ABSTRACT

Title of Dissertation: THE EFFECTS OF SUBTLE RACIAL DISCRIMINATION ON MOOD: EXAMINING THE MEDIATING ROLE OF COGNITIVE APPRAISAL FOR ASIAN AMERICANS

Ha Rim Ahn, Doctor of Philosophy, 2022

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The present study examined the effects of inducing the cognitive strategies of self or other-blame in response to a racist situation on situational mood with Asian American emerging adults. I manipulated responses to racism using a 2-group (randomized, between-subjects experimental design) to examine differences in self- versus other-blame. Participants watched a vignette about a common subtle racism event and were randomly assigned to the self or other-blame condition. Those in the self-blame condition were assigned a speech task to describe what they could have done to change the situation and those in the other-blame condition were asked to describe how the perpetrator is racist. After the manipulation check, there were 120 total Asian American emerging adults (*Mage* = 20.04*, SD* = 2.18; 60.8% female) in the sample; specifically, 100 participants in the other-blame condition and 20 participants in the self-blame condition successfully completed the experimental task. Multiple path analyses were used to examine the effects of the condition (self vs. other-blame) on vocal acoustics and language used during the speech task, and in turn their self-reported anger and depression, while controlling for critical consciousness and prior depression and anger. Vocal pitch mean and range were measured through the software Praat (Boersma & Weenink, 2005) and language words were assessed using the Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2015), while

anger and depression were measured through the Profile of Mood States-Short Form (POMS-SF; Shacham, 1983). Results indicated that those in the other-blame group had greater pitch mean and used more positive emotion words, cognitive mechanism words, and less tentative words. There were no differences in self-reported anger and depression between the two conditions. Implications touched on the importance of racism attributions on speech and language.

Keywords: Asian American, cognitive appraisal, racial discrimination, mood

THE EFFECTS OF SUBTLE RACIAL DISCRIMINATION ON MOOD: EXAMINING THE MEDIATING ROLE OF COGNITIVE APPRAISAL FOR ASIAN AMERICANS

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Chapter 1: Introduction

The Effects of Subtle Racial Discrimination on Mood: Examining the Mediating Role of Cognitive Appraisal for Asian Americans

An Asian American student describes to you an interaction with another friend at the library. The Asian American student was eating dumplings in the library and the student's White friend commented on the smell, saying "it smells bad in here." Whose fault is it? What would happen if you imply that it's the Asian American's fault or the White person's fault?

The United States is becoming an increasingly racially diverse nation – from 2016 to 2060, the number of Asian individuals is expected to rise by 60.67% (U.S. Census Bureau, 2017). However, a diverse nation also signifies living in a racialized world with differences in power, privilege, and oppression. One group that is particularly at risk for experiencing discrimination are Asian American emerging adults given their minority group status in the U.S and life stage. Experiencing anti-Asian racism and discrimination has been linked with worse psychological outcomes (Lee & Ahn, 2011; Paradies et al., 2015; Yoo & Lee, 2010) and emerging adulthood can be a difficult life transition given that this period is marked with instability in work, habitation, and interpersonal relationships as well as identity exploration and self-focus (Arnett et al., 2014). For Asian Americans, identity exploration could include greater curiosity about racism and discrimination in relation to their self. This developmental period may also be a stressful time as more time is spent away from the home and family, especially for Asian Americans whose values may include collectivism and interdependence (Markus & Kitayama, 2010; Yeh & Huang, 1996).

Eliminating racism and racist comments is a laudable but a challenging goal. Therefore, it is important to understand the effects of different ways of responding to racist comments. Thus,

our overall purpose of the study was to experimentally investigate how responses to racist comments affects the immediate psychological state of Asian American emerging adults.

Racial Discrimination and Mental Health

Asian Americans are often dubbed as "model minorities," stereotyped as a high-achieving, emotionally healthy, and academically superior racial group compared to other racial/ethnic minorities (Yi & Museus, 2015). This myth was used to create further racial divisions and tensions in the United States and to perpetuate the idea that Asian Americans do not experience discrimination or racism. However, empirical evidence demonstrates that Asian Americans are victims of discrimination and both subtle and blatant racism (Gee et al., 2009; Yoo et al., 2010), and the COVID-19 pandemic has illuminated the prevalence of anti-Asian racism in the United States (Ahn et al., manuscript submitted for publication). Specifically, subtle racism (Yoo et al., 2010) also known as racial microaggressions (Sue et al., 2007) are daily subtle, often ambiguous, common negative attitudes and behaviors towards historically marginalized groups. For example, people may ask "Where are you *really* from?" towards Asian Americans, suggesting that they are perpetual foreigners in their own country.

Research shows that Asian Americans' mental health suffers from the effects of discrimination (Lee et al., 2008; Gee et al., 2009). In a national survey, Asian Americans who experienced racial discrimination were more likely to have a DSM-IV disorder, depression, or anxiety within the past 12 months (Gee et al., 2007). A meta-analysis found a 0.23 effect size between racial discrimination and mental health for Asian Americans (Lee & Ahn, 2011). There is substantial evidence of the link between racial microaggressions and negative mental health (e.g., Choi et al., 2017; Kim et al., 2017; Nadal et al., 2015; Ong et al., 2013; Sue et al., 2007; Wu et al., 2019). In fact, in a daily diary study spanning over two weeks, 78% of Asian

Americans reported experiencing some form of microaggression, which negatively affected their mood (Ong et al., 2013). Although the literature consistently has demonstrated the link between microaggressions and psychological outcomes, less is known about within-group differences in response to racism. Thus, scholars have called for understanding individual differences and why some individuals may be more and others less resilient to the effects of racism (Harrell et al., 2003). Further research is needed to elucidate the underlying mechanism that may explain the relationship between racial discrimination and health outcomes.

Mediating Role of Cognitive Appraisal: Self and Other

Although there is a rich literature on the link between racial discrimination and health outcomes among Asian Americans (e.g., Gee et al., 2009), it is critical to understand the underlying mechanism as to *why* this link exists in order for counseling psychologists to be able to intervene at the individual level. One way to conceptualize discrimination is to view it as a stressor, as minority groups are more likely to be exposed to taxing life events that endanger their well-being (Clark et al., 1999). Given their racial minority status and exposure to discrimination, Asian Americans may be more prone to stress than majority groups (Folkman & Lazarus, 1989). However, even within Asian Americans, there may be individual differences with the ability to cope with these discriminatory events.

From a cognitive psychology perspective, a mediating factor that can help explain these individual differences is one's internal process of comprehending and understanding events. Lazarus & Folkman (1989) developed the Transactional Model of Stress and Coping to understand the role of stress in an individual's life. The theory posits that stress is dependent on the person and environment and includes two person processes, cognitive appraisal and coping, that mediate the relations between stressful encounters and outcomes. More specifically,

cognitive appraisal deals with the individual's evaluation of the environment and includes primary and then secondary appraisal. The primary appraisal is when an individual determines whether an event is relevant and personally important; then, the secondary appraisal is an evaluation of how to cope or handle the stressful event. Without enough resources to cope, an individual will feel increased stress (Folkman et al., 1986). In the present study, I use this theory to understand how cognitive appraisal may be the link between subtle racial discrimination and increased psychological stress. This may explain why some individuals are more prone to stress from racial discrimination and can help psychologists better understand the cognitive processes in relation to discriminatory events.

Research has examined whether cognitive appraisal could be a potential mediator between racial discrimination and psychological outcomes. For example, King (2005) found that with African American female college students, racial discrimination was associated with more stress through increased personal relevance and importance of the event. Another study also found similar results with newcomer immigrant younger adolescents (Patel et al., 2015). With Latino-American students, researchers have found that attributions about discrimination that were related to viewing discrimination as more global and severe, were related to lower self-esteem levels (Eccleston & Major, 2006). Although these studies illuminate the role of primary appraisal (i.e., how important the discriminatory event is) in explaining the relation between racism and psychological outcomes, there is limited research on secondary appraisals, or the ability for individuals to be able to cope with the situation. This is concerning given that Counseling Psychology's applied focus and utilization of a strength based perspective.

One type of secondary appraisal, or the ability to individuals to cope with the situation is the attribution of responsibility to oneself or others (Crocker & Major, 1989; Mulilis & Duval,

1997). Responsibility determines who is to blame (Smith & Lazarus, 1993). Given that the literature suggests that racism is a system designed to depreciate and diminish the power of historically marginalized groups (Harrell, 2000; Paradies, 2006a; Speight, 2007), as a consequence, Asian Americans may feel powerless and in turn blame themselves in response to racial discrimination. Appraisals may also be less conscious because they are encompassed in social norms (Kitayama & Masuda, 1995) and thus people may not view racism as a concern unless taught. Subtle racism in particular, is insidious and less blatant and thus individuals may be more prone to think that they are at fault. Those who engage in self-blaming attitudes are more likely to feel guilt or depression, while those who attribute blame to others are more likely to feel anger (Smith & Lazarus, 1993; Paradies, 2006a).

For example, one study with Korean immigrant youth found that cognitive appraisals (i.e., feeling frustrated, intimidated, powerless, and helpless) explained why subtle discrimination was linked to increased depressive symptoms (Noh et al., 2007). Noh and colleagues' (2007) study does extend the literature by examining cognitive appraisal as a mediator, but their cross-sectional survey design and broad questions about emotions and cognitive appraisal in an individual's life may not be specific enough to determine whether this cognitive process is a *direct* result of a racial discriminatory event and in turn psychological outcomes. In addition, the study is limited in that it did not directly test self-blame cognitions.

There was one study that specifically examined self-blame as a mediator between racial discrimination and physical and mental health. Blodorn and colleagues (2016) found that perceived racial/ethnic discrimination was linked with increased self-blame and in turn decreased self-reported self-esteem, physical health, and increased anxiety/depressive symptoms with both ethnic minorities and White individuals. This study suggests that racial discrimination may be

detrimental to health because individuals internalize these experiences more generally and thus they may feel more depressed. However, there is a lack of applied research that pertains to whether the internalization of these racist views, can have a *direct* impact on mood. Thus, research can be strengthened by testing an in-the-moment response to racist events.

In addition, the previous study did not distinguish between subtle and blatant racism. Blodorn and colleagues (2016) argue that asking about everyday discrimination may be associated with increased self-blame, because day-to-day discrimination may often feel ambiguous. However, it is still unclear whether there are differences with how individuals respond to the subtle discrimination. Subtle racism may be linked with increased self-blame and distress given that it is more difficult to discount and identify the subtle event as racism. Research has found that blatant gender discrimination is linked with lower self-blame whereas subtle discrimination is associated with higher self-blame (Major et al., 2003). However, less is known about whether blaming oneself in response to a subtle racist event is linked with lower mood.

On the other hand, cognitive restructuring has emerged as a cognitive coping strategy, or secondary appraisal method. One way individuals do this is to attribute negative events to external forces rather than one self, in order to externalize the discrimination (Crocker & Major, 1989). Major, Quinton, & McCoy (2003b) proposed that when discrimination is attributed externally, then self-esteem increases. For example, when participants imagined being rejected from a course because the professor is sexist, participants blamed themselves less (Major et al., 2003a). Another study found that when discrimination is gender-based, women are able to blame themselves less and had higher self-esteem in a work setting (Nestler & Egloff, 2013). Women who were able to attribute negative feedback to discrimination rather than their own inability

reported higher self-esteem (Major et al., 2003a). At the same time, I believe that being able to externalize the discrimination may be associated with more in the moment anger (Smith & Lazarus, 1993) rather than depression. However, over time, it is possible that that becoming more aware of these processes and expressing this anger may be more beneficial rather than internalizing discriminatory events for one's mental health. A recent content analysis examining the racism coping literature in the Counseling Psychology field found that one recommendation is to externalize blame and minimize self-blame (Miller et al., 2018). However, there are no empirical studies that have examined this technique in response to subtle racial discrimination. Rather, studies have merely suggested that clinicians educate clients about external forces associated with discrimination to avoid self-blame (e.g., Liao et al., 2015; Wei et al., 2012) and that this may be a useful strategy to alleviate distress. Thus, it seems critical to test whether putting the responsibility of a racial discriminatory event on the other person rather than oneself, may lead to differences in immediate emotional responses.

Possible Confounds: Ethnic-Racial Socialization and Critical Consciousness

There are two possible confounds affecting the relationship between secondary cognitive appraisal and emotional responses. First, ethnic-racial socialization or the messages that parents relay to children about race and ethnicity (Hughes et al., 2006; Priest et al., 2014) may impact whether or not individuals are able to see racism and make attributions to others or oneself. In particular, recent theory suggests that ethnic-racial socialization specific to cultural pride and traditions may raise their children's awareness to race and social movements (Aniywo et al., 2018). In addition, messages that prepare children about racial bias may make them more aware of different forms of discrimination and how to respond to them. One study that tested this theory found that the more Black adolescents' reported parental messages of racial pride and

preparation for bias, the more likely they were to attribute the academic achievement gap to structural racism rather than to individual causes such as people's work ethic (Bañales et al., 2019). Thus, we will be controlling for ethnic-racial socialization (messages about cultural pride and awareness of bias) in order to test whether the effects of self- versus other-blame have a link on mood, even after controlling for these messages.

In addition, critical consciousness or how those who are historically marginalized think critically about social inequality and taking action (Shin et al., 2016) may also be a confound. Researchers have noted that critical consciousness could be used to test whether individuals make attributions of race to systemic inequalities or to an individual person (Diemer et al., 2015). Having more critical consciousness implies that people have a greater ability to be aware, recognize, and understand discrimination as a systemic issue. A scale that was developed examines various forms of critical consciousness for an adult population, and given that the current study's focus is on race, I will be using the racism critical consciousness subscale as a control variable (Shin et al., 2016).

Experimental Design

One limitation of the research in counseling psychology is the lack of experimental methods. Okazaki (2009) suggests that laboratory or experimental based research can be useful to examine how people react to subtle racial encounters. Unfortunately, in 2006, only 7% of studies focused on racism used experimental methods, while 76% used cross-sectional data (Paradies, 2006b). Thus, in the present study, I used an experimental design to experimentally induced attributions in response to a subtle racism event. Specifically, participants were put into two different groups (self vs. other blame) and asked to blame themselves or blame the perpetrator through a speech task after watching a subtle racist event. By using an experimental

design, I extend the literature by overcoming recall biases (Neblett, 2019) and testing whether we can change individuals' cognitions after a racist event.

Language and Speech Analysis

Historically, counseling psychology has also over-relied on self-report survey data. However, other methodologies may indicate thoughts and feelings that may be less conscious and less prone to social desirability. Especially for Asian Americans who may under-report their psychological symptoms (Jeon et al., 2014), it is important to be cognizant of other cues that may illuminate their emotional state and well-being. Thus, in the present study, I use a speech task to examine differences between participants in the self- and other-blame groups. During the speech task, I examine two methods – non-verbal speech cues and the use of language – to capture relevant processes that may explain why participants in the two conditions report different mood outcomes when asked to either blame themselves or blame others. Examining other methodologies can help mental health practitioners examine non-verbal cues to gain more insight to their clients' reactions and subconscious feelings.

First, I examined changes in pitch mean and pitch range, where lower means and ranges indicated increased sadness, whereas higher pitch has been linked with greater anger and/or positive feelings (e.g., Rochman & Amir, 2013; Rochman et al., 2008). Given the context of racism, it is more likely that greater pitch indicates greater anger. Thus, I will investigate whether there are differences in pitch mean and range between the two experimental conditions and hypothesize that pitch indicates differences in mood. From a counseling psychology perspective, examining other aspects besides self-report data is important to help mental health practitioners identify affective state from voice (Rochman & Amir, 2013).

In addition, for language analysis, I used the Linguistic Inquiry Word Count (LIWC; Pennebaker, 2015) to examine differences in emotional and cognitive processes between the self- vs. other-blame groups. The LIWC program counts the frequencies of words used to indicate emotions (e.g., positive, negative, sad, angry, anxiety) and cognitive mechanisms (e.g., causal, insight, tentative, certainty). Specifically, for cognitive mechanisms, I examined causal words (e.g., because, effect) and insight words (e.g., think, consider), which indicates "the active process of reappraisal" and have been linked with better health outcomes (Tausczik & Pennebaker, 2009, p. 35). The authors suggest that these words are similar to making reconstrual statements and demonstrate a person actively processing and organizing thoughts. However, when thoughts are still being formed or people are insecure about a topic, they use more tentative words (e.g., maybe, perhaps), which may indicate that they have not yet processed the event or formed it into a story. Comparatively, using more certainty words (e.g., always, never) demonstrate that the individual is more certain about their words and speech.

Present Study

To my knowledge, there are no studies examining the role of self- versus other-blame as a form of secondary appraisal to mediate the relationship between subtle racial discrimination and psychological distress. In addition, no studies have experimentally tested whether changing the attribution of responsibility when encountering racial discrimination can impact mood. Given the challenge in naming subtle racism (Yoo et al., 2010), I will be using a subtle discriminatory event to better manipulate participants' belief in blaming oneself or others; a more blatant example may be more challenging to shape the self-responsibility group's cognition in believing that the event is due to their own fault. The study will address whether we can change people's mood by experimentally manipulating an individual's appraisal of a discriminatory event.

Specifically, I examined whether after watching a subtle racist event, being randomly placed in the self or other-blame group affects individuals' vocal acoustics and language used in the speech task and consequently, their self-reported anger and depression. As covariates, it is possible that critical consciousness, or the participants' critical understanding of race and racism (Kim, 2013), may affect whether participants are able to be affected by the manipulation task. In addition, parents' socialization messages preparing them for bias and racial pride may also contribute to participants' understanding and awareness of racism and affect the manipulation task. Below are the main hypotheses:

Hypotheses 1 and 2: While controlling for self-reported prior depression and anger, critical consciousness, and racial socialization (maintenance of heritage culture, awareness of discrimination), participants in the other-blame condition will have greater pitch mean and range during the speech task and in turn greater self-reported anger. Participants in the self-blame condition will have lower pitch mean and range and in turn greater self-reported depression.

Hypothesis 3: While controlling for self-reported prior depression and anger, critical consciousness, and racial socialization (maintenance of heritage culture, awareness of discrimination), participants in the other-blame condition will use a greater number of anger words (measured through the LIWC) during the speech task and in turn report more anger. Those in self-blame condition will use greater frequencies of sad words (measured through the LIWC) and in turn greater self-reported depression. The other LIWC emotion variables (positive emotion, negative emotion, anxiety) as mediator between the group condition (self vs. other-blame) and self-reported mood were exploratory.

Hypothesis 4: While controlling for self-reported prior depression and anger, critical consciousness, and racial socialization (maintenance of heritage culture, awareness of

discrimination), participants in the other-blame condition will use a greater number of cognitive processing words (i.e. insight, cause, certainty), less tentative words, and in turn indicate more anger. On the other hand, those in the self-blame condition will use less cognitive processing words, more tentative words, and in turn self-report more depression.

Chapter 2: Literature Review

The following chapter aims to provide a theoretical overview and rationale of the present study, chosen constructs, and study design.

Evidence of Asian American Psychological Distress

Research findings on the state of psychological distress among Asian Americans seem inconsistent. A paper in the *American Psychologist* noted the confusion in the literature regarding prevalence rates of psychological disorders with Asian Americans, with some noting the strikingly low rates of reported mental health concerns whereas others arguing the high rates due to microaggressions and cultural conflicts (Sue et al., 2012). Studies have found that Asian Americans have lower rates of depression than European Americans (Kim & Lopez, 2014; UHHS, 2017). In 2017, the U.S. Department of Health and Human Services found that 1.2% of Asian Americans reported serious psychological distress compared to 3.4% of non-Hispanic Whites.

On the other hand, research demonstrates that Asian Americans report higher levels of distress including social anxiety, depression, and obsessive beliefs than White Americans (Greenberger & Chen, 1996; Horng & Coles, 2014; Kalibatseva et al., 2017; Lau et al.,, 2009; Okazaki, 1997; Wheaton et al., 2013; Young et al., 2010). In addition, compared to Latino and African Americans, there may be a stronger association between ethnicity and emotional distress for Asian Americans (Cokley et al., 2011). Although the literature seems inconsistent, the state of Asian American mental health may not be suitable to be reduced to comparison between racial groups (Sue et al., 2012). There may be methodological or conceptual confounds (Sue et al., 2012) that make it difficult to assess by examine differences between groups.

When examining statistical rates of mental health concerns, the first national study of Asian Americans found that the overall lifetime rate of any mental disorder was 17.30% (Takeuchi et al., 2007). More recently, the Centers for Disease Control and Prevention (CDC, 2018) found that 2.1% reported serious psychological distress in the past 30 days among those ages 18 and older. In fact, suicide was found to be the leading cause of death for Asian American emerging adults (CDC, 2016). Although the prevalence rates of self-reported mental health concerns may seem small, these rates could be attributed to the high stigma of psychological problems in the Asian American community. Due to the notion of weakness and associated shame (Han & Pong, 2015; Shea & Yeh, 2008), Asian Americans may be underreporting their emotional difficulties. They may also be underdiagnosed due to guilt and their decreased expression of their mood (Jeon et al., 2014). In addition, the lower numbers may be because rather than psychological symptoms, Asian Americans are more likely to report greater somatic concerns (Rao et al., 2012) and are more likely to go to physicians for physical and psychological problems due to the belief in the holistic body and mind (Zhou et al., 2009). In Asian cultures, emotional concerns should be discussed within the family and receiving professional help should only be for physical symptoms (Grover & Ghosh, 2014). Thus, they may not outwardly indicate and report their mental health symptoms.

Conceptualization of Racism

Racism can be defined as the "beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of phenotypic characteristics or ethnic group affiliation" (Clark et al., 1999, p. 805). Harrell (2000) theorized racism as a system of power, dominance, and privilege based on racial groups and rooted in historical oppression. The oppressors have the power to define what is "normal" (Speight, 2007) and defines people of

color as inferior, undesirable, and non-normal (Harrell, 2000). Racism thus can be distinguished as separate from prejudice and discrimination in that it is rooted in historical oppression and power. Racism is interlaced in every facet in U.S. society (Roberts & Rizzo, 2020). Jones (1972) theorized that racism occurs in multiple forms including individual, institutional, and cultural forms. First, individual forms of racism is the view of inferiority of a racial/ethnic group, institutional racism includes systemic oppression, and cultural forms include maintaining the status quo. At the interpersonal level, racism can be both covert and overt forms and is directed from person to person. At the institutional level, evidence of racism exists through unemployment rates, academic achievement, health disparities, criminality in the justice system, and through laws that are designed to continue oppression. At the larger cultural level, racism is manifested through images in the media and in literature, including scientific literature, and language (Harrell, 2000). White Americans hold most positions of power, establish norms, give orders, control resources, and dominant and exploit others (Roberts & Rizzo, 2020). In addition, those who are passive and simply observe live in denial about the gravity of racism, and continue perpetuating the status quo and the racism embedded in society. Consequently, racism is designed to make the oppressed feel powerless and inferior (Harrell, 2000).

Prevalence of Racism towards Asian Americans

In the U.S., the focus on the Black – White dichotomy has minimized the impact of racial discrimination with Asian Americans. The model minority myth (Sue et al., 2007) or the belief that Asian Americans are superior in regards to education and health was used to contribute to the dichotomy while under-emphasizing the detrimental consequences of racism. Asian Americans continue to be plagued with this view as model minorities in the U.S. This myth was developed in the 1900s when Chinese immigrants first came to the U.S. and were compared to

other Black individuals (Yi & Museus, 2015). This was used to uphold the idea of meritocracy or that with hard work, anyone can become successful and succeed. In addition, it was used to argue against the idea of racism being a problem, and again shifting the blame onto people of color and reinforce the racial caste.

However, when examining the history of Asian Americans, it is clear that institutional and structural policies were developed to continue social inequities. When White Europeans colonized the U.S., they developed a classification and caste system based on skin color that advantages Whites and disadvantages racial/ethnic minorities (Nkomo & Al Ariss, 2014). For example, in 1882 the Chinese Exclusion Act was created to prevent Chinese immigration for 60 years. Laws such as the Immigration Act in 1924 also limited the number of people who could enter the U.S. and prevented immigration from Asia. In 1942, thousands of people of Japanese origin were incarcerated. Asians were and are considered an oppressed racial minority group, and labeled as subordinate, substandard, and inferior compared to Whites.

Thus, as a racial minority group, Asian Americans are still victims of racism, racism-related stress and racial microaggressions (Liang et al., 2004; Sue et al., 2009). As scholars, we must dismantle the current rhetoric around race with the focus on the black/white paradigm (Kim, 1999) and recognize how racism towards Asian Americans is pervasive and can be seen in our everyday language, laws, establishments, and on a personal, individual level. In addition, Okazaki (2009) notes that although we know about the psychology of White individuals affected by racism, there is less of an understanding about how to intervene the negative effects of racism among marginalized groups. Furthermore, although research has indicated that existing studies have demonstrated that perceived racism is associated with distress, there is a paucity of research about whether the perception of racism is needed for a psychological injury (Okazaki, 2009). She

suggests “more research is needed to resolve these apparent contradictions regarding the particularities of the attributionally ambiguous contexts and individual factors that act as risk or protective factors in interracial encounters” (Okazaki, 2009, p.105).

Subtle Racism and Microaggressions

Over the years, racism has transformed from more blatant, overt forms to subtle racism. Subtle racism is more implicit, automatic, and unconscious forms of racism that involve “omissions, inactions, or failure to help, rather than a conscious desire to hurt” (Yoo et al., 2010, p. 324), and racial microaggressions are defined as a contemporary form of racism that are implicit, subtle, and automatic brief, everyday harmful messages sent to people of color (Sue et al., 2007; Wong et al., 2014); the two terms seem to be used interchangeably in the literature. Although Asian Americans continue to experience both blatant and subtle forms of racism, subtle forms may be more harmful to their self-esteem because they are ambiguous and victims may question themselves and whether racist behaviors can be attributed to other cause (Major & Crocker, 1989). Within racial microaggressions, Sue et al. (2007) proposed three different forms including microassaults (more explicit racial comments such as using the term “chink,”), microinvalidations (denying the reality of racial minorities such as the view that racial minorities are perpetual foreigners or that they do not experience racism), and microinsults (subtle behaviors that minimize one’s heritage such as assuming that all Asians look the same).

In addition, Sue and colleagues (2007) found 7 common microaggression themes with specifically Asian Americans: 1) Alien in Own Land, or assuming that all Asian Americans are foreign, 2) Ascription of Intelligence, or the belief that all Asians are smart especially in the science and math field, 3) Denial of Racial Reality, or the belief that Asians do not experience racism, 4) Exoticization of Asian American Women, or the belief that Asian American women

are exotic, subservient, and pleasing, 5) Invalidation of Interethnic Differences, or the belief that all Asian Americans are similar, 6) Pathologizing Cultural Values/Communication Styles, or viewing communication styles such as silence as deficits, 7) Second Class Citizenship, or being treated as less than others, 8) Invisibility, or being overlooked or left out, and 9) Undeveloped Incident/Responses, or other events that were difficult to categorize such as being poor drivers or the de-masculinization of Asian American men.

An exploratory study of within group differences with Asian Americans found that individuals with higher education and those who were older were more likely to experience school/workplace microaggressions (Nadal et al., 2015). In addition, Asian Americans living in the U.S. Northeast reported that they were viewed as more inferior or exoticized compared to West Coast Asian Americans. However, there were no differences between gender or immigration status. In the current study, we focused on emerging adulthood given the stressors associated during this developmental period. Although we did not test location region and higher education in the current study, we note this as a limitation.

Racial Discrimination and Mental Health

A meta-analysis examining racism in Asian Americans using 23 empirical studies found a 0.23 significant correlation between racial discrimination and mental health (Lee & Ahn, 2011). Another review of the literature suggests that out of 62 empirical articles examining discrimination and health among Asian Americans, the majority find negative associations between the two (Gee et al., 2009). The National Latino and Asian American Study (n = 2,047) found that controlling for poverty, health, acculturative stress, family cohesion, poverty, and demographics, those who reported discrimination were more likely to have a DSM-IV disorder within the past year (Gee et al., 2007).

One study with both Asian and Latino American college students found that approximately 10% of the variance in state and trait anxiety and psychological distress could be attributed to perceived discrimination, indicating a small effect size (Hwang & Goto, 2008). Perceived discrimination has been linked with Asian American and Pacific Islander college students' depression, anxiety, and somatic symptoms (accounting for 25% – 28% of the variance; Chen et al., 2014). A national study found that regardless of ethnic identity, for Asian Americans younger than 30, higher frequencies of discrimination was associated with more distress (Yip et al., 2008). In addition, there are more similarities than differences with regards to gender and the link between discrimination and health (Hahm et al., 2010).

There is also a positive link between racial discrimination and suicidal behaviors, although the relation is small (Hwang & Goto, 2008). Recent longitudinal research has found that Asian American college students may drink to cope with racial discrimination, contributing to later alcohol-related problems (Le & Iwamoto, 2019). In another study, perceived discrimination and emotional distress association was largest (approximately -0.38 effect size) for Asian Americans compared to Latino and African Americans, suggesting they may be more at risk for negative health outcomes when they experience racism (Cokley et al., 2011). One article found that Asian Americans perceived significantly more discrimination than Hispanics (Sodowsky et al., 1991). However, more recently, Chou and colleagues (2012) found that compared to other ethnic minorities, Asian Americans are least likely to report mental disorders such as post-traumatic stress disorder, substance use, or major depressive disorder due to perceived racism. Nonetheless, the majority of studies seem to indicate that racial discrimination is consistently a predictor of poorer psychological outcomes including depression, anxiety, antisocial behaviors, somatization, hostility, interpersonal sensitivity, disordered eating, poorer

quality of life, psychotic experiences, and smoking with Asian Americans (e.g., Alamilla et al., 2017; Chae et al., 2008; Chen et al., 2014; Huynh et al., 2014; Garcia et al., 2019; Gee & Ponce, 2010; Miller et al., 2011; Park et al., 2013; Oh et al., 2014; Yip et al., 2008). Even when Asian Americans simply imagine racial discriminatory events, they report greater negative affect (Yoo & Lee, 2008).

Subtle Racism and Mental Health

Evidence highlights the link between subtle racism and psychological outcomes with Asian Americans. Racial/ethnic minorities report greater frequencies of racial microaggressions compared to Whites, and Asians specifically may experience more environmental and exoticization microaggressions compared to Black Americans (Nadal et al., 2014). Subtle racist microaggressions have accounted for 24% of the variance in depressive symptoms among Asian American college students (Choi et al., 2017), and 20% of the variance in general mental health problems (Nadal et al., 2015), and have been linked with suicidal ideation through depressive symptoms (O'Keefe et al., 2015). Huynh (2012) found that microaggressions were related to both somatic and depressive symptoms (Huynh, 2012). Within a two week period, 78% of a sample of Asian Americans report some form of microaggression, impacting both somatic symptoms and negative affect (Ong et al., 2013). In addition, foreigner objectification, or the perception that Asian Americans are always foreigners has been linked with lower well-being and higher psychological distress (Wu et al., 2019). Yoo and colleagues (2010) indicate that although subtle racism may be more ubiquitous, it is important to recognize that Asian Americans experience both blatant and subtle racism. They found that subtle racism was negatively linked with self-esteem but not blatant racism, but both types of racism were associated with depression, anxiety, and stress. On the other hand, racial harassment and hostility

has been linked with increased hypervigilance and anxiety compared to the effects of racial discrimination (Carter & Forsyth, 2010). Qualitative findings however with Asian American college students also confirm the link between subtle racism and mental health. Participants for example felt isolated on their college campuses due to their race and were marginalized from their peers (Museus & Park, 2015). Many did not feel accepted by their peers, and others felt that they were denied a voice and racially isolated. Due to these racism experiences, they continuously felt like a foreigner on their college campus and consequently a lack of belonging. Recently, Kim, Kendall, and Cheon (2017) found that the racial microaggression and well-being link can be explained by cultural mistrust, or suspicion towards Whites due to racism, a discrimination coping response. As a whole, these various findings suggest a need to test for more subtle forms of discrimination.

Measurement

A key issue regarding measurement is that many researchers seem to be using scales that were developed for African Americans (e.g., General Ethnic Discrimination Questionnaire) and using it to measure discriminatory experiences for Asian Americans (Gee et al., 2009). These scales fail to ask about racial discrimination that may be more relevant with Asian Americans such as being a perpetual foreigner and assumptions about language (Armenta et al., 2013; Gee et al., 2009; Yoo et al., 2009). To my knowledge, measures that are specific to Asian American racial discrimination include the Race-Related Stressor Scale (RRSS; Loo et al., 2001), the Asian American Racism-Related Stress Inventory (AARSI; Liang, Li, & Kim, 2004) and the Subtle and Blatant Racism Scale (Yoo et al., 2010). The Race-related Stressor Scale is specific for Asian American Vietnam veterans and thus does not seem to generalize to all Asian Americans (Loo et al., 2001). For example, many questions ask about looking like a Vietnamese or about military

personnel. Although the AARSI is one of the first scales to directly examine racism related to Asian Americans, the questions ask about racism-related stress, or the psychological response resulting from exposure to racism (Liang et al., 2004). Furthermore, the measure was not correlated with perceived stress, self-esteem, and health outcomes, and thus racism-related stress may not necessarily lead to increased physical and psychological symptoms (Liang et al., 2004). The Subtle and Blatant Racism Scale (Yoo et al., 2010) may be closest in capturing discrimination that is specific to Asian Americans, includes both subtle and blatant forms, and exhibits strong psychometric properties. In addition, rather than the stress *in response* to discrimination, the measure asks about frequencies of perceived discrimination.

Although most studies measure racial discrimination through a self-report measure, I wanted to test participants' response to subtle racism, which is difficult to capture through self-report data. Yoo and Lee (2008) used written scenarios to examine different racial discrimination scenarios and in response, participants' situational well-being (mood), moderated by ethnic identity. Mellor and colleagues (2001) developed 6 different short videos that they filmed to examine participant responses after watching the videos. Rather than filming my own videos, and given COVID-19 limitations, I used Vyond, an animation computer software to develop various subtle racist scenarios. Harrell (2000) suggested that racism can also be transmitted vicariously, through interactions and observations from others. Thus, using videos to operationalize subtle racism may create a more realistic context for participants' to vicariously experience racism similar to a laboratory setting. Through videos/media, participants can be transported into the story – otherwise known as the experience of being lost and hooked in the narrative (Appel et al., 2015). Lastly, self-report measures are limited in that they capture conscious racism experiences. Asian Americans for example may experience racism but may not

be aware of it or may not indicate it on a self-report measure for a number of reasons (e.g., suppression as a survival mechanism). Thus, I advance the literature by creating a video about a subtle racism event.

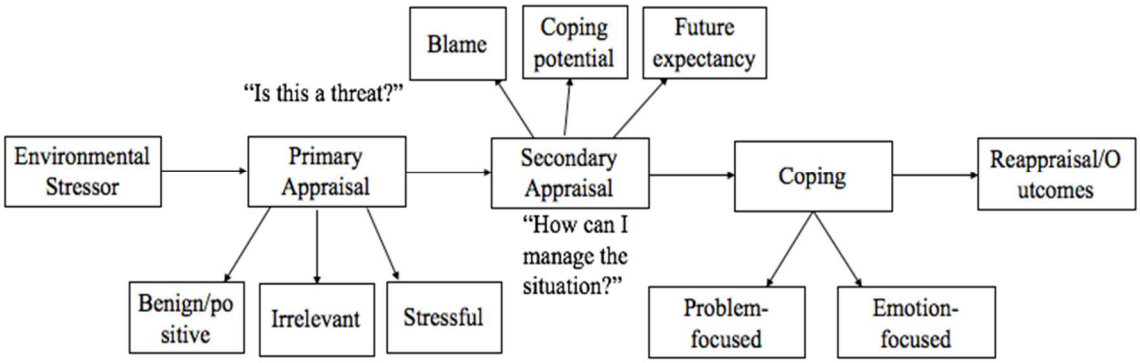
Cognitive Appraisal

For the 50th anniversary of *The Counseling Psychologist*, the editor asked participants to identify topics that would be most important, influential, interesting, and popular in the field in the next two to 10 years (Kim, 2019). On average, the most important chosen topic was "active responses to racism and hate speech/acts/behaviors (prevention, early intervention, more actively challenging complacency)." Given that individualistic forms of coping (e.g., personal strengths) was more related to discrimination and psychological distress than collectivistic resources (e.g., social support) with Asian Americans (Lee & Ahn, 2011), it is also important to examine individual coping responses to racism.

Transactional Model of Stress and Coping

In the current study, I will be using the Transactional Model of Stress and Coping (Lazarus & Folkman, 1987), which describes stress as a result of a transaction between a person and the environment and that stress is a cognitive appraisal or evaluation of an event. Cognitive appraisal is "a process through which the person evaluates whether a particular encounter with the environment is relevant to his or her well-being, and if so, in what ways" (Folkman et al., 1986, p. 992). The theory states that individuals go through two processes: primary appraisal, or whether the event is of personal relevance, and secondary appraisal or how to cope and deal with the event. During primary appraisal, an individual decides whether the event is relevant or irrelevant, positive, and/or stressful (whether there is harm or threat involved). If the event does impact the individual, then the person moves onto secondary appraisal or identifying options to

manage and handle the stressor. For example, an aspect of secondary appraisal is the individual's decision about who should be accountable for the event: the individual, another person, another group of people, or if it is due to chance. After, individuals then implement their coping responses. For example, individuals can use emotion-focused coping or managing emotional responses, problem solving coping to try and change the event, accept the situation, or hold back from responding. These appraisals and responses then impact an individual's psychological outcomes.



Component Process Model

A newer model is the Component Process Model developed by Scherer (2009) to frame how psychological and physiological responses may also be due to cognitive appraisal. An event triggers multiple aspects of appraisal, which then changes motivation and physiological responses. These processes come together and are linked with emotion words, categories, and expression. After the event, there are four central appraisal processes: 1) an individual determines how relevant the event is, 2) decides what the implications of the event are and how it impacts an individual's goals, 3) discovers how to cope with the consequences and 4) figures out how the event may impact one's self-concept, values, and social norms. These appraisal

processes are often unconscious as are the physiological responses. This model differs from others in that it emphasizes that emotions are conscious *and* unconscious; thus, although self-report measures of emotions can describe conscious awareness of feelings, it may not capture the full extent of an individual's emotions. In the end, long-term negative consequences such as depression may be due to incorrect appraisal of the event, inadequate processing, expression, or relationships. For example, someone may appraise a situation and decide that they do not have enough resources to cope with the event, leading to depression.

This newer model extends Lazarus and Folkman's (1987) model by describing the complexity of emotions and four appraisal processes compared to solely the primary and secondary processes of cognitive appraisal. In addition, these processes impact motor functioning and the autonomic nervous system. However, their model does not describe the role of blaming oneself or others in response to a stressor. In addition, given the focus on the dynamic nature of changing emotional and cognitive states as well as the focus on both unconscious and conscious emotions, researchers suggest using microanalytic techniques or examining ongoing changes of emotional responses in naturalistic, interactional settings (Kaiser & Scherr, 1998). Although these techniques would be helpful to analyze physical responses such as bodily, facial, and vocal behaviors, it is highly expensive (Kaiser & Scherr, 1998) and out of scope for the current study.

Locus of Control

A related construct to self vs. other blame may be locus of control, or an individual's belief about whether they have control over a situation or not. Rotter (1966) conceptualized that those with an external locus of control believe that they have little control over life, whereas those with internal locus of control believe that they have control over their life events. A meta-

analysis found that external locus of control was associated with greater depression (Benassi et al., 1988). The authors suggested that those who are depressed tend to view outcomes as beyond control and in turn blame themselves. External locus of control has thus been related to greater anxiety, stress, and depression (Kurtovic et al., 2018), whereas internal locus of control has been associated with more adaptive behaviors (Gore et al., 2016). Studies with undergraduate students have demonstrated that external control (e.g., "there are too many factors beyond my control) compared to internal locus of control (e.g., "I can do this") is a stronger predictor of psychological health (Gore et al., 2016). Another study however found that external locus of control could reduce depression through increased self-esteem (Yu & Fan, 2014) and perceiving control increases stress *but* control and anticipation increase adjustment to life events (Vinokur & Caplan, 1986). Fortunately, social support can buffer against difficult life stressors for those with an external locus of control (Dalgard & Tambs, 1995).

There are studies that have examined the link between racism and locus of control. Cain (1994) found that racism had no effect on locus of control and did not blame any difficulties on institutionalized racism. However, another exploratory study found that racism experiences were linked with greater health locus of control attitudes, indicating that they are more likely to believe that their health is in the hands of people with power and/or fate and luck (Pieterse & Carter, 2010). Lambert and colleagues (2009) found that racism was linked with lower perceived academic control but not social control for African American female adolescents, and low perceived academic control predicted increase depressive symptoms, suggesting that racism may induce lower academic agency and in turn worse mental health. Another study found that internalized racism was linked with greater beliefs about academic locus of control (did not have control over academic outcomes) and in turn less value on higher education (Brown et al., 2017).

With Hispanic Americans, a study found that those who experience more frequent racial discrimination acquire an external locus of control, which may possibly become fixed and in turn be related to increased helplessness (Trevino & Ernst, 2012).

Locus of Responsibility

Similar yet distinct from locus of control, Heider (1958) argued that whether people attribute responsibility is flexible and dependent on context and environmental factors. Hamilton (1978) suggested in a work context, those in power (e.g., superiors, bosses) are held to larger standards of accountability. As a parallel, people of color are oppressed and powerless in the U.S. racial caste system, and thus may have different mental health outcomes dependent on whether they believe they can control or change the situation. Jones and colleagues (1972) theorized about the effects of the locus of responsibility, or the degree of responsibility of blame placed upon the individual or system, in response to racism.

Sue (1987) indicated that locus of control and locus of responsibility are independent and can be placed on a continuum with four quadrants being A) high in internal personal control and high in internal locus of responsibility; B) high external locus of control and high internal locus of responsibility; C) high external locus of control and high external locus of responsibility; and D) high internal locus of control and high external locus of responsibility. Those high in internal control believe they can control their fate and attribute their life to their own attributes (A) – these individuals feel accountable for all life encounters and can lead to symptoms of self-blame. Sue suggested that Western counseling psychology approaches are in this quadrant – that people must take responsibility for their own actions and suggests that when experiencing discrimination and prejudice, an internal response (self-blame) is extreme and self-punishing. Those with high external locus of control and internal locus of responsibility are likely to accept

the domain culture's view of self-responsibility but feel little control (B). Marginalized individuals thus may deny the existence of racism due to the normalization of cultural racism. This may manifest in the therapy room as self-hate from not being able to escape their own cultural heritage. Individuals with high in external blame and external control (C) believe that there is not much one can do when experiencing discrimination and are those who have given up, continue the status quo, and suffer alone due to fear of retaliation (e.g., "Don't rock the boat."). Lastly, those who score high in internal control and external locus of responsibility believe that they can shape events in their life and don't accept the status quo, while also understanding the realities of racism and discrimination (D). Given that internal control is linked with greater personal efficacy, and external responsibility is linked with greater collective action, individuals in this group are more likely to engage in social action. In the current study, although both are related, we focus on locus of responsibility given that it is more state-dependent compared to locus of control which has been theorized as a trait. Sue (1987) suggests that it is possible that individuals can adapt with another perspective when experiencing racism. Using locus of responsibility, I examine specifically self vs. other blame but at the interpersonal level to examine every day, common microaggressions perpetuated by others.

Racial Discrimination, Internalized Racism, and Psychological Distress

Over the past few decades, researchers have noted that another understudied mechanism by which racial discrimination impacts mental health is through internalized racism (Carter, 2007; Speight, 2007). Although Carter (2007) describes internalized racism as self-blame and feeling responsible for racism, Speight (2007) suggests that it is more than this – that "internalized racism is all about the cultural imperialism, the domination, the structure, the normalcy of 'the way things are' in our racialized society" (Speight, 2007, p. 129). In other

words, people of color accept the negative stereotypes created by the dominant group and their imperialistic views. The dominant group chooses what is "normal" and the racism embedded in institutions and systems becomes normalized. Thus, researchers have theorized that internalized racism is a consequence of racism (Speight, 2007; Millan & Alvarez, 2014).

Previous studies have found that Asian Americans also have internalized beliefs such as believing that being more assimilated is "better," think Asians are passive and less physically attractive than Whites, and wish that they were not Asian (Choi et al., 2017; Pyke & Dang, 2003). Some also believe that Asian Americans are more successful than other racial minority groups because of their hard work, otherwise known as the internalization of the model minority myth (Yoo, et al., 2010). Although this can serve as an adaptive strategy to cope and survive racism, it also creates additional barriers such as the types of employment and political representation, thus continuing to perpetuate a systems of inequality (Trieu, 2018). Cross-sectional studies have indicated that internalized racism is positively correlated with depressive symptoms (Choi et al., 2017; David & Okazaki, 2006) and internalization of the model minority myth is related to unfavorable help-seeking attitudes (Kim & Lee, 2014; Gupta et al., 2011), worse mental health (Gupta et al., 2011), and academic expectations stress (Yoo et al., 2015). In a recent review, David and colleagues (2019) suggest to widen the methodological toolbox, given that the majority of studies on internalized racism only use quantitative methods.

In this study, although similar, I conceptualize self-blame and the internalization of racism as two separate constructs. Self-blame may be viewed as a cognitive response to racism and an aspect of internalized racism. Racism is a system of power and privilege that is designed to oppress historically marginalized communities and in order to do so – they blame the victim. Consequently, the victims may internalize the oppression and believe it's their fault as a survival

mechanism. When continuous, these internalized racism beliefs can become locked and trait-like (Pyke & Dang, 2003). In the current study, I focus on self-blame given the focus on being able to change people's thoughts and that it could be more of a state than a trait. In addition, given that the goal is to focus on cognitions, I wanted to examine a specific thought related to a subtle racist event.

Racial Discrimination, Self vs. Other Blame, and Psychological Distress

When individuals experience discrimination, they can either label the event as discrimination or accept personal responsibility (Garcia et al., 2005). Researchers have argued from a cultural perspective, appraisals may not be conscious, because they are communicated by others and already encompassed in social conventions and norms (Kitayama & Masuda, 1995). Racial discrimination is everywhere through individual (e.g., someone calling someone a racist name), institutional (e.g., less access to health care), and societal forms (e.g., media depicting people of color as inferior) and may be viewed as "normal." Thus, from a cultural perspective, racial discrimination may be linked with self-blame given that racial discrimination permeates throughout our lives and may not be seen as problematic unless taught. In addition, when individuals attribute a failure to discrimination, then people view the target as a complainer and one who avoids personal responsibility, protecting the privileged group (Garcia et al., 2005). Thus, there are social costs to externalizing discrimination such as being viewed as rude. In addition, given that Asian Americans are often told to suppress their emotions (Saw & Okazaki, 2010), they may subconsciously internalize the discrimination and blame themselves. However, when Asian Americans are able to externalize the discrimination, even with the social consequences, they may feel more secure with themselves. The unconscious consequences of racism may come into conscious awareness, and individuals may then begin to heal. Scholars

have found that perceiving structural racism is linked with higher collective self-esteem with Asian Americans, possibly because they are able to name and externalize the discrimination (Tawa et al., 2012).

Folkman and colleagues (1986) suggest that self-blame/responsibility may promote problem-focused coping efforts. Previous researchers have examined the role of coping as a mediator between racism and health (Liang et al., 2007). Asian Americans are more likely to use emotion-coping strategies including cognitive reconceptualization of problems compared to problem-focused coping such as advice keeping (Kuo, 1995). Thus, in response to racial discrimination, Asian Americans are less likely to be depressed when using emotion-focused coping over problem-focused coping (Kim, 2013). Consequently, it may be possible that blaming oneself due to discrimination is linked with poorer mental health, because individuals try to use problem-solving methods to "fix" the situation or oneself. Although there is such rich literature on coping with racism with Asian Americans (e.g., Alvarez & Juang, 2010; Liang, et al., 2007; Wei et al., 2010; Yoo & Lee, 2005), there is a paucity of research on specifically self vs. other blame/responsibility of discrimination.

One study examined how cognitive appraisal mediates subtle and overt discrimination and mental health outcomes with Korean adolescents. Noh, Kaspar & Wickrama (2007) believed that with subtle discrimination, the ambiguity of the situation may call for more difficult appraisal and in turn more psychological distress, whereas overt discrimination may involve less cognitive demands but still distressing. They found that cognitive appraisal, or frustration, intimidation, powerless, and helpless completely mediated the link between subtle discrimination and depressive symptoms in that there may be some uncertainty about an event, leading to threat of personal identity. This research sheds light on how subtle discrimination may be linked with

these feelings of shame and exclusion and in turn distress. However, it is not clear how they developed items for cognitive appraisal; the scale's psychometric properties could be strengthened. In addition, it seems as though the cognitive appraisal scale also measures emotional reactions rather than a conscious thought. In addition, they did not test whether other-blame could also be a protective factor between racism and psychological outcomes. Research has found that reappraisal coping, or cognitive adaptation (rather than behavioral coping), predicts less changes in heart rate reactivity given the emphasis on not burdening others and minimizing anxiety in Chinese culture (Lee, Suchday et al., 2012). Thus, cognitive techniques may be useful with Asian Americans.

Carter (2007) noted that a minor event may trigger a stress reaction. Essed (1991) theorized that in order for people to attribute events to racism, they need to have situational knowledge (what is acceptable in a particular situation) and general knowledge of racism (accumulation of familiar, routine experiences). One study in Australia examined whether Asians or Whites attribute short, subtle, ambiguous scenarios that were filmed by the researchers (Mellor et al., 2001). Surprisingly, they found that White individuals were more likely to attribute the behaviors to racism compared to Asians. It is possible that people of color may at times lack critical consciousness of what is prescribed as discrimination, because racism is so institutionalized that it becomes "normal." Another explanation may be that some Asian Americans may not have learned what discrimination may look like and thus struggle to name racism.

Another study found Asian Americans with low ethnic identity are more likely to be satisfied with their lives when they are able to attribute negative events to discrimination (Yoo & Lee, 2005). On the other hand, for those with a strong ethnic identity, cognitive restructuring was

only helpful with low amounts of discriminatory events but not high amounts, indicating they may only be able to cope with less frequent incidents (Yoo & Lee, 2005). However, the measure for testing cognitive restructuring is not specific to externalizing the discrimination; rather, the measure asks questions such as "I convinced myself that things aren't quite as bad as they seem." Although the scale asks about changing how one views the situation, with the context of racial discrimination, it may not be helpful to minimize the event. Asian Americans are often told to suppress their feelings, to maintain harmony, which is linked with greater distress (English & John, 2013; Saw & Okazaki, 2010). Thus, the present study focuses on adaptive cognitive restructuring by specifically externalizing the racial discriminatory event.

The Examination of Racism Using Experimental Methodology

Unfortunately, the field of counseling psychology has historically lacked research using experimentally methodology and the majority of studies use self-report outcome measures (Ponterotto, 1988). This is concerning given that many studies are correlational, and thus directionality cannot be established. Okazaki (2009) suggests that laboratory-based methods may be useful to examine minority individuals' reactions to subtle, ambiguous racial encounters. In 2006, only 9% of studies on racism were experimental compared to 76% being cross-sectional studies (Paradies, 2006b). Seaton, Gee, Neblett, and Spanierman (2018) suggest utilizing methodological approaches such as audit, experimental, and observational techniques to examine the effects of discrimination beyond the individual level – although testing institutional and structural levels of racism are beyond the scope of the current study, we do overcome the biases inherent with survey methodology, such as recall biases (Neblett, 2019). Neblett (2019) notes that racism is interactional and now more subtle and nuanced, such as the inclusion of nonverbal behaviors.

Linguistic Inquiry Word Count (LIWC)

Studies in counseling psychology have also primarily relied on survey methodology and self-report. However, self-reports are limited in that they can only assess for *conscious* experiences. From a psychodynamic perspective, many thoughts and feelings are underneath the conscious level and thus other methodologies may be able to capture more subconscious feelings.

Bradac and colleagues (1979) noted that language does more than express ideas – it reflects people's attitudes, moods, and affiliations. Recent research has shown that emotions motivate and structure thinking and language (Minner, 2019). Sentiment analysis (Mohammad, 2016) is defined as using computer algorithms to describe the valence and emotional contents, from text and/or speech. This first began with Natural Language Processing (NLP) research which was effective at determining valence and subjective from objective texts (Mohammad, 2016). Language Inquiry Word Count (LIWC) was developed in response to the ineffectiveness of using judges as raters to people's written stories (Pennebaker & Beall, 1986). Thus, Tausczik and Pennebaker (2010) created an efficient, computer-based program that looks for words to categorize psychology-based constructs. The program is based on a dictionary that uses words to define a category and over 100 million words were analyzed.

LIWC has 80 different categories that have been linked to psychological processes. Function words such as personal pronouns reflect people's attention. For example, those who experience more pain tend to use more first-person singular pronouns. Verb tense can also demonstrate the focus of attention – for example, those who used greater past tense focus on negative aspects, whereas those who focus on present and future focus on more positive aspects of an individual. LIWC also identifies emotion in languages, including positive words (e.g., nice,

sweet) and negative words (e.g., hurt, ugly). Experiments have demonstrated evidence of validity of the LIWC to measure emotion (Kahn et al., 2007), and positive emotions have been correlated with greater well-being and negative emotions have been correlated with worse physical health and more distress (Vine et al., 2020). In addition, higher status individuals are more likely to speak more frequently and freely, whereas in lower-status individuals, language is more tentative, hesitant, and self-focused. Language can also reveal cognitive complexity, or the extent to which someone can examine two different solutions and integrate these solutions; LIWC examines exclusive words such as "but" and "without," and these have demonstrated to be correlated with people being more honest. Pennebaker and Francis (1996) found that those who used more positive emotion words and insight words when writing had better health outcomes. Similarly, using LIWC, McCarthy, Caputi, and Grenyer (2017) found that significant events in therapy included both positive and negative emotion words as well as more cognitive insight words. However, Pennebaker and colleagues (2003) found that cognitive words accounted for a larger variance in health than emotion words.

The authors (Tausczik & Pennebaker, 2010) note that analyzing language can reveal psychological constructs that are difficult to hide. However, the limitations of the LIWC is that they ignore contexts, irony, and idioms. In addition, the assessment is limited in that there are speech cues that can also reveal people's experiences.

Speech Features (Praat)

Although language can depict emotional processes, acoustic features may also indicate emotional processes (e.g., Elfenbein & Ambady, 2002). Most commonly, researchers examined the fundamental frequency (colloquially known as pitch) and intensity (colloquially known as loudness; Gilboa-Schechtman et al., 2014). Previous research has indicated that a reduced

fundamental frequency pitch and range were correlated with more depression (Honig et al., 2014; Vicsi et al., 2012). Similarly, researchers have also found that high pitch levels have been linked with more positive emotions (Banse & Scherer, 1996) and sad emotions have lower pitch values (Kumbhakarn & Sathe-Pathak, 2015). More recent research also found that higher mean pitch was linked with more pleasant materials, whereas lower mean pitch were linked with neutral materials (Furnes et al., 2016). Furnes and colleagues also found similar findings for pitch range in that higher pitch range expressed more pleasant emotions, whereas lower pitch was linked with sadness. At the same time, research in psychotherapy has demonstrated that anger was correlated with higher levels of mean pitch and pitch range than sadness (Rochman & Amir, 2013; Rochman et al., 2008). Thus, higher pitch could indicate greater levels of positive emotions and anger. On the other hand, research has consistently demonstrated sadness and depression with lower pitch mean and range (Furnes et al., 2016; Honig et al., 2014; Kumbhakarn & Sathe-Pathak, 2015; Rochman & Amir, 2013; Vicsi et al., 2012). Although researchers have also looked at intensity as an indicator of emotions (colloquially known as loudness; e.g., Honig et al., 2014; Furnes et al., 2016; Rochman et al., 2008; Rochman & Amir, 2013; Sauter et al., 2014), given that intensity is more sensitivity to confounding factors such as microphone distance and technology (Rochman & Amir, 2013), I excluded this from the analyses.

Conclusion

In sum, I extend the literature in a number of ways. First, only a few researchers have examined the mediating role of self- vs. other-blame with Asian Americans (e.g., Blodorn et al., 2016; Mellor et al., 2001). In addition, to my knowledge, this is the first known study to test whether we can change cognitions in response to a subtle racism event. Lastly, I examine not

only a self-report outcome measure, but I also use language and speech variables to test subconscious processes during the speech task.

Chapter 3: Method

Method

Design

The present study was an experimental design. The independent variable was randomized and was the self or other-blame condition. The covariates were pre-mood, ethnic-racial socialization (maintenance of heritage culture, awareness of discrimination), and critical consciousness). The mediators were the pitch and LIWC variables and the dependent variables were self-reported anger and depression.

Participants

The final sample include a total of 120 Asian American emerging adults ages 18-29 years old (M = 20.04, SD = 2.18). Participants identified as female (60.8%), followed by male (33.3%), other (0.8%), or did not respond to the item (missing; 5%). In terms of generational status, participants identified as 1.5 generation (born in an Asian country, and came to the US as a child/adolescent, 21.9%), second generation (born in the U.S., either parent was born in an Asian country, 72.8%), 3rd generation (born in the U.S., both parents were born in the U.S., and all grandparents were born in an Asian country, 0.9%), 4th generation (born in the U.S., both parents were born in the U.S., and at least one grandparent was born in the U.S, 1.8%), 5th generation (born in the U.S., both parents and all grandparents born in the U.S., 1.8%), and other (0.9%).

The sample included most heterosexual participants (79.8%), followed by bisexual (9.6%), other (3.5%), lesbian (2.6%), pansexual (1.8%), gay (1.8%), and queer (0.9%). In terms of socioeconomic status, participants self-identified as lower class (1.8%), working class (15.8%), middle class (42.1%), upper middle class (37.7%), and upper class (2.6%). The sample

also included a diverse range of ethnicities including Chinese (31.7%), Indian (16.7%), Korean (15.8%), Vietnamese (12.5%), Taiwanese (5.8%), Filipino (8.3%), Pakistani (5%), Japanese (2.5%), Cambodian (1.7%), Thai (0.8%), and other (10.8%).

Measures

Subtle Racism Event

For racial discrimination, participants watched a short one minute video where they were asked to imagine as if they were the main character, Jaewon, an Asian American college student. The video starts with small talk in the library with Jaewon (main character), John (perpetrator), and another person. Jaewon starts to eat dumplings in the library and John comments "What kind of food is that? It smells kind of bad in here" and he and his friend start laughing. The vignette was a common subtle discriminatory incident that Asian Americans experience (see below for a portion of the video).

Experimental Manipulation

Participants randomly were placed in one of two cognitive appraisal tasks: one was primed for self-responsibility and the other was primed for other responsibility. The self-responsibility condition asked participants to give a short speech about what they believe the

Asian American (Jaewon) could have done differently in that situation. In the other-responsibility condition, participants were asked to give a short speech about why the friend (John) was racist.

Manipulation Check

In order to test whether the manipulation of self-responsibility versus other responsibility was valid, I first individually checked whether their responses during the speech task indicate that they answered the given question or whether they spoke about something else. I coded each response as yes/no in terms of whether they answered the question. In addition, I recruited four undergraduate student coders. First, they were given the definitions of self- and other-blame and were given instructions to code (see Appendix F). Without knowing which group the participants were in, the coders were asked to code each individual response about whether they would classify the response as self-blame (1), other-blame (2), or none/other (3). The average intraclass correlation coefficient (ICC) across the four coders was 0.68 with a 95% confidence interval from 0.62 to 0.73, $F(338, 1014) = 3.13$, $p < .001$. Accordingly, only the participants with agreement from all four coders, were used in the analysis.

Demographics Questionnaire

Participants reported their age, gender, ethnicity, socioeconomic status, sexual orientation, and generational status.

Mood

Mood was assessed using the 37-item self-report Profile of Mood States-Short Form (POMS-SF; Shacham, 1983) which is the short version of the 65-item POMS (McNair et al., 1971). This scale includes 6 subscales: tension (e.g., on-edge), anger (e.g., grouchy), fatigue (e.g., worn out), depression (e.g., unhappy), vigor (e.g., energetic), and confusion (e.g., can't

concentrate) and asks participants to rate their level of agreement now using a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely)*. In the current study, I only used the anger and depression subscales. Higher scores on each subscale represent greater agreement with the corresponding emotion. Previous research has demonstrated adequate reliability estimates (0.76 - 0.95; Curran et al., 1995) and has been used with Asian American college students (Ho & Lau, 2011). The current study yielded internal consistency estimates of .92 (pre-depression), .90 (pre-anger), .93 (post-depression), and .94 (post-anger).

Ethnic-Racial Socialization

Ethnic-racial socialization, or the messages that parents send to their children about race, was examined as a covariate. Specifically, there were two relevant subscales: *Maintenance of Heritage Culture* and *Awareness of Discrimination* in the Asian American Parental Racial-Ethnic Socialization Scale (Juang et al., 2016). Maintenance of heritage culture asks questions about how frequently their parents taught them to be proud of their culture, implicitly or explicitly (e.g., "How often did your parent routinely cook Asian food for you?"). Awareness of Discrimination asks about how often the participants' parents talked to them about their awareness of racial discrimination using the subscale (e.g., "How often did your parents talk to you about why some people will treat you unfairly because your Asian background?"). The subscales asked about the frequencies of how often their parents socialized them about race growing up from 1 (*never)* to 5 (*very often)* and has demonstrated construct validity with ethnic identity and perceived discrimination. The reliability estimates with Asian American college students have been adequate (α = .71 – .90; Juang et al., 2016), and the current study yielded reliability estimates of .78 for maintenance of heritage culture and .90 for awareness of discrimination.

Critical Consciousness

I assessed critical consciousness, or the awareness related to systematic forms of racial discrimination, as a covariate using the racism subscale of the Contemporary Critical Consciousness Measure (Shin et al., 2016). I only used the racism subscale, because it is most relevant to our study given its focus on racial discrimination. Example items include "All Whites contribute to racism in the United States whether they intend to or not" and "The overrepresentation of Blacks and Latinos in prison is directly related to racist disciplinary policies in public schools." Previous research has demonstrated a reliability estimate of .82 for the racism subscale and the current study yielded an estimate of .66. The scale has been validated with measures of discrimination (Shin et al., 2016).

Speech Vocal Analysis

In order to measure speech quality, PRAAT vocal analysis software (Boersma & Weenink, 2005) was used for each participant who completed the speech task. The most common indicator of emotional processes is the fundamental frequency, also known as *pitch*, or the average frequency of the voice sample. Higher pitch mean and pitch range have been linked with greater anger (Rochman & Amir, 2013; Rochman et al., 2008). On the other hand, lower pitch mean and pitch range have been associated with greater sadness (e.g., Furnes et al., 2016; Honig et al., 2014; Rochman & Amir, 2013). In the current study, I use pitch mean and pitch range as vocal indicators of anger and sadness.

Language Analysis

Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2015) was used to examine emotions and cognitive processes during the speech task. LIWC is a commonly used language processing program that examines the psychological components of text. Within each

text, the program calculates the percentage of words that reflects affect processes as well as other categories such as cognition and biological processes. In the current study I investigated emotion words (positive emotion, negative emotion, anxiety, anger, sadness) and cognitive words (insight, causal, tentative, certain). Previous research has demonstrated validity of the LIWC (Kahn et al., 2007).

Procedure

First, I completed a full institutional review board (IRB) application at the University of Maryland, College Park before beginning recruitment and data collection. After receiving approval, I developed four different subtle racism scenarios on Vyond, an online video animation software. The scenarios included: A) Asian American person bringing dumplings to class and is told by a White person that it smells bad, B) an Asian American college student being quiet in class and the White teacher saying that it's disrespectful, C) White students walking and bumping into an Asian American student and getting upset, D) a White friend saying that eating pasta with chopsticks to his Asian American friend is strange.

In order to demonstrate content validity, I sent the videos out to three expert reviewers in the field and asked them to review the videos, choose which video is most stimulating yet subtly racist, and if they had any suggestions/edits to the videos. One expert reviewer suggested scenario A and possibly changing the music. Another reviewer also suggested removing the music for scenario A, thought scenario B and C were too obvious, and scenario D was most subtle but possibly too subtle that people may not think it is racist. The third reviewer thought the scenario B would elicit the most conversation and responses for the participants, and believed that the other videos may not receive the same depth of response because the interactions among characters occur only at one time point compared to multiple time points.

Based on the expert reviewers, I chose scenario A as the vignette. I then pilot tested the experiment for feedback and to test the experiment. I recruited participants on word-of-mouth, personal connections, and emails to a few Asian American clubs. After receiving 44 participants, I examined whether there were any differences between the self-blame and other-blame groups using independent t-tests, and found that those in the self-blame group reported greater fatigue and depression. In the survey, I also asked for suggestions for any changes in the experiment. Participants suggested making the speech task easier (clicking a button) and that given that the same measures were taken twice, some participants were confused and did not re-take the post-measures. The final survey changes included adding sentences in the directions that some measures are repeat questions, and using the recording program software Phonic to embed into Qualtrics to facilitate easier completion of the speech task.

For the experiment, participants were then recruited December 2020 – January 2021 (see Appendix A) through a registrar list-serv of 6,516 Asian American undergraduate and graduate students at a large mid-Atlantic university. In addition, I recruited participants by contacting Asian American students through various Asian American college organizations in all 50 of the United States and through snowballing techniques, Twitter, and personal connections. Participants were also asked to contact other Asian Americans ages 18-29 who may be interested in participating in the study. They were sent emails explaining the study and the qualifications to participate, which were to identify as Asian American and be 18 to 29 years of age.

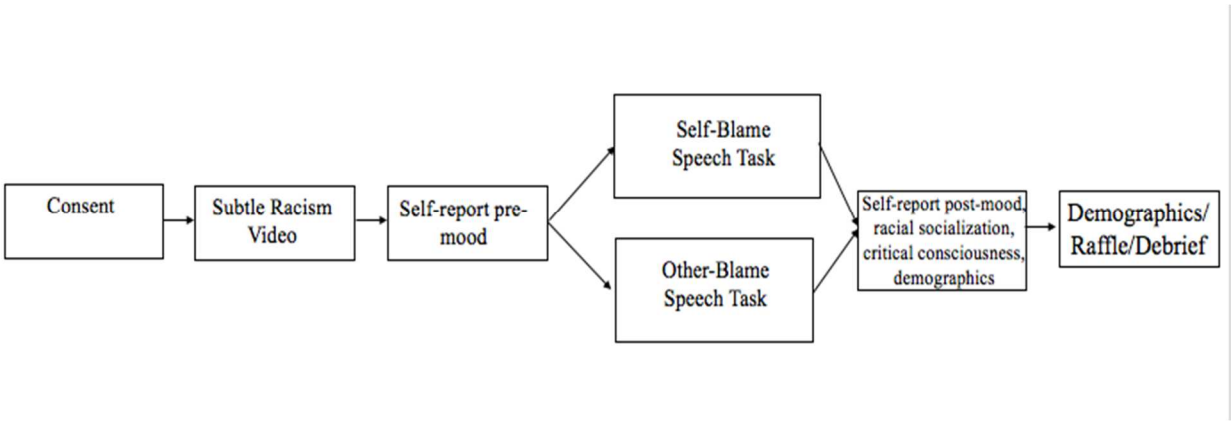
If interested in the survey, participants clicked on the Qualtrics link, and read and completed an online consent form (see Appendix C), which included information about the current study, eligibility, risks to participating in the study, procedures, and confidentiality. After, they completed a validation question of whether they self-identify as Asian American and

are 18-29 years of age. If they did not self-identify, they were sent to the end of the survey. For those that did meet the criteria, they were told that the purpose of the project was to examine ways people respond to everyday encounters and situations. Participants watched the short video clip and were told that they will be engaging in a task based on the video. In order to ensure that participants watched the video, I used the timing setting so that the "Next" button did not show up until the duration of the video.

Participants then completed the self-report pre-measures. After, participants were then randomly assigned using Qualtrics one of two conditions: self-responsibility or other responsibility condition. Those in the self-responsibility condition were asked "If you were the main character (Jaewon), what could you have done to change the situation?" Those in the other-responsibility condition were asked "Why was the friend (John) racist?" All participants were asked to record their response by clicking the "Record" button and clicking "Submit." After the speech task, participants completed the self-report post-measures and were given instructions that some of the questions may be repeated from before, but to please complete them again. Participants then completed information about their demographics and were given resources for counseling services to protect against risk (see Appendix D) and were debriefed about the purpose of the study (see Appendix E). As an incentive, participants had the option to enter a raffle for an Apple Watch Generation 3. See Figure 1 for the survey format.

Figure 1

Participant Survey Format

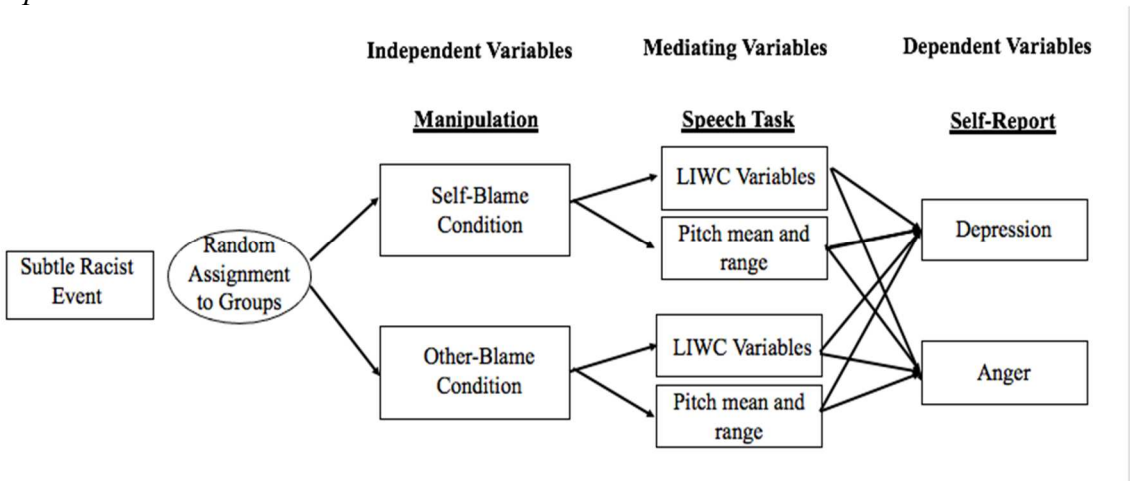


Data Analytic Plan

The proposed study employed a randomized between-subjects experimental design. The experimental model is depicted in Figure 2 below.

Figure 2

Experimental Model



First, I examined transcripts of participant speeches on Phonic and checked each participant's response and revised them if there were any discrepancies or spelling errors with the audiofiles. After, I manually input which group participants were assigned to by checking Phonics and created a group assignment variable on SPSS (Self-blame: 1; Other-blame: 2). Data were cleaned and participants were removed if they did not receive agreement from the four

coders (see manipulation check). I downloaded all the speech files individually from Phonic, used an online converter to convert the files from .mp3 to .wav in order for Praat to read them, and input them into the Praat speech software. In order to analyze and code speech using Phonic, I developed an Excel document with each participant's code number and transcribed their pitch mean and range from the Praat software. In addition, I input the transcripts into LIWC to calculate the language-related processes during the speech task.

Using SPSS, univariate and descriptive statistics were examined on all variables. Dummy codes (0 = self-blame, 1 = other-blame were created as the group condition (Hayes & Preacher, 2014). Mplus (Muthén & Muthén, 2018) was then used to examine mediation analyses. I used path analyses to examine whether the group condition was linked to the speech and LIWC variables and in turn self-report mood, given the directions of the task. After participants watched the video, they were randomly assigned to the group condition, given the speech task (pitch and LIWC variables) and in turn reported their mood in the survey.

Hayes and Preacher (2014) state that with continuous variables, dichotomous or multicategorical independent variables can be estimated in a path analysis. Mediation models are useful in understanding the mechanisms of a phenomenon. However, mediation analyses can become an issue because indirect effects often have non-normal distributions. One approach is to use Bayesian analyses because it does not require the assumption of normality (Yuan & MacKinnon, 2009). In addition, Bayesian analyses are advantageous and more accurate with smaller sample sizes compared to maximum likelihood estimation and frequentist approaches (Muthén, 2010; Van de Schoot et al., 2014). With smaller samples, it is difficult to claim that the estimates are unbiased and the confidence intervals are accurately covered; thus, the Bayes estimator are best for small sample in terms of bias and coverage (Muthén, 2010). With missing

data, Bayes is a full-information estimator and takes a similar approach to Full Information Maximum Likelihood (FIML) method (Asparouhov & Muthen, 2010).

The Posterior Predictive *P*-value (ppp value) indicates overall model fit in Bayesian analysis with values over .10 suggesting good fit (Cain & Zhang, 2019). Yuan and MacKinnon (2009) report that in Bayesian statistics, rather than *p* values, confidence intervals are used to test the 95% probability. If zero is not included between the lower and upper bound of the confidence interval, the null hypothesis is rejected and I can suggest that the true effect is not zero. This would indicate that there is a significant effect with 95% confidence. Given that the current study is experimental and there is a lack of previous knowledge of effect sizes, default priors in Mplus were used.

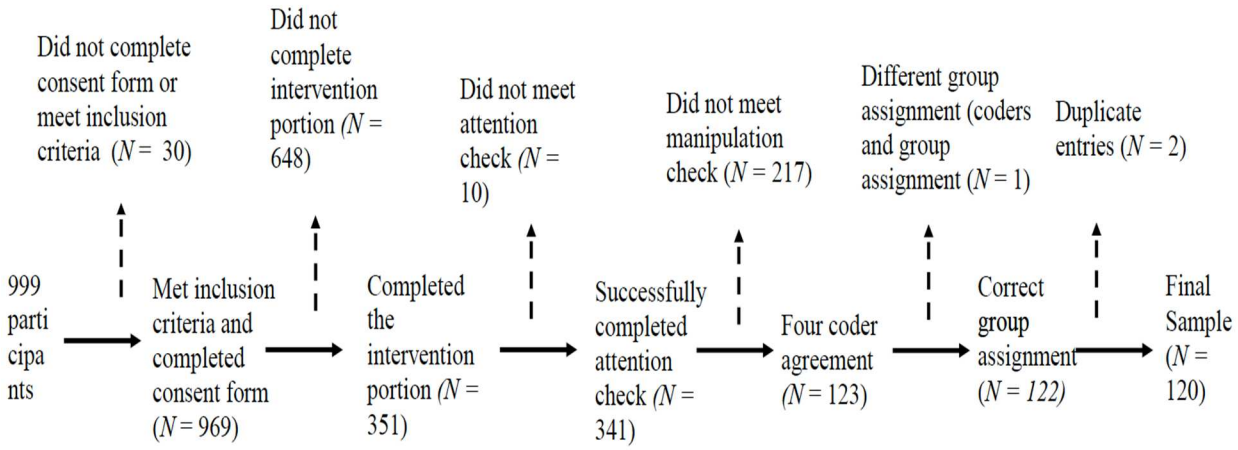
Chapter 4: Results

Data Cleaning and Screening

A total of 999 participants initially opened up the research link on Qualtrics. However, 30 participants did not met the inclusion criteria (Asian American and 18-29 years of age) and were sent to the end of the survey. In addition 648 did not complete the intervention portion of the data and were excluded from the data. 10 participants did not meet the validity question of "Please answer strongly agree" that was included in the survey. Lastly, after the manipulation check (four coder agreement) of the experimental portion of the study, there were a total of 123 participants in the data set. One participant was then omitted because they were placed in a different group from what the coders rated them (e.g., assigned to self-blame group, coders assigned them to other-blame group). Two other participants were omitted because they took the survey twice using the same ID, and only the first response was included. The final sample included a total of 120 participants. See below (Figure 3) for the final inclusion criteria.

Figure 3

Participant Data Inclusion Criteria



Examples of Responses to Speech Task

Self-Blame
I probably would have apologized to the other two guys for eating and making it smell and then probably leave to go eat somewhere else where hopefully no one would make fun of my food. I wouldn't feel like getting into an argument with them while I'm working because then it would get very distracting and hard to focus afterwards when I'm done eating and working again.
I would have been like my bad. And I'm sorry. Um, I would have asked them if it if it smells really bad. If they'd said yes, then I would have closed the container, put it in my bag and washed my hands. And a few minutes later, if it still smelled bad and odor off, I probably left the room. But if they were like close friends, they probably wouldn't said that.
I guess if I were the main character, I could have told the other people I was gonna eat my dumplings. Um, maybe give him a heads up of what they might smell like. Or something like that. Maybe another thing I would have done is give me offered to go to another room or something like that, or yeah.
Other-Blame
Friend was racist because he automatically just pointed out the smell, the bad smell, quote unquote bad smell of the food and did not really think and just kind of laughed with his other friend about another person's culture, and it kind of laughing at that kind of makes it seem as though the friends culture is superior to whoever, um brought the culture to whoever brought that food.
The friend John was racist because he was ignorant of other people's culture. Like in the video he was calling Jaewon food as smelling bad. That is why he was racist.
John was racist because he said that the dumpling smelled bad and not having any consideration of the girl's feelings because that's food from, you know, her country and what she's used to. So he basically straight up said that it smelled really bad in there.

Preliminary Analyses

In the final sample, 100 participants were in the other-blame group and 20 were in the self-blame group. Prior to conducting the main analyses, descriptive statistics were examined. Researchers have previously recommended skewness indices of ±3 and kurtosis indices of ±10 to test for normality (Kline, 2005; Weston & Gore, 2006). When examining the skewness of all variables, they were all in the range of ±2 except for the LIWC anxiety, LIWC anger, and LIWC sadness. For kurtosis, all variables were ±10 except for LIWC sadness. When examining the LIWC sadness variable, there was one participant that scored very high and the majority of participants had a score of 0. Thus, LIWC sadness was excluded from the final analyses.

Univariate statistics of all study variables are listed in Table 1. Most notably, the mean of critical consciousness was 3.45 out of 5, representing that the sample had a relatively high level of awareness of racism. For maintenance of heritage culture, the mean 3.35 was above the median (2.5), indicating that they perceived their parents to send a relatively high amount of cultural pride messages. On the other hand, awareness of discrimination messages (2.02) was lower than the median (2.5), suggesting that the sample did not receive as many messages from their parents about being aware of the existence of bias.

Bivariate correlations are reported in Table 2. Interestingly, group membership (self vs. other blame) was correlated with post-test depression (r = .21*), post-test anger (r = .28**), and pitch mean (r = .25**), suggesting a link between those in the other-blame group and greater post-test depression and anger. The covariates maintenance of heritage culture and awareness of discrimination were not correlated with the group condition, suggesting that there was no effects on the manipulation task. Critical consciousness (r = .24*) and pre-test anger (r = .23*) however were correlated with the group condition and thus were included as covariates in the model. With the LIWC variables, there was a correlation with those in the other-blame group and greater frequencies of using positive emotions (r = .19*), insight (r = .21*), cause (r = .37**), and less tentative words (r = -.51**) than those in the self-blame group.

I present t-tests for the variables between the two groups in Table 3. When running the t-tests, I first examined the Levene's test for equality of variances. If the test was significant, I rejected the null hypothesis and assumed that the variances are not equal. Accordingly, I present the each of the t-test results specific to whether equal variances are assumed to be equal or unequal. First, results demonstrate that the participants who were in the other-blame group (M = 1.82, SD = 0.83) self-reported greater depression compared to those in the self-blame group (M =

1.37, *SD* = 0.51), *t*(115)= -2.34, *p* = .02, *d* = .65. Similarly, those in the other-blame (*M* = 1.85, *SD* = 0.86) group also self-reported greater anger than those in the self-blame group (*M* = 1.22, *SD* = 0.39), *t*(62.73)= -5.03, *p* < .001, *d* = .94. From the voice analysis, participants in the other-blame group (*M* = 178.43Hz, *SD* = 43.18Hz) had greater pitch mean than those in the self-blame group (*M* = 149.73, *SD* = 34.18), *t*(118)= -2.79, *p* = .006, *d* = .76. However, there was not a meaningful difference in pitch range between those in the other-blame (*M* = 470.46Hz, *SD* = 88.91Hz) and self-blame group (*M* = 461.37Hz, *SD* = 110.86Hz) , *t*(118)= -0.40, *p* = .69, *d* = .09.

For the LIWC variables, those in the other-blame group (*M* = 2.01, *SD* =1.99) used greater positive emotion words than those in the self-blame group (*M* = 1.11, *SD* =1.22), *t*(42.02)= -2.88, *p* = .006, *d* = .55. However, participants in both groups used an equal number of negative emotion words: other blame (*M* = 2.95, *SD* = 2.18), self-blame (*M* = 3.31, *SD* = 3.53), *t*(21.98) = .44, *p* = .67, *d* = .12. Similarly, the participants did not use many words indicating anxiety or anger. In addition, both groups used similar amounts of words indicating anxiety: other-blame (*M* = 0.36, *SD* = 0.88), self-blame (*M* = 0.45, *SD* = 1.25), *t*(22.96) = 0.41, *p* = 0.68, *d* = 0.08. There were also no significant differences with the frequencies of anger words during the speech task: other-blame (*M* = 0.82, *SD* = 1.48), self-blame (*M* = 0.44, *SD* = 0.98), *t*(118) = -1.07, *p* = 0.29, *d* = 0.30.

For the cognitive mechanism variables, there were differences in the number of insight words, causal words, and tentative words participants used in each group. Participants in the other-blame group (*M* = 3.50, *SD* = 2.40) used a greater amount of insight words than those in the self-blame group (*M* = 2.10, *SD* = 2.33), *t*(118) = -2.38, *p* = 0.02, *d* = 0.59. In addition, those in the other-blame group (*M* = 4.44, *SD* = 2.57) used a greater amount of causal words than those

in the self-blame group (M = 1.81, SD = 1.87), $t(118) = -4.33$, $p < .001$, $d = 1.17$. However, those in the self-blame group (M = 9.43, SD = 4.43) used a greater amount of tentative words compared to those in the other-blame group (M = 3.76, SD = 3.46), $t(118) = 6.38$, $p < .001$, d = 1.43. Lastly, there was not a meaningful difference in the amount of words used that indicated certainty between the self-blame (M = 0.40, SD = 1.06) and other-blame group (M = 0.82, SD = 1.40), $t(33.79) = -1.87$, $p = .07$, $d = 0.34$.

Table 1

Univariate Statistics

Variables	***M***	***SD***	**Min**	**Max**	**α**
Pre-test Depression	1.91	0.82	1	4.50	.92
Pre-test Anger	1.89	0.80	1	4	.90
Post-test Depression	1.75	0.80	1	4.57	.93
Post-test Anger	1.75	0.84	1	4.71	.94
Maintenance of Heritage Culture	3.35	0.75	1.22	4.67	0.78
Awareness of Discrimination	2.02	1.02	1	5	0.90
Critical Consciousness	3.45	0.81	1.50	5	0.66
Pitch Mean	173.64	43.04	100.47	307.56	
Pitch Range	468.95	92.47	31	525	
LIWC_Positive Emotion	1.93	1.91	0	7.84	
LIWC_Negative Emotion	3.00	2.44	0	14.29	
LIWC_Anxiety	0.38	0.95	0	5	
LIWC_Anger	0.75	1.42	0	9.09	
LIWC_Insight	3.26	2.44	0	9.09	
LIWC_Cause	4.00	2.65	0	14.29	
LIWC_Tentative	4.70	4.20	0	19.15	
LIWC_Certanity	0.83	1.36	0	5.77	

Table 2

Bivariate Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Pre-test Depression	—																	
2. Pre-test Anger	.65**	—																
3. Post-test Depression	.89**	.56**	—															
4. Post-test Anger	.60**	.83**	.69	—														
5. Maintenance of Heritage Culture	-.09	-.02	-.09	-.02	—													
6. Awareness of Discrimination	.03	.02	.05	.06	.22*	—												
7. Critical Consciousness	.34**	.19*	.32**	.22*	.01	.04	—											
8. Pitch Mean	.20*	.21*	.14	.17	-.09	-.07	.29**	—										
9. Pitch Range	-.16	.04	-.18*	-.003	-.02	.01	.05	.12	—									
10. LIWC_Positive Emotion	.15	.19*	.21*	.26**	.03	.03	.18	-.03	.07	—								
11. LIWC_Negative Emotion	.07	.04	-.04	-.03	.13	.06	-.02	.04	-.02	-.10	—							
12. LIWC_Anxiety	.06	.03	.05	-.01	.02	.10	-.12	-.05	.14	.03	.20	—						
13 .LIWC_Anger	.06	-.03	-.08	-.04	-.04	-.18*	-.05	.08	-.05	.04	.40**	-.10	—					
14. LIWC_Insight	-.01	.06	.004	.02	-.04	-.03	-.13	.00	-.07	-.01	-.13	-.05	.06	—				
15. LIWC_Cause	.10	.03	.15	.09	-.15	-.10	.37**	.10	.10	.17	-.14	.06	-.22	.08	—			
16. LIWC_Tentative	-.23*	-.18	-.27**	.24**	.11	.06	-.15	-.14	.06	-.16	-.10	.08	-.00	-.11	-.20*	—		
17. LIWC_Certanity	.09	.14	.05	.09	.09	-.07	.01	.13	.10	-.04	-.04	-.12	.03	.02	-.08	-.08	—	
18. Group (Self vs. Other)	.17	.23*	.21*	.28**	.00	.00	.24*	.25**	.04	.19*	-.06	-.04	.10	.21*	.37**	-.51**	.14	—

Note. *$p < .05$, **$p < .01$, ***$p < .001$

Table 3

T-Tests between Self-Blame and Other-Blame

Variable	Self-Blame		Other Blame				
	M	SD	M	SD	*t*-test	*p*	Cohen's *d*
Post-test Depression	1.37	0.51	1.82	0.83	-2.34**	0.021	0.65
Post-test Anger	1.22	0.39	1.85	0.86	-5.03***	<.001	0.94
Pitch Mean	149.73	34.18	178.43	43.18	-2.79**	0.006	0.76
Pitch Range	461.37	110.86	470.46	88.91	-0.40	0.69	0.09
LIWC_Positive Emotion	1.11	1.22	2.01	1.99	-2.88**	0.006	0.55
LIWC_Negative Emotion	3.31	3.53	2.95	2.18	0.44	0.667	0.12
LIWC_Anxiety	0.45	1.25	0.36	0.88	0.41	0.684	0.08
LIWC_Anger	0.44	0.98	0.82	1.49	-1.07	0.287	0.30
LIWC_Insight	2.10	2.33	3.50	2.40	-2.38*	0.019	0.59
LIWC_Cause	1.81	1.87	4.44	2.57	-4.33***	<.001	1.17
LIWC_Tentative	9.43	4.43	3.76	3.46	6.38***	<.001	1.43
LIWC_Certanity	0.40	1.06	0.82	1.40	-1.87	0.07	0.34

Note. *$p < .05$, **$p < .01$, ***$p < .001$

Main Results

As covariates, I included pre-test anger, pre-test depression, and critical consciousness in the model. I excluded the racial socialization variables (maintenance of heritage culture, awareness of discrimination) given that they were not correlated with the post-test measures.

Model 1

For the first model, I tested whether the group (self vs. other blame) was related to pitch mean and range and in turn self-reported depression and anger. I hypothesized that those in the other-blame condition would report greater scores on pitch mean and range and in turn greater anger. On the other hand, I hypothesized that those in the self-blame condition would indicate greater scores in pitch mean and range and in turn report greater depression.

The model indicated adequate fit with a posterior predictive *p* value of .25. See Figure 4 for the model. The overall model demonstrated that the group condition and covariates (critical consciousness, pre-test depression, pre-test anger) accounted for 6.4% of the variance in pitch mean ($R^2 = 0.064$, Posterior *SD* = 0.043, 95% CI [0.008, 0.164], $p < 0.001$), 0.6% of the variance in pitch range ($R^2 = 0.006$, Posterior *SD* = 0.013, 95% CI [0.000, 0.045], $p < 0.001$), 78.1% of the variance in post-test depression ($R^2 = 0.781$, Posterior *SD* = 0.027, 95% CI [0.728, 0.826], $p < 0.001$), and 69.4% of the variance in post-test anger ($R^2 = 0.694$, Posterior *SD* = 0.035, 95% CI [0.625, 0.760], $p < 0.001$).

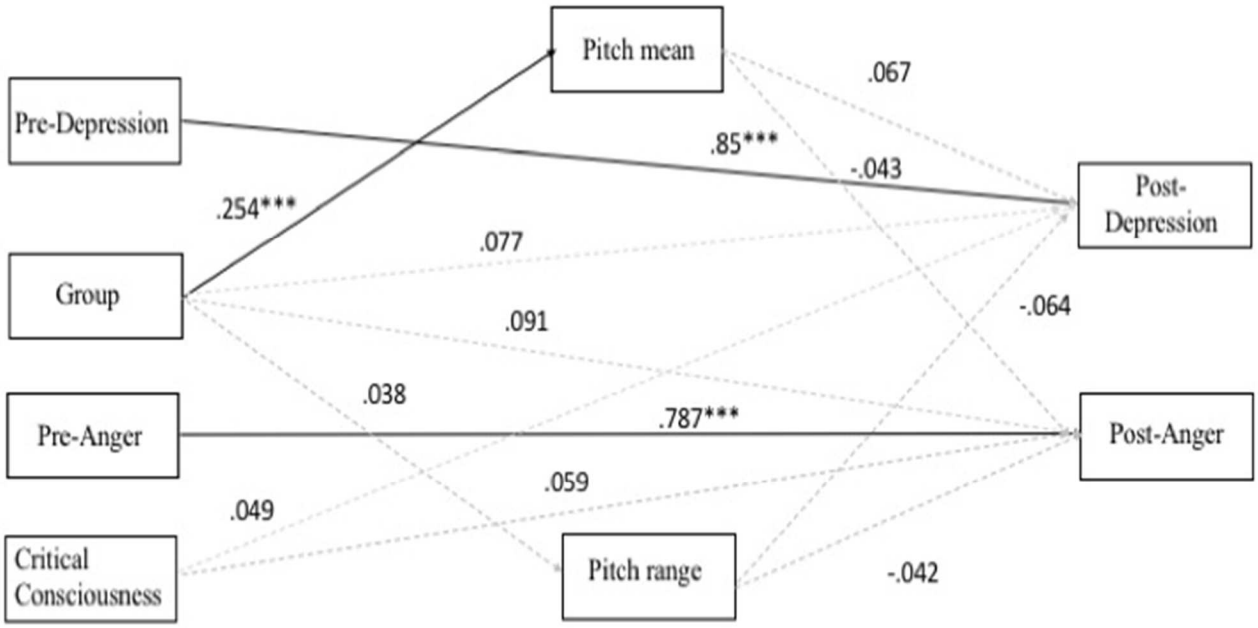
For direct effects, I found that those in the other-blame group had greater pitch mean (ß = 0.254, Posterior *SD* = 0.086, 95% CI = [0.089, 0.405], $p < .001$) but not pitch range (ß = 0.038, Posterior *SD* = 0.086, 95% CI = [-0.107, 0.211], $p = 0.34$). While controlling for critical consciousness (ß = 0.049, Posterior *SD* = 0.052, 95% CI = [-0.067, 0.140], $p = 0.25$) and pre-test depression (ß = 0.85, Posterior *SD* = 0.029, 95% CI = [0.784, 0.903], $p < .001$), the group

condition (ß = 0.077, Posterior *SD* = 0.041, 95% CI = [-0.002, 0.152], *p* = .04), pitch mean (ß = -0.067, Posterior *SD* = 0.045, 95% CI = [-0.163, 0.022], *p* = .07), and pitch range (ß = -0.064, Posterior *SD* = 0.046, 95% CI = [-0.146, 0.019], *p* = .07) did not predict post-test depression. Similarly, while controlling for critical consciousness (ß = 0.059, Posterior *SD* = 0.060, 95% CI = [-0.056, 0.181], *p* = 0.190) and pre-test anger (ß = 0.787, Posterior *SD* = 0.029, 95% CI = [0.710, 0.830], *p* < 0.001), the group condition (ß = 0.091, Posterior *SD* = 0.052, 95% CI = [-0.013, 0.186], *p* = 0.04) was not related to post-test anger. In addition, pitch mean (ß = -0.043, Posterior *SD* = 0.056, 95% CI = [-0.145, 0.057], *p* = 0.210) and pitch range (ß = -0.042, Posterior *SD* = 0.055, 95% CI = [-0.169, 0.050], *p* = 0.200) did not predict post-test anger.

There was also no significant indirect effects in the model. There were no indirect effects between group condition, pitch mean, and post-test depression (ß = -0.015, Posterior *SD* = 0.014, 95% CI = [-0.053, 0.006], *p* = 0.07). Similarly, there were no indirect effects between group condition, pitch range, and post-test depression (ß = -0.001, Posterior *SD* = 0.008, 95% CI = [-0.018, 0.011], *p* = 0.40). Pitch mean was not a mediator between group condition and post-anger (ß = -0.009, Posterior *SD* = 0.015, 95% CI = [-0.045, 0.014], *p* = 0.210) and pitch range was also not a mediator between the group condition and post-test anger (ß = 0.000, Posterior *SD* = 0.018, 95% CI = [-0.057, 0.019], *p* = 0.460).

Figure 4

Path Analytic Model between Group (Self vs. Other Blame), Pitch Mean and Pitch Range, and Self-Reported Depression and Anger



Note. *$p < .05$, **$p < .01$, ***$p < .001$

Significant pathways are in bold; non-significant pathways in gray and dotted

Model 2

The model indicated adequate fit with a posterior predictive *p* value of .75. See Figure 5 for the model. The overall model demonstrated that the group condition and covariates (critical consciousness, pre-test depression, pre-test anger) predicted 3.9% of the variance in LIWC positive emotion ($R^2 = 0.039$, Posterior *SD* = 0.035, 95% CI [0.001, 0.128], $p < 0.001$), 0.6% of the variance in LIWC negative emotion ($R^2 = 0.006$, Posterior *SD* = 0.014, 95% CI [0.000, 0.043], $p < 0.001$), 78.6% of the variance in post-test depression ($R^2 = 0.786$, Posterior *SD* = 0.026, 95% CI [0.723, 0.828], $p < 0.001$), and 69.6% of the variance in post-test anger ($R^2 = 0.696$, Posterior *SD* = 0.034, 95% CI [0.618, 0.761], $p < 0.001$).

For direct effects, I found that those in the other-blame group had greater LIWC positive emotions during the speech task (ß = 0.197, Posterior *SD* = 0.088, 95% CI = [0.030, 0.357], $p < .001$) but there were no differences with the frequencies of negative emotion words (ß =-0.065, Posterior *SD* = 0.086, 95% CI = [-0.208, 0.102], $p = 0.210$). While controlling for critical consciousness (ß = 0.007, Posterior *SD* = 0.046, 95% CI = [-0.091, 0.099], $p = 0.41$) and pre-test depression (ß = 0.859, Posterior *SD* = 0.026, 95% CI = [0.807, 0.905], $p <.001$), the group condition (ß = 0.043, Posterior *SD* = 0.040, 95% CI = [-0.029, 0.118], $p = 0.120$), and frequencies of positive emotions (ß = 0.071, Posterior *SD* = 0.044, 95% CI = [-0.033, 0.168], $p = 0.060$), did not predict post-test depression. However, the less negative emotion words used (ß = -0.095, Posterior *SD* = 0.048, 95% CI = [-0.186, - 0.015], $p = 0.010$), the more participants reported post-test depression.

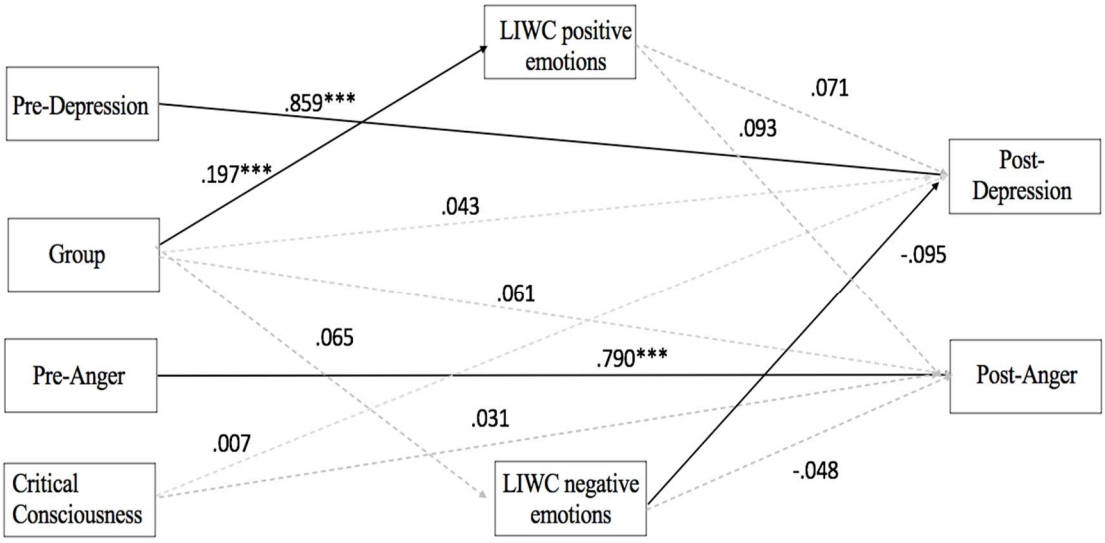
Similarly, while controlling for critical consciousness (ß = 0.031, Posterior *SD* = 0.058, 95% CI = [-0.078, 0.153], $p = 0.330$) and pre-test anger (ß = 0.790, Posterior *SD* = 0.028, 95% CI = [0.725, 0.839], $p < 0.001$), the group condition (ß = 0.061, Posterior *SD* = 0.050, 95% CI =

[-0.034, 0.159], $p = 0.09$) was not related to post-test anger. In addition, LIWC positive emotions (ß = 0.093, Posterior *SD* = 0.055, 95% CI = [-0.019, 0.214], $p = 0.040$) and LIWC negative emotions (ß = -0.048, Posterior *SD* = 0.055, 95% CI = [-0.153, 0.057], $p = 0.180$) did not predict post-test anger.

There was also no significant indirect effects in the model. There were no indirect effects between group condition, LIWC positive emotions, and post-test depression (ß = 0.011, Posterior *SD* = 0.010, 95% CI = [-0.010, 0.033], $p = 0.06$). Similarly, there were no indirect effects between group condition, LIWC negative emotions, and post-test depression (ß = 0.005, Posterior *SD* = 0.011, 95% CI = [-0.012, 0.025], $p = 0.220$). LIWC positive emotions was not a mediator between group condition and post-test anger (ß = 0.016, Posterior *SD* = 0.013, 95% CI = [-0.002, 0.050], $p = 0.04$) and LIWC negative emotions was not a mediator between group condition and post-test anger (ß = 0.001, Posterior *SD* = 0.008, 95% CI = [-0.009, 0.020], $p = 0.370$).

Figure 5

Path Analytic Model between Group (Self vs. Other Blame), LIWC Positive and Negative Emotions,, and Self-Reported Depression and Anger



Note. *$p < .05$, **$p < .01$, ***$p < .001$

Significant pathways are in bold; non-significant pathways in gray and dotted

Model 3

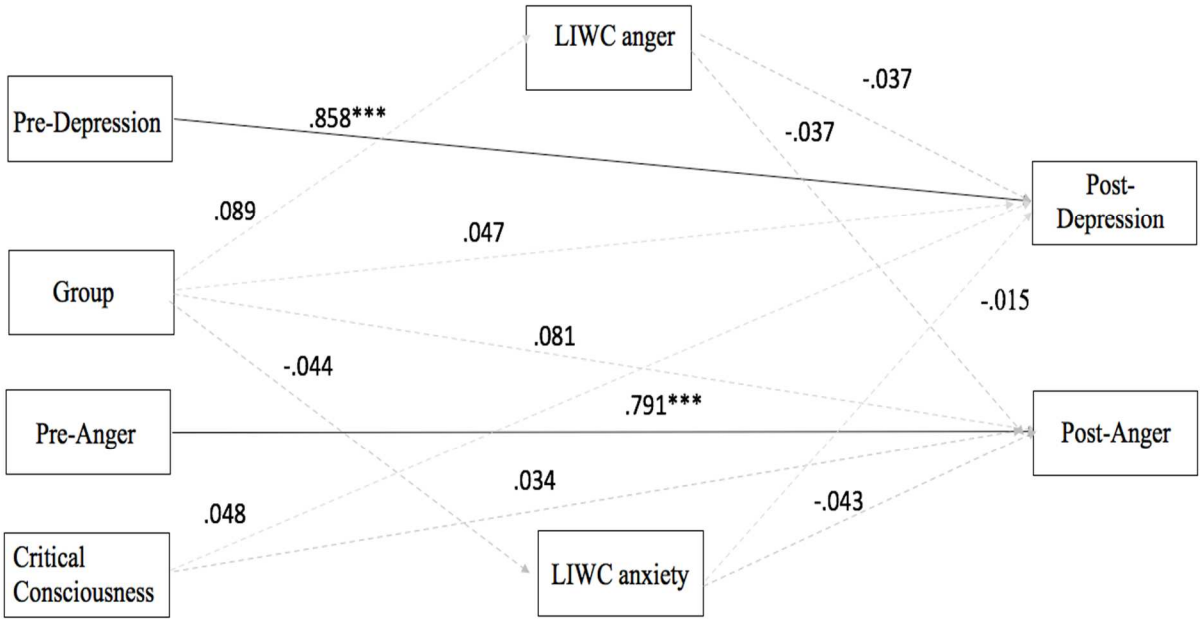
The model indicated adequate fit with a posterior predictive *p* value of 0.750. See Figure 6 for the model. I examined an overall model looking at the relationships between group condition, covariates (critical consciousness, pre-test depression, pre-test anger) predicting 0.9% of the variance in LIWC anger words (R^2 = 0.009, Posterior *SD* = 0.017, 95% CI [0.000, 0.061], *p* < .001), 0.5% of the variance in LIWC anxiety words (R^2 = 0.005, Posterior *SD* = 0.012, 95% CI [0.000, 0.051], *p* < .001), 77.4% of the variance in post-test depression (R^2 = 0.774, Posterior *SD* = 0.029, 95% CI [0.710, 0.821], *p* < .001), and 69% of the variance in post-test anger (R^2 = 0.690, Posterior *SD* = 0.036, 95% CI [0.620, 0.758], *p* < .001).

There were no direct effects of the group condition on LIWC anger (ß = 0.089, Posterior *SD* = 0.090, 95% CI = [-0.091, 0.247], *p* = 0.190), LIWC anxiety (ß = -0.044, Posterior *SD* = 0.087, 95% CI = [-0.192, 0.192], *p* = 0.310). In addition, while controlling for critical consciousness (ß = 0.018, Posterior *SD* = 0.048, 95% CI = [-0.081, 0.126], *p* = 0.36) and pre-test depression (ß = 0.858, Posterior *SD* = 0.023, 95% CI = [0.802, 0.896], *p* <.001), the group condition (ß = 0.047, Posterior *SD* = 0.039, 95% CI = [-0.029, 0.140], *p* = 0.09), number of anger words (ß = -0.037, Posterior *SD* = 0.044, 95% CI = [-0.117, 0.054], *p* = 0.24), number of anxiety words (ß = -0.015, Posterior *SD* = 0.046, 95% CI = [-0.106, 0.068], *p* = 0.390), did not predict post-test depression. Also, while controlling for critical consciousness (ß = 0.034, Posterior *SD* = 0.050, 95% CI = [-0.047, 0.137], *p* = 0.220) and pre-test anger (ß = 0.791, Posterior *SD* = 0.027, 95% CI = [0.730, 0.841], *p* <.001), the group condition (ß = 0.081, Posterior *SD* = 0.048, 95% CI = [-0.02, 0.187], *p* = 0.06), number of anger words (ß = -0.037, Posterior *SD* = 0.049, 95% CI = [-0.130, 0.057], *p* = 0.270), and number of anxiety words (ß = -0.043, Posterior *SD* = 0.054, 95% CI = [-0.139, 0.068], *p* = 0.190), did not predict post-test anger.

There was also no significant indirect effects in the model. There were no indirect effects between group condition, LIWC anger words, and post-test depression (ß = -0.004, Posterior *SD* = 0.016, 95% CI = [-0.045, 0.015], *p* = 0.310). In addition, there were no effects between group condition, LIWC anger words, and post-test anger (ß = -0.005, Posterior *SD* = 0.02, 95% CI = [-0.047, 0.021], *p* = 0.340). There were also no indirect effects between group condition, LIWC anxiety words, and post-test depression (ß = 0.000, Posterior *SD* = 0.012, 95% CI = [-0.017, 0.035], *p* = 0.500); there were similar results with post-test anger (ß = 0.003, Posterior *SD* = 0.019, 95% CI = [-0.026, 0.061], *p* = 0.380).

Figure 6

Path Analytic Model between Group (Self vs. Other Blame), LIWC Anger and Anxiety, and Self-Reported Depression and Anger



Note. *$p < .05$, **$p < .01$, ***$p < .001$

Significant pathways are in bold; non-significant pathways in gray and dotted

Model 4

The model indicated adequate fit with a posterior predictive *p* value of 0.583. See Figure 7 for the model. We examined an overall model looking at the relationships between group condition, covariates (critical consciousness, pre-test depression, pre-test anger) predicting LIWC insight words, LIWC cause words, LIWC tentative words, LIWC certain words, and in turn post-test depression and anger. The group condition and covariates accounted for 4.2% of the variance in LIWC insight words ($R^2 = 0.042$, Posterior *SD* = 0.035, 95% CI [0.001, 0.130], $p < 0.001$), 17.3% of the variance in LIWC cause words ($R^2 = 0.173$, Posterior *SD* = 0.058, 95% CI [0.046, 0.267], $p < 0.001$), 25.4% of the variance in LIWC tentative words ($R^2 = 0.254$, Posterior *SD* = 0.065, 95% CI [0.155, 0.377], $p < 0.001$), 1.8% of the variance in LIWC certain words ($R^2 = 0.018$, Posterior *SD* = 0.026, 95% CI [0.000, 0.098], $p < 0.001$), 78.1% of the variance in post-test depression ($R^2 = 0.781$, Posterior *SD* = 0.029, 95% CI [0.712, 0.827], $p < 0.001$), and 69.2% of the variance in post-test anger ($R^2 = 0.692$, Posterior *SD* = 0.037, 95% CI [0.600, 0.752], $p < 0.001$).

For direct effects, I found that those in the other-blame group had greater LIWC insight words during the speech task (ß = 0.206, Posterior *SD* = 0.087, 95% CI = [0.031, 0.361], $p < .001$) and cause words (ß = 0.416, Posterior *SD* = 0.078, 95% CI = [0.214, 0.517], $p < .001$). However, those in the self-blame condition used more tentative words (ß = -0.503, Posterior *SD* = 0.066, 95% CI = [-0.614, -0.394], $p < .001$). There were no differences in the group condition and the amount of certain words (ß = 0.133, Posterior *SD* = 0.090, 95% CI = [-0.064, 0.314], $p = 0.05$).

While controlling for critical consciousness (ß = 0.031, Posterior *SD* = 0.052, 95% CI = [-0.081, 0.116], $p = 0.340$) and pre-test depression (ß = 0.853, Posterior *SD* = 0.023, 95% CI =

[0.809, 0.899], p <.001), the group condition (ß = 0.015, Posterior *SD* = 0.056, 95% CI = [-0.114, 0.108], p = 0.370), number of insight words (ß = 0.013, Posterior *SD* = 0.048, 95% CI = [-0.092, 0.095], p = 0.440), number of cause words (ß = 0.003, Posterior *SD* = 0.054, 95% CI = [-0.088, 0.109], p = 0.480), number of tentative words (ß = -0.060, Posterior *SD* = 0.053, 95% CI = [-0.178, 0.109], p = 0.028), and number of certain words (ß = -0.027, Posterior *SD* = 0.043, 95% CI = [-0.133, 0.040], p = 0.270) did not predict post-test depression.

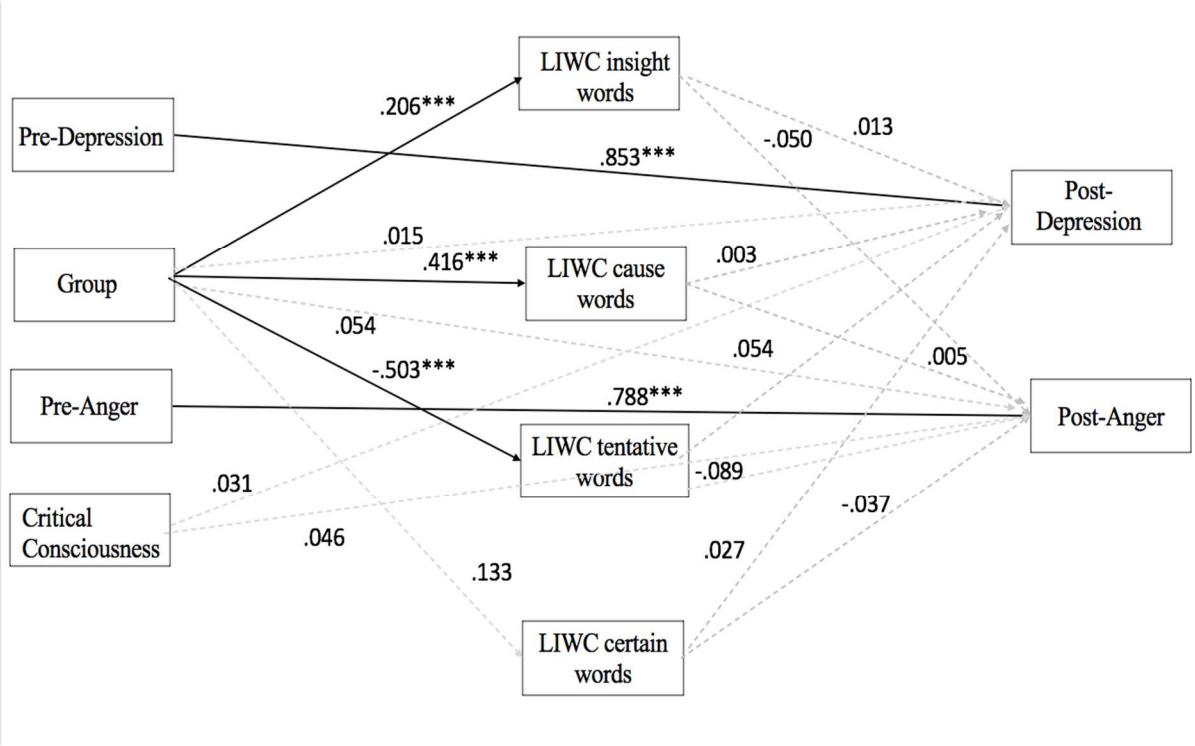
While controlling for critical consciousness (ß = 0.046, Posterior *SD* = 0.057, 95% CI = [-0.073, 0.147], p = 0.230) and pre-test anger (ß = 0.788, Posterior *SD* = 0.028, 95% CI = [0.731, 0.824], p <.001), the group condition (ß = 0.054, Posterior *SD* = 0.063, 95% CI = [-0.072, 0.171], p = 0.220), number of insight words (ß = -0.050, Posterior *SD* = 0.058, 95% CI = [0.142, 0.110], p = 0.240), number of cause words (ß = 0.005, Posterior *SD* = 0.063, 95% CI = [-0.096, 0.132], p = 0.470), number of tentative words (ß = -0.089, Posterior *SD* = 0.060, 95% CI = [-0.244, 0.014], p = 0.060), and number of certain words (ß = -0.037, Posterior *SD* = 0.051, 95% CI = [-0.148, 0.066], p = 0.260) did not predict post-test anger.

There was also no significant indirect effects in the model. There were no indirect effects between group condition, LIWC insight words, and post-test depression (ß = 0.004, Posterior *SD* = 0.028, 95% CI = [-0.049, 0.058], p = 0.440); there were similar results with post-test anger (ß = -0.022, Posterior *SD* = 0.037, 95% CI = [-0.105, 0.039], p = 0.240). In addition, the number of LIWC cause words was not a mediator between group condition and post-test depression (ß = -0.004, Posterior *SD* = 0.056, 95% CI = [-0.088, 0.129], p = 0.480) and group condition and post-test anger (ß = 0.005, Posterior *SD* = 0.066, 95% CI = [-0.118, 0.128], p = 0.470). The number of tentative words was also not a mediator between group condition and post-test depression (ß = 0.081, Posterior *SD* = 0.070, 95% CI = [-0.041, 0.247], p = 0.100) and anger (ß = 0.110,

Posterior *SD* = 0.082, 95% CI = [-0.020, 0.339], *p* = 0.060). The amount of certain words also did not mediate the relation between group and post-test depression (ß = -0.006, Posterior *SD* = 0.019, 95% CI = [-0.063, 0.021], *p* = 0.280) and post-test anger (ß = -0.007, Posterior *SD* = 0.024, 95% CI = [-0.059, 0.040], *p* = 0.290).

Figure 7

Path Analytic Model between Group (Self vs. Other Blame), LIWC Cognitive Variables, and Self-Reported Depression and Anger



Note. *$p < .05$, **$p < .01$, ***$p < .001$

Significant pathways are in bold; non-significant pathways in gray and dotted

Post-Hoc Analyses (without covariates)

As post-hoc analyses, I ran the previous models without covariates. The pre-measures had strong effects on the self-report mood measures, suggesting that mood after the racial microaggression task was more significant in predicting post-mood than whether participants internalized (self-blame) or externalized (other-blame) the subtle racist scenario. Thus, it seems regardless of the cognitive mechanism, results suggest that subtle racism scenario may have produced a stronger effect on mood. However, I was also interested in the results in the two-group posttest-only randomized experimental design. Theoretically, given that the two groups are randomly assigned, a pretest is not required for such design.

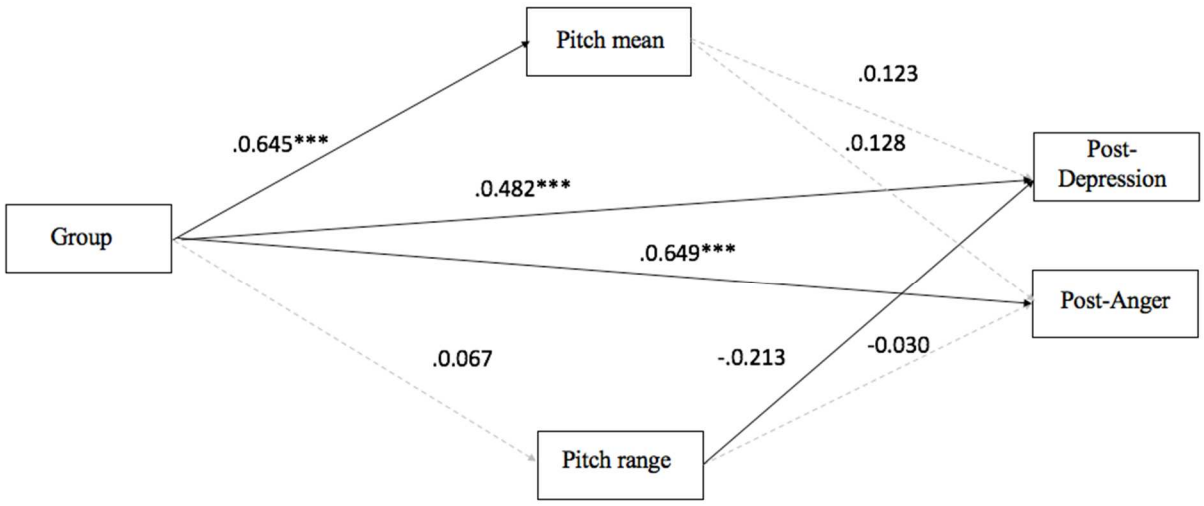
First, I examined the effects of group on pitch mean ($R^2 = 0.058$, Posterior *SD* = 0.037, 95% CI = [0.006, 0.151], $p < .001$), pitch range ($R^2 = 0.003$, Posterior *SD* = 0.015, 95% CI = [0.000, 0.058], $p < .001$), post-test depression ($R^2 = 0.118$, Posterior *SD* = 0.056, 95% CI = [0.012, 0.229], $p < .001$) and post-test anger ($R^2 = 0.110$, Posterior *SD* = 0.047, 95% CI = [0.032, 0.206], $p < .001$). The Posterior Predictive *P*-Value was 0.750.

Those in the other-blame group had greater pitch mean (ß = 0.240, Posterior *SD* = 0.078, 95% CI = [0.078, 0.389], $p < 0.001$), greater self-reported depression (ß = 0.180, Posterior *SD* = 0.077, 95% CI = [0.026, 0.318], $p < 0.001$), and self-reported anger (ß = 242, Posterior *SD* = 0.086, 95% CI = [0.072, 0.416], $p < 0.001$) than the self-blame group. However, there were no differences between self and other-blame in terms of pitch range (ß = 0.025, Posterior *SD* = 0.097, 95% CI = [-0.134, 0.218], $p = 0.390$). In addition, there were no direct effects of pitch mean (ß = 0.123, Posterior *SD* = 0.092, 95% CI = [-0.050, 0.309], $p = 0.090$) on self-reported depression, but those with lower pitch range (ß = -0.213, Posterior *SD* = 0.097, 95% CI = [-0.384, -0.023], $p = 0.090$) reported greater depression. Pitch mean (ß = 0.128, Posterior *SD* =

0.097, 95% CI = [-0.060, 0.307], p = 0.080) and pitch range (ß = -0.030, Posterior SD = 0.092, 95% CI = [-0.206, 0.160], p = 0.390) were not related to self-reported anger.

For indirect effects, pitch mean was not a mediator between group (self vs. other-blame) and post-test anger (ß = 0.025, Posterior SD = 0.026, 95% CI = [-0.012, 0.081], p = 0.080). Pitch range also did not mediate the effects between group and post-test anger (ß = 0.000, Posterior SD = 0.009, 95% CI = [-0.019, 0.024], p = 0.440). Pitch mean also did not mediate the relations between group and post-test depression (ß = -0.004, Posterior SD = 0.021, 95% CI = [-0.048, 0.045], p = 0.390). Lastly, pitch range was not a mediator between group and post-test depression (ß = 0.029, Posterior SD = 0.024, 95% CI = [-0.013, 0.087], p = 0.090). See Figure 8 for the results.

Figure 8



Note. *p < .05, **p < .01, ***p < .001

Significant pathways are in bold; non-significant pathways in gray and dotted

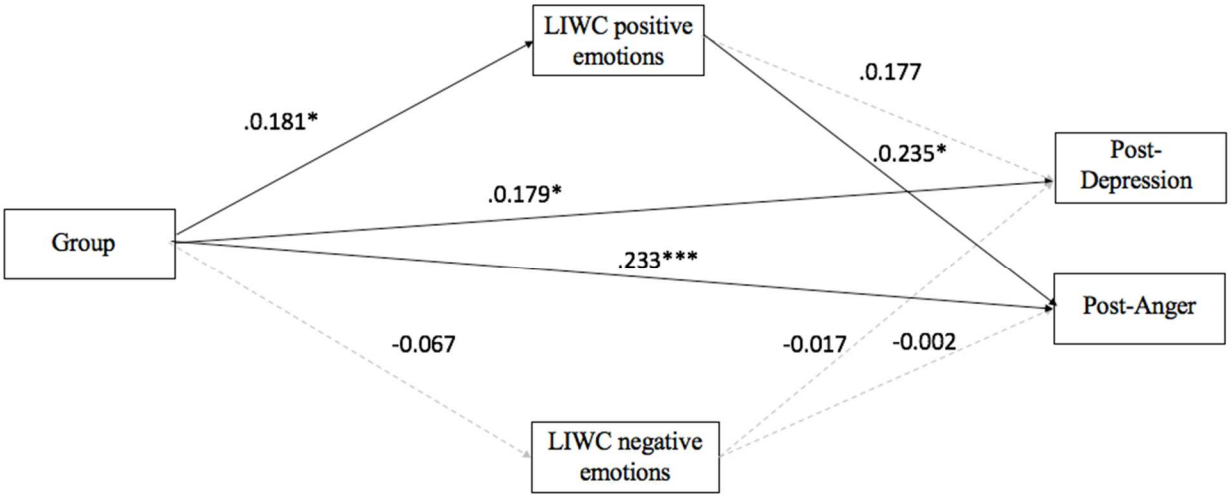
Next, I examined the effects between self vs. other blame, the number of positive (R^2 = 0.033, Posterior *SD* = 0.030, 95% CI = [0.000, 0.113], $p < .001$) and negative emotions (R^2 = 0.007, Posterior *SD* = 0.017, 95% CI = [0.000, 0.049], $p < .001$) used during the speech task, and in turn self-reported depression (R^2 = 0.096, Posterior *SD* = 0.040, 95% CI = [0.027, 0.188], $p < .001$) and anger (R^2 = 0.143, Posterior *SD* = 0.055, 95% CI = [0.041, 0.263], $p < .001$). The Posterior Predictive P-Value was 0.75.

Participants in the other-blame group used more positive emotions during the speech task (ß = 0.181, Posterior *SD* = 0.080, 95% CI = [0.020, 0.336], $p = 0.01$) and reported greater post-test depression (ß = 0.179, Posterior *SD* = 0.076, 95% CI = [0.018, 0.290], $p = 0.02$) and anger (ß = 0.233, Posterior *SD* = 0.083, 95% CI = [0.063, 0.386], $p < 0.001$. However, there were no differences between group membership and the amount of negative emotion words used (ß = -0.067, Posterior *SD* = 0.097, 95% CI = [-0.222, 0.128], $p = 0.240$). Interestingly, the greater number of positive emotion words used, participants then self-reported greater anger (ß = 0.235, Posterior *SD* = 0.089, 95% CI = [0.062, 0.405], $p = 0.010$) but not depression (ß = 0.177, Posterior *SD* = 0.093, 95% CI = [-0.025, 0.355], $p = 0.040$). The amount of negative emotion words used was also not related to anger (ß = -0.002, Posterior *SD* = 0.088, 95% CI = [-0.194, 0.177], $p = .500$) or depression (ß = -0.017, Posterior *SD* = 0.097, 95% CI = [-0.228, 0.157], $p = 0.370$).

There was an indirect effect between group, number of positive emotion words used, and post-test anger (ß = 0.086, Posterior *SD* = 0.061, 95% CI = [0.007, 0.225], $p = 0.02$) such that those in the other-blame group were more likely to use positive emotion words while describing the racist scenario, and in turn report greater anger. On the other hand, those in the self-blame group were less likely to use positive emotions words during the speech task and in turn report

less anger. There were no indirect effects between group, number of negative emotions, and post-test anger (ß = 0.00, Posterior *SD* = 0.009, 95% CI = [-0.023, 0.022], *p* = 0.460). In addition, there were no indirect effects between group, positive emotions, and post-test depression (ß = 0.027, Posterior *SD* = 0.023, 95% CI = [-0.006, 0.088], *p* = 0.05) and between group, negative emotions, and post-test depression (ß = 0.002, Posterior *SD* = 0.011, 95% CI = [-0.024, 0.029], *p* = 0.370). See Figure 9 for the model.

Figure 9



Note. *$p < .05$, **$p < .01$, ***$p < .001$

Significant pathways are in bold; non-significant pathways in gray and dotted

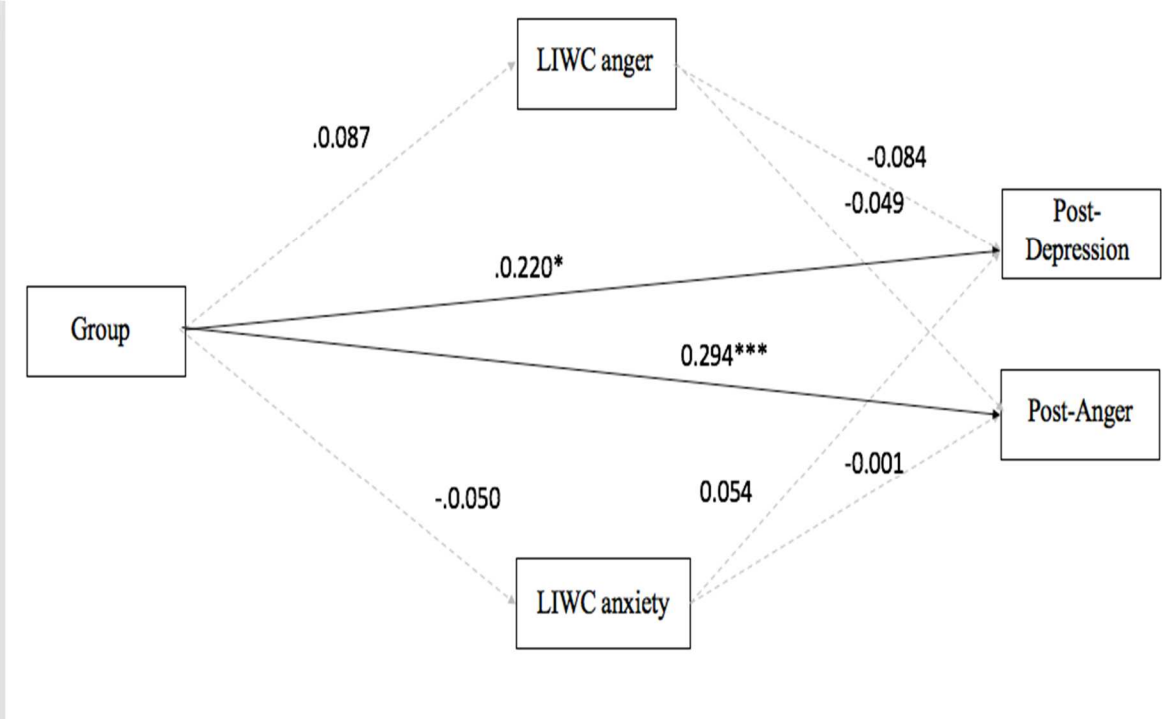
For the next model, I examined whether group was related to the number of anger (R^2 = 0.008, Posterior *SD* = 0.017, 95% CI = [0.000, 0.062], $p < 0.01$) and anxiety words (R^2 = 0.006, Posterior *SD* = 0.015, 95% CI = [0.000, 0.042], $p < 0.01$) used during the speech task and in turn self-reported depression (R^2 = 0.070, Posterior *SD* = 0.038, 95% CI = [0.011, 0.147], $p < .001$) and anger (R^2 = 0.093, Posterior *SD* = 0.047, 95% CI = [0.023, 0.200], $p < .001$).

Group membership was not related to the number of anger (ß = 0.087, Posterior *SD* = 0.082, 95% CI = [-0.067, 0.250], $p = 0.150$) or anxiety (ß = 0.050, Posterior *SD* = 0.097, 95% CI = [-0.205, 0.145], $p = 0.280$) words used during the speech task, but was related to self-reported depression (ß = 0.220, Posterior *SD* = 0.078, 95% CI = [0.055, 0.328], $p = .01$) and anger (ß = 0.294, Posterior *SD* = 0.082, 95% CI = [0.118, 0.430], $p < .001$). The number of anger words used was also not related to self-reported depression (ß = -0.084, Posterior *SD* = 0.090, 95% CI = [-0.273, 0.085], $p = 0.200$) or anger (ß = -0.049, Posterior *SD* = 0.092, 95% CI = [0.220, 0.138], $p = 0.310$). Similarly, the amount of words pertaining to anxiety was not related to self-reported depression (ß = 0.054, Posterior *SD* = 0.091, 95% CI = [-0.156, 0.240], $p = 0.310$) or anger (ß = 0.001, Posterior *SD* = 0.085, 95% CI = [-0.166, 0.184], $p = 0.490$).

Thus, there were no indirect effects between group, LIWC anger, and post-test self-reported anger (ß = -0.004, Posterior *SD* = 0.027, 95% CI = [-0.077, 0.034], $p = 0.340$). There were also no indirect effects between group, LIWC anger, and post-test depression (ß = -0.007, Posterior *SD* = 0.033, 95% CI = [-0.110, 0.024], $p = 0.310$). LIWC anxiety also did not mediate the effects of group membership on self-reported anger (ß = 0.002, Posterior *SD* = 0.020, 95% CI = [-0.041, 0.047], $p = 0.390$) and depression (ß = 0.001, Posterior *SD* = 0.023, 95% CI = [-0.058, 0.054], $p = 0.470$.

The model is presented in Figure 10.

Figure 10



Note. *$p < .05$, **$p < .01$, ***$p < .001$

Significant pathways are in bold; non-significant pathways in gray and dotted

Finally, I examined whether group was related to the number of insight ($R^2 = 0.043$, Posterior *SD* = 0.036, 95% CI = [0.001, 0.144], $p < .001$), cause words ($R^2 = 0.129$, Posterior *SD* = 0.054, 95% CI = [0.064, 0.251], $p < .001$), tentative words ($R^2 = 0.241$, Posterior *SD* = 0.060, 95% CI = [0.123, 0.368], $p < .001$), and certain words ($R^2 = 0.019$, Posterior *SD* = 0.027, 95% CI = [0.000, 0.099], $p < .001$), during the speech task and in turn self-reported depression ($R^2 = 0.097$, Posterior *SD* = 0.052, 95% CI = [0.036, 0.226], $p < .001$) and anger ($R^2 = 0.119$, Posterior *SD* = 0.045, 95% CI = [0.035, 0.201], $p < .001$). The Posterior Predictive P-Value was 0.75.

Those in the other-blame group used greater cause words (ß = 0.360, Posterior *SD* = 0.072, 95% CI = [0.253, 0.501], $p < .001$) but fewer tentative words (ß = -0.491, Posterior *SD* = 0.063, 95% CI = [-0.607, -0.351], $p < .001$) than those in the self-blame group. Both groups used similar amounts of insight (ß = 0.206, Posterior *SD* = 0.091, 95% CI = [-0.026, 0.380], $p = .03$) and certain words (ß = 0.136, Posterior *SD* = 0.093, 95% CI = [-0.033, 0.314], $p = 0.090$) during the speech task. Those in the other-blame group reported greater anger (ß = 0.230, Posterior *SD* = 0.105, 95% CI = [0.002, 0.384], $p = 0.02$) but not depression (ß = 0.091, Posterior *SD* = 0.101, 95% CI = [-0.127, 0.297], $p = 0.190$).

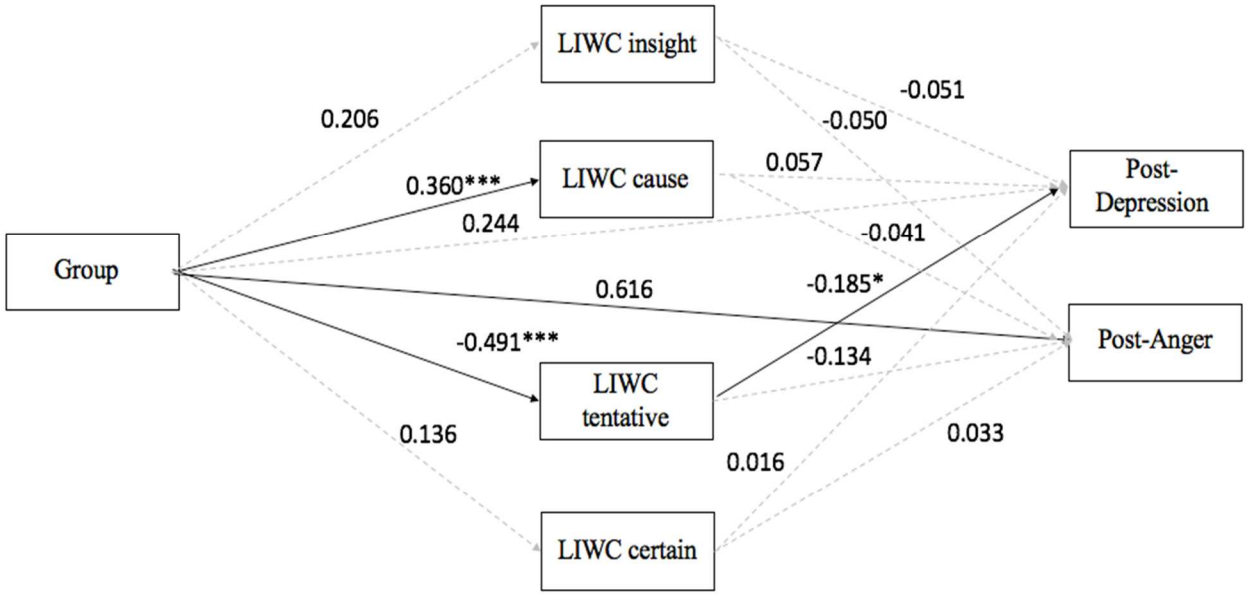
The amount of insight (ß = -0.051, Posterior *SD* = 0.090, 95% CI = [-0.246, 0.118], $p = 0.280$), cause (ß = 0.057, Posterior *SD* = 0.115, 95% CI = [-0.168, 0.271], $p = 0.320$), and certain words (ß = 0.016, Posterior *SD* = 0.084, 95% CI = [-0.132, 0.190], $p = 0.440$) were not related to post-test depression. However, participants who used more tentative words reported less depression (ß = -0.185, Posterior *SD* = 0.094, 95% CI = [-0.393, -0.009], $p = 0.020$). In addition, the number of insight (ß = -0.050, Posterior *SD* = 0.078, 95% CI = [-0.205, 0.078], $p = 0.220$), cause (ß = - 0.041, Posterior *SD* = 0.103, 95% CI = [-0.234, 0.180], $p = 0.350$), certain (ß = 0.033, Posterior *SD* = 0.089, 95% CI = [-0.141, -0.195], $p = 0.340$), and tentative words (ß = -

0.134, Posterior *SD* = 0.104, 95% CI = [-0.286, 0.093], *p* = 0.150) were not related to post-test anger.

For indirect effects, the number of insight words did not mediate the effects between group membership and post-test depression (ß = -0.008, Posterior *SD* = 0.020, 95% CI = [-0.057, 0.027], *p* = 0.290) and post-test anger (ß = -0.010, Posterior *SD* = 0.018, 95% CI = [-0.047, 0.023], *p* = 0.230). Similarly, the number of cause words did not mediate the effects between group membership and post-test depression (ß = 0.025, Posterior *SD* = 0.042, 95% CI = [-0.067, 0.096], *p* = 0.320) and post-test anger (ß = -0.014, Posterior *SD* = 0.039, 95% CI = [-0.093, 0.051], *p* = 0.350). The number of tentative words also was not a mediator between group membership and post-anger (ß = 0.065, Posterior *SD* = 0.054, 95% CI = [-0.043, 0.151], *p* = 0.150). However, the amount of tentative words used was a mediator between group membership and post-test depression (ß = 0.091, Posterior *SD* = 0.051, 95% CI = [0.005, 0.188], *p* = 0.020) such that those in the other-blame group used less tentative words and in turn reported greater depression. On the other hand, those in the self-blame group used more tentative words and in turn, reported less depression than those in the other-blame group. The number of certain words used was not a mediator between group and depression (ß = 0.001, Posterior *SD* = 0.013, 95% CI = [-0.028, 0.024], *p* = 0.450) and group and anger (ß = 0.002, Posterior *SD* = 0.015, 95% CI = [-0.023, 0.033], *p* = 0.350).

See Figure 11 for the model.

Figure 11



Note. *$p < .05$, **$p < .01$, ***$p < .001$

Significant pathways are in bold; non-significant pathways in gray and dotted

Chapter 5: Discussion

Research demonstrates the negative effects of subtle racism on self-reported mental health outcomes (e.g. Choi et al, 2017; Wu et al., 2019; Yoo & Lee, 2010). However, less is known about the mechanisms by which subtle racism affects psychological outcomes and possible within-group differences among Asian Americans. From an applied psychology perspective, it is critical to investigate whether we can induce different cognitions in response to racism in order to help clients heal from racism. The present study extends the literature by using a randomized experimental approach to investigate whether inducing the cognitive appraisal strategies of self vs. other blame affected Asian American emerging adults' self-reported mood through differences in speech and language.

Main Findings

Most interestingly, I found that when controlling for pre-mood and critical consciousness, when participants watched a subtle racist event and asked to blame the perpetrator, they were more likely to use higher pitch, more positive emotion words, more cognitive words (insight, cause), and less tentative words when talking compared to those in the self-blame condition. In previous studies, higher mean pitch, or the rate of vocal fold vibrations (Titze, 2000) has been associated with greater anger (Rochman & Amir, 2013; Rochman et al., 2008) and lower mean pitch has been positively correlated with sadness (Furnes et al., 2016; Honig et al., 2014; Kumbhakarn & Sathe-Pathak, 2015; Rochman & Amir, 2013; Scherer et al., 2003; Vicsi et al., 2012). Given that there have been no studies that I know of examining vocal acoustics in response to racism, these are tentative associations. The results indicate that when asked to externalize a subtle racism event, Asian Americans may feel more anger but rather than reporting it through self-report (Mauss et al., 2011), they may express anger through their pitch, suggesting

that counselors should be cognizant of vocal features as a possible indicator of emotions. This is also consistent with our hypothesis that those in the other-blame condition would feel more anger than those in the self-blame group given that they are describing a racist event. In response to observing a racist event, it is a normal and adaptive reaction to feel anger given that it is an illustration of societal injustice, as indicated by previous empirical studies (e.g., Brondolo et al., 2009; Carter & Forsyth, 2010). Anger is also a form of protection, and it can be a healthy reaction to feel anger when slighted due to one's identity and when there is oppression and possible feelings of powerlessness. On the other hand, if anger is consistently suppressed in response to discrimination, it could lead to rumination and persistent anxiety (Brondolo et al., 2009).

In contrast, participants who were asked to blame themselves in response to a subtle racist event had lower pitch mean, which has previously been associated with more sadness (e.g., Kumbhakarn & Sathe-Pathak, 2015; Rochman & Amir, 2013). Blodorn and colleagues (2016) found that discrimination was linked with increased self-blame and in turn worse self-reported self-esteem and physical and mental health. Thus, lower pitch might indicate that participants in the self-blame group felt greater sadness given that they are believing that other people's subtle racist attacks may be a reflection of themselves. This is concerning given that internalization of oppression could lead to more depression and self-hatred (Paradies, 2006a).

In addition, the other-blame group used more positive emotion words (e.g., nice, sweet) compared to the self-blame group during the speech task, but both groups used similar amounts of negative emotion words. It could be possible that consistent with theories (Crocker & Major, 1989; Major et al., 2002), the other-blame group does have stronger positive feelings given that they can recognize that the subtle racism event is not their fault and could feel relieving. At the

same time, positive emotions with Asian Americans are complex. For example, depressed Asian Americans have been shown to exhibit similar, and possible more, positive emotions than non-depressed Asian Americans (Chentsova-Dutton et al., 2010). Thus, the use of greater positive emotion words could possibly be a strategy to mask their distress or anger. However, the self-blame group did use less positive emotion words and slightly more negative emotion words (M = 3.31) than the other-blame group (M = 2.95), although the difference in the amount of negative emotion words were not significant across groups. Both the self-blame and other-blame group used more negative than positive emotion words however, possibly suggesting that regardless of whether they blamed themselves or the perpetrator, participants had more negative than positive reactions to the subtle racist event. It is interesting to note however, that when participants used more negative emotion words during the speech task, they then self-reported less depression. Thus, it could be that being able to speak and process their negative emotions rather suppressing them may be helpful in reducing depressive feelings.

In addition, although the other blame group had greater pitch mean – possibly suggesting more anger – in the long term, it may be more adaptive to feel anger after being able to process it. This is evidenced by participants in the other blame group using a great number of causal words (e.g., because, effect, hence) and insight (e.g., think, consider, know) words that are indicative of cognitive mechanisms, than those in the self-blame group. Tausczik and Pennebaker (2010) suggest that these cognitive mechanism words indicate an active reappraisal process and being able to create meaning and actively process the event. The use of greater causal and insight words have been associated with better health outcomes (Pennebaker et al., 1997). Thus, when asked to blame others in response to racism, participants may feel more angry

but also may be actively making sense and processing the event as they are expressing themselves.

Relatedly, those in the other-blame group used less tentative (e.g., maybe, perhaps) words and those in the self-blame group used more. When asked to blame themselves, Asian Americans may use more tentative (e.g., perhaps, maybe) words, because they become more hesitant and stressed about the task. Wong-Padoongpatt and colleagues (2017) found that racial microaggressions cause more physiological stress in the body, because it undermines self-concept. Thus, when participants were asked to blame themselves in response to a microaggression, it is likely that their self-esteem decreases and thus are more tentative and anxious when speaking. Another possible explanation is that the greater use of tentative words could indicate cognitive dissonance – or holding contradictory beliefs, ideas, or values (Harmon-Jones & Mills, 2019; Festinger, 1957) – such that they are expressing that the subtle racism event is their fault, when the research has consistently demonstrated that racism is a system of dominance that was created to uphold White supremacy and is not a reflection or the fault of historically marginalized groups (Harrell, 2000; Roberts & Rizzo, 2020). Thus, it is possible that it is confusing and psychologically inconsistent to hold these contradictory views. The use of more tentative words indicate that it is more difficult to process the event (Tausczik & Pennebaker, 2010) and thus it may be more adaptive in naming and processing racism instead. There were however no differences in the amount of words used that indicated certainty (e.g., always, never). Subtle racism can be confusing, because it is implicit, less blatant, and makes people of color question themselves. As indicated by the low mean scores, participants in both the self and other-blame group may be less certain about their responses.

Interestingly, there were no significant differences between self and other-blame on the number of anger (e.g., hate, annoyed) and anxiety (e.g., worried, fearful) related words used. It is possible that participants were either unaware or were less likely to share their anger through words. In addition, there may differences in other varying emotions that we did not test. For example, in response to racism, those who are told to blame themselves may feel greater shame, humiliation, fear, and/or confusion and those who may blame others may feel more sorrow, contempt, and annoyance (Paradies, 2006a). Lastly, it could also be that Asian Americans are taught to suppress their emotions and thus may not be as likely to explicitly use emotion words (Saw & Omakzaki, 2010), as seen by the low means of both the number of anger and anxiety words in each group.

Lastly, participants in the other and self-blame groups had no differences in self-reported mood. First, the covariates, specifically pre-anger and pre-depression, predicted a large amount of variance in post-test mood. Thus, when Asian Americans experience a subtle racial event, their mood in response to the event is a stronger indicator of their feelings regardless of whether they are asked to internalize or externalize the event. However, it is also possible however that they do not explicitly share how they are feeling. Given the high stigma of psychological problems in the Asian American community due to the notion of weakness and associated shame (Han & Pong, 2015; Shea & Yeh, 2008), Asian Americans may underreport their emotional difficulties and instead report greater somatic concerns (Rao et al., 2012; Zou et al., 2009). Although they may feel anger, Asian Americans are less likely to report and display anger than European Americans, even though they feel it physiologically (Mauss et al., 2011). Some may not respond at all or respond less directly in response to racism (Lee, Soto et al., 2012). Thus, it is important to also become aware of other reactions (e.g., voice, language) as cues to their

psychological well-being and that not explicitly sharing their feelings does not mean they do not have emotional reactions.

At the same time, another tentative explanation is that there could be discrepancies between conscious and unconscious reactions. Asians may be more likely to suppress their feelings (Butler et al., 2007; Morelen & Thomassin, 2013; Saw & Okazaki, 2010) and use avoidant coping strategies (Chang, 1996) especially among those who idealize White culture, are ambivalent or confused about their Asian American racial identity, or idealize their own racial group (Lewis et al., 2020). Thus, some Asian Americans may not be consciously aware of their feelings, which is concerning given that emotional suppression has been linked with lower psychological outcomes (e.g., English & John, 2013; Saw & Okazaki, 2010; Srivastava et al., 2009). However, depending on context, suppression may not necessarily always be maladaptive and sometimes can be a survival technique to maintain interpersonal relationships (Butler et al., 2007) and when it is difficult to express negative feelings openly (Rogier et al., 2019). It could be that initial suppression allows individuals time to evaluate their response and process the event and within Eastern cultures, suppression is not necessarily an indicator of worse mental health (Hu et al., 2014). It is important however to create more safe spaces for Asian Americans to become conscious of their feelings and express it to those they can trust, given that consistent use of emotional suppression can have long-term negative effects (Aldao et al., 2010; Brondolo et al., 2009; Srivastava et al., 2009).

Finally, it is important to note that out of 341 completed responses, for only 120 participants was the manipulation successful. In addition, only 20 participants in the sample gave a verbal response that the scenario was their fault compared to the 100 participants who gave a verbal response that the situation was not their fault. For many assigned to the self-blame

condition, it was difficult for them to respond to the question in attributing blame to themselves and were not included in the final sample. It is likely that the high level of critical consciousness, as indicated by the mean score of 3.65 out of 5 made it difficult for participants in the self-blame condition to verbalize self-blame. This may be due to the current sociopolitical climate and the rise in anti-Asian hate crimes and racism during COVID-19 (e.g., Ahn et al., 2022). At the same time, the current study shows that it is also still possible to induce and change attributions – what predicts whether someone was able to successfully internalize or externalize the blame, however is unclear.

Limitations

Although the current study is the first to directly test whether manipulating self-responsibility versus other-responsibility can impact mood, it is not without limitations. First, I did not directly test mental health as an outcome; this is because mood is more likely to fluctuate in an experimental setting. It would be useful to test whether these effects last longitudinally.

Another limitation is that our study aggregated all Asian American ethnic groups based on the assumption that racial discrimination is not linked to a specific Asian American identity. For example, in previous research, older Asian Americans reported experiencing more microaggressions in the workplace and school settings and those living in the West Coast indicated experiencing less microaggressions than Asian Americans in the Northeast and Midwest (Nadal et al., 2015). Another study found that Korean Americans are more likely to appraise stressors as greater losses than Filipino Americans (Bjorck et al., 2010) and perceived discrimination may have negative consequences for Filipinos but not for Vietnamese and Chinese subgroups (Li, 2013). Thus it is possible that there are within-group differences in the

effects of the discriminatory event that I was not able to test in the current study due to sample size limitations.

Relatedly, the external validity of the study is a limitation. Although the study was advertised more generally as the Asian American Everyday Experiences Study, there may still be self-selection bias in that participants who were interested in the Asian American experiences were more likely to take the study given that I used convenience sampling. In addition, there were only 20 participants who successfully completed the self-blame condition and thus findings need to be replicated. The majority of participants who were initially randomly assigned to the self-blame condition did not successfully demonstrate self-blame in in their speech task – this could either be due to higher critical consciousness levels and because the question asked what they could have done to change the situation rather than specifically blaming themselves. Further, most of the sample was middle class, heterosexual, and second generation Asian Americans and as indicated above, the within-group differences call for further research with specific subgroups.

Lastly, it may be useful for future research to examine differences between various types of discrimination. For example, lifetime major discrimination or more structural level discriminatory experiences such as being denied employment, may have more of an impact on health outcomes over everyday, frequency measures of discrimination (Nicholson, 2019). However, other research suggests that interpersonal racism has been linked with lower personal self-esteem whereas structural racism is associated with higher collective self-esteem (Tawa et al., 2012). The mixed findings call for more research on the effects of different types of discrimination on outcomes, and future research should also include other microaggression

scenarios. Finally, it would be interesting to examine the effects of self and other-blame on other related outcomes such as coping with discrimination and social justice intentions.

Implications for Research, Practice, and Advocacy

What do subtle interpersonal racism encounters look like and what can we do as psychologists in response? Using an interdisciplinary approach from cognitive and counseling psychology, this study represents a timely contribution to the literature given the growing mental health needs for Asian American emerging adults. Findings add to the growing body of literature of the effects of subtle racism on mood. The study extends the existing literature by examining an unexplored mechanism explaining this link through experimental testing of the secondary cognitive appraisal strategies of self-blame versus other-blame. In addition, I used multiple types of assessment including acoustic, language, and self-report indicators to examine the effects of self and other-blame. Future studies might use other types of microaggression scenarios, investigate other outcomes such as advocacy and coping with discrimination, and whether gender may also account for differences in outcomes.

The current study has clinical implications in terms of intervention efforts for counseling psychologists other mental health professionals when working with Asian American college students by identifying underlying mechanism to explain how subtle racism is linked with psychological distress. The present study may help clinicians better understand why certain individuals are more prone to stress from discrimination to be able to intervene at the individual level.

Scholars have urged researchers to examine and develop insight aimed at minimizing the internalization of racist beliefs (Miller et al., 2018). Thus, by empirically testing whether attributing the responsibility can impact mental health outcomes, it could encourage clinicians to

also be aware of their attributions of blame and to be more fully equipped to work with Asian American clients. First, clinicians should avoid putting the blame in response to racism onto Asian American clients, as it can be a form of victim-blaming, racial gaslighting (Davis & Ernst, 2017), and pathologizing the client. When others suggest that racism is the victim's fault and they internalize it, they are more likely to use tentative language and lower pitch. This could be a cue for mental health practitioners to become cognizant of what they may have suggested and to take accountability for their actions. If clients continue to blame themselves in response to racism, it is important for mental health practitioners to explore and unpack their clients' emotions and thoughts related to blaming themselves rather than encouraging these harmful views towards the self. The study also informs practice by directly testing whether we can change an individual's attribution of responsibility to impact Asian American emerging adults' mood. Only 20 participants were able to verbally indicate that the racism event was their fault, showing that many others did not believe it was their fault – even when asked. The majority of participants assigned to this group rejected the idea that it was their fault, indicating that many are able to recognize it and even if asked to, will not internalize the subtle racist event. It is likely that if therapists suggest the client taking responsibility in response to racism, it may lead to more distrust of the therapist.

Clinicians could instead *name* racism in response to similar events and use psychoeducation to discuss effective coping strategies such as externalizing the blame rather than internalizing and blaming oneself when Asian American clients are dealing with discrimination. When asked to externalize, participants had greater pitch (possibly suggesting greater anger), but they also used a greater number of positive emotion words and greater cognitive mechanism words, suggesting that they are actively processing the event, compared to the self-blame group.

It is important for clinicians to be aware of Asian American clients' language and vocal acoustics as possible indications of their feelings and help them process the event and emotions if they are ready to. If clients do not outwardly share their feelings in response to discrimination, it does not necessary indicate that subtle racist experiences do not impact them and thus clinicians should be vigilant of other possible cues. If clients are angry while discussing the racism event, they may benefit from expressing, sharing, and processing their anger and for therapists to validate that it is a normal response to experiences of oppression.

In counseling psychology training programs, faculty should incorporate readings and resources related to working with Asian American clients. In addition, programs should provide education about the effects of racism on Asian American mental health through cognitive appraisal to ensure that clinicians do not recreate harm by assuming or insinuating that racism events are the fault of Asian American clients. Clinical practica may consider incorporating showing subtle racism scenario videos (similar to the video used in the current study) and practice how to respond as if they were the therapist to ensure that they are not re-creating oppression in the therapeutic space.

Lastly, findings suggest the importance of engaging in social justice and advocacy. Asian Americans are viewed as the "model minority," when there is surmountable evidence demonstrating the harmful effects of racism on mental health (e.g., Lee & Ahn, 2011; Yoo & Lee, 2010). It is important to discontinue this narrative and for people to believe that Asian Americans are victims of discrimination. Psychologists first should be cognizant of their own biases towards this group and unpack their own views and behaviors that uphold White supremacy. Next, they may also engage in writing op-eds and consulting with the media to inform the public of the harmful effects of subtle racism and to suggest other ways of interacting

with Asian Americans. For example, psychologists could first provide psychoeducation on what subtle racism looks like by showing videos of various scenarios. Then, they might suggest when discussing racism events, for others to not imply that it is fault of Asian Americans but to be actively supportive by discussing and naming racism, while also joining them in their feelings (e.g., anger) and views as they are processing the event.

Conclusion

Findings reveal that it is important for Asian Americans to be able to recognize, name, and externalize racist experiences. As psychologists, we must work to dismantle systems of oppression and prevent harm. In this scenario, suggesting that the White person acted racist can alleviate some of the pain and responsibility on Asian Americans, and consider how we are all affected by a learned, oppressive, racist system. We can help buffer the negative impact of racism on Asian Americans by working to help name and recognize racist experiences, while also preventing harm by undoing a racist system and world.

Chapter 6: Appendices

Appendix A: Sample Recruitment Email

My name is Lydia Harim Ahn, a current fifth year PhD student in Counseling Psychology at the University of Maryland. I am asking you to help with my research. I am currently interested in exploring everyday experiences with Asian Americans ages 18-29. If you agree to participate in the study, you will click next and the survey will take approximately 20 minutes. Participation is completely voluntary and you have the right to quit at any time. If you have any additional questions, you can contact Lydia Ahn (hrahn@umd.edu). Thank you.

Sincerely,

Lydia HaRim Ahn
Doctoral Student
University of Maryland
hrahn@umd.edu

Appendix B: Consent Form

CONSENT TO PARTICIPATE

Project Title	**Asian American Everyday Experiences**
Purpose of the Study	*This research is being conducted by **Lydia Ahn** and **Dennis Kivlighan, Ph.D.** (advisor) at the University of Maryland, College Park. We are inviting you to participate in this research project because you identify as Asian American, live in the U.S., and are 18-29 years of age. The purpose of this research project is to examine ways people respond to everyday encounters and situations.*
Procedures	*The procedures involve completing a 20-minute self-report survey (e.g., "How often did your parents talk to you about why some people will treat you unfairly because your Asian background," "I have a strong sense of belonging to my own ethnic group,") as well as watching a 5 minute video vignette and answering a question through an audio speech task. For the audio speech task, you will be asked to record yourself answering the question and will be uploading the recording into Qualtrics.*
Potential Risks and Discomforts	There may be some risks from participating in this research study such as experiencing painful thoughts and/or emotional distress or feelings of stigma or embarrassment. Please note that you are able to skip any question(s) that make you feel uncomfortable. In addition, a number of mental health resources are provided in the survey. In addition, there is a potential minimal risk of breach of confidentiality in the audio task given that you will be audio recording yourself. Only the primary investigator will have access to this recording, will only be used for speech detection analysis, and will be deleted after the study is completed. Given the number of participants, most likely it will be difficult for the primary investigator to decipher your identity. If you experience discomfort or distress you can contact Lydia Ahn (hrahn@umd.edu) directly for mental health information and resources.
Potential Benefits	There are no direct benefits from participating in the research, but the results may help the investigator learn more about Asian American everyday experiences.
Confidentiality	You only need to provide identifiable information at the end of the survey (e.g. email address) if you wish to enter the raffle. No other identifiable information will be requested. We will do our best to keep your personal information confidential. To help protect your confidentiality: only the researchers will have access to the survey

	data and all data will be securely stored. If we write a report or article about this research project, your identity will be protected to the maximum extent possible as we will report data in aggregate form only. The audiofiles will be stored only in Qualtrics or on a secured computer with password protection, which only the primary investigator will have access to. The audiofile will be retained until the study is completed, or for a maximum of 5 years, and will be completely destroyed after study completion. The data will be retained for 10 years after the completion of the study, according to the University of Maryland policy on human subject files, and then will be destroyed. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law. For example, we are required to report situations in which a participant is at risk for self-harm or harm to others.
Compensation	You will have the opportunity to enter into a raffle for one third generation Apple watch (retail approximately $200). You will be responsible for any taxes assessed on the compensation.
Right to Withdraw and Questions	Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. If you are an employee or student, your employment status or academic standing at UMD will not be affected by your participation or non-participation in this study. If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator: Lydia Ahn 3214 Benjamin Building, University of Maryland, College Park hrahn@umd.edu
Participant Rights	*If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:* University of Maryland College Park Institutional Review Board Office 1204 Marie Mount Hall College Park, Maryland, 20742 E-mail: irb@umd.edu Telephone: 301-405-0678

	For more information regarding participant rights, please visit: https://research.umd.edu/irb-research-participants *This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.*
Statement of Consent	By continuing to the survey you indicate that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You may print a copy of this signed consent form. If you agree to participate, please click "continue" below. By clicking on the "continue" link below you are indicating that you are at least 18 years of age, the research has been explained to you, your questions have been fully answered, and you are freely and voluntarily participating in this research study.
Signed Consent	I have agreed that I am of at least 18 years of age, identify as an Asian American, and that I am freely and voluntarily participating in this research study. Please press "Next" if you agree to participate in the research.

Appendix C: Measures

Profile of Mood States Questionnaire:

Below is a list of words that describe feelings people have. Please CIRCLE THE NUMBER THAT BEST DESCRIBES HOW YOU FEEL RIGHT NOW.

	Not at all (0)	A little (1)	Moderately 2)	Quite a lot (3)	Extremely (4)
Unhappy					
Sad					
Blue					
Hopeless					
Discouraged					
Miserable					
Helpless					
Worthless					
Angry					
Peeved					
Annoyed					
Grouchy					
Resentful					
Bitter					
Furious					

Ethnic-Racial Socialization (Maintenance of Heritage Culture; Awareness of Discrimination; Juang et al., 2016)

	Never (1)	2	3	4	Very often (5)
Maintenance of Heritage Culture					
How often did your parents routinely cook Asian food for you?					
How often did your parents spend time with relatives who are from their home country?					
How often did your parents tell you to speak in their heritage language?					
How often did your parents visit stores and professionals (such as doctors, business owners) of their own ethnicity/culture?					
How often did your parents show you that because they are					

immigrants they have worked hard to come to this country?					
How often did your parents celebrate your heritage culture's holidays?					
How often did your parents use "ethnic" media (e.g., newspapers, books, TV shows)?					
How often did your parents take you to visit their home country?					
How often did your parents encourage you to be proud of your culture?					
Awareness of Discrimination					
How often did your parents talk to you about why some people will treat you unfairly because your Asian background?					
How often did your parents tell you that people may try to take advantage of you because of your Asian background?					
How often did your parents tell you that people may limit you because of your Asian background?					
How often did your parents tell you that you have to work a lot harder in order to get the same rewards as others because of your Asian background?					

Critical Consciousness (Racism subscale; Shin et al., 2016)

	Strongly disagree (1)	2	3	4	Strongly agree (5)
All Whites receive unearned privileges in U.S. society					
The overrepresentation of Blacks and Latinos in prison is directly related to racist disciplinary policies in public schools.					

All Whites contribute to racism in the United States whether they intend to or not.					
Reverse racism against Whites is just as harmful as traditional racism. (R)					

Demographics

Age: ___

Gender:
- Male
- Female
- Other, please specify _____

How would you describe your own socio-economic status:
- Lower class
- Working class
- Middle class
- Upper middle class
- Upper class
- Other

What is your estimated total annual household income?
- none
- between $1 and $24,999.00 per year
- between $25,000.00 and $49,999.00 per year
- between $50,000.00 and $74,999.0 per year
- between $75,000.00 and $99,999.00 per year
- between $100,000.00 and $149,999.00 per year
- between $150,000.00 and $199,999.00 per year
- Over $200,000.00 per year
- Other

Sexual Orientation:
- Heterosexual
- Bisexual
- Gay
- Lesbian
- Queer
- Pansexual
- Other, please specify _____

Citizenship:

- 1st Generation = I was born in an Asian country and came to the U.S. as an adult
- 1.5 Generation = I was born in an Asian country and came to the U.S. as a child or adolescent_____ (indicate age you came to the U.S.)
- 2nd Generation = I was born in the U.S., either parent was born in an Asian country
- 3rd Generation = I was born in the U.S., both parents were born in the U.S., and all grandparents were born in an Asian country
- 4th Generation = I was born in the U.S., both parents were born in the U.S., and at least one grandparent was born in an Asian country and one grandparent was born in the U.S
- 5th Generation = I was born in the U.S., both parents and all grandparents were also born in the U.S.
- Don't know what generation best fits since I lack some information
- Other (Please specify): _____

Ethnicity:

- Korean
- Japanese
- Chinese
- Filipino
- Taiwanese
- Malaysian
- Singaporean
- Thai
- Indian
- Pakistani
- Other (specify)

Appendix D: Resources

Below are resources for those wishing to pursue assistance for personal and emotional issues (please note that these resources are not associated with the University of Maryland and do not represent an endorsement of the professional associations or services):

- American Psychological Association's "Psychologist Locator": http://locator.apa.org/
- Psychology Today's "Find a Therapist": http://therapists.psychologytoday.com/rms/
- American Psychological Association's "Psychology Help Center": http://www.apa.org/helpcenter/index.aspx
- American Board of Professional Psychology "Find a Board Certified Psychologist": http://www.abpp.org/i4a/member_directory/feSearchForm.cfm?directory_id=3&pageid=3292&showTitle=1
- University of Maryland, College Park Counseling Center: https://www.counseling.umd.edu/
- University of Maryland, College Park Health Center: https://health.umd.edu/

Appendix E: Debrief

Thank you for participating in the study. The purpose of this research was to examine whether secondary cognitive appraisal, specifically self-blame or other-blame in response to a racial discriminatory event would be associated with mood. You were randomly assigned to either the self-blame group (What could you have done differently in this scenario?) or the other-blame group (Why was the perpetrator racist?). The speech task will be used to examine whether the experimental conditions worked, and to also test speech anxiety levels. As a reminder, only the primary investigator will have access to this information and will be deleted as soon as the study is completed. We are hoping this information will be useful in testing whether self or other blame in response to racist scenarios can induce different mood responses.

Appendix F: Instructions for Coders

My name is Lydia, a current 5th year PhD candidate in counseling psychology here at UMD. Thank you so much for being open to helping with coding.

The project is examining people's responses to a racial discrimination scenario. The scenario was a microaggression, or a subtle form of racism that is often hard to depict. In this case, an Asian American student (Jaewon) brought dumplings to the library, and her friend (John) stated "what is that? It smells bad in here" followed by him laughing. Participants were randomly assigned two one of two categories: either self-blame or other blame.

They were either asked what Jaewon could have done to change the situation (self-blame) or why John was racist (other-blame). I need some help with coding the responses to see whether they actually reflect self-blame (in this scenario, this was Jaewon's fault (the Asian American bringing the dumplings) or other-blame (this was John's fault (the White person making a comment). Self-blame for example would be something like "Jaewon shouldn't have brought the dumplings because it is a library and is smelly." and other-blame would be something like "John is racist because he made a rude negative comment about someone else's culture."

I have put them in a document, and I was wondering whether you all would be able to look over each response and categorize them into either 1(self-blame), 2(other-blame), or 3(neither/other).

Chapter 7: References

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