

PURPOSE IN LIFE AS A TOOL FOR MANAGING RACIAL DISCRIMINATION AND
SUICIDE IDEATION IN RACIAL/ETHNIC MINORITY EMERGING ADULTS

A Thesis

Presented to

The Faculty of the Department

of Psychology

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In Partial Fulfillment

Of the Requirements for the Degree of

Master of Arts

By

Judy H. Hong

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ABSTRACT

An Existential-Constructivist approach to suicide resilience suggests that purpose in life (PIL) offsets one's existential concerns, however, contextual challenges, such as racial discrimination, are believed to threaten both emotional wellbeing and contribute to risk for suicide. We posit that for racial and ethnic minority emerging adults ($N=289$) who perceive racial discrimination, having more PIL will be a more salient buffer than ethnic identity (EI) on thoughts of suicide. Regression analysis showed that EI was not a significant moderator for the relationship between perceived racial discrimination (PRD) on suicidal ideation ($b = -.47, p = .13$), however, PIL was a significant moderator ($b = -.06, p = .025$). A hierarchical regression showed that PIL as a moderator explained additional variance ($\Delta R^2 = 0.112, p < .001$) in suicide ideation above and beyond EI as a moderator. Further investigation into the clinical significance of PIL as a buffer is necessary.

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Purpose in Life as a Tool for Managing Racial Discrimination and Suicide Ideation in Racial/Ethnic Minority Emerging Adults

Chapter 1:

Review of the Related Literature

1.1 Overview: Suicide Ideation, Racial Discrimination, Ethnic Identity, and Purpose in Life

Suicide is the 10th leading cause of death in the United States, following nine health-related causes (e.g., heart disease, cancer) and accidental deaths (Xu, Murphy, Kochanek, & Bastian, 2016). In 2014, 42,773 people in the US died by suicide, culminating in unquantifiable emotional and psychological damage to those left behind as well as a cost of approximately \$44 billion dollars to the country (AFSP, 2014). On average, 117 people die by suicide per day (AFSP, 2014). After a steady decline in suicide rates beginning from the mid-1980s to 1999, the rate of suicide increased approximately 24% from 1999 through 2014 (Curtin, Warner, & Hedegaard, 2016).

Among adults, the 18-to-25 age group endorses the highest rate of suicidal thought and planning (CDC, 2015). Across these emerging adults, differences between racial/ethnic groups arise. For the years 2004-2010, the annualized rate of suicide for White, non-Hispanic adults age 18 to 24 years was 13.93 per 100,000, while rates for the Black (8.61), Hispanic (8.01), and Asian/Pacific Islander (7.43) groups were considerably lower (CDC, 2016a). Since racial and ethnic minority (REM) groups are exposed to additional stressors, such as racial discrimination, researchers have examined this supposed paradox of more stressful life circumstances, but lower suicide rates (Gibbs, 1997; Davidson & Wingate, 2011; Rockett et al., 2010).

Racial discrimination for REM groups have been linked to detrimental physical and psychological outcomes (Hwang & Groto, 2009; Pascoe & Richman, 2009; Schmitt, Branscombe, Postmes, & Garcia, 2014). For Black, Hispanic, and Asian individuals, racial discrimination has been positively associated with thoughts of suicide, suicide planning, and acts of suicide (e.g., Chao, Mallinckrodt, & Wei, 2012; Hwang & Groto, 2009; Gomez, Miranda, & Polanco, 2011).

Ethnic identity (EI) and purpose in life (PIL) have been two individual-level factors that researchers have explored in explaining this minority paradox. Ethnic identity is a conceptualization of the self derived from ethnic-group membership (Phinney & Alipuria, 1990) while purpose in life can be thought of as the belief that one's life has meaning and direction (Frankl, 1959). Although these concepts have been relatively well-documented as meaningful, protective factors for REM populations (e.g., Kiang, & Fuligni, 2010; Wong, 2013), and certainly EI has been found to buffer distressing effects of racial discrimination (Sellers & Shelton, 2003), PIL may target a deeper, more future-oriented personal drive for existence beyond that of ethnic-group membership. I posit that this more profound and widespread impulse to make advancements in one's life may be more powerful than even strength of identification with one's racial/ethnic group. The present study seeks to compare the moderating role of EI and PIL as sources of resiliency for the association of perceived racial discrimination (PRD) and suicide ideation (SI) in university students age 18 to 25 that identify as racial/ethnic minorities.

1.2 Suicide among Racial/Ethnic Minorities

According to a report by the Centers for Disease Control and Prevention to promote uniform definitions for self-directed violence research, *suicide* is operationally defined as

“death caused by self-directed injurious behavior with any intent to die as a result of the behavior” (Crosby, Ortega, & Melanson, 2011). Acts that generally precede suicide are *suicidal ideation* (SI; “Thoughts of engaging in suicide-related behavior”), *suicide plan* (“A thought regarding a self-initiated action that facilitates self-harm behavior or a suicide attempt [that will] often include an organized manner of engaging in suicidal behavior such as a description of a time frame and method”), and *suicide attempt* (SA; “A non-fatal self-directed, potentially injurious behavior with any intent to die as a result of the behavior, [which] may or may not result in injury”; Crosby, Ortega, & Melanson, 2011).

While rates of suicide for Black, Hispanic, and Asian Americans are comparatively lower than White non-Hispanic individuals (AFSP, 2014), researchers suggest that data for REM suicide ideation underestimate actual prevalence (Chu, Hsieh, & Tokars, 2011; Morrison & Downey, 2000). Suicide ideation, which is usually associated with distress, can be harmful if not debilitating (Westheide, et. al, 2008; Williams, Barnhofer, Crane, & Beck, 2005). For example, in a recent literature review, psychological distress and SI in Eastern Asians in North America were associated with internalizing symptoms, self-blame, and risky behaviors (Han, Oliffe, & Ogrodniczuk, 2013). These internalizing symptoms can manifest in various forms, such as withdrawal from others, anxiety, and worry (Lau, Zane, & Myers, 2002). Furthermore, psychological anguish in many cultures can manifest as somatic symptoms (Gotlib & Hammen, 2008; Han, Oliffe, & Ogrodniczuk, 2013), making detection of SI an even trickier task.

Scholars have attempted to decipher the discrepancy between high rates of REM stressors and low rates of suicide and SI. Speculations on misleading estimates of SI have been attributed to culturally ill-informed clinical evaluations (Chu, Goldblum, Floyd, &

Bongar, 2010; Langhinrichsen-Rohling, Friend, & Powell, 2009), low rates of help-seeking (Chung, 2010; Miranda, Soffer, Polanco-Roman, Wheeler, & Moore, 2015), and low rates of self-disclosure (Aubert, Daigle, & Daigle, 2004; Morrison & Downey, 2000). In one study, only 1 in 36 ethnic minority students who endorsed SI voluntarily revealed thoughts of suicide without a suicide risk assessment (Morrison & Downey, 2000).

Regardless of whether statistics on racial and ethnic minority SI reflect actual rates of suicidal thought, there seems to be a salient cultural component of suicide for REM groups that differ from the White population. One theory, the cultural model of suicide (Chu, Goldblum, Floyd, & Bongar, 2010), posits that one's cultural/racial background influences suicide vulnerability. The type of stressor that results in suicidal behaviors and meaning attached to those stressors, as well as forms of communication and methods employed to carry out suicidal acts, are all said to be influenced by cultural/racial background. In essence, race and culture cannot be disregarded when investigating or treating suicidal thoughts and behaviors in individuals of racial/ethnic minority groups. Additionally, studies have linked thwarted belongingness, the dimension of the interpersonal psychological theory of suicide (Joiner, 2005) that assesses social isolation, to discrimination for racial minorities (Wang, Wong, & Fu, 2013).

Among university-age adults (generally considered 18 to 24 years old), rates of fatal suicide are relatively lower than other age groups (ODPHP, 2016). However, it is a leading cause of death, following unintentional deaths and homicide (CDC, 2016b). A 2014 release by the American College Health Association reported that 8.1% of surveyed college students in the last 12 months seriously considered suicide and 1.3% attempted suicide (ACHA, 2014) - statistics that are on the rise (Schwartz, 2011). It should be noted that three-quarters of

surveyed students in this national poll were White, a racial imbalance that appears as a limitation in several national studies (e.g., Brownson, Becker, Shadick, Jaggars, & Nitkin-Kaner, 2014; Drum, Brownson, Denmark, & Smith, 2009; Eisenberg, Hunt, & Speer, 2013).

Racial breakdown of suicide data for university students has revealed differences across groups. In a national survey of undergraduate university students, Brownson and colleagues (2014) found that Caucasian/White students reported lower recent and lifetime distressful thinking, suicidal thoughts, and suicide attempts on four of six main categories examined in the study, while the African American/Black group only endorsed one question at a lower rate (“I wish I was dead” within the past 12 months). Incidentally, this item was the only item Asian Americans significantly endorsed at a higher rate than the overall sample. In another study of racially-diverse university students presenting at a counseling center, Polanco-Roman and colleagues (2014) found that White individuals reported a lower rate of both SI and SA compared to their REM counterparts. These results seem to conflict with national suicide rates, which report White individuals to have the highest suicide rate of any race in the 18-to-24 age group (CDC, 2016a). Eisenberg, Hunt, and Speer (2013) reported Black college and university students endorsed higher prevalence of SI in the past year than other groups, including White respondents, but lower attempts. For ideation, plan, and attempts, there were no significant difference for the Asian or Hispanic groups compared to the White participants. Other studies have found no significant differences in suicide risk between REM and White university students (e.g., Kilbert, Barefoot, Langhinrichsen-Rohling, Warren, & Smalley, 2015). Further investigation of racial disparities is warranted to better understand the intersection of race, age, and progression of suicidal thoughts to SA and suicide.

1.3 Suicide and Perceived Racial Discrimination

Race-based discrimination is defined by differential treatment of individuals according to race that can be either intentional or unintentional and encompass a number of acts (e.g., lack of respect, suspicion, devaluation, scapegoating, and dehumanization; Jones, 2000). Perceived racial discrimination (PRD) has been associated with adverse health and psychological outcomes for a wide range of REM groups of differing ages and backgrounds (Araújo & Borrell, 2006; Basáñez, Unger, Soto, Crano, & Baezconde-Garbanati, 2013; Nadimpalli, James, Yu, Cothran, & Barnes, 2015; Paradies, 2006; Wang, Wong, & Fu, 2013). Even more alarming, racial discrimination has been both directly and indirectly associated with thoughts of suicide. Walker and colleagues (2014) observed in a community sample of African Americans that a significant association between heightened perceptions of racial discrimination and more SI through depressive symptoms. Discrimination was speculated to be associated with feelings of “alienation and interpersonal rejection” leading to suicide vulnerability.

Despite the link between discrimination and susceptibility to suicide, scholars have speculated on the supposed paradox of high racial discrimination, yet low prevalence of certain detrimental outcomes among some REM groups. For instance, Keyes (2009) surmises that the “Black-White Paradox in Health” (i.e., lower rate of common mental illnesses in Black individuals compared to White individuals, despite experiencing discrimination and inequality) is a result of the resiliency of Black individuals. The authors suggest potent protective factors such as religion, racial socialization and identification, and coping styles to explain the alleged discrepancy. In a relatively older article evaluating Black versus White suicide rates from the 1960s to 1990s, the paradoxical theory still held true (Gibbs, 1997). In

concordance, these authors also highlighted religiosity and importance of ethnic-group socialization, among others, as potential buffers.

For university students, research is sparse but extant literature points to meaningful associations between racial discrimination and SI. Among Asian international students attending a public university in the Midwestern US, racial discrimination was significantly correlated with depressive symptoms as well as thoughts of suicide (Wang, Wong, & Fu, 2013). Additionally, racial discrimination moderated the relationships between perceived burdensomeness and SI as well as thwarted belongingness and SI in this study (Wang, Wong, & Fu, 2013). This suggests that even in situations where REM students feel interpersonally strained, whether they experience rejection due to race may be the determining factor in progression to suicidal thoughts. In another study comparing university students by race, students who experienced perceived discrimination had over 5 times higher odds of endorsing a past suicide attempts, while Latino students, specifically, had over three times higher odds (Gomez, Miranda, & Polanco, 2011).

1.4 Ethnic Identity as a Resilience Factor

Ethnic identity has been described as a sense of self derived from feelings of membership in one's ethnic group and one's values and emotional significance tied to that social membership (Phinney & Alipuria, 1990). Literature regarding protective properties of EI is expanding, but inconclusive. Findings suggest that EI is often helpful in buffering against life stressors as well as contextual stressors (e.g., perceived racial discrimination), but associations are often weak or indirect.

For example, in a study of Latino adults, ethnic commitment ("sense of belonging or attachment to a particular ethnic group") but not ethnic exploration ("seeking information

regarding one's ethnicity") was found to moderate the effects of racial discrimination on next-day depression (Torres & Ong, 2010). In fact, ethnic exploration appeared to exacerbate effects from perceptions of racial discrimination while ethnic commitment was associated with shortened recovery periods. These findings support Phinney's (1990) and Cross's (1971) models of ethnic identity development such that psychological/emotional vulnerability varies according to stage of racial/ethnic identity development. Perhaps ethnic identity is protective, but only when an individual is at a more advanced stage of EI. While studies like this found some support for EI as a source of resilience, others (e.g., Ai, Pappas, & Simonsen, 2015) found EI to neither buffer life nor cultural stressors.

Other researchers have found more promising results of the insulating effects of EI, either directly or indirectly. In an ethnically diverse sample of emerging adults, hopelessness was found to mediate the relationship between culturally-related stressors and depression and suicide, but only at low levels of ethnic identity (Polanco-Roman & Miranda, 2013). Additionally, Walker and colleagues (2008) found EI to significantly moderate the depression-suicide ideation relationship for African Americans (but not European Americans). In further support, a study of physiological reactivity showed that African American college students who reported higher self-reported private regard (i.e., more positive feelings towards one's own race; Sellers, Smith, Shelton, Rowley, & Chavous, 1998) demonstrated less reactivity in response to racially-discriminatory vignettes. In other words, these individuals did not react as if a threat was present (Neblett & Roberts, 2013). Extending these findings to REM individuals who perceive experiences of racial discrimination, more positive feelings towards one's own racial/ethnic group may be both psychologically and physiologically protective. Taken together, ethnic identity may insulate against cultural

stressors in two ways—for specific subgroups of persons who have reached a more established level of EI or through an indirect association of other, more salient factors.

1.5 Purpose in Life as a Resilience Factor

Purpose in life has long been of interest to scholars as far back as Aristotle (1947) and Frankl (1959), but up until the last half of the twentieth century, researchers have not taken an interest in its measureable effects (Brandstätter, Baumann, Borasio, & Fegg, 2012). Rogers (2001) diagramed the Existential-Constructivist approach to suicide resilience, suggesting that PIL offsets one's existential concerns regarding meaninglessness, isolation, and death (Rogers, 2001). Additionally, Ryff (1989) differentiates a more subjective, surface-level type of psychological well-being compared to a deeper sense of self-actualization, with PIL being a key dimension. It may follow that this struggle to establish meaning can insulate against adverse life events, such as experiences of racial discrimination.

A fair amount of research has attempted to elucidate the link between lack of PIL and harmful outcomes. This effect has been shown for clinical samples (Błazek, Kaźmierczak, & Besta, 2015; Heisel & Flett, 2004), university students (Edwards & Holden, 2001; Wang, Lightsey, Pietruszka, Uruk, & Wells, 2007), as well as in practical therapeutic application (Fitzpatrick & Kim, 2008).

Specifically, studies have examined the buffering effects of life meaning on suicidal thoughts. Among a sample of university students, meaning in life (MIL; used interchangeably with PIL in this paper) was tested as a source of resiliency for the relationship between perceived burdensomeness and SI as well as thwarted belongingness and SI (Kleiman & Beaver, 2013). Kleinman & Beaver reported that MIL was significant in explaining the relationships between both variables and SI. The researchers posited that the

association between MIL and SI is consistent with foremost frameworks of suicide such as Joiner's interpersonal theory of suicide (IPTS; Van Orden et al., 2010). The theory postulates that thwarted belongingness and perceived burdensomeness lead to the desire for suicide. For many people, social inclusion and connectedness with others significantly factor into life meaning, which in turn influences thoughts of suicide. The outcomes further support the buffering effects of PIL for an array of threatening precipitants of SI for this population. In other studies of university students, PIL was found to have meaningful implications for predicting suicidal thoughts. Lester and Badro (1992) suggested that adding PIL to depression significantly improved the model's capacity to predict current suicide ideation status.

Only a handful of studies have examined PIL as a buffer for racial discrimination. From a national survey of U.S. adults age 25 to 74 years (Midlife in the United States survey, MIDUS), perceived racial discrimination was found to be a negative predictor of PIL (Ryff, Keyes, & Hughes, 2003). Nadimpalli and colleagues (2015), however, found no interaction effect of discrimination and PIL on depression for older African Americans. Of note, the sample's discrimination and depression scores were low and may have affected detection of a significant effect. No other studies have focused on the moderating effects of PIL on discrimination.

A scant number of studies have specifically examined life purpose as a source of resiliency for REM university students. When comparing psychological symptomatology of European American and African American college students, researchers found that variance from religiosity was minimal and was subsumed by MIL for European American students

where as for African American students, religiosity subsumed MIL (Holmes & Hardin, 2009). These results suggest protective effects of MIL differ by racial group.

As emerging adulthood is often conceptualized as a period of finding identity and looking to the future, PIL can be both potent and prevailing in the presence of life stressors. It can be a versatile source of resiliency with the ability to permeate a myriad of obstacles. In general, those who have thoughts of suicide are considering giving up on life. In these cases, it is logical, as well as empirically supported, that gaining a life purpose can deter thoughts of suicide.

Few researchers have examined both purpose in life and ethnic identity as intermediary factors for pernicious stressors (e.g., Kiang & Fuligni, 2010; Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2008). A study of Latin American, Asian, and European American adolescents found that a significant portion of EI's buffering effects were explained by PIL (Kiang & Fuligni, 2010). Authors suggested that EI can be considered a branch of PIL whereby one carves out a meaningful role as a member of his/or social group and, furthermore, facing stressors such as racial discrimination may lead to meaning-making (Kiang & Fuligni, 2010). Perhaps PIL subsumes the positive effects of EI and, as such, is broader and more able to deal with racial discrimination in its complexities.

1.6 Current Study

The purpose of this study is to address limitations in the current literature by examining the association between perceived racial discrimination and suicide ideation in a sample of Asian American, Hispanic, and Black emerging adults, as well as the potential buffering effects of ethnic identity and purpose in life. The specific hypotheses for the current study are the following: 1) ethnic identity will moderate the association between

perceived racial discrimination and suicide ideation, such that high perceived racial discrimination will be associated with low suicide ideation for individuals who report high ethnic identity; (2) purpose in life will moderate the association as well, such that high perceived racial discrimination will be associated with low suicide ideation for individuals who report high purpose in life, and that (3) purpose in life as a moderator will explain unique variance in suicide ideation above and beyond the variance explained by ethnic identity as a moderator.

1.6.1 Covariates. Several variables are known to relate to suicide ideation. Because we aim to investigate the unique impact of our study predictors, we propose to control for these variables known to impact SI. The control variables are as follows:

Intrinsic religiosity. Religion has been shown to be a strong protective factor against adverse outcomes (e.g., depression, suicide ideation) for certain REM groups (Walker & Bishop, 2005). Intrinsic religiosity is a more personal, internalized form of religious commitment that may buffer the effects of perceived racial discrimination.

Gender. Female college students as well as non-students ages 18 to 22 years are more likely to endorse suicide ideation than their male counterparts (SAMHSA, 2014).

Age. Adults ages 18 to 25 years report higher rates of suicide ideation compared to adults ages 26 to 49 as well as adults 50 or older (SAMHSA, 2014).

Chapter 2:

Methodology

2.1 Participants

Participants are 289 undergraduate students enrolled at a large university in the southwestern region of the United States. Participants volunteered for this study to gain

academic credit. The mean age for the total sample is 20.47 years ($SD = 1.83$ years) with an age range of 18 to 25 years. The majority of participants are characterized as single, never married (93.8%), and at least a second-generation U.S. citizen (74.8%). The ethnic composition of the sample is diverse, with 118 Asian Americans (40.8%), 94 Hispanic (32.5%), and 77 Black (26.6%) students.

2.2 Measures

2.2.1 Demographics. The participants were asked comprehensive demographic questions including age, gender, race/ethnicity, marital status, and generational status.

2.2.2 Adult scale for suicide ideation (ASIQ). Adult scale for suicide ideation (Reynolds, 1991) is a 25-item self-report measure of the severity of suicide ideation in adults age 18 and older. Participants were asked to respond on a seven-point scale regarding the frequency of suicidal thoughts ranging from 0 (*never had the thought*) to 6 (*had the thought almost every day*). A total score was produced by summing the ratings, with higher scores reflecting greater levels of suicide ideation. The scale has shown high reliability and validity data for a community of adults and college student samples (Fu & Yip, 2007; Reynolds, 1991; Reynolds, Kobak, & Griest, 1990). Additionally, the ASIQ has been found to correlate significantly with the related constructs of depression, hopelessness, anxiety, self-esteem, and history of prior suicide attempts, providing evidence of construct validity (Reynolds, Kobak, & Griest, 1990). In the current study, this measure was found to be highly reliable at Cronbach's alpha of .98.

2.2.3 Everyday discrimination scale (EDS). The EDS (Williams, Yu, Jackson, & Anderson, 1997) is a 9-item self-report measure designed to assess more routine and relatively minor experiences of perceived discrimination. Example items include, "You have

been treated with less courtesy than other people,” and “You have been threatened or harassed.” Participants were asked to respond on a four-point scale regarding the frequency of encounters from 1 (*never*) to 4 (*four or more times*). A total score was produced by summing the ratings, with higher scores reflecting more experiences of discrimination. In an additional question, participants were asked to attribute discrimination to ancestry or national origins, gender, race, age, religion, height or weight, shade of skin color, sexual orientation, education or income level, physical disability, or other reasons. Only those participants who endorsed racial discrimination (i.e., your ancestry or national origins, race, shade of skin color) as the likely source of their discrimination experiences were included in the current study. The scale has shown high reliability and validity for national and community adult samples (Lewis, Aiello, Leurgans, Kelly, & Barnes, 2010; Pérez, Fortuna, & Alegria, 2008; Williams, Yu, Jackson, & Anderson, 1997). In the current study, this measure was found to have high alpha reliability at .90.

2.2.4 Multigroup ethnic identity measure (MEIM) – Affirmation, belonging, and commitment subscale. The MEIM (Phinney, 1992) is a widely used measure of ethnic identity based on the components of ethnic identity that are common across ethnic groups (Phinney, 1992). The measure consists of 14 items that assess three aspects of ethnic identity (i.e., positive ethnic attitudes and sense of belonging; ethnic identity achievement; and ethnic behaviors/practices). The seven questions of the affirmation, belonging, and commitment subscale, which assesses level of ethnic identity achievement, were used for this study. Participants were instructed to rate each item on a Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Scores are obtained by calculating the average across the seven items with higher scores representing a more positive ethnic group identity. The MEIM

has been shown to be valid and reliable for Asian, Black, Hispanic, and White individuals (Cheng et al., 2010; Chesin & Jeglic, 2012; Phinney, 1992; Walker, Wingate, Obasi, & Joiner, 2008; Williams, Chapman, Wong, & Turkheimer, 2012). The present study demonstrated a Cronbach's alpha of .89.

2.2.5 Psychological well-being scale (PWB) – Purpose in life subscale. The psychological well-being scale (PWB) is a 42-item self-report instrument designed to assess an individual's level of psychological functioning (Ryff & Keyes, 1995). The Purpose in life subscale (7 items), one of six dimensions measured in the PWB, assesses the belief that one's life has purpose and meaning. Participants responded to questions such as "I have a sense of direction and purpose in life" and "I live life one day at a time and don't really think about the future." Each item is rated on a Likert Scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Summing the items produces a score for the subscale, higher scores indicating higher levels of life purpose. The subscale has been reported to have high internal consistency ($\alpha = .88$; Hamilton et al., 2007) and has been utilized in studies of African-American and Mexican-American samples (Ryff, Keyes & Hughes, 2003). For the current study, alpha reliability is estimated at .76 for this measure.

2.2.6 Duke university religion index (DUREL) - Intrinsic religiosity subscale. The DUREL (Koenig & Büssing, 2010) is a 5-item instrument used to measure religious involvement. Intrinsic religiosity, one of three DUREL subscales, assesses personal motivation for religious commitment. Participants rate each of three item on a Likert Scale, ranging from 1 (*definitely not true*) to 5 (*definitely true of me*): "In my life, I experience the presence of the Divine (i.e., God)," "My religious beliefs are what really lie behind my whole approach to life," and "I try hard to carry my religion over into all other dealings in life."

Available research suggests that those who are more intrinsically-oriented are better psychologically adjusted with regard to responsibility, anxiety, and internal locus of control than extrinsically-oriented individuals (Bergin, 1991; Ventis, 1995). For the current sample, the measure was found to be highly reliable at Cronbach's alpha of .90.

2.3 Procedure

The present study was granted institutional review board approval. Potential study participants were recruited via the University of Houston SONA system. Students who were younger than 18 years of age or over 25 years old were not included in the study. Each participant was informed that she or he will be administered an online set of questionnaires that include questions about stressful life events, life meaning, and suicide. Upon consent, participants were administered the battery of questionnaires and informed that participation in the study could cease at any time and referral for psychological services will be available if needed. Approximately 30 minutes were required to complete the packet of questionnaires. Each participant received university SONA credit as incentive for participating in the study.

2.4 Analytic Plan

2.4.1 Sample Size Planning and Statistical Power

Power analyses were conducted using the G-Power software (Faul, Erdfelder, Buchner, & Lang, 2009). The primary analysis consisted of a hierarchical linear regression and linear regression moderation analyses. The largest number of predictors that were entered did not exceed 7. Similar studies have found moderate effect sizes (Graham, Calloway, Roemer, 2015; Graham, West, Martinez, Roemer, 2016), thus a power analyses was conducted with an alpha = .05, power = .80, and an estimated effect size of $f^2 = .15$. This analysis revealed that 85 participants were needed in the sample.

2.4.2 Data Analysis

Confirmatory factor analysis

Given suggestions that ethnic identity may be a form of life purpose (Kiang & Fuligni, 2010), a confirmatory factor analysis (CFA) was first conducted to determine if the two variables were indeed separate factors or if they are subsumed under the same latent variable. If significant overlap exists between purpose in life (PIL) and ethnic identity (EI), then it would not be necessary to compare them as moderators when they are essentially the same theoretical buffer for perceived racial discrimination. The CFA was conducted using Mplus version 7.4 (Muthen & Muthen, 2017). Two competing models were compared: a single-factor solution where all scale items were loaded onto one latent variable, and a two-factor solution, where scale items were loaded onto their respective variables (i.e., PIL or EI). RMSEA, CFI, and TLI fit indices were used to determine if the one-factor or two-factor model best fit the data. A correlation for the two variables was calculated to derive the percentage of shared variability between PIL and EI to strengthen the results of the factor analysis.

Hypothesis 1 and Hypothesis 2: Ethnic identity and purpose in life as moderators, separately

Moderation occurs when the effects of a predictor variable on a dependent variable differ at various levels of a moderator variable (Baron & Kenney, 1986). For the current study, ethnic identity and purpose in life were tested as interaction terms in two separate regression models for association between perceived racial discrimination and suicide ideation. The analyses were conducted via Model 1 on version 2.16 of PROCESS macro for SPSS (Hayes, 2013). Both moderated regression models included the control variables age,

gender, and intrinsic religiosity. The model testing Hypothesis 1 estimated a regression weight for the interaction of ethnic identity and perceived racial discrimination and evaluated if including the interaction variable to the simple regression model would be significant in explaining variance in suicide ideation. The model testing Hypothesis 2 used the same analysis technique, but for the interaction of purpose in life and perceived racial discrimination predicting suicide ideation.

Hypothesis 3: Unique variance explained by purpose in life as a moderator

A hierarchical regression was conducted to determine if the perceived racial discrimination by purpose in life interaction explained unique variance above and beyond variance explained by EI, and the interaction of perceived racial discrimination and EI. Level of intrinsic religiosity, gender, and age were also entered as covariates. The significance of the regression weight associated with the PIL by perceived racial discrimination interaction was evaluated to determine if PIL serves as an effective buffer, such that a significant regression weight would show that even when accounting for the moderating effects of EI, PIL as a moderator would explain unique variance in suicide ideation. Tests of significance were two-tailed at the .05 level.

Chapter 3

Results

3.1 Preliminary Analysis

Means, standard deviations, and intercorrelations for all measured variables are presented in Table 1. Consistent with other studies (e.g., Kiang & Fuligni, 2010), there was a significant correlation between purpose in life and ethnic identity ($r = 0.30, p < .001$). Both purpose in life (PIL) and ethnic identity (EI) was significantly correlated, and in the same

direction, to other study variables: negatively correlated with suicide ideation, positively correlated with intrinsic religiosity, and more likely to occur in females. Age was not correlated with either PIL or EI in this sample. As expected, higher scores on perceived experiences of racial discrimination were associated with increased suicide ideation ($r = 0.24$, $p < .001$). The strongest correlation in the sample was between purpose in life and suicide ideation ($r = -0.38$, $p < .001$).

3.2 Combining Racial-ethnic Groups

First, a nested model comparison was conducted to evaluate if the Asian, Hispanic, and Black racial/ethnic groups may be combined into one group for analysis. An unconstrained model (with separate covariance matrices for the three racial/ethnic groups) was compared to a constrained model (with a single covariance matrix). Results showed that for this data, there were no significant differences between the covariance of the data when examining the racial-ethnic groups separately and collapsing Asian, Hispanic, and Black individuals into one group ($\chi^2 = 52.04$, $p = .14$). A non-significant chi-squared statistic shows that the relationship of the study variables do not differ according to racial/ethnic groups for this sample and further analyses may treat the participants as a combined group.

3.3 Confirmatory Factor Analysis

Single-factor and two-factor models were fit to PIL and EI items to evaluate if PIL and EI are two separate latent variables. The results of the single-factor analysis showed a poor fit to the data (RMSEA = .19, CFI = .81, TLI = .78). The two-factor model (RMSEA = .07, CFI = .97, TLI = .97) was found to be a much better fit to the data and a significant improvement over the one-factor model. These findings give support that PIL and EI are distinct constructs and may be examined separately as buffers on perceived racial

discrimination.

3.4 Hypothesis 1: Ethnic Identity as a Moderator

To test the first hypothesis that ethnic identity moderated the relationship between perceived racial discrimination and thoughts of suicide, moderation analysis using PROCESS macro for SPSS was employed (Hayes, 2013; model 1 = simple moderation). Results show that the interaction of perceived racial discrimination and ethnic identity did not significantly diminish thoughts of suicide for those who perceived racial discrimination ($b = -.47, p = .13$; Table 2). Put another way, for both low and high scores of ethnic identity (e.g., 1 standard deviation below and above the mean EI score), the conditional effect of PRD on SI remained significant. The data showed that the overall model explained 14.8% of the total variance of suicide ideation ($R^2 = 0.15, p < .001$) and adding the ethnic identity interaction term to the model did not significantly increase the model's ability to predict suicide ideation ($\Delta R^2 = 0.007, p = .13$). Follow-up tests of main effects were carried out. Ethnic identity was found to be a significant predictor for suicide ideation ($b = 6.91, p = .002$). In the current sample, one's level of ethnic identity was found to be a significant predictor of level of suicidal thought.

3.5 Hypothesis 2: Purpose in Life as a Moderator

To test the second hypothesis that PIL moderates the perceived racial discrimination-suicide ideation association, moderation analyses using the PROCESS macro for SPSS (Hayes, 2013; model 1 = simple moderation) was conducted. Results showed that the addition of the interaction term increased the variance explained in suicide ideation by 1.4% ($\Delta R^2 = 0.014, p = .03$). In total, approximately twenty-five percent of the variance in suicide ideation was explained by the interactive effect of PIL and perceived racial discrimination,

the main effects, and the covariates, intrinsic religiosity, gender, and age ($R^2 = 0.25, p < .001$, Table 3). Purpose in life was found to be a significant moderator ($b = -.06, p = .025$), such that the relation between perceived racial discrimination and suicide ideation varies depending on the level of PIL. To determine how PIL moderates the relation between perceived racial discrimination and suicide ideation, the interaction was plotted to examine the association between PRD and SI at low and high levels of PIL (i.e., 1 standard deviation below and above the PIL mean of the sample). The results showed that at low levels of PIL, the simple slope of the PRD-SI association was significant ($b = 1.19, p < .001$, Figure 1). However, at higher levels of PIL, the slope was not significantly different from zero ($b = .43, p = .09$). Figure 1 shows this relationship, graphically, that as levels of perceived racial discrimination increase, suicide ideation levels increase, but not for individuals with high purpose in life. In other words, high PIL serves to buffer the impact of racial discrimination on suicide ideation.

3.6 Hypothesis 3: Unique Variance Explained by Purpose in Life as a Moderator

The last hypothesis evaluated if PIL as a moderator explained unique variance above and beyond a model that included EI as a moderator. Although we found in addressing the second hypothesis that EI was not significant as a moderator, the value of adding the PIL interaction can still be evaluated. A hierarchical regression analysis was used where the interaction of EI and perceived racial discrimination was entered in the model along with EI and the covariates, intrinsic religiosity, gender, and age. Then PIL and the interaction term for PIL and perceived racial discrimination was added to the model for comparison. Results showed a small, but significant effect after adding the PIL by perceived racial discrimination variable ($b = -.06, p = .034$; Table 4). Adding the PIL interaction term to the model increased

the model's capability to predict suicide ideation by 11.2% ($\Delta R^2 = .112, p < .001$). In other words, considering one's level of purpose in life notably determines if experiencing racial discrimination will be associated with thoughts of suicide, even after accounting for the individual's level of ethnic group identification.

Chapter 4

Discussion

The overall aim of the current study was to investigate whether the association between perceived racial discrimination and suicide ideation differed as a function of ethnic identity or purpose in life among racially/ethnically diverse young adults. The hypotheses were partially supported such that as purpose in life increased, those who perceived higher levels of racial discrimination experienced lower levels of suicide ideation, however, PIL was not found to be a strong predictor. This interactive effect was not seen in those with higher levels of ethnic identity. Furthermore, the hypothesis that purpose in life additionally contributes to the prediction of suicidal thought when ethnic identity has been considered, was supported.

4.1 Moderating Roles of Ethnic Identity and Purpose in Life

Contrary to prediction, the level of ethnic identity did not alter the positive association of perceived racial discrimination and suicide ideation in the current sample. Despite extensive research on the buffering effects of racial identity (Cross, 1971; Phinney & Alipuria, 1990; Sellers & Shelton, 2003), which posit that REM individuals who report strong ethnic identity combat the negative feeling of racial discrimination by focusing on their positive feelings about their racial group, this was not observed in the current study. Although it may be reasonable to assume that those who strongly identify with their

racial/ethnic group may possess positive feelings that buffer feelings of unequal treatment based on race, the current findings may be explained by identity theory and stress research (Thoits, 1991). This line of research posits that those who report a greater deal of pride in their identities may take added offense when that identity is threatened, resulting in heightened distress (Thoits, 1991; Lee, 2005). In the context of the current study, those who take pride in their racial/ethnic identity may be subject to heightened distress and thoughts of suicide when their racial/ethnic identity is threatened. The null findings may also be partially attributed to the racial-ethnic demographics of the community in which the participants were recruited. The latest U.S. census polls report that a mere 25.6% of the study city's population identifies as non-Hispanic White (U.S. Census Bureau, 2016). Perhaps in a city where the combined minority racial-ethnic groups are the majority, ethnic identity is underutilized as a tool to combat a struggle that traditionally affects the non-dominant culture.

Next, it was hypothesized that one's level of purpose in life would significantly contribute to whether perceptions of racial discrimination would be connected to suicide ideation. The results showed that this hypothesis was supported - as purpose in life ratings increased, those with higher levels of perceived racial discrimination experienced lower levels of suicidal thought. Almost by definition, those who have formed life purpose have intentionality, look to the future, and appreciate that there is more to be accomplished (Ryff, 1989), the antithesis of wanting to end life. Drawing this back to our study, having high life purpose may make one less vulnerable to racial slights. Philosopher Viktor Frankl proposed that the ability to acquire and establish life meaning in the face of adverse circumstances is a key component for resiliency (Keyes, 2009). Taking the argument one step further, hardship and suffering have been credited with deepening meaning where one's life becomes a vessel

for change and justice (Keyes, 2009; Ryff, 2003). In this way, racial/ethnic minority individuals who have acquired life goals and a future-oriented outlook, may be protected, if not empowered, by injustices brought on by their racial/ethnic identification. Furthermore, the interactive effect of purpose in life and perceived racial discrimination is meaningful in determining thoughts of suicide even when factoring in one's level of intrinsic religiosity, a characteristic shown to predict SI (Walker, Salami, Carter, & Flowers, 2014).

4.2 Unique Variance Explained by Purpose in Life as a Moderator

The third hypothesis, predicting the interactive effect of PIL would be meaningful in predicting SI, even when the interactive effect of EI is considered, was supported. The outcome may indeed be explained by PIL's more potent, prevailing, and versatile effect on contextual stressor, rather than a more targeted effect from having a strong sense of ethnic identity. Researchers have speculated that EI is one form of PIL, and in fact the effect by which EI is connected to positive psychological, academic, and adjustment outcomes may be through PIL (Kiang, 2010). Although our study confirmed that for the current sample, PIL and EI were distinct constructs, we were also able to confirm the significant correlation of these characteristics. Regarding the weakness of both PIL and EI as buffers, various explanations may be possible. Considering the study sample of emerging adults, it may be possible that, at this developmental stage, the participants may feel that they have a strong sense of PIL or feel that they possess a clear impression of what their racial-ethnic background means to them. In reality, however, they may be in a more exploratory phase, still discovering and finding their sense of self (Brittian, 2015). For ethnic identity, Phinney (1990) describes this as a search stage, interpreted as a state of questioning and development.

While in this precursory phase, this group of 18-to-25 year old students may in actuality be unprepared to traverse the prejudicial treatment that they face, leading to poor mental health.

4.3 Limitations and Future Directions

Although this study expanded the growing literature on the effects of resilience factors on discrimination pertaining to racial-ethnic minority groups, it is not without its limitations. First, the sample was recruited from a university student population, which limits generalizability. It can be argued that university students may have more purpose in life than emerging adults in general since presumably they are in school to better their future. Furthermore, although the authors strived for a gender balance, there was a larger proportion of females than males, which may have affected the outcome since females have been found to have more frequent thoughts of suicide (SAMHSA, 2014). Researchers have also found differing rates of racial discrimination and purpose in life when comparing male and female REM individuals (Seaton, 2008). Future studies may seek to gather a more representative sample of emerging adults.

Second, the relatively small sample size restricted the ability of the authors to perform more complex, post-hoc statistical analyses that could have elucidated the reason for such small effects. A larger sample size would have also given the authors the ability to analyze the data by racial-ethnic subgroups, possibly finding substantial differences. Researchers may seek to collect a larger sample for future studies to parse out the nuances of PIL and EI as resilience factors.

Third, cross-sectional data were used for this study, which essentially gives a time-specific snapshot of an individual's experiences and ratings, making causal interpretations

difficult. A longitudinal data collection technique with multiple time points, using additional data collection approaches beyond self-report questionnaires, would be optimal.

4.4 Conclusion

Overall, this study contributed to the necessary body of literature in search of resilience factors for racial-ethnic minority people. As race relations continue to be a relevant and pressing issue, and discrimination a daily occurrence in the lives of many, studies like these are critical. This is the first study that begins to explore the nuances of purpose in life compared to ethnic identity as relating to experiences of race-based discrimination. As researchers have characterized ethnic group identity as a form of life meaning, it is both clinically useful and practically important to fully understand targets for treatment and the most effectual way to decrease distress for people of color.

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Table 1

Means, Standard Deviations, and Intercorrelations Among Measured Variables (N = 289)

Variable	1	2	3	4	5	6	7	<i>M</i>	<i>SD</i>
1. SI	-	.24**	-.38**	-.20**	-.20**	.08	.004	13.82	23.05
2. PRD	-	-	-.05	-.03	.009	.03	.12*	10.88	6.56
3. PIL	-	-	-	.30**	.15**	.15*	.10 [†]	30.76	6.22
4. EI	-	-	-	-	.26**	.20**	.09	3.26	.61
5. IR	-	-	-	-	-	.13*	-.06	10.20	3.92
6. Gender ^a	-	-	-	-	-	-	.11 [†]	.61 ^b	
7. Age	-	-	-	-	-	-	-	20.47	1.83

Note. SI = suicide ideation; PRD = perceived racial discrimination; PIL = purpose in life; EI = ethnic identity; IR = intrinsic religiosity.

^aMales are reference group

^bPercentage females

* $p < .05$. ** $p < .01$. [†] $p < .10$.

Table 2

Linear Regression Moderation Analysis of Ethnic Identity by Perceived Racial Discrimination Predicting Suicide Ideation

Variable	<i>b</i>	<i>SE b</i>	<i>t</i>	<i>R</i> ²
Age	-.46	.71	-.65	
Gender ^a	6.26*	2.68	2.33	
IR	-1.02**	.34	-3.004	
PRD	2.41*	1.04	2.32	
EI	-1.69	4.12	-.41	
PRD x EI	-.47	.31	-1.50	
				.148**

Note. IR = intrinsic religiosity; PRD = perceived racial discrimination; EI = ethnic identity; PRD x EI = perceived racial discrimination by ethnic identity.

^aMales are reference group

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

Table 3

Linear Regression Moderation Analysis of Purpose in Life by Perceived Racial Discrimination Predicting Suicide Ideation

Variable	<i>b</i>	<i>SE b</i>	<i>t</i>	<i>R</i> ²
Age	-.035	.68	-.05	
Gender ^a	6.78	2.58	2.63	
IR	-1.02	.32	-3.19	
PRD	2.70**	.86	3.13	
PIL	-.62	.38	-1.64	
PRD x PIL	-.06*	.03	-2.25	
				.246**

Note. IR = intrinsic religiosity; PRD = perceived racial discrimination; PIL = purpose in life; PRD x PIL = perceived racial discrimination by purpose in life.

^aMales are reference group

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

Table 4

Hierarchical Regression Analysis of Perceived Racial Discrimination by Ethnic Identity and Perceived Racial Discrimination by Purpose in Life Predicting Suicide Ideation

Model		<i>b</i>	<i>SE b</i>	<i>p-value</i>
Step	Variable			
Step 1				$R^2=.144^{**}$
	Age	-.421	.718	.558
	Gender ^a	6.034	2.734	.028
	IR	-1.028	.344	.003
	PRD	1.535	.750	.042
	EI	-6.859	2.24	.002
	PRD x EI	-.026	.028	.364
Step 2				$\Delta R^2=.112^{**}$
	PIL	-.571	.376	.130
	PRD x PIL	-.058	.027	.034

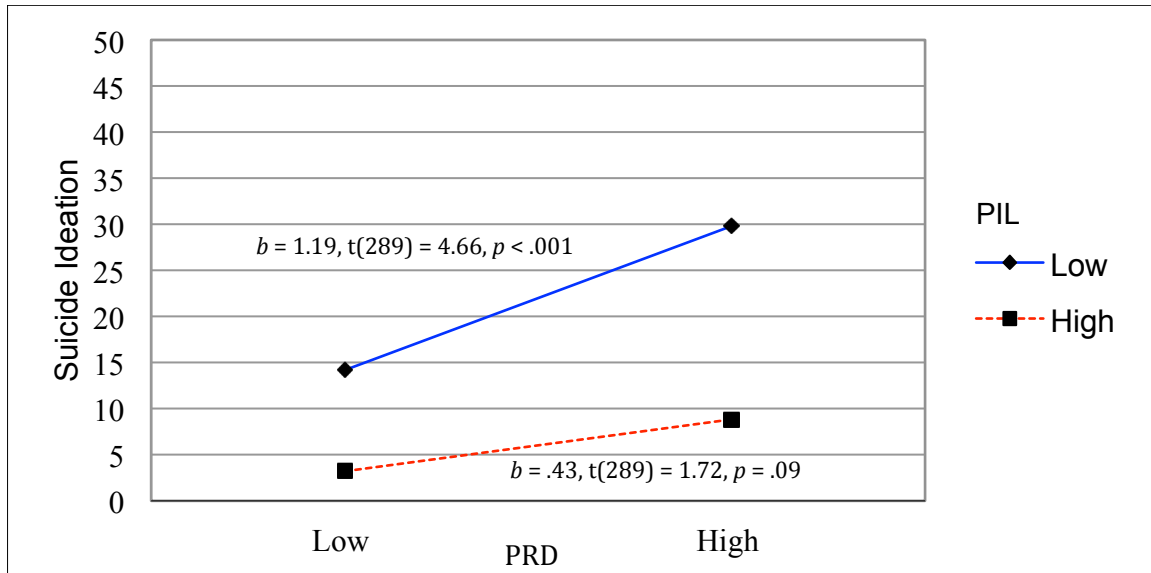
Note. IR = intrinsic religiosity; PRD = perceived racial discrimination; PIL = purpose in life; PRD x EI = perceived racial discrimination by ethnic identity; PRD x PIL = perceived racial discrimination by purpose in life.

^aMales are reference group

$^{**}p < .01$.

Figure 1

Association of Perceived Racial Discrimination and Suicide Ideation at Low and High Levels of Purpose in Life.



Note. PRD = perceived racial discrimination; PIL = purpose in life.