculpt coping behaviors, when examining dysfunction, that an individual may experience when presented with unfair and unjust treatment (Causadias, 2013). Scholars have begun to conceptualize the detrimental impact of discrimination, and other cultural stressors rooted in systemic racism, xenophobia, and nativism, from a cultural development and psychopathology framework (Causadias, 2013), positing that the effects of discrimination, and similar stressors, on psychopathology (i.e., depression symptoms and alcohol use) are likely mitigated by disruptions to normative developmental processes (e.g., Meca et al., 2022). That said, despite the utility of this framework, it is worth noting that it does not provide concrete guidance over how specific cultural processes may impact psychopathology.

Figure 1

Cultural Development and Psychopathology Framework (Causadias, 2013)



Relevant Models of Psychopathology

Within a cultural development and psychopathology framework (Causadias, 2013), I drew on the cognitive vulnerability-stress theory (Beck, 1987; 2002) and the drinking to cope model (Cooper et al., 1988), as relevant theoretical models for understanding the links between discrimination and psychopathology, for the purpose of identifying potential developmental mechanisms that may explain the existing connection.

Cognitive Vulnerability-Stress Model. The cognitive vulnerability-stress model of depression (Beck, 1987; 2002) has its foundations within the diathesis-stress perspective (Scher et al., 2005), suggesting that negative cognitions arise as a result of stressful experiences, with this cognitive reactivity being particularly salient in those who are susceptible to depression (see Figure 2; Beck 1967). As described in Beck's theory of depression (1967), cognitive structures, or schemas, develop based on early life experiences that inform how an individual conceptualizes themselves, others, and the world (see Figure 3). Moreover, these structures are activated in the future to provide perspective for one's expectations, appraisals, and interpretation of life experiences based on similar stimuli present in the schemas. As such, schemas that are based on negative childhood experiences (e.g., abuse, neglect, stress, trauma) are likely to be activated when similar stressors are experienced in the future. Activation of negative schemas can occur via direct activation, as described by Beck (1967), in which a stimulus that directly corresponds to an existing negative schema is activated. Additionally, indirect activation can occur when schemas that are connected to negative schemas based on some levels of similarity are activated. Once the stimulation through the interconnected network is sufficiently strong to breach the threshold, full activation of negative schema may occur. Moreover, the "kindling" effect may support future activation based on more rapid

connections and decreased thresholds (Beck, 2008; Crick & Dodge, 1994). Further, negative schemas may cause an individual to attend to negative stimuli more than positive stimuli (Ingram & Luxton, 2005). Through the accumulation of negative schemas in early development, sensitization to events or stimuli can occur, leading to an increase in negative patterns of information processing and negative automatic thoughts of oneself leading to the development of depression (Beck, 1967).

Figure 2

Cognitive Vulnerability-Stress Model of Depression (Beck, 1987)

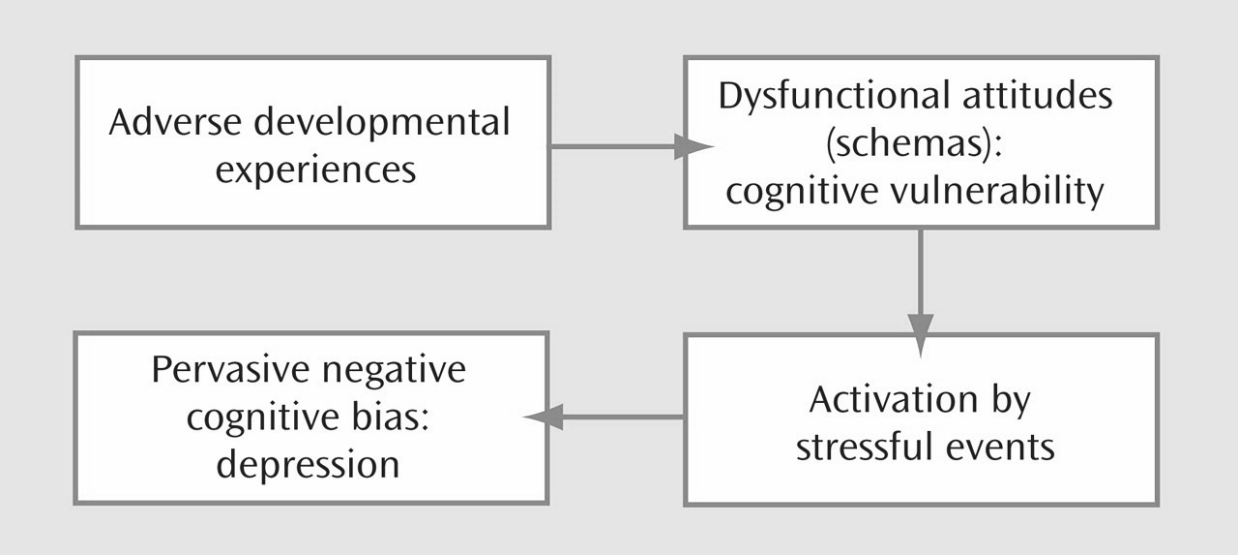
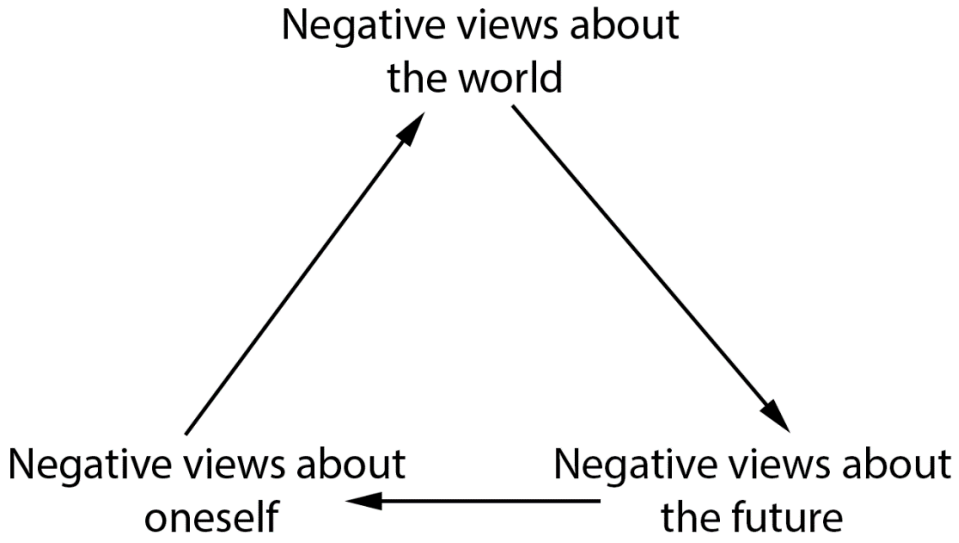


Figure 3

Negative Triad of Depression (Beck, 1987)



Drinking to Cope. Cooper et al. (1988) posited in the Drinking to Cope model (see Figure 4) that for individuals with a limited repertoire of adaptive coping methods, the expectancies, or anticipated results of potential positive sensations and reduction of pathways leading to negative emotions serve as motivation for the use of alcohol. In line with Bandura's (1969) perspective on social learning's role in alcohol abuse, confirmation of positive expectancies in drinking to cope will reinforce its use during future stressful experiences as opposed to seeking more adaptive methods (Cooper et al., 1988, 1995; Crum et al., 2013). For individuals still in the early stages of establishing adaptive methods of coping, such as adolescents and emerging adults (Arnett, 2000), who may also have limited protective factors (e.g., secure identity), social learning via drinking to cope may be particularly salient, placing them at greater risk for excessive and heavy drinking and related negative consequences (Ames et al., 2002; Bray et al., 2003).

Limited adaptive coping resources and social learning as described in the drinking to cope model likely influenced the findings from recent research with Mexican-origin adolescents which demonstrated a positive association of ethnic/racial discrimination with alcohol use and suggested that early life experiences of ethnic/racial discrimination contribute to early alcohol use and continued use as individuals age (Song et al., 2021.) Additionally, Song et al., (2021) found that higher levels of negative affect that remained consistent across the course of development was indirectly associated with hazardous alcohol use in later years.

Integration Across Frameworks and Theories. Taken together, the Cognitive Vulnerability Theory and the Drinking to Cope Model suggest that stressful events, such as discrimination, can activate negative schemas which in turn places individuals at risk for depression and alcohol use, as a means of coping (see Figure 5). Consistently, Ayers (2021)

found that ethnic/racial discrimination activated negative self-schemas tied to working models of adult romantic attachment insecurity, which in turn resulted in psychopathology (i.e., depression). This is not surprising given that stressful interpersonal events have been reported to disrupt early relational bonds and lead to depression (Fowler et al., 2013; Hammen, 1992; Hammen et al., 2005). Viewed from the perspective of Causadias's cultural development and psychopathology framework (2013), cultural stressors, such as discrimination, if not appropriately coped with, can undermine and rupture attachment security, giving way to maladaptive coping behaviors and psychopathology. Additionally, existing research has demonstrated that significant life and interpersonal stressors can disrupt existing attachment bonds, thereby shifting one's ability to utilize social (e.g., romantic) bonds in coping with stressful encounters (Charuvastra & Cloitre, 2008). Thus, giving way for stressors to elicit coping behaviors rooted in working models of insecure attachment dimensions (i.e., anxious, and avoidant), that contribute to the development of psychopathology (e.g., depression and alcohol use) (Cortés-García et al., 2020). Moreover, to regulate negative emotions (e.g., depressed mood) associated with interpersonal discord and stress, individuals may engage in substance use to cope (Padykula & Conklin, 2010). Such networks may become more easily activated due to the "kindling" effect (Beck, 2008; Hammen et al., 2005; Kendler et al., 2000; Monroe & Harkness, 2005), they may become more generalized across experiences, and with repeated and increasingly impulsive use of substances or other maladaptive behaviors (e.g., isolation, negative self-talk, and decrease engagement in pleasurable activities), these networks may result in the substitution of the substance itself for interpersonal relationships. Therefore, responses to specific stressors, that elicit negative emotions (e.g., depressed mood and hopelessness) via adaptation of ineffective working models, give rise to addiction (Bowlby 1969; Crick & Dodge,

1994; Hammen, 2002; Padykula & Conklin, 2010). To expand our conceptualization of how disruption of protective normative developmental processes (e.g., attachment, identity formation) within a particular cultural context (Meca et al., 2022) can lead to the development of psychopathology (i.e., depression, alcohol use), I provide next, a review of the developmental process of attachment.

Figure 4

Drinking to Cope Model (Cooper et al., 1988)

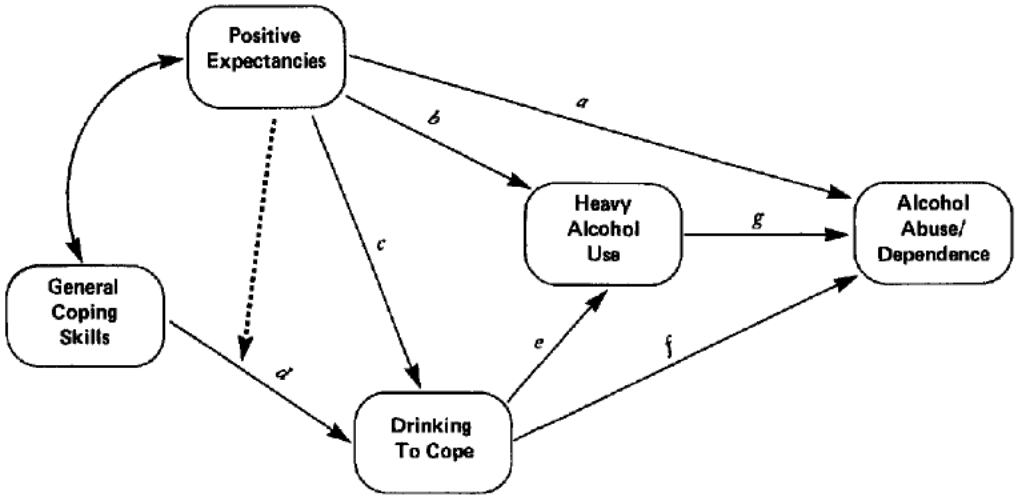
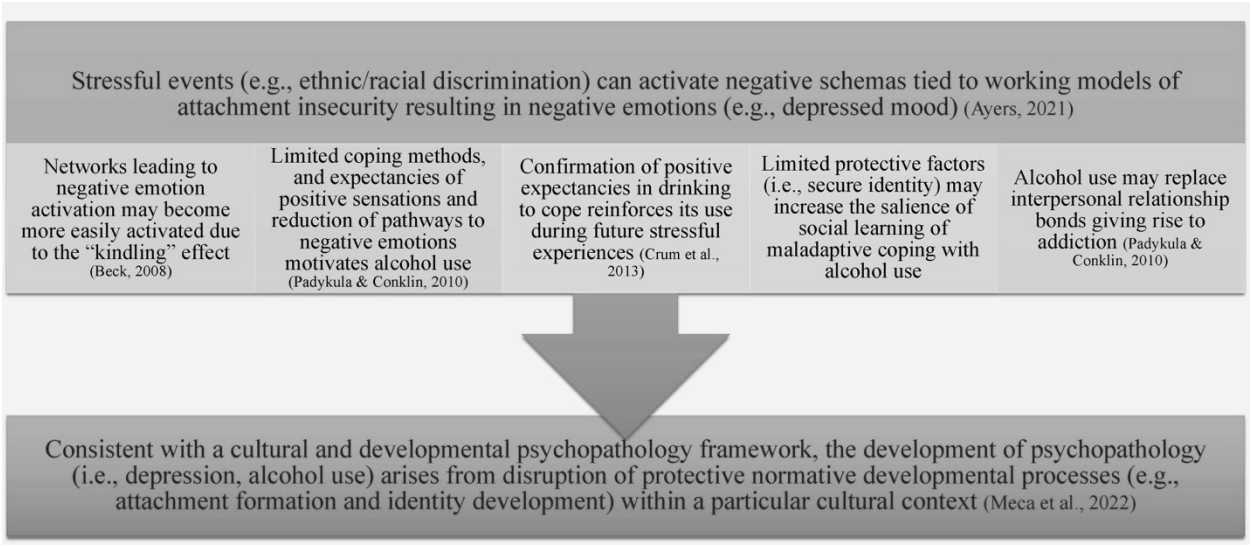


Figure 5

Integration Across Frameworks and Theories



Attachment. Attachment can be thought of as a representation of how one regulates emotions within close interpersonal relationships (Babcock et al., 2000). Attachment theory, stemming from the psychoanalytic view, suggests that an individual develops inner beliefs about whether their primary attachment figure is loving and responsive based on the character of nurturing support the figure provides (Bowlby, 1969). The individual also establishes the type and level of care and consideration they are worthy of receiving based on these early interactions. Also from these early life exchanges, attachment behaviors develop based on one's need for a sense of security thus increasing the likelihood of an individual's survival (Bowlby, 1969). Attachment bonds formed during childhood not only support the survival of the individual, but as they are maintained throughout life, they influence the individual's adult relationships and the care and support they believe they deserve (Hazen & Shaver, 1987). These developmentally adaptive behaviors, based on interactions with primary caregivers and the environment, lead to the establishment of cognitive representations or *mental working models* that organize an individual's cognitions, affects, and behaviors (Bowlby, 1973; Cook et al., 2017).

Internal Working Models. The working models make pertinent behavioral and emotional knowledge easily accessible (Bowlby 1973; Cook et al., 2017). Repeated pairing of the mental working models based on the individual's expectations of self and others in interpersonal relationships, with the related developed behavior, influences the attachment bonds established in future relationships (Bowlby, 1969, 1973; Mikulincer & Shaver, 2019). In essence, individuals mental working model consists of a *working model of others* (i.e., a model of how attachment figures respond) and a *working model of self* (i.e., a model of an individual's intrinsic efficacy and value) and is utilized to acquire support during times of stress (Mikulincer & Shaver, 2019).

By accessing and adapting these models, the individual can assimilate to new relationships across time (Bowlby, 1969, 1973; Kobak & Hazan, 1991); therefore, influencing and being influenced by adult partners with whom one is in close relationship (Hazan & Shaver, 1987).

Throughout life, a wide variety of relational partners can serve as attachment figures and influence change in an individual's attachment models (Baldwin et al., 1996). During childhood, parents, grandparents, siblings, and care workers may serve as attachment figures (Mikulincer & Shaver, 2007). As an individual ages, teachers, coaches, close friends or relatives and romantic partners may also be placed in the role of an attachment figure (Mikulincer & Shaver, 2007). Moreover, across a broad range of settings and organizations (e.g., therapists within a therapeutic relationship, leaders at work or in the military, and symbolic figures such as God in religion) may become sources of security and objects of proximity seeking (Mikulincer & Shaver, 2007). Research has shown that individuals often hold multiple relationships as influential and demonstrate multiple attachment patterns based on the nature of the relationship and the environment, and the models that are readily accessible to them (Baldwin et al., 1996). Thus, not only can attachment models be viewed as dynamic and mutable based on close interpersonal relationships throughout life (Bowlby 1969; Mikulincer & Shaver, 2012), but multiple models may be maintained in response to the support and care an individual receives relative to the stress they experience, the figures that are accessible, and the models they maintain (Baldwin et al., 1996). More succinctly, a stressful experience with an attachment figure may elicit one model, whereas a similar experience with a different figure may elicit a different model, and both may be maintained within the individual's repertoire.

Individual Differences in Attachment Style. Expanding upon Bowlby's work, Mary Ainsworth conducted her "Strange Situation" observation in the 1970's which concluded with

the classification of infant's behaviors observed into three distinct attachment styles – secure attachment, (anxious) ambivalent-insecure attachment, and avoidant-insecure attachment (Ainsworth & Bell, 1970). Secure attachment represents the successful establishment of healthy, adaptive attachment motives. The individual with a secure attachment style believes themselves worthy of care and support and is able to communicate affect and foster effective responses from others (Kobak & Hazan, 1991). In contrast, individuals with insecure attachment styles believe themselves to be less worthy of care and support, and have limited efficacy in communicating affect, which may result in rejection and other negative responses from others (Kobak & Hazan, 1991). Insecurely attached individuals find that their communication of negative affect does not foster helpful responses from their primary attachment figure (Kobak & Hazan, 1991). As such, they develop maladaptive patterns of emotion communication to distort their negative affect via deactivation or hyperactivation (Dozier & Kobak, 1992; Kobak & Hazan, 1991) in hope of eliciting desired responses from others.

Impact of Attachment Styles in Adulthood. As previously noted, attachments influence and are influenced by a variety of individuals throughout the lifespan, including adult partners with whom one is in close relationship with (Hazan & Shaver, 1987). Indeed, research has shown that individuals with higher levels of attachment anxiety fear rejection and abandonment in interpersonal relationships, whereas individuals with higher levels of attachment avoidance are more likely to experience closeness in relationships as uncomfortable and are averse to depending on others (Taylor et al., 2015). According to Mikulincer and Shaver (2012), individuals with attachment anxiety seek to experience nearness and security in relationships and are therefore concerned with the ability to access a relational attachment figure and the value they hold to that figure. Further, individuals with high levels of attachment anxiety often use

hyperactivating behaviors to cope with relational stress and doubt. On the other hand, individuals with attachment avoidance experience discomfort from closeness and dependency to relational attachment figures. Individuals with high levels of attachment avoidance often seek independence, are emotionally disconnected, and utilize deactivating behaviors to cope with relational stress and doubt.

Factors Contributing to Adult Romantic Attachment. As previously noted, adult romantic attachment insecurity has been associated with traumatic and stressful experiences, including discrimination (e.g., Ayers, 2021). Moreover, disruption of secure attachment, or its development, has been associated with increased risk with the development of psychopathology (e.g., depression, substance use) (Brennan & Shaver, 1995; Hammen, 1992; Nakhoul et al., 2020; Zakalik & Wei, 2006). As a result, an understanding of factors that may mitigate the detrimental impact of discrimination and attachment style is critical (Ayers, 2021). One such variable that has been suggested to be involved in the association between discrimination and psychopathology is identity (Grigsby et al., 2018; Meca et al., 2022). However, what continues to be less clear in the literature, are the mechanisms that directly lend to identity's protective function; further, what variables and outcomes unique to ethnic/racial minorities may also be influenced by it, which this study hopes to shed light on. As outlined below, I propose that identity, in particular ethnic/racial identity, serves as a protective factor that diminishes the detrimental impact of discrimination on individuals' attachment style.

Identity Development. To examine the protective nature of ethnic/racial identity, it is essential to conceptualize what identity is and how it is developed. Identity development allows an individual to establish a cohesive self-image that underlies future decision making, such as career choices (Côté & Bynner, 2008) and romantic partner selection (Beyers & Seiffge-Krenke,

2010), and symbolizes a critical developmental process of adolescence and emerging adulthood (Kroger & Marcia, 2011). Identity can be thought of as the response to the question: "Who are you?" (Vignoles et al., 2011). While a singular response may come to mind, it can also be considered more broadly, from a multilevel perspective; more specifically, as one's sense of self individually, in relation to others, as a member of a larger group, and in relation to material items and significant places (Vignoles et al., 2011). Indeed, identity is informed by the various relationships and environmental exposures and contexts of an individual, starting as early as conception. However, extending beyond these early developmental stages, identity continues to guide an individual's choices throughout life (Kurtines et al., 2008). As a whole, identity represents the cornerstone of an individual's life which gives orientation to the construction of one's goals, values, roles, and beliefs (e.g., Berman, 2016). Moreover, for ethnic/racial minorities, this normative developmental task must also inform how they navigate unique social and environmental experiences of ethnic/racial discrimination, institutionalized racism, and oppression throughout life (Coll et al., 1996) through the development of a coherent Ethnic/Racial Identity (ERI).

Ethnic/Racial Identity. Ethnic/Racial Identity (ERI) encompasses an individuals' thoughts and feelings about the ethnic/racial group to which they hold membership, as well as how such thoughts and feelings are derived over time (Umaña-Taylor et al., 2014). It should be noted that, while some scholars have suggested that ethnic and race identity encompass two separate constructs (Cokley, 2007), more recent literature highlights the interweaving of the two within individual's lived experiences (Umaña-Taylor et al., 2014).

Conceptualizing Ethnic/Racial Identity. Early works of identity scholars posited that members of minority groups may internalize negative opinions held by the majority population,

which may subsequently result in psychological stress (Erikson 1968; Phinney 1989; Tajfel, 1978). In progressing from accepting a label, minorities must determine the extent to which external negative views are allowed to influence one's sense of self and their understanding of the significance of membership to a particular group (Phinney 1989; Tajfel, 1978). Indeed, extending beyond Erikson's (1968) ego identity development theory and building on Marcia's (1980) operationalization of identity development, described as the result of *exploration* – one's consideration of the meaning of belonging to a group (Phinney, 1989), and *commitment* – understanding of the meaning of group membership (Umaña-Taylor et al., 2014), Phinney (1989) suggested a model of ethnic identity development in which achievement is an emboldened acceptance of membership to an ethnic group. Additionally, Phinney (1989) drew on Tajfel's (1981) Social Identity Theory (SIT) in development of this model, adding a third component, ethnic identity affirmation, to Marcia's (1980; 1988) operationalization. Like SIT (Tajfel, 1981), Phinney (1989) suggested that individuals must achieve and maintain a positive sense of uniqueness of their group, in relation to other groups. Accordingly, the degree to which an individual feels positively or negatively about their membership to a specific ethnic group, characterizes ethnic identity *affirmation* (Umaña-Taylor et al., 2004). Although existing research on ERI has highlighted varying aspects of ERI development (Schwartz et al., 2013; Umaña-Taylor et al., 2014), the focus of this study was on all three dimensions of ERI development (i.e., exploration, commitment/resolution, and affirmation).

Ethnic/Racial Identity and Psychopathology. For minorities in the U.S., ERI emerges within the context of racism, prejudice, and oppression (Coll et al., 1996; Yip 2018), which often prompts a desire for greater understanding of what one's membership to a group means and promotes increased feelings of connectedness to the group to which they belong (Kiang et al.,

2010; Umaña-Taylor et al., 2014). Moreover, an individual's identification with and positive regard for the group to which they hold membership is theorized to be strengthened by such antagonistic intergroup exchanges (Tajfel & Turner, 1986). Furthermore, an individual's emotions and cognitions about the meaning of their group membership informs how ethnic/racial discrimination is experienced and interpreted (Sellers & Shelton, 2003). Indeed, a reciprocal relationship is suggested to be at the core of the development of both ERI and discrimination, such that each informs the other (Yip, 2018). Whereas discrimination has been shown to convey harm to an individual's mental, behavioral, and physical health as well as their sense of self (Paradies et al., 2015; Polanco-Roman et al., 2019), greater commitment to one's identity has been described as protective against the deleterious effects of such unfair treatment (Yip, 2018; Zapolski et al., 2018). Although minorities chronically encounter discrimination within social, institutional and interpersonal experiences (Seller, et al., 2006; Yip, 2018; Zapolski et al., 2018), greater positive ERI has been suggested to buffer against its negative effects on anxiety and depression symptoms (Sellers et al., 2006; Zapolski et al., 2018), substance use including alcohol and cannabis (Banks et al., 2021; Fuller-Rowell et al., 2012; Gee et al., 2007), academic outcomes (Lee et al., 2021), and risky health behaviors (Yip, 2019). Moreover, higher levels of positive ERI have been suggested to buffer stressful life experiences and be associated with a positive sense of quality of life (Snyder et al., 2006; Utsey et al., 2002).

Present Study

Drawing on Causadias's Cultural Development and Psychopathology Framework (2013), Beck's Cognitive Vulnerability-Stress Models of Depression (1987), and Cooper and colleagues' Drinking to Cope Model (1988), this dissertation sought to elucidate the mechanisms that underlie how ethnic/racial discrimination impacts depression and alcohol use among ethnic/racial

minoritized individuals, which may shed light on methods of reducing the negative effects of racially charged events and experiences. This was achieved by replicating recent work (Ayers, 2021), to determine whether adult romantic attachment dimensions (i.e., anxious, and avoidant) mediate the association between perceived discrimination and depression symptoms; and extending prior work, to determine whether this indirect effect holds for alcohol use as well (see Figure 6). Additionally, directly extending prior work, I examined whether ERI serves to moderate the association between perceived discrimination and adult romantic attachment dimensions, and in turn, moderate the indirect association between discrimination with depression symptoms and alcohol use among ethnic/racial minoritized individuals (see Figures 7 & 8). Lastly, I examined whether any differences emerged between three ethnic/racial minority groups (i.e., Black, Hispanic/Latinx, and East Asian). As such, this dissertation was centered around three key research aims outlined below.

Aim 1 – Indirect Effects Model: The first aim of this dissertation was to examine if dimensions of adult romantic attachment (i.e., anxious, and avoidant) mediate the association between perceived discrimination and depression symptoms and alcohol use.

Hypothesis 1A: Perceived discrimination would be positively associated with both anxiety and avoidant adult romantic attachment dimensions.

Hypothesis 1B: Anxious and avoidant adult romantic attachment dimensions would be uniquely and positively associated with depression symptoms and alcohol use.

Hypothesis 1C: The indirect effect between perceived discrimination and both depression symptoms and alcohol use would be significant, and positive, through both anxious and avoidant adult romantic attachment dimensions.

Hypothesis 1D: Consistent with my prior work (Ayers, 2021), I hypothesized that perceived discrimination would still have a direct effect on both depression symptoms and alcohol use, over and above its indirect effect vis-à-vis adult romantic attachment dimensions.

Aim 2 – Moderated Mediated Model: The second aim of this dissertation was to examine if dimensions of ERI (i.e., exploration, commitment/resolution, and affirmation) moderate the relationship between perceived discrimination and adult romantic attachment dimensions (i.e., anxious, and avoidant) and/or depression symptoms and alcohol use.

Hypothesis 2A: ERI (i.e., exploration, commitment/resolution, and affirmation) would moderate the relationship between perceived discrimination and adult romantic attachment dimensions (i.e., anxious, and avoidant). Specifically, for those with high ERI exploration, commitment/resolution, or affirmation, the association between perceived discrimination and adult romantic attachment dimensions would be diminished. In contrast, for those with low ERI exploration, commitment/resolution, or affirmation, discrimination would be more strongly associated with adult romantic attachment dimensions.

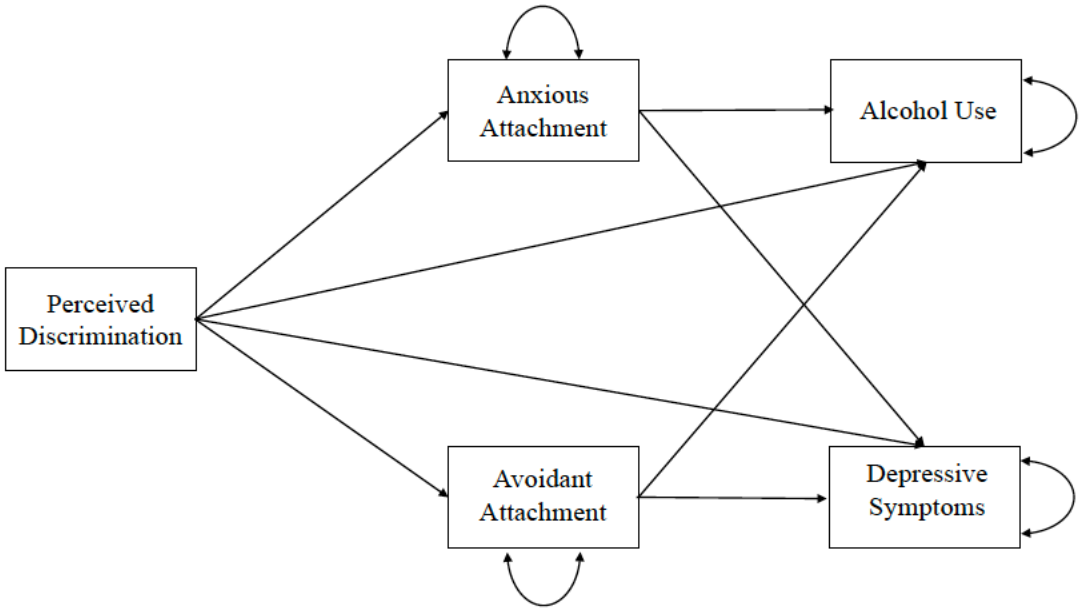
Hypothesis 2B: ERI (i.e., exploration, commitment/resolution, and affirmation) would also moderate the relationship between perceived discrimination and depression symptoms and alcohol use. Specifically, for those with high ERI exploration, commitment/resolution, or affirmation, the association, over and above indirect effects, between perceived discrimination and depression symptoms and alcohol use would be diminished. In contrast, for those with low ERI exploration, commitment/resolution, or affirmation, discrimination would be more strongly associated with depression symptoms and alcohol use.

Aim 3 - Multigroup Differences in Moderated Mediation: The third, final, and exploratory aim of this dissertation was to examine if these effects hold/vary across ethnic/racial minoritized

groups (i.e., Black, Hispanic, and East Asian). Given the lack of prior research, this aim was treated as exploratory, and no specific hypothesis were be made.

Figure 6

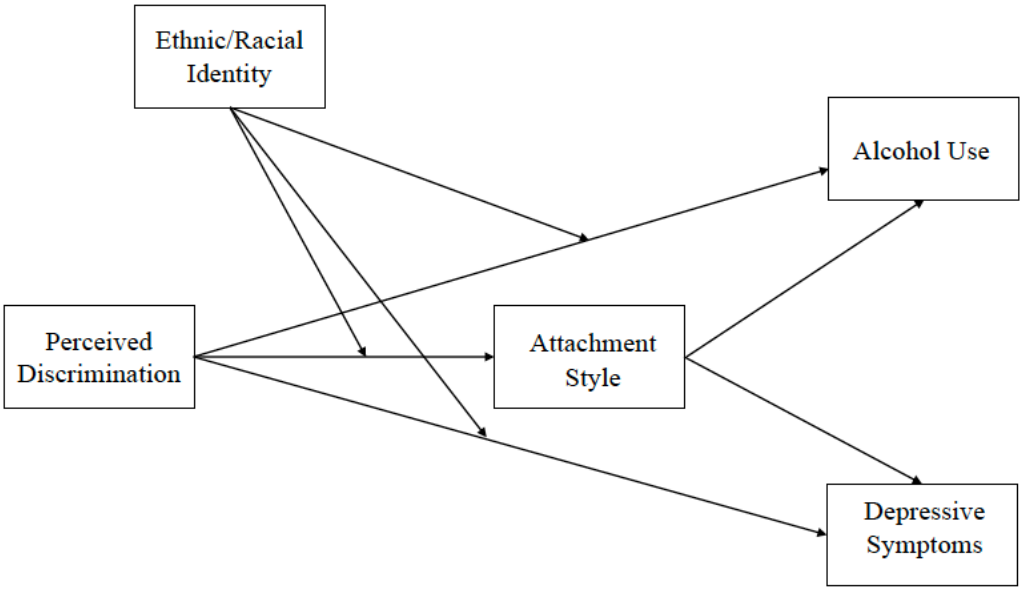
Mediated Model



Note. Covariates (i.e., age, gender, and ethnicity/race) not shown for simplicity.

Figure 7

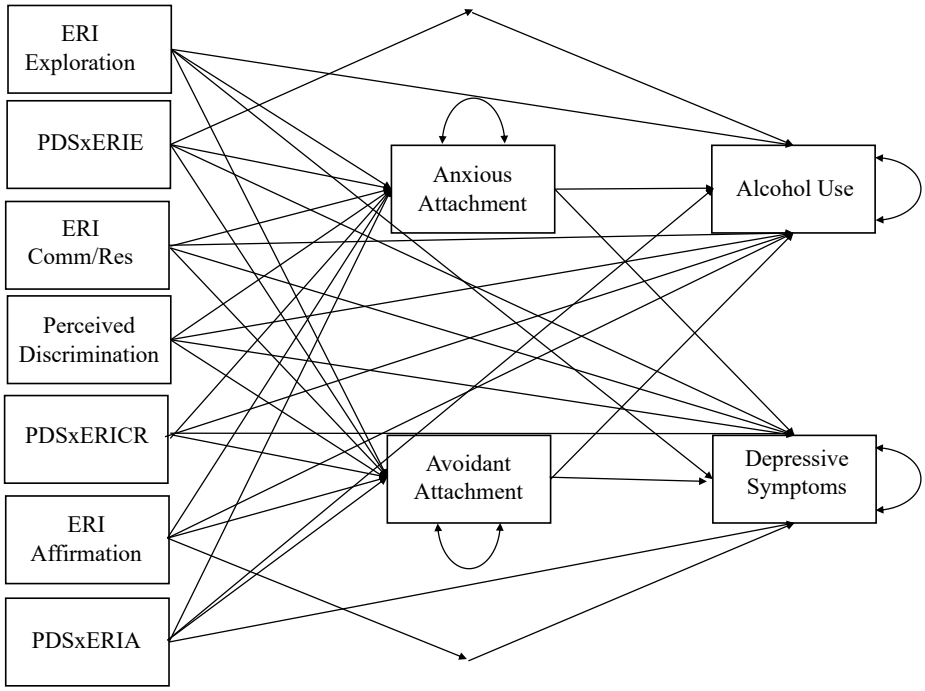
Moderated Mediated Model



Note. Covariates (i.e., age, gender, and ethnicity/race) not shown for simplicity.

Figure 8

Moderated Mediated Fully Saturated Model



Note. Covariates (i.e., age, gender, and ethnicity/race) not shown for simplicity.

CHAPTER II

METHOD

Participants

The study drew on a subset of 8,309 college students (72.8% female; M_{age} = 19.94 years, 18-29, *SD* = 2.01) from the Multi-Site University Study of Identity and Culture (MUSIC; see Castillo & Schwartz, 2013). For this study, college students ranging in age from 18 to 63 years old and identifying as Black (*n* = 888; 26.5%), East Asian (*n* = 977; 29.1%), or Hispanic (*n* = 1488; 44.4%) were included in the data analytic sample. The total sample consisted of 3,353 ethnic minority college students (72.2% female, 27.8% male; 18 participants did not indicate their gender). The mean age of participants was 20.33 years (*SD* = 3.49). See Table 1 for additional Sample Demographics.

Procedure

The Multi-Site University Study of Identity and Culture (MUSIC; see Castillo & Schwartz, 2013) was a collaborative effort across several researchers to gather a diverse sample of college students to better understand identity and cultural processes and their relation to well-being and health outcomes. Data were collected between September 2008 and October 2009 (*n* = 9,697) from students at 30 colleges and universities in the United States. Universities and colleges were selected to provide a diverse representation across various regions of the United States. Consistently, twenty-three schools were public and seven were private. Participants were recruited either through research pools, largely from psychology, or through printed or e-mailed announcements sent to students attending classes in human development, family and consumer science courses, psychology, sociology, business, family studies, education, and human nutrition.

Table 1

Sample Demographics

Characteristic	***N***	**(%)**
Age		
18-25	3200	(95.6)
26-35	109	(3.3)
36-45	22	(0.7)
46-65	14	(0.4)
Gender		
Male	927	(27.8)
Female	2408	(72.2)
Sexual Orientation		
Not Sexual	6	(0.2)
Completely Heterosexual	2927	(88.9)
Mostly Heterosexual	199	(6.0)
Bisexual	59	(1.8)
Mostly Homosexual	25	(0.8)
Completely Homosexual	52	(1.6)
Not Sure	24	(0.7)
Current Residence/ “Where Resides Now”		
With Parents	770	(23.1)
On Campus	1032	(30.9)
University Apartments	157	(4.7)
Fraternity/Sorority Housing	24	(0.7)
House/Apartment	1328	(39.8)
Other	26	(0.8)
Asian and Hispanic Ethnicity/ “Race”		
Asian	886	(26.4)
Hispanic	1183	(35.3)
General Ethnic Group		
Black	888	(26.5)
East Asian	977	(29.1)
Hispanic	1488	(44.4)

Students interested in participating received a link to a secure website where they completed informed consent electronically. Subsequently, participants who consented to partake in the study completed an online questionnaire. The full survey was divided into six separate web pages to allow participants to save their work and resume later. Eighty-five percent of participants submitted all six pages. Participants received course credit, research credit, or were entered into a raffle for a prize drawing based on their institution.

Power Analysis

The sample size needed for this study was determined based on the guidelines for a path analysis model provided by Kyriazos (2018) for using the N:q ratio, which states that 10 participants are needed for each parameter. Given that the final model of this dissertation had 33 parameters of interest (i.e., 28 paths and 5 residual errors; see Figure 8), a sample size of 330 should have been sufficient. As such, given that sample for this study consist of 3,353, and the lowest sub-group has a sample a size of 888, this dissertation consisted of a sample size more than sufficient to meet the required minimum.

Measures

Demographics

The MUSIC study utilized a robust demographic questionnaire (see Appendix B). For this study, participants' ethnicity/race, age, and gender were utilized as either grouping variable or key covariates. Participants completed statements such as, "My ethnicity is…" For this dissertation, I focused on participants that identified as Black, East Asian, and Hispanic.

Ethnic/Racial Discrimination.

The Perceived Discrimination subscale is a 9-item measure derived from the 32-item Scale of Ethnic Experience (Malcarne et al., 2006) used in the MUSIC study to assess

participants' experiences of discrimination (see Appendix C). The items were rated on a 5-point Likert scale ranging from 1 (*strongly disagree*), to 5 (*strongly agree*). Sample items include, "Generally speaking, my ethnic group is respected in America (Reverse-Coded)" and "My ethnic group is often criticized in this country." The Perceived Discrimination subscale has exhibited good concurrent validity (Malcarne et al., 2006) and adequate internal consistency in previous research, with Cronbach's alpha coefficients ranging between .76 and .91 for ethnic/racial groups including African Americans, Filipino Americans, Mexican Americans, and White Americans (Malcarne et al., 2006) and between .78 to .82 for Asians (Park et al., 2013). Cronbach's alpha for the Perceived Discrimination subscale for this study was .83.

Adult Romantic Attachment

The Experiences in Close Relationships (Brennan et al., 1998) is a 36-item self-report measure used in the MUSIC study to assess participants' style of adult romantic attachment (see Appendix D). The items were rated on a 7-point Likert scale ranging from 1 (*strongly disagree*), to 7 (*strongly agree*). Sample items include, "I prefer not to show a partner how I feel deep down" and "I worry about being abandoned." Factor analyses for this measure revealed two reliable attachment dimensions – anxiety and avoidance. Higher mean scores were indicative of greater anxiety and avoidance. Internal consistency for the measure was originally reported as good, with Cronbach's alpha coefficients of .91 for Anxiety and .94 for Avoidance (Brennan et al., 1998). Cronbach's alpha for the Anxiety and Avoidance subscales within the MUSIC study was .87 and .86. Cronbach's alpha for the Experiences in Close Relationships measure, across the three subscales, for this study was .90.

Ethnic/Racial Identity

The 17-item Ethnic Identity Scale (EIS; Umaña-Taylor, 2004) was used in the MUSIC study to assess participants' ethnic/racial identity exploration, commitment/resolution, and affirmation (see Appendix E). The EIS measures three discrete constructs: a) exploration (7 items), or the extent to which an individual has explored their ethnicity; (b) commitment/resolution (4 items), or the extent to which an individual has resolved the meaning of their ethnic identity for them; and (c) affirmation (6 items), or the affect (positive or negative) that they experience based on their ethnic/group membership. Sample items include "I have attended events that have helped me learn more about my ethnicity" (exploration), "I have a clear sense of what my ethnicity means to me" (resolution), and "I wish I were of a different ethnicity" (affirmation). Items were scored on a 4-point Likert-type scale, ranging from 1 (*Does not describe me at all*) to 4 (*Describes me very well*). Following reverse coding of the appropriate items, the sum of item responses was calculated. Higher mean scores indicated greater exploration, commitment/resolution, and affirmation. The subscales of the EIS have demonstrated moderately strong internal consistency with Cronbach's alpha coefficients ranging from .84 to .89 with ethnically diverse samples. The EIS has been used to assess ethnic identity with African American, Asian American, Native American/American Indian, Latino, White, and Multiracial adolescents, and adults in the U.S (Umaña-Taylor, 2022). Cronbach's alpha for the Ethnic Identity Scale, across the three subscales in this study was .90.

Depression

The 20-item Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) was used in the MUSIC study to assess depression symptoms (e.g., poor appetite, restless sleep, loneliness, etc.), including depressive feelings and behaviors (se Appendix F). Sample items

include: “I was bothered by things that usually don’t bother me” and “I have felt down and unhappy this week.” Participants rated their level of depressive symptoms during the last week on a 5-point Likert-type scale, ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Following reverse coding of the appropriate items, the sum of item responses was calculated; higher scores indicated more frequent experience depressive symptoms. The CES-D was shown to have good internal consistency with initial Cronbach’s alpha coefficients of .80 and higher (Radloff, 1977). It has also been demonstrated to have good sensitivity, specificity, and high internal consistency in assessing individuals’ risk for clinical depression (Lewinsohn et al., 1997). The CES-D has been used across a broad range of ages (Lewinsohn et al., 1997) and has been appropriately use with racially/ethnically diverse populations (Roth et al., 2008). Based on preliminary research, Cronbach’s alpha for the CES-D in this study was .87.

Alcohol Use

The 10-item Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993) was used in the MUSIC study to assess alcohol use (see Appendix G). The first 7 items assess for frequency of specific drinking behaviors from the previous year, rated on a 5-point Likert-type scale, ranging from 1 (*Never*) to 5 (*Four or more times per week*). The 8th item assesses for the amount consumed by number of drinks and are scored 1 (*1 or 2*) to 5 (*10 or more*). The last 2 items inquire about alcohol-related problems and are scored 1 (*No*), 2 (*Yes, but no in the last year*), or 3 (*Yes, during the last year*). The AUDIT total score is sensitive to harmful alcohol use in diverse populations with scores of 8 or more indicating riskier use (Saunders, et al., 1993; Volk et al., 1997), and among college students the AUDIT has been shown to exhibit good sensitivity, specificity, and internal consistency with Cronbach’s alpha coefficients of .80 (Fleming et al., 1991). Cronbach’s alpha for the AUDIT in this study was .858.

Data Analysis

Preliminary Analysis

Prior to my primary analyses, which was conducted utilizing a series of path models in *Mplus* (version 8.5; Muthén & Muthén, 1998-2020), the basic assumptions of regression were tested in SPSS as path analysis is an extension of multiple regression. The first assumption states that there must be a linear relationship between the predictors and criterion variables. To assess linearity, scatterplots for each predictor were produced. The scatterplots demonstrated no unusual patterns and met the linearity assumptions. The second assumption to be met was that all relevant predictors were contained in the model. This assumption was met based on prior research, and thus, necessary predictors were included for this study. The third assumption was that the measurement of the study variables was error-free. This assumption was met by the utilization of variable measures with high reliability and validity to reduce the error of measurement. The fourth assumption was that of homoscedasticity which required that residual variances be constant. Homoscedasticity was tested visually via scatterplots of standardized residuals and standardized predicted values. The scatterplots demonstrated random dispersion with no funnel shapes (indicative of homoscedasticity); therefore, the assumption was satisfied. The fifth assumption, independence of residuals, was checked using the Durbin-Watson statistic, to determine whether values fell between 1.5-2.5. The Durbin-Watson values for this study were 2.024 (CES-D) and 1.838 (AUDIT) which indicates this assumption was not violated. The sixth assumption, normality of distribution of the residuals, was tested visually via histograms and Q-Q plots. The points appeared to follow along the line with only a few points somewhat off the line; thus, the observed residuals were displayed normal distribution. Lastly, to assess for multicollinearity, Tolerance and VIF values were analyzed based on the standard cut-off value of

.10 for Tolerance and 10 for VIF (George & Mallery, 2010). Total perceived discrimination demonstrated acceptable Tolerance (.97) and VIF (1.03) values. Anxious adult romantic attachment demonstrated acceptable Tolerance (.92) and VIF (1.09) values. Anxious adult romantic attachment demonstrated acceptable Tolerance (.94) and VIF (1.07) values.

Primary Analysis

The primary analysis consisted of a series of path models, estimated in *Mplus* (version 8.5; Muthén & Muthén, 1998-2020), a robust maximum likelihood estimator (MLR) was used to account for deviations from non-normality. Additionally, parameters were estimated using a sandwich estimator (Kauermann & Carroll, 2001) to adjust the standard errors and account for nesting of participants within data collection (i.e., university). Missing data was accounted for through Full Information Maximum Likelihood (FIML). Age, gender, and ethnicity/race were included as covariates. Assessment of model fit was determined using the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). Model fit was established based on Little's (2013) suggested values of good fit: CFI ≥ .95, RMSEA ≤ .06, and SRMR ≤ .061; adequate fit as CFI =.90-.95, RMSEA = .06-.08, and SRMR = .06-.08; and mediocre fit as CFI = .85-.90, RMSEA = .08-.10, and SRMR = .08-.10. Specifically, I estimated three distinct models, mapping onto the three research questions.

Hypothesis Testing

Research Question 1 – Indirect Effects Model. The aim of the first research question, replicating and extending my own prior work (Ayers, 2021), was to determine whether adult romantic attachment dimensions (i.e., anxious, and avoidant) mediated the relationship between ethnic/racial discrimination and depression and alcohol use. Utilizing a path model, as shown in

Figure 6, I assessed the direct effect of perceived discrimination (exogenous), and indirect effects vis-a-vis adult romantic attachment dimensions (i.e., anxious, and avoidant), on depression symptoms (endogenous variable) and alcohol use (endogenous variable). As indicated before, I hypothesized that perceived discrimination would be positively associated with both anxious and avoidant adult romantic attachment dimensions; anxious and avoidant adult romantic attachment dimensions would be uniquely and positively associated with depression symptoms and alcohol use; the indirect effect between discrimination and both depression symptoms and alcohol use would be significant, and positive, through both anxious and avoidant adult romantic attachment dimensions; and consistent with my prior work (Ayers, 2021), I hypothesized that perceived discrimination would still have a direct effect on both depression symptoms and alcohol use, over and above its indirect effect vis-à-vis adult romantic attachment dimensions. To determine whether adult romantic attachment dimensions (i.e., anxious, and avoidant) mediate the association between perceived discrimination and depression symptoms and alcohol use, I utilized the delta method in *Mplus* (version 8.5; Muthén & Muthén, 1998-2020) through the "Model Indirect" command to determine the significance of observed indirect effects. Given that the estimated model represented a fully saturated model, to obtain model fit, non-significant effects were trimmed.

Research Questions 2 – Moderated Mediation. Next, building on the above path model, I assessed the moderation effects of ERI on the association of perceived discrimination on depression symptoms and alcohol use through adult romantic attachment dimensions. As I previously indicated, I predicted that ERI exploration, commitment/resolution, and affirmation would moderate the relationship between ERI discrimination and adult romantic attachment dimensions. More specifically, I hypothesized that ERI (i.e., exploration, commitment/resolution,

and affirmation) would moderate the relationship between perceived discrimination and adult romantic attachment dimensions (i.e., anxious, and avoidant). Specifically, for those with high ERI exploration, commitment/resolution, or affirmation, the association between perceived discrimination and adult romantic attachment dimensions would be diminished. In contrast, when ERI exploration, commitment/resolution, or affirmation was low, discrimination would be more strongly associated with adult romantic attachment dimensions. Additionally, I hypothesized that ERI (i.e., exploration, commitment/resolution, and affirmation) would also moderate the relationship between perceived discrimination and depression symptoms and alcohol use. Specifically, for those with high ERI exploration, commitment/resolution, or affirmation, the association, over and above indirect effects, between perceived discrimination and depression symptoms and alcohol use would be diminished. In contrast, when ERI exploration, commitment/resolution, or affirmation was low, discrimination would be more strongly associated with depression symptoms and alcohol use.

Prior to determining significance of conditional effects, all exogenous variables (i.e., perceived discrimination and ethnic/racial identity exploration, commitment/resolution, and affirmation) were mean-centered. Next, product terms were created between discrimination and ERI exploration (PDSxERIE), between discrimination and ERI commitment/resolution (PDSxERICR), and between discrimination and ERI affirmation (PDSxERIA). As shown in Figure 8, these product terms were then added in the path model as predictors of adult romantic attachment dimensions. Any significant interaction effects were subsequently probed at 1 SD above and below the mean, utilizing the model constraint commands in *Mplus* (version 8.5; Muthén & Muthén, 1998-2020).

Research Question 3 - Multigroup Differences in Moderated Mediation. Finally, I utilized a multigroup path model to examine whether these effects varied across the three largest ethnic/racial minoritized groups (i.e., Black, Hispanic, and East Asian) within the MUSIC study. To do this, I estimated a fully unconstrained multigroup model in which all direct, indirect, and conditional effects were allowed to vary across ethnic/racial groups. Subsequently, after trimming any non-significant effects across ethnic/racial groups and then estimated a fully constrained model in which each path was forced to be equal across ethnic/racial groups. To determine invariance, I used the Satorra-Bentler scaled chi-square difference test (Satorra & Bentler, 2010), and the <CFI (if <.01, then invariance) and <RMSEA (if < .01, then invariance) to determine if there was a significant decline in model fit. The results indicate a significant decline in model fit, indicating a lack of structural invariance, therefore, I examined path by path to determine which paths significantly varied across the three ethnic/racial groups.

CHAPTER III

RESULTS

Participant Reactivity

Descriptive statistics for study variables are shown in Table 2. On measures of perceived discrimination, participants reported an average sum score of 13.89 (SD = 4.94, range 0-36), indicating slightly below average level of endorsement. For hazardous alcohol use, participants reported an average sum score of 15.08 (SD = 6.01, range 0-48, indicating a low average level of endorsement. Of note, scores of 15 or greater on the AUDIT are indicative of hazardous alcohol use and at risk of alcohol dependence (Saunders, n.d.). For depression symptoms participants reported an average sum score of 54.73 (SD = 12.76, range 0-100) indicating a slightly above average level of endorsement. For adult romantic attachment measures, participants reported an average of 3.75 (SD = 1.18, range 0-7) for anxious adult romantic attachment and an average of 3.00 (SD = 1.12, range 0-6.82) for avoidant adult romantic attachment, indictive of average level of endorsement for both subscales. For measures of ethnic/racial identity, participants reported a sum of 19.20 (SD = 5.23, range 0-28) for ERI exploration, 11.64 (SD = 3.25, range 0-16) for ERI commitment/resolution, 21.96 (SD = 3.32, range 0-24) for ERI affirmation, indicating a high level of endorsement across all ERI components.

Aim 1: Indirect Effects Model

The first aim was to examine if dimensions of adult romantic attachment (i.e., anxiety and avoidance) mediates the association between perceived discrimination and depression symptoms and alcohol use. It was hypothesized that perceived discrimination would be positively associated with both anxiety and avoidant adult romantic attachment dimensions. As shown in Table 2, results showed that perceived discrimination was positively associated with

both anxiety (β = 0.148, p < .001), and avoidant (β = 0.086, p = .003) adult romantic attachment dimensions, controlling for (i.e., ethnicity/race, age, and gender). It was also hypothesized that anxious and avoidant adult romantic attachment dimensions would be uniquely and positively associated with depression symptoms and alcohol use. Consistently, results showed that anxious adult romantic attachment was also positively associated with both depression symptoms (β = 0.282, p < .001), and alcohol use (β = 0.078, p =.010); and avoidant adult romantic attachment was positively associated with depression symptoms (β = 0.221, p < .001), and alcohol use (β = 0.144, p < .001).

It was hypothesized that the indirect effect between perceived discrimination and both depression symptoms and alcohol use would be significant, and positive, through both anxiety and avoidant adult romantic attachment dimensions. Utilizing model indirect effects, results showed that perceived discrimination was positively associated with depression symptoms through anxious (β = 0.042, p < .001) and avoidant (β = 0.019, p = .006) adult attachment styles. Perceived discrimination was also positively associated with alcohol use through anxious (β = 0.012, p = .022) and avoidant (β = 0.012, p = .013) adult attachment style. Lastly, it was hypothesized that perceived discrimination would still have a direct effect on both depression symptoms and alcohol use, over and above its indirect effect vis-à-vis adult romantic attachment dimensions. Results showed that after controlling for dimensions of adult romantic attachment (i.e., anxiety and avoidance), perceived discrimination was positively associated with depression symptoms (β = 0.122, p < .001) and alcohol use (β = 0.135, p < .001). Collectively, discrimination, adult attachment styles, and key covariates (i.e., ethnicity/race, age, and gender) accounted for approximately 19.1% of the variance in depression symptoms, R^2 = .191 and 8.0% of the variance in alcohol use R^2 = .080.

Table 2

Indirect Effects Model Results

	B	***SE***	***p***
ANXIETY ATTACHMENT			
Perceived Discrimination	**0.148**	**0.029**	**<.001**
Age	**-0.106**	**0.029**	**<.001**
Ethnicity/Race	0.026	0.029	0.367
Gender	-0.024	0.029	0.414
R^2	**0.036**	**0.011**	**0.001**
AVOIDANCE ATTACHMENT			
Perceived Discrimination	**0.086**	**0.029**	**0.003**
Age	-0.048	0.029	0.102
Ethnicity/Race	**-0.082**	**0.029**	**0.005**
Gender	-0.021	0.029	0.482
R^2	**0.016**	**0.007**	**0.031**
DEPRESSION			
Perceived Discrimination	**0.122**	**0.027**	**<.001**
Anxiety Attachment	**0.282**	**0.027**	**<.001**
Avoidance Attachment	**0.221**	**0.028**	**<.001**
Age	-0.005	0.028	0.853
Ethnicity/Race	**0.054**	**0.028**	**0.049**
Gender	-0.013	0.027	0.633
R^2	**0.191**	**0.021**	**<.001**
Indirect Anxious	**0.042**	**0.009**	**<.001**
Indirect Avoidance	**0.019**	**0.007**	**0.006**
ALCOHOL USE			
Perceived Discrimination	**0.135**	**0.029**	**<.001**
Anxiety Attachment	**0.078**	**0.030**	**0.010**
Avoidance Attachment	**0.144**	**0.030**	**<.001**
Age	-0.024	0.029	0.406
Ethnicity/Race	0.032	0.029	0.282
Gender	**-0.127**	**0.029**	**<.001**
R^2	**0.080**	**0.016**	**<.001**
Indirect Anxious	**0.012**	**0.005**	**0.022**
Indirect Avoidance	**0.012**	**0.005**	**0.013**

Aim 2: Moderated Mediated Model

The second aim of this dissertation was to examine if dimensions of ERI (i.e., exploration, commitment/resolution, and affirmation) moderate the relationship between perceived discrimination and adult romantic attachment dimensions (i.e., anxiety and avoidance) and/or depression symptoms and alcohol use. It was hypothesized that ERI (i.e., exploration, commitment/resolution, and affirmation) would moderate the relationship between perceived discrimination and adult romantic attachment dimensions (i.e., anxiety and avoidance). As indicated in Table 3, results showed that exploration did moderate the relationship between perceived discrimination and anxiety (β = -0.147, p = .001; Figure 9). Seeking to further explore this relationship, the association between perceived discrimination and anxious adult attachment was examined at -1 and +1 *SD* of ERI exploration. As indicated in Figure 9, when ERI exploration is low, discrimination is positively associated with an anxious adult attachment style (β = 0.301, p < .001). In contrast, when exploration is high, the relationship between discrimination and anxious adult attachment was minimal (β = 0.007, p = .884). In essence, as ERI exploration increases, the relationship between discrimination and anxious adult attachment reduces. That said, results showed that exploration did not moderate the relationship between perceived discrimination and avoidance (β = 0.023, p = .598).

Although results showed that commitment/resolution did not moderate the relationship between perceived discrimination and anxiety (β = .084, p = .053) it did moderate the relationship between perceived discrimination and avoidance (β = -.088, p = .038; Figure 10) such that as commitment/resolution increases, the association between perceived discrimination and avoidance decreases. Specifically, as indicated in Figure 10, when ERI commitment/resolution is low, the association between discrimination and avoidant adult

attachment style is positive (β = 0.161, p = .001). In contrast, when ERI commitment/resolution is high, this relationship becomes non-significant (β = -0.015, p = .773). Finally, results showed that affirmation did not moderate the relationship between perceived discrimination and anxiety (β = 0.033, p = .308) nor avoidance (β = -0.014, p = .657).

In addition, it was hypothesized that ERI (i.e., exploration, commitment/resolution, and affirmation) would also moderate the relationship between perceived discrimination and depression symptoms and alcohol use. As posited, ERI affirmation did moderate the relationship between perceived discrimination and alcohol use (β = -0.132, p < .001; Figure 11) such that as affirmation increases, the association between perceived discrimination and alcohol use decreases. Specifically, as indicated in Figure 11, when ERI affirmation is low, the association between discrimination and alcohol use is positive (β = 0.208, p = .267). In contrast, when ERI affirmation is high, this relationship decreases (β = -.056, p = .821).

Lastly, the significant association (i.e., main effect) between perceived discrimination with depression symptoms (β = 0.077, p = .008) and alcohol use (β = 0.076, p = .016) remained, even after controlling for ERI. In addition, there was a significant negative association between affirmation and depression symptoms (β = -0.179, p < .001) and alcohol use (β = -0.142, p < .001), such that as affirmation increases, depression symptoms and alcohol use decrease.

Table 3

Moderated Mediated Model Results

	B	***SE***	***p***
ANXIETY ATTACHMENT			
Perceived Discrimination	**0.154**	**0.031**	**< .001**
Exploration	-0.023	0.040	0.566
PDSxERIE	**-0.147**	**0.044**	**0.001**
Commitment/Resolution	-0.028	0.04	0.482
PDSxERICR	**0.084**	**0.043**	**0.053**
Affirmation	**-0.081**	**0.031**	**0.009**
PDSxERIA	0.033	0.032	0.308
Age	**-0.105**	**0.029**	**<.001**
Ethnicity/Race	0.030	0.029	0.309
Gender	-0.013	0.029	0.655
AVOIDANCE ATTACHMENT			
Perceived Discrimination	**0.073**	**0.031**	**0.017**
Exploration	-0.001	0.039	0.973
PDSxERIE	0.023	0.043	0.598
Commitment/Resolution	**-0.246**	**0.038**	**< .001**
PDSxERICR	**-0.088**	**0.042**	**0.038**
Affirmation	**-0.12**	**0.030**	**< .001**
PDSxERIA	-0.014	0.031	0.657
Age	-0.039	0.028	0.168
Ethnicity/Race	**-0.077**	**0.028**	**0.006**
Gender	-0.002	0.028	0.945
DEPRESSION			
Perceived Discrimination	**0.077**	**0.029**	**0.008**
Exploration	0.028	0.037	0.447
PDSxERIE	0.031	0.041	0.443
Commitment/Resolution	0.001	0.037	1.000
PDSxERICR	0.008	0.040	0.839
Affirmation	**-0.179**	**0.029**	**< .001**
PDSxERIA	-0.031	0.029	0.293
Age	0.007	0.027	0.795
Ethnicity/Race	**0.064**	**0.027**	**0.020**
Gender	0.005	0.027	0.856
ALCOHOL USE			

Perceived Discrimination	**0.076**	**0.031**	**0.016**
Exploration	-0.051	0.039	0.190
PDSxERIE	0.004	0.043	0.922
Commitment/Resolution	-0.002	0.040	0.957
PDSxERICR	-0.053	0.043	0.210
Affirmation	**-0.142**	**0.031**	**0.001**
PDSxERIA	**-0.132**	**0.031**	**< .001**
Age	-0.019	0.028	0.488
Ethnicity/Race	**0.036**	**0.029**	**0.220**
Gender	**-0.108**	**0.029**	**<.001**

Figure 9

Exploration & Anxious

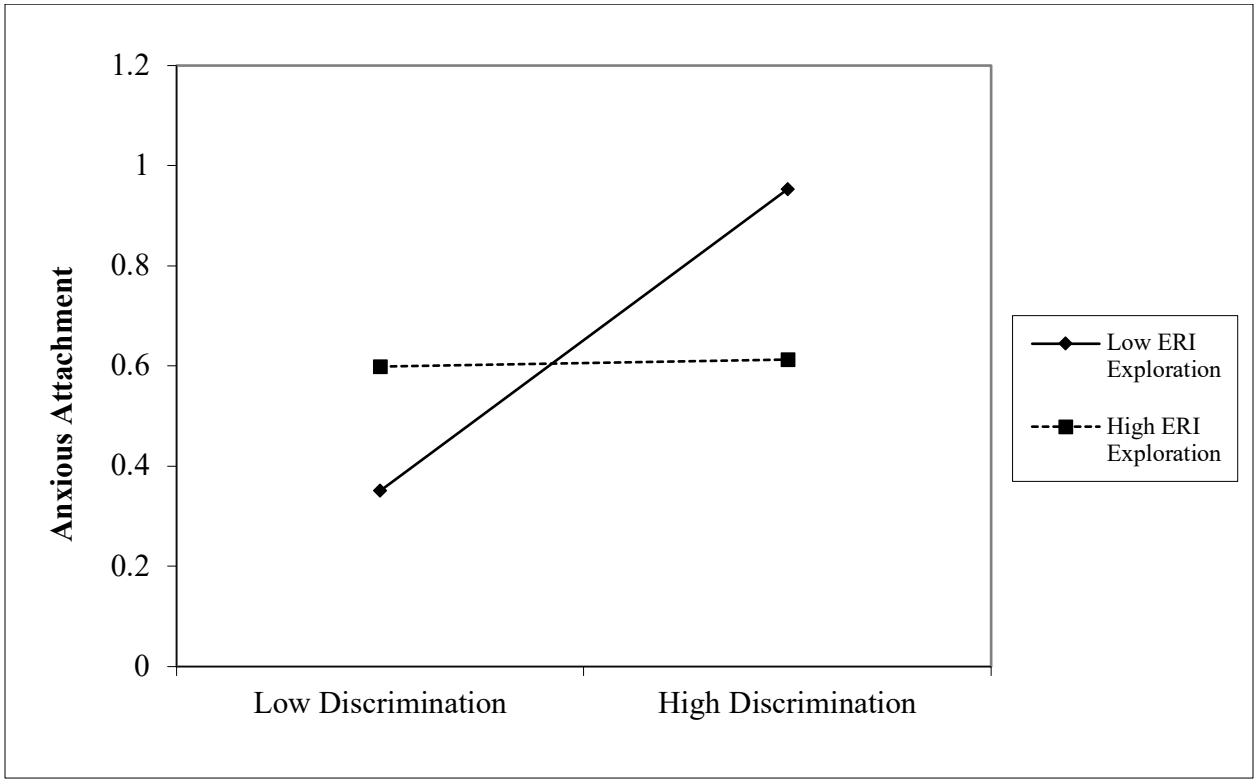


Figure 10

Commitment/Resolution & Avoidance

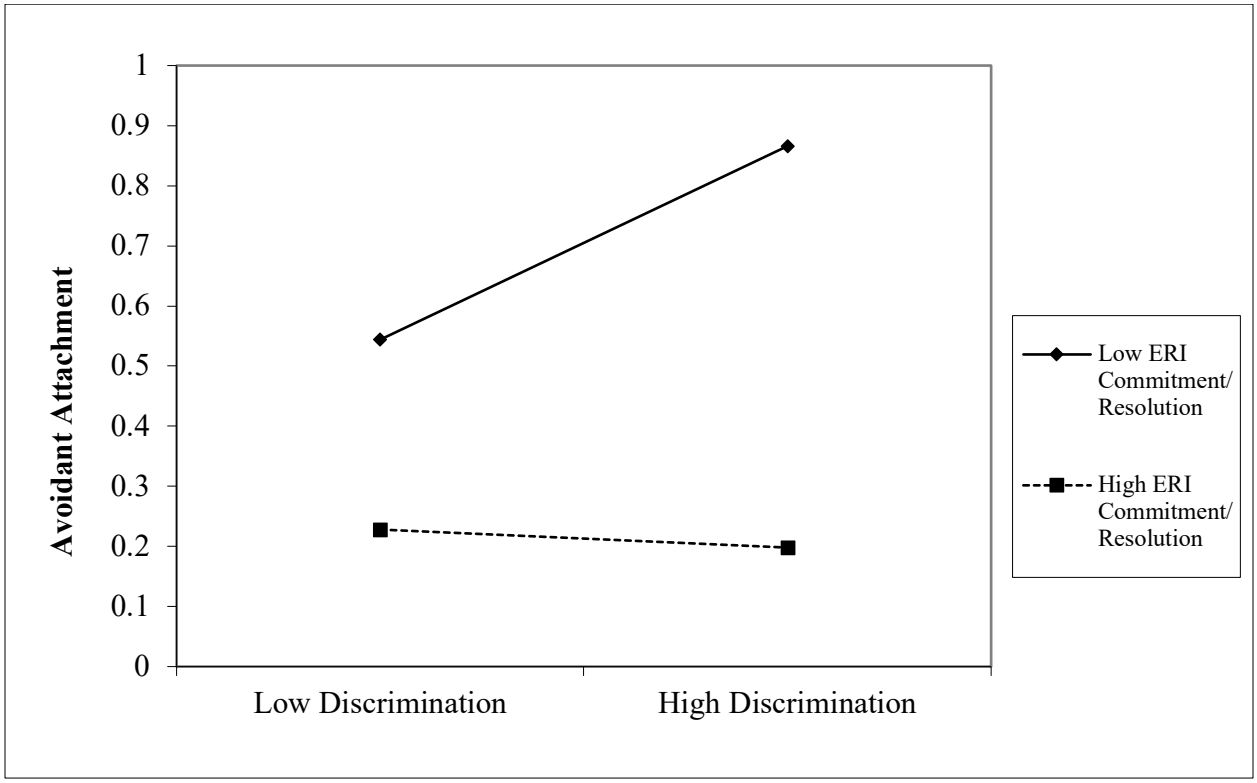
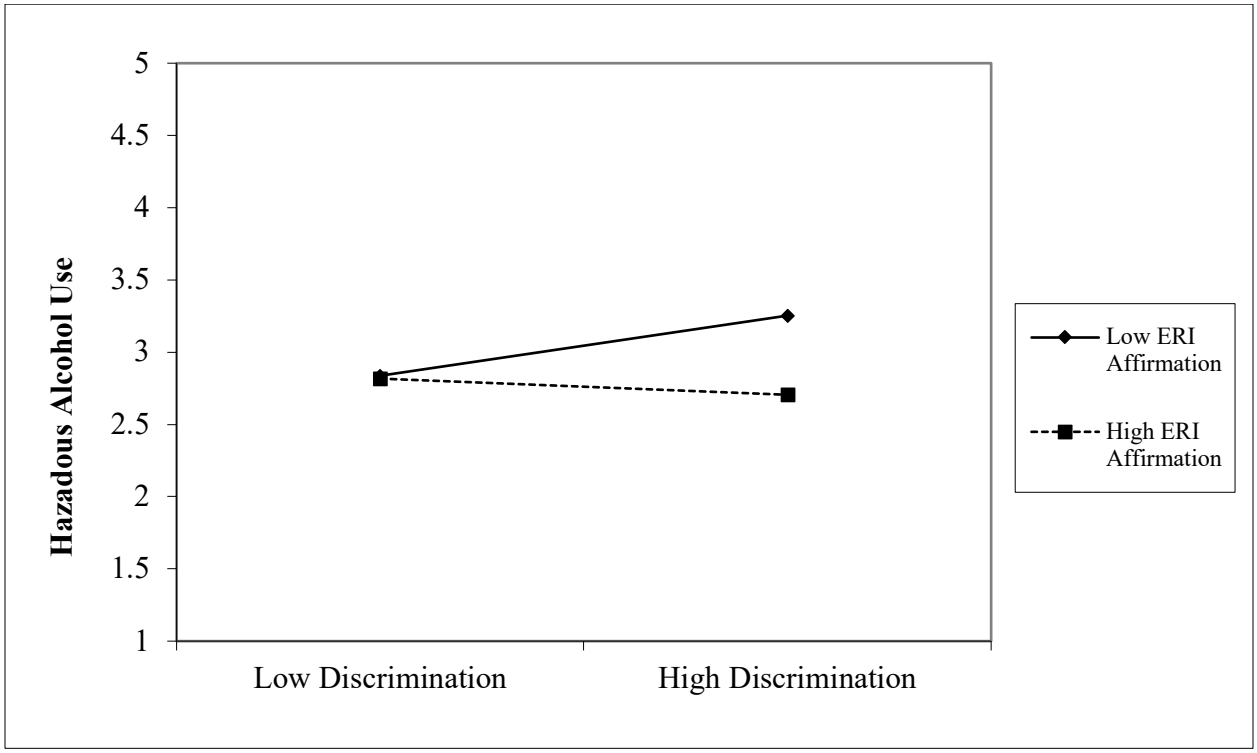


Figure 11

Affirmation & Alcohol Use



Aim 3: Multigroup Differences in Moderated Mediation

The third, final, and exploratory aim of this dissertation was to examine if these findings differed across ethnic/racial minoritized groups (i.e., Black, Hispanic, and East Asian). Towards this end, we compared a fully constrained model, in which path were forced to be equal across ethnic/racial minoritized groups (i.e., Black, Hispanic, and Asian) to an unconstrained model. Results indicated a significant difference between the two models, $\Delta\chi^2$ (64) = 115.32, $p < .001$ (using Satorra-Bentler scaling correction; ΔRMSEA = 0.035, ΔCFI = 0.084). Subsequently, I proceeded to test path by path to determine which paths significantly differed across groups. Of the 32 paths, results indicated 4 paths differed between Black, Hispanic, and Asian participants. Although the models' significant interactions did not differ across ethnic/racial minoritized groups, some associations did differ across ERI dimensions. Specifically, the association between anxious adult romantic attachment and ERI resolution (Black, $\beta = .040$, $p = .568$; Hispanic, $\beta = -.122$, $p = .027$; and East Asian $\beta = .056$, $p = .275$) varied across ethnic/racial minoritized groups. Similarly, the association between avoidant adult romantic attachment and both ERI exploration (Black, $\beta = -.135$, $p = .039$; Hispanic, $\beta = .072$, $p = .191$; and East Asian $\beta = -.022$, $p = .67$) and affirmation (Black, $\beta = .202$, $p = .001$; Hispanic, $\beta = -.249$, $p < .001$; and East Asian $\beta = -.029$, $p = .52$) varied across ethnic/racial minoritized groups. Lastly, for alcohol use, only anxious adult romantic attachment (Black, $\beta = .246$, $p < .001$; Hispanic, $\beta = -.024$, $p = .64$; and East Asian $\beta = .07$, $p = .093$), varied across ethnic/racial minoritized groups.

CHAPTER IV

DISCUSSION

Existing research has described the detrimental impact of ethnic/racial discrimination on the wellbeing of minorities. Stress caused by perceived discrimination based on one's ethnicity and/or race has been shown to increase psychopathology and the use of maladaptive coping methods. Specifically, expanding on existing research that has described the relationship between perceived discrimination and symptoms of depression (Chou et al., 2012; Hudson et al., 2016; Madubata et al., 2018; Torres & Taknint, 2015) and alcohol use (Desalu et al., 2019; Gilbert & Zemore, 2016, Le & Iwamoto, 2019) in ethnic/racial minorities can help shed light on to factors that may be protective. Conceptualizing this from the perspective of the Cultural Development and Psychopathology framework (Causadias, 2013) suggests that the effects of ethnic/racial discrimination on the psychological wellbeing of ethnic/racial minorities are likely mitigated by processes that occur within normal development.

In recent work, adult romantic attachment has been demonstrated to be one such normative developmental process that mediates the relationship of ethnic/racial discrimination on psychopathology (Ayers, 2021). However, greater clarity on the role of adult romantic attachment in mediating the association between discrimination and depression symptoms and alcohol use is needed. Moreover, exploration of the role of other individual factors such as ethnic/racial identity has yet to be fully explored in the association of discrimination-attachment-depression/alcohol use among ethnic/racial minoritized individuals. The present study addressed several gaps in the literature by examining the moderating role of ethnic/racial identity along with the mediating role of adult romantic attachment on the relationship between discrimination and depression and alcohol use in ethnic/racial minority college students.

Aim 1: Indirect Effects Model

The first aim of the present study sought to examine the mediating effects of adult romantic attachment (i.e., anxious, and avoidant) in the association between perceived discrimination and depression symptoms and alcohol use. Hypothesis 1A was supported such that minority college students who experienced more perceived discrimination reported more anxious and avoidant adult romantic attachment; in other words, more experiences of ethnic/racial discrimination resulted in greater adult romantic attachment insecurity. Repeated experiences of ethnic/racial discrimination decrease the efficacy of adaptive behaviors to reduce stress leading ethnic/racial minorities to implore maladaptive behaviors in effort to secure desired support and cope. Additionally, use of behaviors rooted in attachment insecurity likely results in harm to the individual and their relationships. These results represent novel findings within the limited body of existing research describing the detrimental impact of cultural stressors (i.e., ethnic/racial discrimination) on the relational bonds of ethnic/racial minorities. The bulk of existing research has focused on the links between discrimination and mental health directly. Indeed, only a handful of studies to date have examined the links between ethnic/racial discrimination and relational outcomes such as relationship health and satisfaction (Kogan et al., 2013) and familial relationships and conflict (Riina & McHale, 2010). Thus, there continues to remain a dearth of information on the effects of ethnic/racial discrimination on adult romantic attachment in ethnic/racial minorities (Stern et al., 2022).

Next, the results provided support for Hypothesis 1B of this study, such that minority college students who reported greater adult romantic attachment insecurity (i.e., anxious, and avoidant) described experiencing more depression symptoms and alcohol use. These results support suppositions described in existing literature that has examined the relationship between

insecure attachment (i.e., anxious, and avoidant) and mental health problems such as depression symptoms and alcohol use (e.g., Mickelson et al., 1997; Mikulincer & Shaver, 2016). Interestingly, the results demonstrated that anxious adult romantic attachment was more closely related to depression symptoms, whereas avoidant adult romantic attachment was more closely related to alcohol use. As a review, attachment theory suggests that an individual develops inner beliefs about whether their primary attachment figure is loving and responsive based on the character of nurturing support the figure provides (Bowlby, 1969). These inner beliefs inform the type and level of care and consideration the individual believes they are worthy of receiving and contribute to the development of attachment behaviors to support one's needs and chances of survival (Bowlby, 1969). Moreover, early attachment bonds continue to inform an individual's behavior and the care and support they believe they deserve in relationship to others throughout life (Hazen & Shaver, 1987). Indeed, these developmentally adaptive behaviors lead to the establishment of cognitive representations or *mental working models* that organize an individual's cognitions, affects, and behaviors (Bowlby, 1973; Cook et al., 2017). Considering this, to better understand the anxious adult romantic attachment-depression symptoms relationship, we can look to the cognitive vulnerability-stress model of depression (Beck, 1987; 2002), which suggests that stressful experiences contribute to the rise of negative cognitions, which with repeated exposure, lead to the development of negative cognitive schemas based on early life experiences that inform how an individual conceptualizes themselves, others, and the world (Beck, 1987). Taken together, exposure to stressful life experiences activates mental working models of anxious attachment rooted in fear of rejection and abandonment that elicit negative cognitions and schemas of unworthiness, hopelessness, guilt, and shame supporting the development of depression symptoms.

Similarly, to better understand the avoidant adult romantic attachment-alcohol use relationship, we can look to the Drinking to Cope Model, which suggests that for individuals with a limited repertoire of adaptive coping methods (e.g., emerging adults; Arnett, 2000), the expectancies, or anticipated results of potential positive sensations and reduction of pathways leading to negative emotions serve as motivation for the use of alcohol (Cooper et al., 1988). Additionally, when paired with Bandura's (1969) perspective on social learning's role in alcohol abuse, confirmation of positive expectancies in drinking to cope will reinforce its use during future stressful experiences as opposed to seeking more adaptive methods (Cooper et al., 1988, 1995; Crum et al., 2013). Therefore, exposure to stressful life experiences activates mental working models of avoidant attachment, rooted in a desire to downregulate emotions and evasion of the discomfort associated with closeness to and dependency on relational attachment figures. Consequentially, due to a limited repertoire of adaptive coping methods, individuals use alcohol to decrease their experience of undesired emotions and subsequently dependency on others for support. Further, alcohol is also likely used to cope with thoughts and feelings associated with isolation, thus, reinforcing its use. Although the relationships described in these findings have been described in existing literature, limited studies have focused on ethnic/racial minorities (Cortés-Garcia et al., 2020; Fairbairn et al., 2018). Thus, the findings from this study serve to fill the gap in the literature that describes these relationships in the context of ethnic/racial minorities. Future research should continue to examine how these relationships may be present across diverse populations.

Hypothesis 1C was also supported such that minority college students who experienced more perceived discrimination also experienced more depression symptoms through both anxious and avoidant adult romantic attachment styles and engaged in greater alcohol use

through both anxious and avoidant adult romantic attachment styles. These results underscore the suppositions based on the cultural development and psychopathology perspective (Causadias, 2013), that suggest that cultural stressors (i.e., ethnic/racial discrimination) undermine normative developmental processes (i.e., attachment security) leading to psychopathology (i.e., depression symptoms and increased alcohol use). Indeed, ethnic/racial discrimination related stress likely erodes the effectiveness of adaptive coping methods resulting in the activation of working models of insecure attachment, and subsequently negative thoughts and emotions; thus, promoting the use of maladaptive coping behaviors. In essence, increased experiences of discrimination contribute to greater attachment insecurity (i.e., anxious, and avoidant) which supports the development of depression symptoms and increased alcohol use in ethnic/racial minorities. These mediational associations represent novel data that serves to fill the gap in the literature focused on adult romantic attachment in ethnic/racial minorities within the context of discrimination. Indeed, recently emerged findings have described a significant association of neighborhood racism-insecure attachment-depression symptoms in Black youth (Stern et al., 2022), supporting the need for additional empirical studies focused on cultural stressors, attachment, and psychopathology.

Lastly, consistent with my prior work (Ayers, 2021), minority college students who experienced more perceived discrimination experienced a direct main effect of greater depression symptoms and greater alcohol use after controlling for the mediating effect of anxious and avoidant adult romantic attachment styles. These findings underscore existing research that has described a positive association between perceived discrimination and mental health problems such as depression symptoms (Chou et al., 2012; Hudson et al., 2016; Madubata et al., 2018; Torres & Taknint, 2015), as well as perceived discrimination and alcohol use (Desalu et

al., 2019; Gilbert & Zemore, 2016; Le & Iwamoto, 2019; Song et al., 2021; Tran et al., 2010). Moreover, they highlight the need for continued research investigating other potential mechanisms that may be underlying the detrimental effect of discrimination. Indeed, given that only partial mediational effects were observed, there are likely mechanisms other than adult romantic attachment involved such as identity (Meca et al., 2022).

Aim 2: Moderated Mediated Model

The results from my prior research (Ayers, 2021) along with Aim 1 of this study support the suppositions rooted in the cultural development and psychopathology framework (Causadias, 2013) as they illustrate the deleterious effects that cultural stressors can have on the well-being of ethnic/racial minorities, as well as mechanisms that are involved. Considering this, I also proposed that individual factors (i.e., ERI) likely buffer the negative effects of ethnic/racial discrimination. Thus, the second aim of the present study sought to examine if dimensions of ERI (i.e., exploration, commitment/resolution, and affirmation) moderate the relationship between perceived discrimination and adult romantic attachment dimensions (i.e., anxious, and avoidant) and/or depression symptoms and alcohol use.

As was expected for Hypothesis 2A, ERI exploration did moderate the association between perceived discrimination and anxious adult romantic attachment. Specifically, when ERI exploration is low, ethnic/racial discrimination is positively associated with anxious adult romantic attachment. In contrast, when ERI exploration is high, the relationship between ethnic/racial discrimination and anxious adult attachment was minimal. In essence, as ERI exploration increases, the relationship between perceived discrimination and anxious adult attachment reduces. The process of ERI exploration encompasses a nurturing exposure to aspects of one's ethnic/racial group, often through immersion via ethnocultural events and increased

connectedness to others (Phinney, 2006). Considering this, the use of activating behaviors associated with an anxious attachment style, that are employed to increase an individual's proximity to others and promote feelings of acceptance and support, are likely mitigated by processes associated with higher levels of ERI exploration.

On the other hand, the results demonstrated that ERI exploration did not moderate the association of perceived discrimination and avoidant adult romantic attachment. It is possible, that for some, exploration of the meaning of their ethnic/racial group membership involves reading books and other material, and exploration via online spaces, which may physically limit social interactions and stimulate greater introspective thought. Indeed, prior scholars have differentiated between unique types of ERI exploration, specifically *participation* – engaging in ethnocultural activities which impart knowledge about one's ethnic/racial group, and *search* – ongoing inquiry about one's ethnic/racial identity reflecting unsuccessful attempts to acquire knowledge (Syed et al., 2013). In essence, ERI exploration participation is suggested to support learning about one's ethnic/racial group through increased activities that promote closeness to others, which in turn likely mitigates the use of anxious adult romantic attachment behaviors; whereas the enduring and introspective questioning of one's ethnic/racial identity associated with ERI exploration search likely promotes isolative activities such as reading and exploration of online spaces. Thus, although ERI exploration search may be high, as perceived discrimination erodes adaptive methods of coping, protection against the reliance on maladaptive behaviors of avoidant adult romantic attachment (i.e., isolation) is likely not conferred. Future research should continue to examine unique types of ERI exploration.

Alternatively, it has been described that exploration in diverse spaces may lead to experiences of negative stereotypes and discrimination (Walker et al., 2022), which may also

promote the use of maladaptive coping methods associated with avoidant attachment (e.g., emotion deactivation and isolation). Indeed, in diverse online spaces, Tynes et al. (2013) described that African American students endorse the greatest number of experiences of ethnic/racial discrimination. Thus, for some, the development of ERI, begets cultural stress and its negative consequences. Therefore, it is imperative that future research examines differing methods of cultural exploration to highlight and support those that are safest and most advantageous.

As anticipated, ERI commitment/resolution moderated the relationship between perceived discrimination and avoidant adult romantic attachment. Specifically, when ERI commitment/resolution is low, ethnic/racial discrimination is positively associated with avoidant adult romantic attachment. On the other hand, when ERI commitment/resolution is high, the relationship between ethnic/racial discrimination and avoidant adult attachment was minimal. In essence, as ERI commitment/resolution increases, the relationship between perceived discrimination and avoidant adult attachment diminishes. ERI commitment/resolution represents the degree to which an individual feels connected and personally invested in the ethnic/racial group to which they hold membership (Wang et al., 2017). It entails the process of an individual establishing a clear understanding of what it means to them to hold membership to their ethnic/racial group (Umaña-Taylor et al., 2014). Considering this, the use of deactivating and isolative behaviors associated with avoidant attachment styles, which are employed to decrease an individual's dependency and proximity to others, are likely mitigated by the internal processes associated with higher levels of ERI commitment/resolution. In contrast, for those with low ERI commitment/resolution, who feel less connected and invested to their ethnic/racial group, when experiences of ethnic/racial discrimination degrade their limited adaptive coping methods, fear of

interpersonal dependency and discomfort with intimacy promotes the use of avoidant attachment behaviors. In essence, greater ERI commitment/resolution supports an individual's comfort with intimacy within their ethnic/racial group. Indeed, greater commitment to one's ethnic/racial group membership, likely promotes behaviors that are aligned with their cultural values, which for many ethnic/racial minorities, are collectivistic in nature (Harrison et al., 1990; Lee & Mock, 2005; Meca et al., 2022; Yee et al., 2007).

On the other hand, in contrast to my original hypothesis, the results demonstrated that ERI commitment/resolution did not significantly moderate the relationship between perceived discrimination and anxious adult romantic attachment. These results are fascinating given their contrast to ERI commitment/resolution's moderating effects on the relationship between perceived discrimination and avoidant adult romantic attachment. It is possible, that greater ethnic/racial salience (i.e., awareness of one's ethnicity/race in daily experiences), associated with ERI commitment/resolution development, may promote additional exploration after experiences of ethnic/racial discrimination (Syed & Amitia, 2010; Torres et al., 2011; Wang et al., 2017); thus, allowing for explorative processes to impart significant influence over the use of anxious adult romantic attachment behaviors as described in Hypothesis 2A. Future research should examine the longitudinal development of ERI dimensions which may shed light onto how specific developmental processes may be protective.

Finally, in contrast to what was expected, ERI affirmation did not moderate the relationship between perceived discrimination and anxious adult romantic attachment nor avoidant adult romantic attachment. The results demonstrated that ERI affirmation, the degree to which the individual maintains a positive perspective of the ethnic/racial group to which they belong (Umaña-Taylor et al., 2004), did not significantly impact the association of perceived

discrimination and anxious adult romantic attachment nor avoidant adult romantic attachment. Hence, for individuals who maintain a strong positive opinion of their ethnic/racial group, exposure to ethnic/racial discrimination does not impact likelihood of utilizing maladaptive coping behaviors associated with insecure adult romantic attachment. That said, it is worth noting that ERI affirmation was negatively and significantly associated directly with both anxious and avoidant romantic attachment styles. Specifically, as ERI affirmation increased, the use of maladaptive coping behaviors associated with adult romantic attachment insecurity (i.e., anxious, and avoidant) was diminished. Thus, the establishment and maintenance of positive affect towards one's ethnic/racial group may support the maintenance of secure attachment in adult romantic relationships. Future research should examine what messages are particularly salient in establishing and maintaining a positive perspective of one's ethnic/racial group. Greater understanding may inform methods to support ERI development and subsequently attachment security.

Expanding beyond the influence of ERI on the association between perceived discrimination and adult romantic attachment dimensions, Hypothesis 2B sought to glean information on the moderating effects of ERI dimensions in the relationship between perceived discrimination and depression symptoms and alcohol use. The limited existing literature describing the impact of ERI on mental health problems within the context of discrimination has been mixed (Brondolo et al., 2009; Kyere et al., 2022; Su et al., 2021). Additionally, the paucity of studies examining this association within a diverse sample of emerging adults makes these findings unique. Contrary to what was expected for Hypothesis 2B, neither ERI exploration nor ERI commitment/resolution moderated the relationship between perceived discrimination and depression symptoms nor alcohol use. Similar to some existing literature, these findings suggest

that ERI exploration may provide only limited influence on the deleterious effects of ethnic/racial discrimination in the direct association with psychopathology (i.e., depression symptoms and alcohol use) (Torres et al., 2011). The exploration of the meaning of one's membership to an ethnic/racial group entails introspective thought which may promote isolative activities and ruminative processes that may support the development of depression symptoms. Additionally, coping with cultural stress and emotions that arise during the exploration process may support the use of maladaptive coping behaviors such as alcohol use. Moreover, the use of alcohol to cope may be reinforced by social learning and positive expectancies (Bandura, 1969; Cooper et al., 1995; Martin et al., 2003; Schwartz, 2016). Like ERI exploration, the results suggested that ERI commitment/resolution also may only provide limited influence in the buffering of the effects of ethnic/racial discrimination. Although this finding differs from some existing research (Torres et al., 2011; Walker et al., 2022), it is possible that greater awareness of the role one's ethnicity/race plays in everyday experiences contributes cyclical questioning and exploration of one's ERI on exposure to ethnic/racial discrimination, which may increase their psychological vulnerability (Syed & Amitia, 2010; Torres et al., 2011). Future research should examine how activities involved in ERI development may be associated with psychopathology. Greater insight may highlight adaptive ways of coping with cultural stress during this developmental period.

As was expected, ERI affirmation did moderate the relationship between perceived discrimination and alcohol use. This finding supports the growing body of research that has described the protective nature of ERI affirmation (i.e., positive views about one's ethnic/racial group) against alcohol use (Richman et al., 2013; Desalu et al., 2021). For example, Su et al. (2021) found that greater positive opinions about being Black was protective against the

deleterious effects of ethnic/racial discrimination that promote alcohol use in a sample of Black American young adults. Indeed, positive perceptions of one's group membership likely support the rejection of negative messages and experiences of discrimination that lead to the use of alcohol-related coping behaviors; moreover, positive perspective about the collectivist nature of most ethnic/racial minority groups support use of more adaptive coping methods (e.g., social support). Thus, for individuals who maintain more negative views about their ethnic/racial group (i.e., low ERI affirmation), the use of maladaptive coping behaviors, such as self-medication via alcohol use are more likely to occur (Desalu et al., 2021). Therefore, continued examination of salient messages in the context of discrimination is essential to understanding what aspects of one's ethnic/racial group instills greater pride and positive opinions within the individual.

On the other hand, inconsistent with what was expected, ERI affirmation did not moderate the relationship between perceived discrimination and depression symptoms in this study. Indeed, findings on the protective nature of ERI on depression symptoms have been mixed (Brondolo et al., 2009; Kyere et al., 2022; Su et al., 2021). Considering that depression represents an affective state of how one views oneself, others, and the world, it may be that although an individual maintains a positive perspective about the ethnic/racial group to which they belong, perceptions of negative views held by others about one's ethnic/racial group contributes to poorer appraisals of oneself and the world within the context of discriminatory stress. This finding may be akin to research findings utilizing the Multidimensional Model of Racial Identity (MMRI; Sellers et al., 1998), that have described the association of discrimination with psychopathology within the context of *private regard* – the degree which one holds positive or negative feelings towards their ethnic/racial group and of being a part of their ethnic/racial group, and *public regard* – the degree to which one feels others perceive their

ethnic/racial group positively or negatively (Meca et al., 2023). Indeed, public regard has been shown to exacerbate the harmful impact of discrimination in the development of depression symptoms in minorities (Seaton & Iida, 2019).

Additionally, as suggested by earlier work on identity development (Phinney, 1989; Tajfel, 1981), whereas ERI affirmation has primarily been described and assessed as the extent of one's positive views (Umaña-Taylor et al., 2004), a negative affective component likely remains at play that may contribute to persistent psychopathology (Chae et al., 2017; Meca et al, 2022). From the perspective of the cultural development and psychopathology framework (Causadias, 2013), it is likely that experiences of ethnic/racial discrimination convey negative perceptions held by others regarding an individual's ethnic/racial group that undermines the positive influence of ERI, thus contributing to the development of depression symptoms. Therefore, additional empirical evidence is needed to examine the influence of public regard and the negative perceptions held by others that are most salient to an individual within the context of ethnic/racial discrimination. Greater understanding of such perceptions may provide new targets for intervention to improve the wellbeing of ethnic/racial minorities.

Furthermore, it is worth noting, that the externalizing nature of alcohol use may contribute to these findings such that increased alcohol use is not only observable, but it can also lead to more socially severe consequences (e.g., legal problems). Thus, ERI affirmation may prevent more visible maladaptive behaviors out of fears related to problematic outcomes. Moreover, the internalizing nature of depression may allow for its development more stealthily in the absence of observable outcomes. Additionally, the introspective nature of depression symptoms may cause individuals to not only reevaluate their ERI, as well as other identities, but it may also propagate due to associated ruminative processes. Indeed, existing research has

suggested that as ERI development can be a cyclical process, introspection and reexamination can increase ethnic/racial minorities vulnerability (Torres et al., 2011).

Overall, as expected, the findings from this study did demonstrate that ethnic/racial minority college students with greater ERI affirmation reported less depression symptoms and alcohol use. This finding supports existing research that has described that greater ERI strength is positively associated with wellbeing (i.e., less depression symptoms and alcohol use) in ethnic/racial minorities (Cross et al., 2018; Green et al., 2006; Zapolski et al., 2017). For example, in a sample of 1850 emerging adults from diverse ethnic/racial backgrounds, ERI affirmation was less associated with alcohol use disorder symptoms in Asian and African Americans from the sample (Walker et al., 2022). It is likely that the maintenance of a positive opinion about one's ethnic/racial group supports an individual's desire to uphold their culture's values and its positive perception by society (Brittian-Loyd & Williams, 2017), thus, promoting more healthy behaviors. Whereas more negative opinions about one's ethnic racial group likely contributes to more negative appraisals of oneself supporting the need for maladaptive coping behaviors such as alcohol use. It is imperative that future investigations examine whether emerging adults are concerned with how their ethnic/racial group is perceived by others, such that it influences their use of maladaptive coping behaviors.

Aim 3: Multigroup Differences in Moderated Mediation

The third and final aim of the present study sought to explore if the effects found in the first two aims hold/vary across ethnic/racial minoritized groups (i.e., Black, Hispanic, and East Asian). Although the significant interactions from the models in this study did not differ across ethnic/racial minoritized groups, there were some associations that varied between ethnic/racial groups across ERI dimensions.

ERI commitment/resolution, not ERI exploration, varied in its association with anxious adult romantic attachment. Specifically, ERI commitment/resolution demonstrated a strong negative association with anxious adult romantic attachment in Hispanic/Latinx individuals, but not in the other two groups. This finding suggests that Hispanic/Latinx individuals who have contemplated the meaning of their membership to their ethnic/racial group and have *committed* to it, are less likely to display an anxious adult romantic attachment style. Several factors may contribute to this finding, largely centered around values that are most salient to Hispanic/Latinx culture (i.e., familism, respect, religion, and traditional gender roles). Consistently, research on Hispanic/Latinx cultural family values in the U.S. has primarily focused on familism (Meca et al., 2022; Sabogal et al., 1987; Stein et al., 2014) which likely plays a key role in this association. Conceptually, familism represents a group of values centered on an individual's commitment to the needs of the family over the individual's, the perspective that the family is the main source of support, the formation of one's sense of self based on one's relationship to the family, the maintenance of familial connections and harmony among members, referencing familial preferences over the individual's, and maintaining respect and upholding one's responsibilities to the family throughout one's life (Meca et al., 2022; Sabogal et al., 1987; Valdés, 2008). Moreover, an individual's commitment to family encompasses the nuclear family as well as the extended family (i.e., aunts, uncles, cousins, grandparents, godparents, etc.) (Meca et al., 2022; Unger et al., 2002). As such, these findings suggest that greater ERI commitment/resolution in Hispanic/Latinx individuals is associated with more familism; and therefore, greater closeness to familial supports and less anxious adult romantic attachment.

The difference in the association of ERI commitment/resolution and anxious adult romantic attachment across ethnic/racial groups may be due to variations in the cultural values of

each group. Whereas each of the three groups included in this study maintain a key cultural value that influences family interactions, differences in structure may contribute to the findings of this study. For example, for Asian Americans, adherence to filial piety emphasizes a hierarchical structure, obedience, proper conduct, and impulse control (Meca et al., 2022; Wu, 1996). For Black/African Americans on the other hand, communalism represents the consciousness of interdependence of people (i.e., family; Boykin et al., 1997); however, unlike Hispanic/Latinx and Asian Americans, the concept of family encompasses individuals outside of those of blood relationship (e.g., neighbors, friends; McAdoo, 1998; Meca et al., 2022). Thus, when compared to the constellation of values that familism entails, commitment to one's ethnic/racial group and its cultural values within the context of cultural stressors likely results in variability in the coping behaviors that are elicited. Future research should examine how these cultural differences differentially impact the relationships described.

ERI exploration and affirmation were found to vary in their association with avoidant adult romantic attachment across the groups. Specifically, ERI exploration and affirmation were found to have strong negative associations with avoidant adult romantic attachment in the Black/African American group, and ERI affirmation demonstrated a strong negative association with avoidant adult romantic attachment in the Hispanic/Latinx group. These findings suggest that Black/African American individuals who have engaged in greater exploration of the meaning of their ethnic/racial group membership, are less likely to display an avoidant adult romantic attachment style. It is possible that participation in ethnocultural activities during exploration, promotes greater comfort with interpersonal intimacy and reliance on others to impart knowledge about one's culture; thus, promoting greater adult romantic attachment security. Moreover, socialization and immersion in ethnocultural events (i.e., the exploration

participation process) may be particularly critical for ERI and attachment security development in Black/African American individuals.

Additionally, the findings suggested that Black/African American and Hispanic/Latinx individuals, not Asian, who establish and maintain a positive perspective of the ethnic/racial group to which they belong (Umaña-Taylor et al., 2004), are less likely to display an avoidant adult romantic attachment style. This finding may be related to the positive messaging about one's ethnicity/race that is received through greater interaction with other group members. Additionally, the maintenance of positive views of oneself and one's group maybe self-reinforcing of adherence to collectivist values that promote greater interpersonal intimacy; and therefore, greater adult romantic attachment security. The absence of this significant finding in Asian American individuals may be a result of the differential positive messaging about ethnic/racial groups that minorities receive. Whereas Asian Americans are consistently regarded as, "model minorities" – smart, high achieving, hardworking (Kim & Lee, 2014), Hispanic/Latinx Americans are often stereotyped as undocumented immigrants and unskilled workers (Burns & Gimpel, 2000) and Black/African Americans are often perceived as violent and dangerous (Donovan et al., 2013; Williams & Modammed, 2013). This racial triangulation process (Kim, 1999) likely supports the intra-group dependency for positive messaging and the subsequent influence on attachment styles for Black/African American and Hispanic/Latinx individuals. However, because Asian Americans received greater positive regard across social settings, their dependency on intra-group positive messaging is likely less; and therefore, exerts less influence on their attachment styles. Moreover, it is worth noting that some researchers have described that individuals from Asian cultures demonstrate lower rates of avoidant attachment (Agishtein et al., 2013; Takahashi, 1986), which may contribute to these findings.

Future research should further examine variations in ERI developmental processes across different ethnicities/races. Greater understanding may shed light onto potential intervention targets that are unique to specific ethnic/racial groups.

Lastly, the findings demonstrated that perceived discrimination was positively associated with anxious adult romantic attachment exclusively in Black/African Americans; moreover, as a result, perceived discrimination was also positively associated with alcohol use through anxious adult romantic attachment solely in the Black/African American group. Individuals with an anxious adult romantic attachment style utilize activating behaviors in effort to elicit social support when concerned with the fear of rejection and a desire for increased closeness to attachment figures. In a longitudinal study of Black/African American emerging adults Hurd et al. (2014) described the predictive nature of perceived discrimination on the increased frequency of alcohol use; however, to our knowledge, perceived discrimination's association with alcohol use through anxious adult romantic attachment, in this population, has not been described in existing literature. Thus, this finding serves to provide novel evidence of how perceived discrimination causes detriment to the wellbeing of ethnic/racial minorities.

Black/African Americans with an anxious adult romantic attachment style may use alcohol to reduce their activating emotions and behaviors. In such cases, alcohol use may be considered particularly helpful to Black/African Americans, who are socially more likely to be viewed as aggressive, angry, and vehement compared to individuals from Asian and Hispanic/Latinx minority groups (Donovan et al., 2013). Indeed, the experiences and consequences of discrimination are likely to differ across ethnic/racial minority groups because of differing perceptions held by society (Donovan et al., 2013). Whereas Asian Americans are consistently regarded as, "model minorities" (Kim & Lee, 2014), and Hispanic/Latinx Americans

are stereotyped as undocumented immigrants and unskilled workers (Burns & Gimpel, 2000), Black/African Americans are more often than not perceived as violent and dangerous (Donovan et al., 2013; Williams & Modammed, 2013). Thus, as experiences of discrimination likely increase the awareness of these ethnicity/race-based negative stereotypes (Wang et al., 2017), Black/African Americans likely use alcohol to down regulate their activating behaviors and emotions to prevent the perpetuation of socially held negative views and potential adverse repercussions. In light of this, future research should examine which negative stereotypes are most salient for Black/African Americans in association with alcohol use, within the context of discrimination, to create better understanding of potential targets for change.

Clinical Implications

Ethnic/Racial Discrimination Prevention

The results from this study demonstrated that perceived discrimination (i.e., ethnic/racial discrimination) was directly related to psychopathology (i.e., depression symptoms and alcohol use) such that ethnic/racial minority emerging adults who experienced ethnic/racial discrimination reported more depression symptoms and higher levels of alcohol use. Considering this finding, clinicians and mental health care professionals should strive to prevent ethnic/racial discrimination in practice and promote an inclusive environment on college campuses. It is recommended that college campuses engage in efforts that minimize ethnic/racial discrimination within the structure of the institution through modification of policies and practices. For example, college campuses can strive to foster diversity, equity, and inclusion through the implementation of programming and training on diversity and implicit and explicit bias. Devine et al. (2013) described that prejudice habit-breaking interventions can reduce discrimination by helping individuals gain greater awareness of their biases and when they are likely to occur, as

well as, fostering concern for the deleterious effects that their biases can confer (Devine & Monteith, 1993; Plant & Devine, 2009). Additionally, Devine et al. (2013) described five mutually reinforcing training strategies: 1) stereotype replacement, 2) counter-stereotypic imaging, 3) individuation, 4) perspective taking, and 5) increasing opportunities for contact, that can help reduce the habitual engagement in prejudice and discriminatory practices. Indeed, these interventions were noted to produce significant reductions in implicit bias that persisted, and highlighted that awareness and intentionality are vital to reducing ongoing practices of discrimination. Furthermore, interventions such as these, can improve how counselors, faculty, staff, and administrators interact and communicate with ethnic/racial minority students, thus supporting their wellbeing.

In addition to trainings and interventions to reduce discrimination, higher education institutions and counseling centers should seek to promote programing that increases social integration and interactions between individuals from differing ethnic/racial backgrounds to reduce the prevalence of discrimination and support harmony and acceptance within the overall college community. Whereas historic efforts have been made to increase integration and create diversity within education (Brown v. Board of Education, 1954), promotion of interaction between diverse individuals is essential to circumvent the implicit nature of persons to group themselves in seeking comfort (Haring-Smith, 2012; Tienda, 2013). Indeed, through methods such as structured group conversations, social activities, and ethnocultural events, university leaders can foster peer interactions that promote acceptance and reduce bias and discrimination within the college community (Tienda, 2013).

Attachment Security Enhancement

The results from this study also underscore the influence of relational attachment bonds (i.e., adult romantic attachment dimensions) in the association of perceived discrimination (i.e., ethnic/racial discrimination) with psychopathology (i.e., depression symptoms and alcohol use). Specifically, the findings highlight that ethnic/racial minority emerging adults who experience ethnic/racial discrimination reported greater adult romantic attachment insecurity (i.e., anxious, and avoidant) and subsequent depression symptoms and alcohol use. Existing literature has described that interaction with secure attachment figures (e.g., teachers, coaches, therapists, etc.) can support the development of coping methods such as emotion-regulation strategies that can translate to other relationships (Mikulincer & Shaver, 2007; 2012; 2020). Considering this, clinicians, mental health providers, and colleges are recommended to promote the use of therapies and supportive programing activities that can have security enhancing effects.

A growing body of research has begun to highlight the effects of interventions that enhance an individual's sense of security and positive expectations for support from attachment figures (Mikulincer & Shaver, 2020). For example, attachment researchers have demonstrated that security priming techniques can have robust positive effects on an individual's mood, distress tolerance, physical health, and psychological wellbeing (Mikulincer & Shaver, 2007; 2020). Additionally, some psychotherapy techniques (e.g., Emotion-Focused Therapy; Johnson, 2003) focus on enhancing couples' ability to provided sympathetic and responsive support during times of distress, thereby improving security as well as more positive, relationship supporting, interpersonal interactions. Moreover, from Bowlby's (1988) perspective of therapeutic change, counselors, when viewed by clients as, "stronger and wiser" caregivers, can serve as prospective suppliers of security on which clients can project their concerns and distress

rooted in attachment insecurity. Thus, the responsiveness of counselors to clients' help-seeking can support the enhancement of attachment security and promote positive therapeutic effects (Håvås et al., 2015; Mikulincer &Shaver, 2020; Parish & Eagle, 2003). Indeed, researchers have described decreases in attachment insecurity and greater reports of secure attachment in response to psychotherapy (Maxwell et al., 2014; Travis et al., 2001); further, they also noted substantial improvement in psychopathology-related symptoms. In essence, the usefulness of security enhancing therapies and techniques have been demonstrated across a variety of settings; therefore, application of these helpful interventions may support ethnic/racial minority emerging adults cope with the effects of ethnic/racial discrimination.

ERI Development

Lastly, the findings from this study support existing literature that has suggested that greater positive ERI may buffer against the negative effects of ethnic/racial discrimination in the development of psychopathology (i.e., depression symptoms and alcohol use) (Sellers et al., 2006; Walker et al., 2022; Zapolski et al., 2018). Considering this finding, clinicians, mental health care professionals, counseling centers, and colleges should strive to promote the positive development of ERI in ethnic/racial minority emerging adults through ethnocultural activities, mentorship and buddy programs, presentations and workshops on minority cultures, and provision of relevant resources (i.e., reading materials) that can support exploration and contemplation of one's ethnic/racial identity. Additionally, it is recommended that positive messaging and visual representation be enhanced in settings which emerging adults frequent. For example, counseling centers should utilize educational materials that display images of individuals from ethnic/racial minority groups. Further, universities should include students, faculty, and staff from ethnic/racial minority groups in marketing materials to promote emerging

adults' positive affect toward their ethnic/racial group. Furthermore, the hiring and maintenance of an ethnically/racially diverse faculty and staff, representative of the student population at colleges, may support development of programing and research that supports ERI development.

Policy Implications

Ethnic/racial discrimination continues to exist at the institutional level due to policies and practices that have systematically disparaged ethnic/racial minorities. Thus, it is recommended that universities and organizations that interact with college students implement routine assessments of existing policies and procedures to identify specific areas in which reform is needed to minimize discrimination and foster environments of accessibility and inclusion. Existing literature has highlighted changes by which institutions can help restore and promote the mental and emotional wellbeing of ethnic/racial minorities who have been impacted by the deleterious effects of longstanding discriminatory practices. For example, recruiting and retaining faculty and staff from diverse ethnic/racial backgrounds can not only support greater awareness of underlying areas of discrimination within the system, but also can support implementation of practices and activities that foster interactions of staff and students from different cultural backgrounds to improve future relations (Bravo et al., 2023).

Limitations

The findings from this study should be interpreted considering several limitations. First, the ethnic identity measure used did not assess for culture of origin, bicultural identity, nor the ethnic identity of participants' romantic partners; thus, the findings from this study did not allow for examination of the potential influence of varying levels of intersectionality and identity. For example, time in the U.S. has been described to influence the relationship between perceived discrimination and depression symptoms and alcohol use (Gee et al., 2006; Szaflarski et al.,

2011), and the development of ethnic identity has been suggested to be a dynamic interchange between an individual's heritage and American culture for some first and second-generation U.S. born emerging adults (Nesteruk et al., 2015). Second, the cross-sectional nature of the data limited examination of the causal attributions and temporal ordering of the variables, thus requiring further empirical study to support the findings. For example, individuals who are depressed may be more likely to interpret negative events as attributable to ethnic/racial discrimination (Hudson et al., 2016). Additionally, although prior research has suggested that the co-occurring relationship of depression symptoms and alcohol use may be bidirectional (Pedrelli et al., 2016), findings from a more recent meta-analyses suggested that whereas alcohol use problems were associated with a greater risk of the development of depression symptoms, heavy alcohol use was not a significant predictor of depression symptoms (Li et al., 2020). Moreover, given that there was a significant difference in anxious adult romantic attachment by age, particularly among Hispanic/Latinx emerging adults, suggesting that with increased age anxious attachment endorsement was decreased, there is a key need for future research to utilize longitudinal methods to better understand change across these key processes.

Third, the sample included in this study was primarily female (71.8%) and heterosexual (88.9%). Considering that rates of ethnic/racial discrimination, depression, and alcohol use may differ across gender and sexual identities, the generalizability of the findings may be limited (Hatzenbuehler, 2009; NIAAA, 2022; NIMH, 2022; Williams & Mohammed, 2009). Indeed, my findings highlighted a significant difference in alcohol use by gender, particularly among Hispanic and Asian participants. More specifically, females had significantly less endorsement of alcohol use than males, which is consistent with substantive research documenting disparities in alcohol use by sex (White, 2020). Fourth, the measure of adult romantic attachment used did

not assess for cultural variations, nor did it asses for the participants' romantic partners' adult romantic attachment style which may limit the interpretations described. Fifthly, all variables included were assessed via self-report; therefore, the findings for this study may be subject to reporting bias and shared method variance. Lastly, this study utilized existing data collected between September 2008 – October 2009 (Castillo & Schwartz, 2013), thus the generalizability of the findings may be limited.

Future Directions

This study has several implications for future research. First, considering the cross-sectional nature of the data used in this study, conclusions about temporal sequences and causal directional association were unable to be examined. Future empirical studies should focus on the longitudinal examination of the relationships described in this study, which may potentially highlight the causal directional associations and temporal ordering.

Second, because this study solely utilized data from college students, the results may not generalize to ethnic/racial minority emerging adults outside of higher educational settings. Considering this, future research should seek to recruit participants from outside of the college setting to examine whether the findings from this study hold/vary. Moreover, this study uniquely examined ethnic/racial identity from the perspective of individuals' culture of origin. For many individuals, particularly second and third generation immigrants, ethnic/racial identity development may have greater overlap with United States Identity (USI) (i.e., bicultural identity; Gartner et al., 2014; Meca at al., 2023). Therefore, future research should examine the development and effect of ERI integrated with USI within the context of the relationships described in this study. Doing so may provide greater understanding of the processes required to integrate ERI and USI cultural values across a variety of settings.

Thirdly, considering the limited inclusion of other factors of diversity within the data used for this study (e.g., LGBTQIA+ identified persons), whereas participants primarily identified as heterosexual and cis gender, the findings may not be generalizable to populations of other gender and sexual identities. Thus, future research should seek to recruit participants from diverse gender identities and sexual orientations. By doing so, insight into how the intersectionality of diverse identities influence the relationships described in this study may be gained; moreover, the information gleaned from a more diverse sample may inform more salient targets of intervention and prevention for these populations. Fourthly, this study did not include data from the partners of the participants of this study. Therefore, the influence of ERI and adult romantic attachment security of participants' partners was not examined. Considering this, future research should seek to obtain data from couples which may shed light onto additional influences at play in the relationships described in this study.

Fifthly, bearing in mind the application of a singular model of ethnic/racial identity across the three groups examined in this study, future research should consider other distinct models ethnic/racial identity such as the Multidimensional Model Racial Identity (Sellers et al., 1998) and Nigrescence (Cross & Vandiver, 2001; Worrell et al., 2001). Moreover, future research should also consider inclusion of models that distinguish the heterogeneity of bicultural individuals such as the Bicultural Identity Integration framework (Benet-Martínez Haritatos, 2005; Nguyen & Benet-Martínez, 2012) which may support a greater understanding of ethnic/racial identity within the context of the increasingly diverse U.S. population (Meca et al., 2023). Sixthly, as this study was limited in the outcomes measured (i.e., depression symptoms and alcohol use), future studies should examine alternative adjustment outcomes (e.g., anxiety) and other externalizing outcomes (e.g., tobacco and cannabis use). For example, ethnic/racial

discrimination was shown to be positively associated with tobacco and cannabis use, and cooccurring tobacco use disorder and cannabis use disorder in non-Hispanic Black adults (Mattingly et al., 2023).

Lastly, considering the use of archival data for this study, and therefore the potential limitations in generalizability of the findings, future research should examine whether these findings hold true in light of societal changes and more recent historical events that have negatively impacted ethnic/racial minorities. Indeed, future research should assess for the impact of perceived online racism considering the relatively ubiquitous nature of internet and social media use in contemporary day. Additionally, several ethnically/racially charged events have occurred since the collection of this data, which have had damaging impacts on the populations and variables discussed in this study. For example, alcohol use severity for individuals of Asian origin has been directly impacted by experiences of COVID-19-related racism (i.e., anti-Asian hate), as well as indirectly through associated depression-related coping drinking (Keum & Choi, 2022). Additionally, whereas Hispanic/Latinx individuals have been highlighted as one of the fastest growing minority groups in the U.S. during the last decade, the anti-immigration legislature policies enacted during the Trump Presidential administration resulted in deportation and separation of families at the border, and political unrest centered around DACA (Rabin et al., 2022). Resultingly, substantial increases in depression, anxiety and other psychopathology have been observed; moreover, ethnicity/racially motivated harassment of Hispanic/Latinx individuals has translated into increased symptoms of PTSD particularly in younger demographics (Rabin et al., 2022). Furthermore, the growth of the Black Lives Matter movement and other related peaceful protests, which occurred in response racism begotten by the, “immersive terrorism” of the Charlottesville Riot (Blout & Burkart, 2020), and the murders of George Floyd, Breonna

Taylor, and numerous other Black/African American individuals as a result of police violence has translated in to detrimental effects on the metal health (e.g., depression, anxiety, and PTSD) and wellbeing of Black/African Americans (Green et al., 2021). Indeed, the negative effects of on the mental health and wellbeing of ethnic/racial minorities have likely been further exacerbated by the more recent experiences of ethnic/racial discrimination inflicted by the majority culture in America, underscoring the need for continued research to unearth methods to prevent and treat the negative consequences of the discrimination and racism that plague ethnic/racial minorities.

CONCLUSIONS

Emerging adulthood is a period of dynamic life changes, riddled with decision making, that can impart uncertainty about an individual's self-efficacy to traverse new challenges outside of the protections and structures of childhood and adolescence. The present study addresses several gaps in the literature by examining the moderating role of ethnic/racial identity along with the mediating role of adult romantic attachment on the relationship between discrimination and depression and alcohol use in ethnic/racial minority college students. In addition, this study was the first to examine the detrimental impact of cultural stressors (i.e., ethnic/racial discrimination) on the relational bonds of ethnic/racial minorities. Overall, it was found that adult romantic attachment dimensions (i.e., anxious, and avoidance) mediate the positive associations of perceived discrimination (i.e., ethnic/racial discrimination) and depression symptoms and alcohol use. Additionally, this study sought to highlight the buffering effects of ethnic/racial identity dimensions (i.e., exploration, commitment/resolution, and affirmation) on the associations of perceived discrimination – adult romantic attachment – depression symptoms/alcohol use. It was found that ERI exploration moderated the association between perceived discrimination and anxious adult romantic attachment, ERI commitment/resolution moderated the association between perceived discrimination and avoidant adult romantic attachment, and ERI affirmation moderated the relationship between perceived discrimination and alcohol use. Moreover, it was found that ethnic/racial minority college students with greater ERI affirmation reported less depression symptoms and alcohol use.

On the other hand, it was found that ERI exploration did not moderate the association of perceived discrimination and avoidant adult romantic attachment, ERI commitment/resolution did not moderate the relationship between perceived discrimination and anxious adult romantic

attachment, ERI affirmation did not moderate the relationship between perceived discrimination and anxious adult romantic attachment nor avoidant adult romantic attachment, neither ERI exploration nor ERI commitment/resolution moderated the relationship between perceived discrimination and depression symptoms nor alcohol use, and ERI affirmation did not moderate the relationship between perceived discrimination and depression symptoms in this study.

Lastly, exploratory findings of how these associations vary/hold across ethnic/racial minority groups (i.e., Black/African America, Hispanic/Latinx, East Asian) demonstrated a strong negative association between ERI commitment/resolution and anxious adult romantic attachment in the Hispanic/Latinx group, ERI exploration and affirmation were found to have strong negative associations with avoidant adult romantic attachment in the Black/African American group, ERI affirmation demonstrated a strong negative association with avoidant adult romantic attachment in the Hispanic/Latinx group, and perceived discrimination was positively associated with anxious adult romantic attachment exclusively in Black/African Americans; moreover, as a result, perceived discrimination was also positively associated with alcohol use through anxious adult romantic attachment solely in the Black/African American group.

Collectively, these results establish that the normative developmental process of attachment mediates the relationship of ethnic/racial discrimination on psychopathology (Ayers, 2021). Moreover, these results provide support for the buffering nature of other individual factors such as ethnic/racial identity in the association of discrimination-attachment-depression/alcohol use among ethnic/racial minoritized individuals. Future studies should examine other potential mediators in these associations, seek to understand attachment security enhancement and the unique aspects of ERI development, as well as incorporate longitudinal data to describe stronger inferences.

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APPENDICES

APPENDIX A

Demographics Questionnaire

1. Age:

2. Gender (check one): Male Female

3. My ethnicity is (choose one):
   a. Black, African American, Afro-Caribbean, Black African, Other in this category.
   b. Caucasian, White, European American, White European, Other in this category.
   c. East Asian, Asian American, Amerasian, Asian-Caribbean, Other in this category.
   d. Latino/a, Hispanic, Spanish, Latin American, of Spanish speaking- South American/Caribbean heritage, Other in this category.
   e. South Asian, South Asian American, of South Asian heritage, Other in this category.
   f. Middle Eastern, Arab, Non-Black North African, Other in this category.
   g. Coloured-South African, Khoi San, Cape Malay, Other in this category.

4. If you are Biracial/ Multiracial, please answer item 3 as best you can, and then specify the racial/ethnic groups to which you belong_____.

5. If you are Biracial/Multiracial, which group do you identify with most?

_____

6. The ethnicity of the person who took primary responsibility for raising me is (Same choices as above):
   a. Black, African American, Afro-Caribbean, Black African, Other in this category.
   b. Caucasian, White, European American, White European, Other in this category.
   c. East Asian, Asian American, Amerasian, Asian-Caribbean, Other in this category.
   d. Latino/a, Hispanic, Spanish, Latin American, of Spanish speaking- South American/Caribbean heritage, Other in this category.
   e. South Asian, South Asian American, of South Asian heritage, Other in this category.
   f. Middle Eastern, Arab, Non-Black North African, Other in this category.
   g. Coloured-South African, Khoi San, Cape Malay, Other in this category.

7. My mother's ethnicity is (Same choices as #3):
   a. Black, African American, Afro-Caribbean, Black African, Other in this category.
   b. Caucasian, White, European American, White European, Other in this category.
   c. East Asian, Asian American, Amerasian, Asian-Caribbean, Other in this category.

d. Latino/a, Hispanic, Spanish, Latin American, of Spanish speaking- South American/Caribbean heritage, Other in this category.
e. South Asian, South Asian American, of South Asian heritage, Other in this category.
f. Middle Eastern, Arab, Non-Black North African, Other in this Category.
g. Coloured-South African, Khoi San, Cape Malay, Other in this category.

8. My father's ethnicity is (Same choices as #3):
   a. Black, African American, Afro-Caribbean, Black African, Other in this category.
   b. Caucasian, White, European American, White European, Other in this category.
   c. East Asian, Asian American, Amerasian, Asian-Caribbean, Other in this category.
   d. Latino/a, Hispanic, Spanish, Latin American, of Spanish speaking- South American/Caribbean heritage, Other in this category.
   e. South Asian, South Asian American, of South Asian heritage, Other in this category.
   f. Middle Eastern, Arab, Non-Black North African, Other in this Category.
   g. Coloured-South African, Khoi San, Cape Malay, Other in this category.

9. In my own words, I prefer to think of my ethnicity as_____.

10. Were you born in the United States? Yes No

10a. If no, where were you born? _____

11. Was your mother born in the United States?
Yes No

11a. If no, where was she born? _____

12. Was your father born in the United States?
Yes No

12a. If no, where was he born? _____

13. Where do you live?
In parents' or other relatives' home On-Campus Dorms/ Residence halls
On-campus or University-owned Apartments Fraternity/sorority house
Off-campus apartments or house Other (specify)

14. What is your religious preference?
    No religion
    Agnostic
    Atheist
    Mainstream Protestant/Christian (e.g., Methodist, Lutheran,
        Baptist, Presbyterian, etc.) Assemblies of God, Pentecostal,
        Holiness or other Charismatic
    Roman Catholic
    Orthodox (Eastern, Greek, Russian, Serbian, Ukrainian)
    Jewish
    Mormon (Latter Day Saints)
    Jehovah's Witness
    Islamic/Muslim
    Hindu
    Buddhist
    Other (Write in)

14a. In the last month, how often have you attended a religious service at your church/mosque/synagogue?

1 Not at all
2 Less than once per week
3 About once per week
4 2-3 times per week
5 More than 3 times per week

14b. How many times in the last month have you attended a religious service somewhere outside of a church/mosque/synagogue?

1 Not at all
2 Less than once per week
3 About once per week
4 2-3 times per week
5 More than 3 times per week

14c. How often do you pray?

1 Never
2 Hardly ever
3 Sometimes
4 Often
5 Every day

14d. In terms of religion, how observant are you?

1 I do not observe a religion
2 I observe during holidays
3 I follow some customs regularly
4 I follow most of the customs
5 I follow all of the customs

15. Please indicate your family's annual household income. If you are supporting yourself, please indicate **your** income. If your family is supporting you, please indicate **their** income:

Below $30,000 $30,000 to $50,000 $50,000 to $100,000 Above $100,000

16. My biological mother and father were the most important mother and father figures in my life while I was growing up. True False

IF 16 IS MARKED TRUE, ASK THE FOLLOWING QUESTION:

16a. How would you characterize your family (check one)?
Parents still married
Parents separated/divorced
Parents never married to one another
One or both parents deceased
Other (please specify)

IF SEPARATED/DIVORCED OR NEVER MARRIED, ASK THE FOLLOWING QUESTIONS:

16b. How old were you when your parents stopped living together?
16c. How would you describe the living arrangements you had after your parents stopped living together? Lived with mother Lived with father Joint custody Other (specify)

16d. How often did you see the parent you did not live with? (Open-ended answer)
16e. How many people in your family (including cousins, aunts, uncles, grandparents, etc.) have ever had a severe alcohol or drug problem?

IF 16 IS MARKED FALSE, ASK THE FOLLOWING QUESTION:

16f. Whom did you consider to be the most important mother figure in your life?
Biological mother Stepmother Adoptive mother Grandmother Other (specify)

IF 16e IS MARKED AS ANYONE OTHER THAN BIOLOGICAL MOTHER, ASK THE FOLLOWING QUESTIONS (IF NOT, CONTINUE TO 16H):

16g. Did this person legally adopt you? Yes No
16h. If so, how old were you when this happened?
16i. What is the religious preference of your primary mother figure?
No religion
Agnostic
Atheist
Mainstream Protestant/Christian (e.g., Methodist, Lutheran, Baptist, Presbyterian, etc.)
Assemblies of God, Pentecostal, Holiness or other Charismatic
Roman Catholic
Orthodox (Eastern, Greek, Russian, Serbian, Ukrainian)
Jewish
Mormon (Latter Day Saints)
Jehovah's Witness

Islamic/Muslim
Hindu
Buddhist
Other (Write in)

16j. Whom did you consider to be the most important father figure in your life?
Biological father Stepfather Adoptive father Grandfather
Other (specify)

IF ANYONE OTHER THAN BIOLOGICAL FATHER, ASK THE FOLLOWING QUESTIONS (IF NOT, CONTINUE TO 16l):

16k. Did this person legally adopt you? Yes No
16l. If so, how old were you when this happened?
16m. What is the religious preference of your primary father figure?
No religion
Agnostic
Atheist
Mainstream Protestant/Christian (e.g., Methodist, Lutheran, Baptist, Presbyterian, etc.)
Assemblies of God, Pentecostal, Holiness or other Charismatic
Roman Catholic
Orthodox (Eastern, Greek, Russian, Serbian, Ukrainian)
Jewish
Mormon (Latter Day Saints)
Jehovah's Witness
Islamic/Muslim
Hindu
Buddhist
Other (Write in)

16n. In the past year, how many times has your mother (or mother figure) ever done things that could get her in trouble with the police?
None Once Twice Three or more times

16o. In the past year, how many times has your father (or father figure) ever done things that could get him in trouble with the police?

None Once Twice Three or more times

16p. Have you ever thought that one of your parents had a drinking problem? (Yes/No)
16q. Did you ever encourage one of your parents to quit drinking? (Yes/No)
16r. Did you ever argue or fight with a parent when he or she was drunk? (Yes/No)
16s. Have you ever heard your parents fight when one of them was drunk? (Yes/No)
16t. Did you ever feel like hiding or emptying a parent's bottle of liquor? (Yes/No)
16u. Did you ever wish that one or both of your parents would stop drinking? (Yes/No)

17. What is your marital status? Single
In a relationship of less than 1 year duration Serious committed relationship (1 year or longer) Engaged
Married/permanently

partnered Divorced
Widowed

18. What race/ethnicity is your partner (boyfriend, girlfriend, fiancé(e), spouse)?
    a. Black, African American, Afro-Caribbean, Black African, Other in this category.
    b. Caucasian, White, European American, White European, Other in this category.
    c. East Asian, Asian American, Amerasian, Asian-Caribbean, Other in this category.
    d. Latino/a, Hispanic, Spanish, Latin American, of Spanish speaking- South American/Caribbean heritage, Other in this category.
    e. South Asian, South Asian American, of South Asian heritage, Other in this category.
    f. Middle Eastern, Arab, Non-Black North African, Other in this category.
    g. Coloured-South African, Khoi San, Cape Malay, Other in this category.

19. How important is being in a romantic relationship with someone of the same racial/ethnic background as you?

1 Completely Unimportant
2 Mostly Unimportant
3 Somewhat Important
4 Extremely Important

20. In your romantic relationships in the past, how many of your partners have been of the same race/ethnicity as you?

1 None have been the same race/ethnicity. 2 A few
3 Some
4 Most
5 All have been the same race/ethnicity.

21. How would you characterize your sexual orientation?

1 Completely Heterosexual
2 Mostly Heterosexual
3 Bisexual
4 Mostly Homosexual
5 Completely Homosexual
6 Not Sure

22. Which of the following best characterizes your vaginal, oral, or anal sexual activity in the last month?

1 Sex with one committed partner (boyfriend, girlfriend, fiancé(e), spouse)
2 Sex with one casual partner ("friends with benefits")
3 Sex with one partner most of the time, but also with other people
4 Sex with a number of different people
5 I have not had sex in the last month

23a. What is your height?_____ft._____in. 23b. What is your

current/actual weight?_____lbs.

23c. What is your most desired (or ideal) weight?_____lbs.

24. Are you a member of an intramural or extramural college athletic team? 24a. If yes, what sport(s) do you play? (Open-ended)

25. Are you a member of a Greek social fraternity/sorority (not an honor society)? 25a. If yes, which one?

26. What kinds of grades do you mostly get in your classes?

(Check one)

_____Mostly A's
_____Mostly A's and B's
_____Mostly B's
_____Mostly B's and C's
_____Mostly C's
_____Mostly C's and D's
_____Mostly D's
_____Mostly D's and F's

27. How many years have you been enrolled in a university or college?

28. How far is your university from where you primarily grew up? (miles /kilometers)

29. How often do you translate or interpret for your parents because they don't speak English or don't speak it well?

Never Rarely Sometimes Often Always

APPENDIX B

Brief Discrimination Scale

How many times have you experienced the following events in THE PAST YEAR?

1. Rejected by others because of your ethnicity/race
2. Heard someone say to you, “Go back where you came from!”
3. Denied opportunities because of your ethnicity/race
4. Had someone speak to you in a foreign language because of your ethnicity/race.
5. Had your American citizenship or residency questioned by others
6. Had someone comment on or be surprised by your English language ability.
7. Asked by strangers, “Where are you from?” because of your ethnicity/race
8. Had someone speak to you to in an unnecessarily slow or loud way.
9. Treated unfairly or rudely by strangers because of your ethnicity/race

APPENDIX C

Relational Attachment Scale

The following statements concern how you feel in romantic relationships. If YOU ARE in a relationship, please think of how you act and feel with respect to your CURRENT ROMANTIC PARTNER when answering the following questions.

If YOU ARE NOT in a relationship, please think of how YOU TYPICALLY act and feel toward romantic partners in general when answering the following questions.

1	4	7
Strongly Disagree	Neutral	Strongly Agree

Are you currently in a relationship? Yes No

1. Just when a partner starts to get close to me, I find myself pulling away.
2. I am very comfortable being close to romantic partners.
3. I want to get close to my partners, but I keep pulling back.
4. I feel comfortable depending on romantic partners.
5. I usually discuss my problems and concerns with my partners.
6. I get uncomfortable when a romantic partner wants to be very close.
7. I find it difficult to allow myself to depend on romantic partners.
8. It helps to turn to my romantic partners in times of need.
9. I worry a fair amount about losing my romantic partner.
10. I worry that romantic partners won't care about me as much as I care about them.
11. I need lots of reassurance that I'm loved by my partner.
12. I get frustrated when my partner is not around as much as I would like.
13. My desire to be close sometimes scares people away.
14. When romantic partners disapprove of me, I feel really bad about myself.

15. I worry about being alone.
16. When I'm not involved in a relationship, I feel somewhat anxious and insecure.
17. I worry about being abandoned.
18. I worry a lot about my relationships
19. I do not often worry about being abandoned.
20. I prefer not to be too close to romantic partners.
21. If I can't get my partner to show interest in me, I get upset or angry.
22. I tell my partner just about everything.
23. I find that my partner(s) don't want to get as close as I would like.
24. I feel comfortable depending on romantic partners.
25. I don't mind asking romantic partners for comfort, advice, or help.
26. I get frustrated if romantic partners are not available when I need them.
27. I resent it when my partner spends time away from me.
28. I turn to my partner for many things, including comfort and reassurance.
29. I don't feel comfortable opening up to romantic partners.
30. I often wish that my partner's feelings for me were as strong as my feelings for him/her.
31. I often want to merge completely with romantic partners, and it sometimes scares them away.
32. I feel comfortable sharing my private thoughts and feelings with my partner.
33. I try to avoid getting too close to my partner.
34. I find it relatively easy to get close to my partner.
35. Sometimes I feel that I force my partners to show more feeling, more commitment.
36. I prefer not to show a partner how I feel deep down.

APPENDIX D

Ethnic Identity Scale

	Does not describe me at all	Describes me a little	Describes me well	Describes me very well
10. My feelings about my ethnicity are mostly negative.	1	2	3	4
11. I have not participated in any activities that would teach me about my ethnicity.	1	2	3	4
12. I am clear about what my ethnicity means to me.	1	2	3	4
13. I have experienced things that reflect my ethnicity, such as eating food, listening to music, and watching movies.	1	2	3	4
14. I have attended events that have helped me learn more about my ethnicity	1	2	3	4
15. I have read books/magazines/newspapers or other materials that have taught me about my ethnicity.	1	2	3	4
16. I feel negatively about my ethnicity.	1	2	3	4
17. I have participated in activities that have exposed me to my ethnicity	1	2	3	4
18. I wish I were of a different ethnicity.	1	2	3	4
19. I am not happy with my ethnicity.	1	2	3	4
20. I have learned about my ethnicity by doing things such as reading (books, magazines, newspapers), searching the internet, or keeping up with current events.	1	2	3	4
21. I understand how I feel about my ethnicity.	1	2	3	4
22. If I could choose, I would prefer to be of a different ethnicity.	1	2	3	4
23. I know what my ethnicity means to me.	1	2	3	4
24. I have participated in activities that have taught me about my ethnicity.	1	2	3	4
25. I dislike my ethnicity.	1	2	3	4
26. I have a clear sense of what my ethnicity means to me.	1	2	3	4

APPENDIX E

Depression Scale

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. This week, I have been bothered by things that usually don't bother me.
2. This week, I did not feel like eating
3. This week, my friends tried to cheer me up, but I didn't feel happy.
4. This week, I felt just as good as other people.
5. I have had trouble paying attention this week.
6. I have felt down and unhappy this week
7. This week, I have felt too tired to do many things.
8. This week, I felt something good was going to happen.
9. This week, things I usually did well before didn't work out right.
10. I felt scared this week.
11. This week, I didn't sleep as well as usual.
12. I was happy this week.
13. I was more quiet than usual this week.
14. This week, I felt lonely, like I didn't have friends.
15. People I know were not friendly to me this week.
16. I had a good time this week.
17. I felt like crying this week.
18. I felt sad this week.
19. People didn't like me this week.
20. I had a hard time getting started doing things this week.

APPENDIX F

Alcohol Use Scale

WHEN ASKED ABOUT A TYPICAL DRINK, ONE DRINK IN THIS ENTIRE SURVEY EQUALS:

- **4 oz**. of wine
- **12 oz**. of beer (8 oz. of Canadian, Malt liquor or Ice Beers, or 10 oz. of Microbrew)
- **10 oz**. of wine cooler (e.g., Smirnoff Ice)
- **1.25 oz**. of 80 proof liquor, or
1 oz. of 100 proof liquor

The items below ask questions about your use of alcoholic beverages during the PAST YEAR.

192. How often do you have a drink containing alcohol?
Never Monthly or Less 2-4 Times a Month 2 to 3 Times a Week 4+ Times a Week

Please use the following response scale to answer the Questions below:

Never 1	Less than Monthly 2	Monthly 3	Weekly 4	Daily/Almost Daily 5

193. How often do you have six or more drinks on one occasion?

194. How often during the last year have you found that you were not able to stop drinking once you had started?

195. How often during the last year have you failed to do what was normally expected from you because of drinking?

196. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

197. How often during the last year have you had a feeling of guilt or remorse after drinking?

198. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

199. How many drinks containing alcohol do you have on a typical **DAY** when you are drinking? 1 or 2 3 or 4 5 or 6 7 to 9 10 or more I Don't Drink

200. Have you or someone else been injured as a result of <u>your</u> drinking? No Yes, but not in the last year Yes, during the last year

201. Has a relative or friend, a doctor or other health worker, been concerned about your drinking or suggested you cut down?
No Yes, but not in the last year Yes, during the last year

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