2019

Social Influences on racial identity, perceived social support, and mental health among Black college students

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science

at Virginia Commonwealth University.

by

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B.S., Grand Valley State University, May 2016

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Virginia Commonwealth University
Richmond, Virginia
April, 2019

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Abstract

SOCIAL INFLUENCES ON RACIAL IDENTITY, PERCEIVED SOCIAL SUPPORT, AND MENTAL HEALTH AMONG BLACK COLLEGE STUDENTS

By Sultan A. Hubbard, B.S.

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at Virginia Commonwealth University.

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Major Director: Shawn O. Utsey, Ph.D.
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The first goal for the study was to estimate trait effects and social influences for racial centrality, racial private regard, and racial public regard. The second was to estimate correlational relationships between racial identity, depression, and anxiety symptoms. The study used 110 Black university students (M_{age}=19.5, SD=4.13) from a southeastern American university. Restricted maximum likelihood estimation was conducted to estimate variance components for all constructs. Racial centrality, racial private regard, and racial public regard consisted of mostly trait effects, although reflecting substantial social influences. Correlational findings indicated that providers who evoked high racial centrality also evoked low depression, low anxiety, and were seen as supportive. Providers who evoked racial private regard also evoked low depression, low anxiety, and were seen as supportive. Socially influenced racial public regard had no statistically significant links to other constructs. Findings suggest socially influenced racial identity holds links to mental health outcomes and social support.

Social Influences on racial identity, perceived social support, and mental health among Black college students

Since arriving to the United States until the present, Black peoples have experienced racial discrimination and oppression (Painter, 2007; Kessler, Mickelson, & Williams, 1999; Landrine & Klonoff, 1996; D'Augelli & Hershberger, 1993). Psychotic symptoms (Hope et al. 2017), depression (Bynum et al. 2008), anxiety (Neblet et al. 2004), low self-esteem (Settles et al. 2010), psychological distress and functioning (Sellers & Shelton, 2003; Sellers et al., 2006), and post-traumatic stress (Carter, 2007) are a few of the psychological ramifications that may be accrued through racial oppression. Theorists have suggested that racial identity is a protective factor against the harmful effects of discrimination for Black people (e.g. Cross, 1971, 1991, 2000; Helms, 1990; Sellers et al., 1998; Phinney, 1989, 1990, 1993; Carter, 2007). However, little focus has been given to the role of personal relationships on Black racial identity. Research within the social support literature has offered suggestions as to how specific supportive relationships evoke favorable affect and thought. Such an effect may apply to racial identity as well (Lakey & Orehek, 2011). The primary aim of this study is to add to the existing research by 1) assessing the extent to which specific relationships might evoke high or low racial identity and 2) estimate correlations describing the extent to which supportive providers evoke positive racial identity, mental health, and social support in participants.

The Multidimensional Model of Racial Identity. The Multidimensional Model of Racial Identity is useful in examining how experiences, such as racial discrimination, affect mental health outcomes of African descent peoples (MMRI; Sellers et al., 1998). The MMRI hypothesizes that due to racial centrality, racial regard, and racial ideological differences, disagreement as to whether environmental cues indicate racial discrimination may arise. In

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addition, due to these factors in racial identity, differences between behavior and mental health reactions as a result of experiencing racial discrimination may occur as well. The theory defines racial identity as the extent to which one's race is seen as significant to one's identity in addition to the meaning one attributes to being Black. The theory assumes that 1) identity is both situationally influenced and a property of the individual, 2) racial identity, among other identities, are upheld within the self-concept and are ordered hierarchically, 3) self-perceptions of racial identity are the best indicators of one's racial identity, and 4) *a priori* definitions of healthy racial identity are not given due to such judgments being idiosyncratically based.

The MMRI describes *situational cues, racial centrality*, *racial salience*, *racial ideology*, and *racial regard,* as factors within the model which affect behavior, cognition, and mental health outcomes for Black peoples. Sellers et al. (1998) defines situational cues as environmental stimuli which may be interpreted as racially salient for any given individual. Racial centrality refers to the extent to which a Black person normatively defines themselves by their Black American heritage. The theory hypothesizes that the degree of racial centrality held by an individual, impacts the likelihood in which a situational cue may be interpreted as racially salient (i.e. *racial salience*). An individual experiencing a situation as racially salient engages in cognitive processes by which their racial ideology is made accessible.

Four racial ideologies are represented within the MMRI: 1) *Nationalist* (i.e. the extent to which one sees Black identity as unique, while holding preferences for Black persons, places, and culture), 2) *Oppressed Minority* (i.e. the extent to which one perceives underlining similarities in the oppression of all marginalized groups in addition to those of African descent), 3) *Humanist* (i.e. the extent to which one does not believe one ought to identify others in terms of race, gender, class, etc. in favor of seeing humanity as a united whole), and 4) *assimilationist*

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(i.e. the extent to which one believes one should emphasize the similarities Black peoples have with mainstream society). Racial salience also impacts *racial private regard* (i.e. the extent to which one positively or negatively appraises their racial identity) and *racial public regard* (i.e. the extent to which one perceives others positively or negatively appraise their racial group). According to the MMRI, one's particular racial ideology and racial regard result in particular behavioral, cognitive, and psychological responses as a result of the racially salient situation. Indeed, specific persons from one's social network could be viewed as racially salient situations. Due to African descent people having different degrees of racial centrality, not all will find particular situations racially salient. What is more, Black peoples are likely to have different psychological reactions to racially salient situations due to differences in racial regard and racial ideology. Currently, it is unclear if these differences in racial identity factors are attributed to trait differences in individuals or social influences among participants when asked to reflect on their racial identity or on racially salient situations.

Racial identity and psychological well-being. Racial identity is a protective factor against poor mental health outcomes for Black peoples. Settles et al. (2010) conducted a correlational study in order to examine the relationship between private regard, public regard, racial centrality, self-esteem, and depression symptoms within a sample of 379 Black women. Results indicated that Black women's positive appraisal of Black peoples (i.e. private regard) was associated with experiencing fewer depression symptoms. The higher racial centrality was indicated, the stronger the relationship between positive private regard and lower depression became. Likewise, Black women who thought that others perceived Blacks favorably (i.e. public regard) reported fewer rates of depression. Higher public and private regard were associated with fewer depression symptoms and higher self-esteem scores respectively. The authors also reported

a full mediation effect between racial private regard, depression, and self-esteem. Specifically, higher private regard was linked to fewer depression rates through self-esteem.

In addition, Sellers & Shelton (2003) sought to assess racial identity as a moderator of psychological distress and racial discrimination and found that among 267 Black college students who were relatively high in nationalistic ideology (i.e. the extent to which one sees Black identity as unique, while holding preferences for Black persons, places, and culture) reported experiencing fewer psychological distress symptoms (i.e. depression, stress, and anxiety) as a result of racial discrimination, compared to peers who reported fewer nationalistic ideological beliefs. Similarly, Neblett, Shelton, & Sellers (2004) sought to assess racial identity's effect on the relationship between experienced daily racial hassles and stress, anxiety, and depression symptoms. The authors found that those with high racial centrality levels reported significantly fewer stress, anxiety, and depression symptoms than those endorsing low and medium racial centrality levels. Sellers et al. (2006) assessed the relationship between racial discrimination, racial identity, and psychological functioning among 314 Black adolescents. The authors found that those who perceived their Black heritage more favorably (i.e. private regard) also experienced fewer depressive symptoms. Bynum et al. (2008) have indicated similar relationships between racial identity and depressive symptoms. Particularly, higher private regard endorsed by Black males resulted in fewer depression and anxiety symptoms associated with frequent racism related stressors.

Sellers et al. (2003) sought to assess the indirect and direct links between racial identity variables and the relationship between perceived stress and mental health outcomes in a sample of 555 Black college students. Correlation results indicated that those who more readily identified with their race (i.e. racial centrality) reported lower stress, depression, and anxiety

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symptoms. Similarly, those who believed others to have positive perceptions of Black peoples (i.e. public regard) also reported less stress, depression, and anxiety symptoms. Additionally, the authors found that racial centrality moderated the relationship between perceived stress and racial discrimination, indicating that high racial centrality decreases the linked between perceived stress and racial discrimination. Rowley et al. (1998) sought to examine the relationship between racial identity and self-esteem among 245 Black college and high school students. In their study, a small yet significant positive correlation between self-esteem and private regard and racial centrality was noted. In addition, private regard significantly predicted self-esteem among Black participants. The authors also found support for moderation effects of racial centrality on the relationship between self-esteem and private racial regard.

Yip, Seaton, and Sellers (2006) also found links to Black racial identity and fewer depression symptoms. While assessing ethnic identity development statuses across the life span, the authors found that Black college students whom did not explore the meaning of their racial identity nor committed to a definition of what their racial identity was (i.e. diffusion status), reported significantly more depression symptoms than other Black participants in the sample that had explored the meaning of their racial identity and committed to a definition of its significance (i.e. achieved status). Although Yip et al. (2006) operationally defined racial identity through Cross' Nigrescence Model (1971, 1991, 2000), the construct significantly overlaps with the MMRI in that those holding a diffused status may be akin to those with low racial centrality since they have not yet investigated their racial identity. Similarly, those with an achieved status may be akin to those with high racial centrality since they have investigated the meaning of their racial identity and have explored its significance to their self-concept. Pyant & Yanico (1991)

similarly found that those who highly endorsed low racial identity attitudes also reported higher depression scores.

Needless to say, Black racial identity has shown links to psychological well-being. Racial identity may increase associations with mental health outcomes due to influences associated with situational cues, racial centrality, racial regard, and racial ideology of the particular Black person. According to the MMRI, racial identity is not entirely stationary and can ebb and flow based on social and situational factors. Although the link between racial identity and mental health is well established, the question of whether racial identity primarily changes based on social influences or is relatively stable across relationships still remains.

Moreover, few researchers have assessed the variability of racial identity constructs (Shelton & Sellers, 2000), and to the author's knowledge, no past research has assessed variability in racial identity as a function of influences from social network members. In Shelton & Sellers (2000), sought to assess the extent to which racial identity reflected cross-situational stability and/ or situational variability. For part one of their study, 68 Black females participated in two sessions. The first session involved a racially salient 5-minute video where a Black female participant viewed a tape of a White male beating a Black male, while the participant was in the presence of three White female experimenters. The second session involved a racially ambiguous condition in which Black female participants were randomly assigned to either A) watch a 5-minute tape of a White male beating a White male, in the presence of three Black female experimenters or B) watch a 5-minute tape of a White male beating a White male, in the presence of three White male experimenters.

The authors found that racial centrality, racial ideology, and racial public regard were relatively stable across the racially salient and racially ambiguous conditions (i.e. high trait

stability/ cross-situational stability). However, the authors reported statistically significant mean differences in racial centrality across the racially salient and racially ambiguous conditions. This indicated that although participant's racial identity was relatively consistent across both conditions, the extent to which racial centrality was evoked by the conditions were different (i.e. racial centrality means were higher in the racially salient condition as opposed to the racially ambiguous condition). Although Shelton & Sellers (2000) assess racial identity's stability across situations, the data is limited in what it can tell regarding changes in racial identity as a result of important dyadic relationships. The authors appear to come close to this concept by assessing differences in racial centrality across situations, but their analyses do not include variance components to estimate the effect size of situations on racial identity.

These findings leave open questions regarding the extent that racial identity may change based on social influences from networks one belongs too. Is racial identity solely a factor of trait characteristics of African descent peoples? In particular, are high racial centrality, racial private regard, and racial public regard, primarily trait characteristics of individuals or does Black racial identity reflect social influences? Due to lack of replication of Shelton & Sellers (2000) findings and that the focus of analyses did not include network members, this question is still largely open. Theory within the field of social support offers insights into this question.

Main effects between social support and mental health. Perceived social support is the belief that family and friends will aid an individual when in time of need (Barrera, 1986), and has played a key role in Black well-being and community development (Bagley & Carroll, 1998; Boyd-Franklin, 2003; Brown, 2008; Pipes-McAdoo, 2002; Thorton, 1998; Brody et al. 2016). A main effect of perceived support is indicated when differing levels of perceived support predict different levels of an outcome variable, such as depression scores, while holding constant other

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predictor variables. Stress-buffering effects are indicated when differing levels of perceived social support affect an outcome variable at different levels of another predictor variable. For example, Seawell, Cutrona, & Russell, (2014) demonstrate a classic stress buffering effort of perceived social support tailored for racial discrimination on the negative effects of racial discrimination (i.e. depression) for 590 Black women. However, research suggests that main effects in social support are more plentiful and more consistently replicated within the literature compared to stress buffering effects through enacted social support (Lakey & Orehek, 2011; Odafe, Salami, & Walker, 2017; Lakey & Cronin, 2008; Brewin et al. 2000; Finch et al. 1999).

For example, Dessler (1985) assessed the relationship between perceived social support from extended kin relationships among 285 Black participants. Results demonstrated that those who perceived their extended family as highly supportive reported fewer depressive symptoms than those who appraise their extended family as less supportive (Dessler, 1985). Brown (2008) assessed the ability to persevere in difficult circumstances (i.e. resiliency) and its relation to perceived social support among 153 Black adolescents. Results suggested that those reporting high perceived social support from non-family/non-friend significant persons also reported high resiliency.

Additionally, Hope et al. (2017) found that those who experienced high emotional support from church members also reported fewer odds of lifetime psychiatric disorder rates among 1170 Black adolescents (810 African Americans and 360 Black Caribbean's). Odafe, Salami, & Walker (2017) sought to assess the relationship between perceived social support, racial discrimination, and hopelessness among 236 Black males. Odafe et al. (2017) found main effects for appraisal perceived support on hopelessness outcomes indicating that those reporting higher perceived support levels also reported fewer hopelessness scores on average. In their

recent study, Sheffler and Sachs-Ericsson (2016) assessed the effects of recent stressful life events and perceived social support levels on health functioning (i.e. depression and chronic health issues) of 2,327 Black Americans and White Americans three years from the date data had been collected. The authors reported that among Black Americans, those with high perceived social support had lower depression and chronic health issues than those with low perceived social support regardless of levels of negative stressful life events reported.

Hooper, Baker, & McNutt (2013), conducted a study to investigate adaptive and maladaptive coping factors for 168 Black Americans desiring to quit smoking. The authors found that those endorsing high positive affect and high perceived social support also reported high adaptive coping respectively. Causey, Livingstone, & High (2015) assessed the relationships between awareness of racism and discrimination in society, self-esteem, parental involvement, and perceived social support among 98 Black college students. Results suggested that those with high perceived social support from parents typically reported high self-esteem rates regardless of parental involvement or awareness of racism and discrimination in society. Boulware & Bui (2016) find similar social support main effects when assessing social support, continued bonds with others, religious coping on prolonged grief disorder symptoms, and life satisfactions scores. Results concluded that those with low perceived social support typically reported high prolonged grief disorder symptoms and lower quality of life compared to those reporting high perceived social support.

Furthermore, the literature demonstrates consistent main effects of perceived social support, but like the racial identity literature reviewed prior, it is unclear if these effects primarily reflect social influences of dyads or trait perceived social support from participants. Regarding perceived social support, research suggests that the construct is primarily a reflection of

interpersonal dynamics between dyadic relationships rather than individual's trait dispositions to perceive others as supportive (Lakey & Orehek, 2011). For example, Lakey (2010) conducted a meta-analysis of five studies which assessed some 5,000 dyadic relationships. Results suggested that 62% of the variance in perceived social support was attributed to relational effects, 27% attributed to trait influences of the recipient, and 7% attributed to agreement among observers about the supportiveness of specific providers (provider trait effects). Relational effects are a specific type of social influence studied in dyadic research and it reflects dynamics in relationships that are not shared across relationships. Other research has found similar results regarding social support as a construct reflecting predominantly social influences (e.g. Lakey & Scoboria, 2005; Woods, Lakey, & Sain, 2016; Lakey et al. 2015; Williamson & O'Hara, 2017). Due to perceived social support reflecting primarily social influence variance, assessing for social influences of social support, and its relationship to other socially influenced racial identity, may provide understanding as to how perceived support impacts racial identity and thus mental health outcomes. Theory within the social support literature offers a framework for conceptualizing social influences in perceived support as they impact mental health and racial identity variables.

Relational Regulation Theory (RRT). RRT is a main effects social support theory that makes predictions regarding the relational aspects of perceived social support on mental health. RRT hypothesizes that human beings regulate their affect, thought, and behavior on a moment by moment basis through ordinary yet consequential conversation and shared activity. Such regulation of affect through ordinary social interactions is primarily relational (i.e. reflects unique taste of the individual rather than the objective power of the social interaction). For example, an individual discussing their favorite anime television show may experience unique

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regulation of affect, however this is not necessarily a shared experience across the population. RRT (Lakey & Orehek, 2011) encourages researchers to assess not only trait variance, but also that aspect of constructs that is evoked by relational influences. When applying RRT to racial identity, new hypotheses can be derived allowing one to 1) assess the extent to which racial identity reflects social influences and 2) estimate the correlations among constructs for the social influence components specifically. For example, estimating the social influences component of perceived social support, racial centrality, and mental health outcomes respectively, allows one to make new predictions regarding these constructs; particularly, how they may be evoked through social interactions rather than trait characteristics of individuals. Making predictions of how these constructs are enhanced through social interactions may be useful for propagating newer mental health interventions for African descent peoples.

The Social Relations Model (SRM). Moreover, RRT is informed by a statistical approach known as the Social Relations Model (Kenny, 1994; Kenny, Kashy, & Cook, 2006). In a fully crossed round robin design where recipients (i.e. participants) rate the same providers (e.g. social network members), the SRM can permit partitioning of variance into at least three components—relational, recipient, and provider influences (e.g. Lakey, Vander Molen, Fles, & Andrews, 2016; Woods, Lakey, & Sain, 2016). The SRM defines relational influences as the extent to which a recipient sees a provider as evoking a particular quality in the relationship (e.g. supportiveness) more than the recipient typically experiences in other relationships, and more of that quality than the provider typically evokes in other relationships. For example, consider two siblings (e.g. Eman and Malcolm). Malcolm perceives Eman as more supportive than he typically sees others and more supportive than she is typically seen by others. This is an example of a relational effect. Recipient influences denote the aspect of a particular quality that reflects

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the perceiver's trait-like characteristics. For example, Malcolm sees Eman as generally supportive, but Malcolm also sees everyone as generally supportive independently of whom he is rating. Provider influences denote the objectiveness of the particular quality of the one being rated (where consensus among recipients is an index of objectiveness). For example, Malcolm sees Eman as supportive and there is consensus among the entire family regarding Eman's objective supportiveness. Guided by the SRM (Kenny, 1994; Kenny, Kashy, & Cook, 2006), researchers are able to quantitatively define and partition the relational components of constructs and estimate correlations among the relational components of constructs. An example of this using racial centrality would be as follows: Eman evokes atypically strong racial centrality in Malcolm that is uniquely evident in the context of his relationship with Eman and not in any other relationship of his or hers, respectively. When experiencing this unique enhancement of racial centrality with Eman, Malcolm typically experiences unusually high perceived social support that is also a unique property of his relationship with Eman.

Furthermore, following the SRM approach, researchers have also utilized a one with many design (e.g. Lakey & Scoboria, 2005; Woods, Lakey, & Sain, 2016; Lakey & Rhodes, 2015; Quick & Lakey, 2017). Instead of participants being placed within groups and rating each other on various qualities (i.e. round robin design), participants are asked to list three to four important people within their unique social networks. These individuals can choose to rate any given individual, whether a present or past romantic partner, friend or foe, parent with whom they have a pleasant or negative relationship with, and more. In this design, each recipient rates different people since typically, no one person has the same important figures within their social network. A key limitation in the one with many design is that relational and provider influences are confounded within analyses and are presented as a combined effect (i.e. *social influences*;

Lakey & Scoboria, 2005; Woods, Lakey, & Sain, 2016; Lakey & Rhodes, 2015; Quick & Lakey, 2017). However, as stated prior, provider effects are relatively small in round robin designs, and so, for perceived support, relational affects explain most of the variance in the construct. Recipient influences are still quantifiable but are often termed as *trait influences*. The one with many design is preferable in cases where a researcher wishes to study the impact of relationships from one's social network on psychological constructs since the design requires participants to rate persons within their own unique social circle. Understanding how members of one's own social network impact racial identity and mental health provides insight into potential interventions. Consequently, the round robin design is often limited in application to intimate relationships research since few people have the same important members in their social network.

Statement of the Problem

It is still unclear if current research on racial identity primarily reflects social influences or trait characteristics of individuals, which is a limitation to our current understanding of racial identity and how it may be enacted as a protective factor for Black peoples. Although current literature has found perceived support to be primarily relational (Lakey & Orehek, 2011), little is known regarding racial identity in the context of important dyadic relationships, a potentially aspect of racial identity's link to psychological well-being. Furthermore, the MMRI and RRT agree that constructs are not purely trait like but include situational and social influences. RRT makes specific predictions regarding social influences on mental health, but this has not been applied to racial identity. This leaves inquiries about socially influenced racial identity and its link to protective factors and mental health untested.

The Present Study

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Racial discrimination is a frequent experience for Black peoples and has been associated with psychotic symptoms (Hope et al. 2017), anxiety (Neblet et al. 2004), low self-esteem (Settles et al. 2010), depression (Bynum et al. 2008), psychological distress and functioning (Sellers & Shelton, 2003; Sellers et al., 2006), and post-traumatic stress (Carter, 2007). Research and theory have suggested that racial identity can aid in protecting Blacks from negative psychological outcomes on health as a result of racial discrimination and race related stress (e.g. Cross, 1971, 1991, 2000; Helms, 1990; Sellers et al., 1998). However, research has not explored whether there are influences of one's social network on racial identity. Relational regulation theory (Lakey & Orehek, 2011) is a main effects social support theory, and is useful for making predictions on how supportive providers may evoke racial identity appraisals and mental health outcomes in recipients. By partitioning variance into social and trait influences across racial identity and mental health variables (i.e. depression and anxiety) one may make new predictions about the relationship between racial identity and mental health. For example, providers that evoked low public regard among recipients also evoked low depression, low anxiety, and high perceived support is an example of a prediction one can make regarding relationships between constructs for the social influence component specifically. These findings will inform future research and may be useful in producing interventions that address mental health needs of Black peoples.

Moreover, the current study seeks to add to the existing research by assessing the extent to which racial identity, mental health, and perceived support reflect social influences of their social network. By correlating the social influences component of constructs across all variables, one can estimate new links between racial identity, perceived social support, and mental health among an Black college sample.

Estimating the social influences of racial identity and mental health outcomes informs researchers of the extent to which racial identity and mental health are evoked through important relationships, which may be useful in informing future interventions among Black peoples. In order to assess this, the social influence components of constructs must be isolated and then correlated across constructs to estimate the link between socially influenced racial identity and other socially influenced variables. Although RRT has not been applied to racial identity, doing so will allow researchers to assess socially influenced racial identity and links to high socially influenced perceived support and mental health outcomes for people of African descent. The current study uses RRT as a framework for conceptualizing racial identity and mental health outcomes as socially influenced. Using RRT and the MMRI as conceptual frameworks, the current study seeks to generate new predictions about the link between racial identity, mental health outcomes, and perceived support.

Statement of Hypotheses

Primary Hypothesis:

> **Research Question 1a.** To what extent will racial identity, particularly racial centrality, racial public regard, and racial private regard, reflect social influences and trait variance?
>
> **Hypothesis 1a.** Racial identity, particularly racial centrality, racial public regard, and racial private regard will reflect statistically significant social influences and trait variance.
>
> **Research Question 1b.** To what extent will perceived support reflect social influences and trait variance?
>
> **Hypothesis 1b.** Perceived social support will reflect primarily social influence variance and will reflect statistically significant trait influences.

Secondary Hypothesis:

Research Question 1c. To what extent will depression and anxiety scores reflect social influences and trait variance?

Hypothesis 1c. Depression and anxiety will reflect statistically significant trait influences of participants in addition to social influences effects.

Research Question 2a. Will providers who evoke high socially influenced racial centrality, high socially influenced racial public regard, and high socially influenced private regard in recipients also evoke high socially influenced perceived social support, low socially influenced depression, and low socially influenced anxiety scores in recipients?

Hypothesis 2a. Providers who evoke high socially influenced racial centrality, high socially influenced racial public regard, and high socially influenced private regard in recipients will also evoke high socially influenced perceived social support, low socially influenced depression, and low socially influenced anxiety scores in recipients.

Methods

Participants

The current sample consisted of 110 Black college students (3 graduate and 107 undergraduates; mean age=19.5) from a large public university in the southeastern coast of the United States (74.5% female, 24.5% male, and .9% Gender Non-Binary). All participants included in the analyses identified as African descent people. Students were recruited through Black student organizations, flyers, email, and information sessions in classrooms. Participating students either chose to receive undergraduate course credit for participation or entered into a raffle to receive 1 of 4 $20 Starbucks gift cards as an honorarium for participation.

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Procedure

The study was conducted online through the secure Qualtrics site. Using the one perceiver many targets one with many design participants were asked to pick three people from their social network whom have a strong influence on them, for better or for worse. Subjects were prompted to rate three salient network members on the following characteristics: 1) racial centrality, 2) racial private regard, 3) racial public regard, 4) perceived social support, 5) anxiety, and 6) depression, when in the presence of, or when thinking of, each social network member. This is the typical practice in past research in this area (e.g. Quick & Lakey, 2017; Woods, Lakey, & Sain, 2016; Lakey & Scoboria, 2005). In particular, participants were asked "When with person A, or when thinking about them, to what extent do you agree with the following statements?". For provider 1 participants typically rated mothers (38.2%) and friends (30%) who were usually of African descent (86.4%) and female (69.1%). Participants were in contact with provider 1 for several times a month to nearly every day (93.6%) and had known provider 1 for a year or longer (86.4%). For provider 2 participants typically rated their father (29.1%) and friends (27.3%) who were usually of African descent (86.4%) and male (51.8%). Participants were in contact with provider 2 for several times a month to nearly every day (86.4%) and had known provider 2 for a year or longer (82.7%). For provider 3 participants typically rated a friend (35.5%) or sibling (19.1%) who were usually of African descent (77.3%) and female (76.4%). Participants were in contact with provider 3 for several times a month to nearly every day (84.5%) and had known provider 3 for a year or longer (79.1%).

Measures

Internal consistency values for social influences and trait effects for each construct are provided due to the focus of the current study. The formula for Cronbach's alpha is equivalent to

the typical formula for Cronbach's alpha (Cronbach, Gleser, Nanda, & Rajaratnam, 1972; Quick

& Lakey, 2017). The formula is $\alpha_{trait} = \sigma^2_r / [\sigma^2_r + (\sigma^2_{(r \times i)} / n_i)]$, where r indicates recipients, i

represents items, and n_i reflects number of items. The formula for calculating internal

consistency for social influences is $\alpha = \sigma^2_{p \text{ nested within } r} / (\sigma^2_{p \text{ nested within } r} + [\sigma^2_{(p \text{ nested within } r)} \times$

$i / n_i])$, where r indicates recipients, i indicates items, n_i indicates number of items, and p indicates

providers. The average of odd and even items across constructs represent the number of items

(i.e. two items).

Perceived social support was measured using 12-items from the Social Provisions Scale

(Cutrona & Russell, 1987). This measure has been used frequently in past research and had an

internal consistency reliability of $\alpha=.87$ (social influences) and $\alpha=.82$ (trait effects) in the current

study. Examples of items from this measure are, "Do your relationships with this social network

member provide you with a sense of security and well-being?", "Can you depend on this social

network member if you really need to?", and "Could you turn to this social network member for

advice if you have problems?".

Racial identity was assessed using the centrality, private regard, and public regard

subscales of the Multidimensional Inventory of Black Identity (MIBI; Sellers et al., 1998). The

8-item centrality subscale assesses the extent to which one normatively defines themselves by

race and had an internal consistency reliability estimate of $\alpha=.77$ for social influences and $\alpha=.63$

for trait effects. Examples of this subscale are, "In general, being Black is an important part of

my self-image" and "I have a strong attachment to other Black people". The 6-item private

regard subscale assesses the degree to which one appraises their racial group as favorable and

has an internal consistency reliability estimate of $\alpha=.75$ for social influences and $\alpha=.94$ for trait

effects. Examples of the private regard subscale are, "I feel good about Black people" and "I

often regret that I am Black". The 6-item public regard subscale measures the degree to which subjects perceive out-group members to have favorable perceptions of their racial group and has an internal consistency reliability of $\alpha=.75$ for social influences and $\alpha=.82$ for trait effects. Examples of this measure are, "Blacks are not respected by the broader society" and "In general, other groups view Blacks in a positive manner".

Anxiety was measured using the seven item Generalized Anxiety Disorder scale-7 (GAD-7; Spitzer et al., 2006). The internal consistency reliability is estimated at $\alpha=.86$ for social influences and $\alpha=.94$ for trait effects. Participants are asked to rate on a 4-point scale (0=Not at all sure and 3=Nearly Every day), how often in the past two weeks they experienced various items such as "Feeling nervous, anxious, or on edge" or "Trouble relaxing".

Depression was measured using the 12 item Center for Epidemiological Sciences Depression Scale (CES-D-12; Roberts & Sobhan, 1992). Internal consistency reliability values for social influences were at $\alpha=.72$ and $\alpha=.89$ for trait effects. Participants are asked to rate depressive symptoms on a 4-point likert scale ranging from "Rarely or none of the time (less than 1 day)" to "Most or all of the time (5-7 days)". Examples of the scale are, "I was bothered by things that usually don't bother me", "I did not feel like eating; my appetite was poor", and "I felt that I could not shake off the blues even with help from my family or friends".

Statistical Analysis Plan

Analyses proceed in two steps. First one must estimate trait and social influences respectively for each construct. Second, correlations for social influences are estimated across constructs. In order to estimate variance for trait and social influence, restricted maximum likelihood estimation with random factors, using the variance component function in SPSS 25, was used. In order to account for non-independence of data statistical significance of correlations

were used by bootstrapping in STATA with 1000 resamples of recipients. Recipients are independent observations making resampling by recipients with replacement ideal. Random effects are used since one does not typically study the same levels of within and between subjects factors when using a one with many design (see Marcus, Kashy, & Baldwin, 2009). The one perceiver many targets one with many design was used (Kenny, 1994) where providers (i.e. network members) were nested within recipients (i.e. participants) by items. Recipients each formed separate levels of the random between subjects factor (trait effects) and each network member formed separate levels of the random within subjects factor (social influences effects). Splitting items into odd and even scores formed the two levels of the items factor. This has been done in previous research to reduce measurement error and simplify the study's design (e.g. Woods, Lakey, & Sain, 2016, Quick & Lakey, 2017). The design produced five effects: recipient (trait effects), providers nested within recipients (social influences effects), items, recipients by items, providers nested within recipients by items (error term). Due to item effects reflecting measurement error and trait and social influences being the focus of analyses, only these effects are reported.

Social influence effects are defined as $SI_{ij} = X_{ij} - MR_i$, where X_{ij} indicates participant i's reported score of a particular variable when with provider j. MR_i indicates participant i's average ratings across providers (Woods, Lakey, & Sain, 2016; Quick & Lakey, 2017). Dyads are the unit of analyses for calculating social influences (N=330 dyads). For the current study, racial centrality, private regard, public regard, perceived social support, anxiety, and depression were assessed for trait effects and social influences. As stated prior in this article, social influences are combined effects consisting of provider trait variance and uniquely dyadic variance. Calculating correlations for social influences occurs after deriving the effect across constructs. Percentile

bootstrapping by resampling recipients was conducted to assess statistical significance of results, since parametric significance tests are not available for these analyses (e.g. Lakey & Quick, 2017; Woods, Lakey, & Sain, 2016). Bootstrapping with 1000 resamples with replacement using recipients was done due to recipients being independent observations. Bootstrapping occurred using STATA.

Results

Missing data

Participants who did not meet the study criteria, that is, they did not identify as a person of African descent (n=7), were excluded from the study. Likewise, if participants did not complete 75% of the questionnaire or more they were excluded from analyses (n=21).

Descriptive Statistics

Table 1 contains participant's demographics, means, standard deviations, and ranges across constructs. All participants included in the study were of African descent. Frequency of contact, length of relationship, relationship type, provider gender identity, and provider racial identity are network salient variables and are briefly described in the procedures section. Exhaustive demographic results for these variables is available upon request.

Hypothesis 1a

To estimate social influences and trait effects for racial centrality, racial private regard, and racial public regard, restricted maximum likelihood estimation with random effects was used. As shown in table 2, results indicated significant trait and social influences on racial centrality, racial private regard, and racial public regard. In particular, 29% of the variance in Racial centrality reflected trait characteristics of recipients and 20% reflected social influences. Trait effects accounting for 68% of the variance in Racial private regard and 14% of variance

reflected social influences. Like private regard, trait effects accounting for 54% of the variance in

racial public regard while 12% of the variance reflected social influences.

Hypothesis 1b

Social influences accounted for 54% of the variance in perceived social support.

Significant trait influences, approximately 19% of the variance, reflected trait characteristics of

recipient's social support ratings.

Table 1. *Descriptive Statistics*

Variable	N	Mean (SD)	Range
African Descent	110	--	--
Age	110	19.54 (4.13)	18-41
Man	27	--	--
Woman	82	--	--
Gender-Non Binary	1	--	--
Racial Centrality (Provider 1)	110	38.15 (7.44)	18-53
Racial Private Regard (Provider 1)	110	36.53 (6.75)	6-42
Racial Public Regard (Provider 1)	110	21.05 (6.85)	6-41
Perceived Social Support (Provider 1)	110	45.94 (9.07)	17-59
Anxiety (Provider 1)	110	12.11 (5.07)	7-27
Depression (Provider 1)	110	22.76 (7.38)	12-42
Racial Centrality (Provider 2)	110	36.45 (7.81)	8-51
Racial Private Regard (Provider 2)	110	36.21 (6.42)	6-42
Racial Public Regard (Provider 2)	110	20.93 (6.66)	6-39
Perceived Social Support (Provider 2)	110	43.81 (9.16)	19-58
Anxiety (Provider 2)	110	11.68 (4.66)	7-28
Depression (Provider 2)	110	22.78 (6.93)	12-48
Racial Centrality (Provider 3)	110	36.85 (8.18)	15-55
Racial Private Regard (Provider 3)	110	36.55 (6.28)	6-42
Racial Public Regard (Provider 3)	110	21.35 (6.92)	7-38
Perceived Social Support (Provider 3)	110	44.55 (8.94)	22-58
Anxiety (Provider 3)	110	11.15 (4.49)	7-28
Depression (Provider 3)	110	22.02 (7.49)	12-48

Note. Age of participants reflects years. Mean indicates average scores and
standard deviations across constructs. Range indicates breadth of scores
endorsed by particiants.

Hypothesis 1c

Self-reported anxiety reflected equally as large effects for trait and social influences. Trait effects accounted for 40% of the variance in anxiety as did social influences. Depression consisted of trait variance primarily, accounting for 39% of the variance in depression scores. Although trait effects account for most of the variance in depression it nevertheless reflected strong social influences, accounting for 28% of the variance in depression scores.

Table 2. *Variance components, standard errors, confidence intervals, and proportion of variance explained*

Source	Variance Component	Standard Error[a]	95% Confidence Interval[a]	Proportion of Variance Explained[b]
Racial Centrality				
Trait Effects	0.39	0.10	0.18-0.59	0.29*
Social Influences	0.26	0.11	0.20-0.33	0.20*
Racial Private Regard				
Trait Effects	0.87	0.14	0.60-1.14	0.68*
Social Influences	0.18	0.03	0.12-0.24	0.14*
Racial Public Regard				
Trait Effects	0.85	0.15	0.54-1.15	0.54*
Social Influences	0.19	0.032	0.13-0.25	0.12*
Perceived Social Support				
Trait Effects	0.13	0.04	.04-.22	0.19*
Social Influences	0.36	0.04	.09-.27	0.54*
Anxiety				
Trait Effects	0.21	0.04	0.13-0.30	0.40*
Social Influences	0.21	0.03	0.15-0.27	0.40*
Depression				
Trait Effects	0.18	0.03	0.11-.24	0.39*
Social Influences	0.12	0	.123-.123	0.28*

Note. [a] Refers to variance components. [b] Proportion of variance explained was estimated by dividing variance components for a particular effect by the total variance. Total variance is the sum of all five variance components (e.g. recipient trait effects, social influences, items, recipients x items, and providers nested within recipients x items, which is the error term). Effects are significant* is 95% confidence interval does not include zero.

Hypothesis 2a

The bivariate correlation function in SPSS 25 was used to assess the relationship between racial identity variables (i.e. racial centrality, racial private regard, and racial public regard), mental health outcomes, and social support. In particular, a correlation matrix of the social

influences components across variables was conducted. Providers who evoked high racial centrality also evoked low depression (r = -.158, p<.05), and low anxiety (r = -.128, p<.05). Providers who evoked high racial centrality, low depression and low anxiety were also seen as highly support (r = .215, p<.05). Similarly, providers who evoked high racial private regard in recipients also evoked low depression symptoms (r = -.383, p<.05), and low anxiety (r = -.232, p<.05). Those evoking high racial regard, low depression, and low anxiety were also seen as highly supportive (r = .369, p<.05). There were no significant links between recipients who were socially influenced to believe dominant society thought of Black peoples favorably and recipient depression (r = -.075, *ns*), anxiety symptoms (r = .034, *ns*), and perceived social support (r = -.042, *ns*).

Table 3. *Correlations among constructs for social influences*

	Racial Centrality	Racial Private Regard	Racial Public Regard	Perceived Social Support	Anxiety
Depression	-.158[*]	-.383[*]	-0.075	-.505[*]	.658[*]
Racial Centrality	--	.372[*]	-0.082	.215[*]	-.128[*]
Racial Private Regard	--	--	0.045	.369[*]	-.232[*]
Racial Public Regard	--	--	--	-0.042	0.037
Perceived Social Support	--	--	--	--	-.292[*]

*p<.05

Additional findings

Although hypotheses for correlations among socially influenced racial identity constructs were not considered prior to data collection, it would be a mistake not to report them. Moreover,

providers who evoked internalization of African descent identity as central to recipients' self-concept (i.e. racial centrality) also evoked high personal appraisals of African descent identity (i.e. racial private regard) in recipients (r = .372, p<.05). There were no significant findings between those who reported high socially influenced racial public regard, socially influenced racial centrality (r = -.082, *ns*), and high racial public regard (r = .045, *ns*).

Discussion

This study examined the extent to which racial centrality, racial private regard, and racial public regard reflected trait influences of recipients (i.e. participants) and social influences of important network members. The second goal of the study was to estimate the relationship between socially influenced racial identity (i.e. racial centrality, racial private, and racial public regard) and socially influenced anxiety, depression, and perceived social support. From the authors review of the literature, no previous research partitioned variance of racial identity for trait effects of participants and social influences of network members. As a result, main effect findings linking racial identity and decreases in internalizing symptoms may be masking underlying mechanisms of this relationship. Racial identity has long been conceptualized as a protective factor for African descent peoples (e.g. Cross, 1971, 1991, 2000; Helms, 1990; Sellers et al., 1998) yet assessing for underlining trait and social influences on racial identity has not been assessed. This study sought to address this gap in the literature.

As predicted, racial private regard, racial public regard, and racial centrality, reflected statistically significant trait and social influences. Particularly, scores indicated that participant's racial private regard was relatively consistent when with or when thinking about members across their social network. These trait effects accounted for most of the variance in the construct, however, social influences represented a significant portion of the variance. To a substantial

extent, racial private regard varied upon the provider with whom the recipient was interacting or thinking about (i.e. social influences). Moreover, when a provider evoked racial private regard, the provider also evoked less depression and anxiety. Providers who evoked less anxiety, depression and high racial private regard were seen as more supportive. This is important because racial identity theories have yet to consider the role of social network members in evoking racial regard and mental health. Clinically, this suggests an increased focus on how clinicians impact the appraisal of one's own racial group which may bolster psychological resources in such a way that meet clinical needs. Scholars and clinicians intending to study racial private regard's protective effects for basic or applied purposes should consider how trait and social influences may impact their research findings and interventions' success.

Similarly, when with or thinking about social network members, participants held relatively consistent beliefs about societal perceptions of Black peoples (racial public regard); this occurred regardless of which social network member participants rated. Results also indicated that beliefs about other's perception of Blacks varies depending on who one is with or whom one is thinking about. Contrary to prediction, statistically significant findings linking socially influenced racial public regard to socially influenced depression, anxiety, and perceived social support, were not found. Sellers et al. (2003) hypothesized that low racial public regard was adaptive for Black peoples because this worldview reduced harmful effects of discrimination on mental health. The moderator effect of public regard is said to emerge due to participants seeing discrimination as a function of racism, not a reflection of objective beliefs about oneself or one's racial group. Experiencing racism is then seen as a systemic issue rather than a personal one that impacts one's self-concept. The current findings did not show a significant link between public regard and mental health, perhaps due to similar mechanisms Sellers et al. (2003)

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discusses. For many Black people it is taken for granted that broader western society appraises them and their contributions of lesser worth than other racial groups. Due to this belief, many Blacks may cultivate a racial identity framework that is relatively resistant to public regard concerns. There may be no effect between socially influenced public regard and socially influenced mental health among Black peoples because negative perceptions may be assumed to reflect racism. As a result of one's identity including public regard seldomly, even positive increases in public regard may render limited effects on mental health.

This proposition may reflect why racial public regard appears to have the most varied links to mental health among other racial identity constructs described in the Multidimensional Model of Racial Identity (MMRI; Sellers et al., 1998). For example, Yip, Seaton, & Sellers (2006) found that as racial public regard increased depression scores decreased, suggesting that perceptions of other's appraisal of Blacks is linked to mental health outcomes. However, after conducting regressions and correlational analyses Sellers et al. (2006) found no link between public regard and depression symptoms. They did however find evidence of public private regard moderating the relationship between racial discrimination and psychological well-being, depression, and perceived stress levels, respectively. Direct or indirect links between racial public regard and mental health may be a function of trait and social influences factors on these constructs, however, further research is needed to explore the mechanisms behind public regard's indirect and direct links to internalizing symptoms.

Furthermore, the proportion of variance in racial centrality explained by social influences and trait effects was relatively similar. Racial centrality was influenced largely by social influences of network members and trait effects of recipients. To a large degree, racial centrality was relatively consistent when with or when thinking about members in their social network.

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Additionally, racial centrality varied to a substantial degree when with or thinking about particular members of one's social network. Providers who evoked high racial centrality also evoked low depression and anxiety in recipients. Providers who evoked high racial centrality, low depression, and low anxiety were also seen as supportive. These findings not only complement existing literature that links racial centrality to mental health (e.g. Yip et al., 2006; Sellers et al., 2006; Settles et al., 2010; Bynum et al., 2008; Neblett, Shelton, & Sellers, 2004), they also provide further justification for racial identity research to consider influences from social network members. Since trait and social influences are quantitatively distinct, it is likely that measuring constructs at either level may produce different sizes of effects for relationships across constructs. Racial identity research could be enriched further by exploring influences from one's social network on racial identity and mental health outcomes. Similarly, these findings implore clinical practitioners to consider how their therapeutic interventions cultivate racial centrality of patients. Considering the substantial social influence of racial centrality, and its links to depression anxiety, and social support, this construct merits therapeutic attention.

To date, there has been limited research assessing variability of racial identity, and to the author's knowledge, there has been no research assessing social influences or trait effects of racial identity. Shelton & Sellers (2000) assessed variability of racial centrality, private and public regard, and racial ideology, but did so in the context of either a racially salient and racially ambiguous situation. The authors found statistically significant mean differences in racial centrality across racially salient and racially ambiguous situations. They also report relative stability among racial ideology and racial public and private regard, but no variance component analyses were conducted to inform the literature about effect sizes of these results. Their findings inform us that racial centrality is subject to situational variability. However, we do not know how

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much of the variance in scores is due to situational influences. The current study demonstrated that racial centrality consisted of largely trait variance (29%) and did show variability across network members (i.e. social influences; 20%). Results confirm Shelton & Sellers (2000) thoughts that racial identity, in their case racial centrality, can fluctuate depending on external stimuli. Replication of the current findings is necessary to explore the nature of these constructs, whether they are largely trait or socially influenced among Black emerging adults. Further replications may provide new insights into racial identity's link to mental health outcomes.

Further, consistent with predictions, the study found trait and social influences for mental health outcomes and protective factors (e.g. Quick & Lakey, 2017, Woods et al., 2016, Lakey & Scoboria, 2005; Lakey, 2010). Social influences and trait effects for anxiety were equal in this study, both accounting for 40% of the variance respectively. So also did depression symptoms; it primarily reflected trait (39%) variance followed by smaller, yet large social influences (28%). Perceived social support was also found to reflect social influences primarily as predicted (54%; Lakey, 2010). Not only have these findings not be documented in an all Black sample, these findings are useful in that they permit further examination of the link between protective factors (i.e. racial identity and perceived support) and mental health outcomes for the social influences of constructs specifically.

Lastly, Relational Regulation Theory (Lakey & Orehek, 2011) and the Multidimensional Model of Racial Identity (Sellers et al., 1998) implore researchers to consider constructs as dynamic phenomena, effected not only by situations, but also by stable trait characteristics of individuals, and social influences of dyads. Although the current study did not examine the full predictions of Relational Regulation Theory, its preliminary findings are useful in providing justification for testing whether racial identity explains some of the variance in main effects

between perceived support and mental health. Similarly, the Multidimensional Model of Racial Identity has not been fully examined, however, the current study provides justification for examining racial ideological beliefs for social and trait effects and the relationship to socially influences mental health outcomes. Additionally, the concept of racial cues (Sellers et al., 1998) permitted cues to include the concept of social agents engaging in behaviors that may be racially laden. The current findings further validate this claim that behavior of social network members can impact aspects of recipient's identity as a racialized person.

Limitations

This study, however novel in many respects, has limitations. Earlier in this article a distinction was made between social influences, relational effects, and provider effects. Provider effects denote agreement among participants about the qualities of the individual being rated. When applied to clinical work, one could calculate provider effects to assess for the extent to which clients agreed about the objective supportiveness of their clinician (e.g. Lakey, Cohen, & Neely, 2008). Relational effects denote the extent that a particular recipient sees a provider in such a way that the recipient sees the provider differently than they see other providers and in such a way that there is little agreement among other recipients about a particular characteristic of a given provider. Within the one with many design as opposed to a round robin design, provider and relational influences as confounded into a combined social influences score. For constructs such as perceived support, this not as significant an issue due to consistent research that perceived support is primarily relational (e.g. Lakey, 2010). However, there is a dearth of research using RRT and the SRM as frameworks for studying Black racial identity. As a result, the social influences reported in this article may primarily reflect relational or provider trait influences. Further research is needed to assess this question.

Another limitation of the study is that some reviewers will be unsatisfied that it is not possible to control for social desirability in variance component analyses. Although this is true, it is not much of a concern for the following reason. Participants who systematically rate providers in such a way as to improve their self-image would most likely do so across all social network members in the study. If so, this would indicate a recipient effect by definition since recipient effects denote consistent patterns of ratings across social network members. If a participant rated network members in this way one would identify strong trait influences of recipients (i.e. participants) on social desirability. If participants rated network members differentially to manage their self-image, we would find strong social influences on social desirability. Since the study is concerned about estimating social influences of dyads finding socially influenced social desirability would be redundant to the study's findings since this too is estimated in social influences.

Additionally, the study may have limited generalizability in that convenience sampling was used to recruit participants for the given study. Due to the sample being conveniently collected at a regional southeastern university, there may be underlining similarities in the sample that undermine generalizability of findings to Black emerging adults across the United States. Additionally, the sample includes primarily women (n=82), with fewer men (n=27), and even fewer non-binary individuals (n=1). Generalizing the study's findings to Black peoples across gender identities may prove unjustifiable due to the gender demographics not representing Black gender proportions in the United States. It is the researcher's belief that irrespective of these limitations the study provides insights into new methods of exploring racial identity's link to mental health. By assessing social and trait influences on Black racial identity one is able to

estimate new links between Black racial identity and other constructs impacting mental health of

Black Peoples.

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Vita

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