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The Missing Link in Contemporary Health Disparities Research: A Profile of the Mental and Self-Rated Health of Multiracial Young Adults

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Abstract

This study compared the mental and self-rated health of monoracial and multiracial young adults using data from Wave 3 of the National Longitudinal Adolescent to Adult study. Our analytic sample consisted of 10,535 men and women ages 18-25 that self-identified as monoracial (Asian, Black, Native American, and White) or multiracial (White-Nonwhite and Nonwhite-Nonwhite). We find that when comparing aggregated racial groups, multiracials have poorer mental health than monoracials. However, differences emerge when multiracials are disaggregated into their two primary pairings of White-Nonwhite and Nonwhite-Nonwhite and compared to monoracials collectively and individually. We find that White-Nonwhites have poorer mental and self-rated health relative to monoracials generally and Whites specifically. In contrast, Nonwhite-Nonwhites have greater self-esteem and self-rated health than Whites as well as the aggregated monoracial group. Our findings highlight the complexities of examining multiracial health without researchers using consistent multiracial categories and reference groups. The results are discussed using three new perspectives that are introduced to explain health disparities between monoracial and multiracial persons.

Keywords

multiracial; monoracial; mental health; self-rated health

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Introduction

Health researchers have demonstrated there are significant racial disparities in mental and self-rated health (Barnes, Keyes, & Bates, 2013; Miller & Kail, 2016; Shahabi et al., 2016). Previous studies have primarily focused on people identifying with one racial group (monoracial) and research on those that identify with two or more racial groups (multiracial) have largely focused on adolescents (Cooney & Radina, 2000; Tashiro, 2005; Udry, Li, & Hendrickson-Smith, 2003). As a result, much less is known about the health of multiracial adults compared to their monoracial peers.

Although some findings are mixed, prior research generally shows that multiracials have greater depression symptomatology, lower self-esteem, and lower self-rated health than monoracials (Bratter & Gorman, 2011; Cooney & Radina, 2000; Milan & Keiley, 2000). The inconclusive results are partially due to the fact that there are a multitude of possible multiracial combinations but no standard categorization of multiracials or the monoracial groups to whom they are compared. For example, some studies compare the health of all multiracials to all monoracials and others compare various White-Nonwhite and Nonwhite-Nonwhite pairings to Whites or racial minorities (Campbell & Eggerling-Boeck, 2006; Lau, Lin & Flores, 2012). Furthermore, it is also important to consider that the highest prevalence for having any mental illnesses among adults are reported by those who identify as multiracial as well as those 18-25 years of age (National Institute of Mental Health, 2017). Thus, there is still a limited understanding of the health profile for multiracial adults.

Researchers use several theories including the fundamental causes, minority stress, and stress process theories to explain racial disparities in health (Link & Phelan, 1995; Meyer, 2003; Pearlin, 1989; Tillman & Miller, 2017). This body of literature also establishes that health outcomes are affected by both biological and social factors. The aforementioned theoretical perspectives have been generally applied to monoracial individuals however, although multiracials have unique racial identities and social experiences that may contribute to differential health outcomes between monoracial and multiracial persons. As such, the development of new theoretical insights that incorporate multiracials into the racial disparities in health literature can provide researchers and practitioners with a crucial new link for interconnecting race and the social determinants of health.

Racial Disparities in Mental and Self-Rated Health

Epidemiological studies using data collected from a nationally representative sample of non-institutionalized persons finds that nearly 20% of adults in the United States meet the DSM-IV diagnostic criteria for some type of mental, behavioral, or emotional disorder (SAMHSA, 2017). This means millions of adults are adversely affected in their ability to think, cope with stressful experiences, interact with others, and generally enjoy their lives (World Health Organization, 2014). However, a number of studies show a robust association between race and mental illnesses including depression (Ali et al., 2017; Lee, et al., 2014; NIMH, 2017), self-esteem (Fisher et al., 2017; Gonzales-Backen et al., 2015), and life satisfaction (Shahabi et al., 2016). There are also significant racial differences in self-rated health (Miller & Kail,

2016; Sarkin et al., 2013), which is a general indicator of an individual's perceived mental, physical, and social well-being (WHO, 1948).

To better comprehend the underlying mechanisms that contribute to the observed racial disparities, a clearer understanding is needed of the role race plays in health outcomes. Although race is often conceptualized according to a person's biological and physical characteristics (LaVeist, 1996), many social scientists view race as a social construct used to divide groups without any biological basis (Omi & Winant, 1994). Racial identity also tends to be a proxy for other factors that effect health including an individual's socioeconomic status, social environments, and coping resources (LaVeist, 2005; Williams & Collins, 2001). Such race-based psychosocial determinants can be considered *fundamental causes* of racial disparities in health because they shape a person's exposure to, and the impact of, many illnesses and risk factors that affect well-being (Link & Phelan, 1999; Williams & Collins, 2001).

Racial disparities in health have also been explained using the stress process theory. This approach posits that people in different social statuses (e.g. racial groups) tend to be exposed to dissimilar stressors and have disparate access to coping resources that can help mediate health disparities or buffer health outcomes from the adverse effects of stress. Differences in stress exposure and resources to cope with stressful life events, in turn, contribute to health disparities between people with different social statuses (Pearlin et al., 1981; Turner, Wheaton, & Lloyd, 1995). Accordingly, racial differences in social experiences largely contribute to racial disparities in health.

Multiracial Health Disparities

Despite the extensive evidence indicating the racial disparities in health, greater inclusion of multiracial adults is needed in this literature. Most research on the mental and self-rated health of multiracials has focused on adolescents and generally shows that they report significantly higher levels of depression but lower levels of self-esteem and self-rated health than monoracials (Campbell and Eggerling-Boeck 2006; Fisher et al. 2017; Tabb et al., 2017; Udry, Li, and Hendrickson-Smith 2003). Yet, few studies have examined the mental health of multiracial adults even though the frequency of mental illness among adults is inversely related to age with the youngest (ages 18-25) having the highest prevalence (NIMH, 2017). Moreover, multiracial adults have a higher prevalence of mental illness (30%) than any other racial group (NIMH, 2017).

Although there is tremendous diversity in the racial groups with which multiracials self-identify, the vast majority (75%) identify as White-Nonwhite (e.g. White-Asian) and the remaining 25% as Nonwhite-Nonwhite (e.g. Black-Native American) (Humes, Jones, and Ramirez 2011; Pew Research Center 2015). However, unlike monoracials, there is no "standard" multiracial group used by researchers because multiracial is a ubiquitous term used to capture the numerous categorizations of people that self-identify as such. Differences in categorization may partially contribute to the mixed findings yielded in the current multiracial health research and makes how researchers categorize multiracials just as important as the group(s) to which their health is compared.

For example, some studies compare all multiracials to all monoracials, but others compare specific multiracials to Whites, other minorities, or both. However, aggregating multiracials into one general category does not account for any potential differences in the social experiences of White-Nonwhite or Nonwhite-Nonwhite multiracials that may contribute to health disparities between these groups. In contrast, comparing aggregated or specific multiracial groups to only Whites or Whites and one minority group does not reveal how their health compares to other racial minority groups thereby making it difficult to accurately assess the well-being of multiracials relative to monoracials. Accordingly, Shih and Sanchez (2005) argue that such varied study designs highlight the complexities faced by researchers investigating the link between multiracial identity and mental health, and suggest it may be premature to conclude that multiracials face an elevated risk of mental illness compared to monoracials.

Researchers have applied a number of theories to the multiracial population for explaining health disparities between monoracial and multiracial people. For instance, the minority stress process theory suggests that people with marginalized social statuses like multiracials are exposed to more social stressors like racism and discrimination (Bostwick et al., 2014; Meyer, 2003) that are linked to deleterious health outcomes (Miller, Rote, & Keith, 2014; Slotman et al., 2017). Multiracials specifically report experiencing discrimination and microaggressions related to their blended racial identities from people that doubt their self-identity or view multiracial identities as abnormal, which can lead to negative attitudes, adverse self-perceptions, and other issues with emotional adjustment (Greif, 2015; Johnston & Nadal, 2010; Sanchez, 2010). Overall, the application of this theory may help explain differences in well-being between monoracials and multiracials but we are not aware of a sociological perspective that incorporates multiracials into the racial disparities in health literature.

Racialized Experiences of Multiracial Persons

Racial disparities in health are not only affected by biological reasons like gene mutations or changes in cell functioning but also social factors like self-identity and social experiences (Link & Phelan, 1996; Pearlin, 1989; Ponticelli, 1998; Williams & Collins, 2001). In terms of race, skin tone and group affiliation are two salient factors that both greatly affect social experiences and identity (Keith and Herring 1991; Maxwell et al., 2015). Bonilla-Silva (2004) suggested society currently has a “tri-racial divide” consisting of Whites, Honorary Whites, and Collective Blacks, whereby multiracials are categorized as either White or Honorary White. However, this classification overlooks the fact that many multiracials such as Halle Berry and President Barack Obama are categorized as Black due to their skin tone, self-identification, or the “one-drop rule” that classifies people with any African heritage as Black (Wolfe, 2015). We therefore modified Bonilla Silva’s tri-racial divide to propose three perspectives on the social experiences of multiracials that may particularly impact their health: 1) The White Experience; 2) The Minority Experience; and 3) The Blended Race Experience.

The White Experience: This perspective refers to multiracials that self-identify as either White-Nonwhite (e.g. White-Asian or White-Black) or monoracial White despite having

parents with different racial backgrounds. An individual's choice of racial identity may be related to the fact that they look like, or are socialized to associate with being, a member of the monoracial White group (Helms, 1990; Wolfe, 2015). Accordingly, this group of multiracials are likely to have social experiences that are similar to monoracial Whites including *white privilege* and *white consciousness*. As a result, White-Nonwhite multiracials that have the *White experience* are likely to report health outcomes that are similar to Whites (i.e. no statistical differences) but significantly different from Nonwhite minorities.

The Minority Experience: This approach refers to multiracials that identify as White-Nonwhite, with two Nonwhite-Nonwhite minority groups (e.g. Black-Asian or Native-Asian), or as a monoracial minority (e.g. Asian or Black). The racial identification of these individuals may be related to phenotype or socialization factors whereby many multiracial persons with a brown skin tone have long been socially categorized as Black. For example, due to the one-drop rule, brown-skinned multiracials (regardless of their racial combinations) are likely to have experiences akin to monoracial Blacks. Similarly, multiracials that solely identify with other minority groups are likely to have social experiences that reflect being a member of that particular group (e.g. Asian or Native American). These multiracials are therefore likely to have health outcomes that are comparable to Nonwhites but significantly different from Whites.

The Blended Race Experience: This viewpoint refers to people that clearly self-identify as being a member of a multiracial group that has its own racial experiences that are distinct from monoracials. Such experiences may be related to family socialization (James et al., 2018) as well as the degree to which multiracials feel connected with their family. These individuals may also experience microaggressions and macroaggressions for identifying as multiracial, which in turn can negatively impact their health. In contrast, some multiracials may be able to symbolically switch their racial identity according to the race of the people with whom they are interacting (Wilton, Sanchez, & Garcia, 2012). Such *identity shifting* may allow multiracials to draw on various psychosocial resources that protect their mental health or filter out emotionally detrimental social experiences. Therefore, this group of multiracials may have health outcomes that are either similar to, or significantly different from, monoracials.

Few studies have examined the well-being of multiracial adults and the extant multiracial health literature has presented mixed results, partly due to inconsistent multiracial categorizations. There also is no current sociological perspective that includes multiracials to explain racial differences in health between monoracial and multiracial persons. Therefore, the purpose of the present study is to contribute to the racial disparities in health literature by exploring the impact using different categorizations has on the health outcomes of multiracial young adults relative to their monoracial peers. Using data from Wave 3 of the National Longitudinal Study of Adolescent to Adult Health, we pose the following research questions:

> Q_1: Do monoracials collectively have better or worse mental and self-rated health than multiracials?

Q_2: Do both White-Nonwhite and Nonwhite-Nonwhite multiracials have similar or worse mental and self-rated health than monoracials collectively?

Q_3: Do individual monoracial groups have better or worse mental and self-rated health than multiracials?

Q_4: Do White-Nonwhite and Nonwhite-Nonwhite multiracials have similar or worse mental and self-rated as other racial minorities compared to Whites?

Methods

Data and sample

The present study uses data from Wave 3 of the *National Longitudinal Study of Adolescent to Adult Health* (Add Health). The Add Health is a school-based study of a nationally representative sample of adolescents in grades 7-12 in the United States with Wave 1 beginning in 1994-1995. The Add Health used a multistage, stratified, school-based, cluster sampling design that involves four waves of data collection and several data collection components. See Bearman, Jones and Udry (1997) for more details on the Add Health Study.

The present study uses Wave 3 data, collected from 2001 to 2002. Although this data is somewhat dated, it is one of the only nationally representative data sets that has the measures available to examine the mental and self-rated health of multiracial persons ages 18-25. This investigation compares the mental and self-rated health profiles of multiracial young adults with White-Nonwhite (e.g. White-Asian) and Nonwhite-Nonwhite (e.g. Black-Native American) identities to monoracial persons. To conduct these comparisons, our analytic sample was limited to individuals that self-identified with the Asian, Non-Hispanic Black, Native American, and Non-Hispanic White racial groups. Individuals that identified as Hispanic were excluded from the sample because they are classified as an ethnic group and not a race (Humes et al., 2011). The final analytic sample consists of 10,098 monoracial and 437 multiracial young adults (N=10,535).

Independent Variables

Race is a self-reported measure that categorizes respondents as monoracial or multiracial. Respondents that identified themselves as *monoracial* were coded into one of four mutually exclusive categories: Asian, Native American, Non-Hispanic Black, and Non-Hispanic White. Respondents that identified themselves as *multiracial* were coded as *Nonwhite-Nonwhite* if they self-identified as Black-Native American, Black-Asian, Native American-Asian, and Black-Native American-Asian. Respondents that identified themselves as; White-Asian, White-Black, White-Native American, White-Asian-Black, White-Asian-Native American, and White-Asian-Black-Native American were coded as *White-Nonwhite*.

Gender is a self-reported measure that categorizes respondents as either female (1) or male (0). *Age* is measured continuously in years ranging from 18 to 25. *Education* is based on the respondent's highest educational attainment and is then coded into five mutually exclusive categories: "less than high school;" "high school graduate;" "associate degree;" "bachelor degree;" and "more than a bachelor degree."

Dependent Variables

Depression symptomatology was measured using a nine-item index with scores ranging from 0 to 27 (α = .84) modified from Radloff's (1977) CES-D 20-item index where scores range from 0 to 60 (α ranging from .85 to .90). Responses to items 1 through 7 were coded so that the range of values was from 0=never or rarely; 1=sometimes; 2=a lot of the time; and 3= most of the time or all of the time, and responses to items 8 and 9 were reverse coded whereby 3=never or rarely and 0= most of the time or all of the time.

Self-Esteem was a four-item index ranging from 4 to 20 (α = .78) modified from Rosenberg's (1965) 10-item index where scores range from 0 to 30 (α ranging from .77 to .88). Responses to the items were coded such that 5=strongly agree; 4 =agree; 3= neither agree nor disagree; 2= disagree; and 1= strongly disagree.

Life Satisfaction is a one-item measure. "How satisfied are you with your life as a whole?" Ranging from 1 to 5 where 5 = very satisfied; 4 = satisfied; = neither satisfied nor dissatisfied; 2 = dissatisfied; and 1 = very dissatisfied.

Self-Rated Health - is a one-item measure. "In general, how is your health?" Ranging from 1 to 5 where 5=excellent; 4=very good; 3=good; 2=fair; and 1=poor.

Statistical analyses

To compare the differences in the means between the multiracial and monoracial samples, chi-square tests were used for the categorical variables and one-tailed t-tests used for the continuous variables. Second, the multivariate analyses use ordinary least squares (OLS) analysis to predict racial differences in depression symptomatology, self-esteem, life satisfaction, and self-rated health between monoracial and multiracial young adults. Coefficient estimates are adjusted for the complex sampling design of the Add Health study by using the "svy" commands in Stata SE, version 14 (StataCorp, 2015).

Descriptive Results

Table 1 presents the descriptive statistics for the variables used in the analyses to assess differences in means between the monoracial and multiracial young adults. In terms of race, 96% of the sample was monoracial and 4% multiracial, which is in-line with 2010 census estimates (Humes et al., 2011). Among the multiracial sample, 86% self-identified as White-Nonwhite and 14% identified as Nonwhite-Nonwhite whereas 77%, 16%, 2%, and 4% of monoracials identified as White, Black, Native American, and Asian respectively. In terms of well-being, multiracials have significantly greater depression symptomatology (5.05 vs. 4.51) and slightly lower self-esteem (16.64 vs. 16.88) than their monoracial counterparts. However, there were no statistical differences in the life satisfaction or self-rated health reported by multiracial and monoracial young adults. The sample also had an equal percentage of males and females in the monoracial and multiracial groups with no differences in the average age of monoracial (21.38 years) and multiracial (21.39 years) young adults but there were marginal differences in educational attainment.

Table 2 presents the results of the multivariate analyses that examined the racial disparities in mental and self-rated health outcomes when broadly comparing monoracial and multiracial young adults. The findings presented in Panel A answer the first research question and indicate that, when comparing the aggregated monoracial and multiracial groups, monoracial people report having less depression symptomatology ($\beta = -0.53$, $p < .001$), higher self-esteem ($\beta = 0.24$, $p < .10$), and greater life satisfaction ($\beta = 0.18$, $p < .01$) than multiracials. There were no significant differences in self-rated health between monoracial and multiracial persons.

The results presented in Panel B answered the second research question by comparing the health of the two multiracial groups to the aggregated monoracial group. We find clear health disparities whereby multiracials that identify as Nonwhite-Nonwhite have greater self-esteem ($\beta = 0.68$, $p < .05$) and self-rated health ($\beta = 0.20$, $p < .05$) than monoracials. In contrast, White-Nonwhite multiracials have greater depression symptomatology ($\beta = 0.54$, $p < .10$), lower self-esteem ($\beta = -0.38$, $p < .05$), lower life satisfaction ($\beta = -0.16$, $p < .05$), and lower self-rated health ($\beta = -0.11$, $p < .10$) than monoracials. It is interesting to note that no differences in self-rated health were found when comparing the two aggregated groups in Panel A, but disparities are revealed when disaggregating multiracials into their two primary pairings in Panel B. Moreover, we find that White-Nonwhite people have poorer mental and self-rated health than Whites but Nonwhite-Nonwhite multiracials have better mental health and similar self-rated health as their White peers.

Results from the ordinary least squares analyses comparing the mental and self-rated health of individual monoracial groups to the aggregated multiracial group are presented in Table 3. The findings presented in Panel A show that, compared to multiracials, Whites have less depression symptomatology ($\beta = -0.72$, $p < .01$) and higher life satisfaction ($\beta = 0.20$, $p < .01$). In contrast, Native Americans have greater depression than multiracials ($\beta = 0.72$, $p < .10$) but Blacks have higher self-esteem ($\beta = 0.66$, $p < .001$). There were no statistically significant differences in the mental or self-rated health between Asians and multiracials. These findings answer the third research question and indicate health disparities between monoracials and multiracials vary by the specific monoracial group of comparison.

The results presented in Panel B address the fourth research question by including both multiracial groups in the analysis to compare the health of individual minority groups to Whites. Among monoracial persons, Blacks have greater depression symptomatology ($\beta = 0.67$, $p < .001$), greater self-esteem ($\beta = 0.48$, $p < .001$), and lower life satisfaction ($\beta = -0.14$, $p < .001$) than Whites. Native Americans also have greater depression ($\beta = 1.44$, $p < .001$) as well as lower self-rated health ($\beta = -0.20$, $p < .01$) than Whites. Asians similarly reported having greater depression ($\beta = 1.18$, $p < .001$), lower life satisfaction ($\beta = -0.11$, $p < .01$), and lower self-rated health ($\beta = -0.11$, $p < .01$) when compared to Whites. Among multiracials, those who identified as Nonwhite-Nonwhite have greater self-esteem ($\beta = 0.74$, $p < .05$), greater self-rated health ($\beta = 0.19$, $p < .05$), and lower life satisfaction ($\beta = -0.32$, $p < .05$) than Whites but there were no significant differences in depression. Multiracials with a White-Nonwhite identity however, have greater depression ($\beta = 0.74$, $p < .05$), lower self-esteem ($\beta = -0.32$, $p < .05$), lower life satisfaction ($\beta = -0.19$, $p < .01$), and lower self-rated health ($\beta = -0.12$, $p < .01$) than Whites. These overall findings indicate that, like other racial

minority groups, White-Nonwhite multiracials face an elevated risk of having poorer mental and self-rated health than Whites but young adults that identify as Nonwhite-Nonwhite do not face the same risks.

Discussion

Despite being one of the fastest growing racial groups, few studies have examined the mental and self-rated health of multiracial adults. The present study addresses this issue using a sample of monoracial and multiracial young adults (ages 18-25) from the nationally representative Add Health study and makes several contributions to advance the racial disparities in health research. First, we explored multiple mental and self-rated health outcomes to present an overall profile of the well-being of multiracial young adults. Second, differences in study design and conceptualizations of multiracial in prior studies have contributed to mixed and inconsistent findings for multiracial health (Shih & Sanchez, 2005). Therefore, we demonstrate how different categorizations of multiracial persons influence differences in findings and suggest conceptualizing multiracials as a collective minority group consisting of the two primary categories of White-Nonwhite and Nonwhite-Nonwhite persons. Lastly, we propose three new perspectives to explain the racial disparities in health observed between multiracial and monoracial people.

Our findings reveal that when using an aggregated measure with one general category encompassing all multiracials and another for monoracials, monoracial persons have better mental health in terms of less depression, higher self-esteem, and higher life satisfaction, and self-rated health, which supports prior research (Cooney & Radina, 2000; Fisher et al 2014; Lau et al., 2012). However, our study extends previous research by demonstrating the importance of disaggregating multiracials according to the racial groups with whom they identify because their mental and self-rated health varies significantly by their racial identity. Specifically, discovering that Nonwhite-Nonwhite persons had greater self-esteem and self-rated health than monoracials whereas White-Nonwhites had greater depression, lower self-esteem, lower satisfaction, and lower self-rated health is a significant finding suggesting there are meaningful racial disparities in health among different multiracial pairings that are related to the racial groups with whom they self-identify (Bratter & Gorman, 2011; Lau et al., 2012; Udry et al., 2003). Moreover, these differences indicate that multiracials that only identify with racial minority groups may actually have better health than monoracials but multiracials that partially identify as White have poorer mental and self-rated health.

When comparing the aggregated multiracial group to individual monoracial groups, our findings demonstrate that not all racial groups have equally different mental and self-rated health outcomes from multiracials (Bratter & Gorman, 2011; Udry et al., 2003). Moreover, when compared to Whites as commonly done in many racial disparity studies, the disaggregated Nonwhite-Nonwhite multiracial group had greater self-esteem and self-rated health than Whites whereas the White-Nonwhite multiracial group had lower self-esteem, life satisfaction, and self-rated as well as greater depression symptomatology. Put another way, multiracials with minority identities may have better health than Whites and those with a partially White identity have worse health. This suggests that all multiracials may not face an elevated risk of mental illness (Shih and Sanchez, 2005) and using an analytical strategy

comparing the two primary multiracial groups reveals much more detail about the health disparities between multiracials and monoracials than comparing both groups in aggregate.

Discovering that White-Nonwhite multiracial young adults have significantly poorer mental and self-rated health than Whites was a surprising finding that did not support the proposed *White Experience* perspective. The observed health disparities may be related to differences in self-identity, since some multiracial individuals tend to struggle with their identity in combination with perceiving elevated levels of social stressors like racial discrimination that are positively related to depression symptomatology (Ahn et al., 2017; Choi et al., 2006; Slotman et al., 2017). Similarly, the lower self-rated health of White-Nonwhite multiracial young adults may reflect rating one's health negatively in terms of social health due to racial discrimination related to their identity in the absence of chronic diseases (Landrine et al., 2016). Thus, differences in life experiences related to exposure to social stressors such as microaggressions may be significant factors that influence the mental health disadvantages reported by White-Nonwhite multiracial individuals. The observed outcomes also fall more closely inline with the proposed *Minority Experience* and suggests it is more likely that multiracials who self-identify as monoracial White may actually have the White Experience but those that only partially identify as White do not have the same experiences. This position is supported by the fact that the population of multiracial adults rises from 3% to 7% when the racial background of an individual's parents and grandparents are also accounted for resulting in a "multiracial identity gap" (Pew Research Center, 2015), which further adds to the complexity of understanding the health of multiracials.

Conversely, we find that Nonwhite-Nonwhite multiracials have lower life satisfaction but greater self-esteem and self-rated health than Whites. The differences in life satisfaction are not surprising given that monoracial Whites are more likely to report having greater life satisfaction than racial minorities because they are, on average, better off in a number of ways in almost all aspects of life (Barger, Donoho, & Wayment, 2009). The findings for self-esteem suggest that like Blacks (Gray-Little & Hafdahl, 2000; Hill, Wallace, & Myers 2012), Nonwhite-Nonwhite multiracial persons might also have a self-esteem advantage over Whites that may at least partially stem from their ability to attribute negative social experiences to prejudice or racial discrimination rather than something personal about their appearance, behavior, or characteristics as well as placing less importance on the stigmatized attributes of multiracial persons and instead subjectively emphasizing their more positive characteristics (Crocker & Major 1989; Hill et al., 2012). Since self-esteem is based on a person's intrinsic view of how they value themselves or others in their group (Bachman et al., 2011), our findings suggest that Nonwhite-Nonwhite multiracials highly value their culture(s) and may have a stronger self-identity than Whites. In terms of self-rated health, given that it is a general measure of a person's perceived mental, physical, and social well-being (WHO, 1948), our findings suggest Nonwhite-Nonwhite multiracials perceive their overall health to be better than Whites and this differs from results of previous research that examined specific multiracial pairings (Bratter & Gorman, 2011). Instead of supporting the expected Minority Experience, these are very interesting findings that support the *Blended Race Experience*. Using the Blended Race Experience perspective helps interpret our findings because some multiracial people can integrate their multiple racial identities into one identity (Gibbs, 1998) and such *identity shifting* may explain why multiracial

individuals that identify as Nonwhite-Nonwhite have better health than their monoracial counterparts whereby they switch their identity according to the group of people that they are interacting with (Wilton, Sanchez, & Garcia, 2012). Identity shifting can be used as part of one's impression management strategies for protecting the self-worth of stigmatized people (Zeigler-Hill, 2012). The ability to shift racial identities, in turn, can reduce or buffer multiracial individuals from the adverse effects of stressful events related to their discriminatory experiences, which have been found to be associated with significantly lower self-rated health (Alvarez-Galvez, 2016).

Limitations

One limitation to the present study is the data were collected in 2001 and may not fully reflect the experiences and well-being of today's young adults. We do believe however, that there is utility in examining data of this age because we are not aware of any other publicly available data set with the measures to make such analyses and understanding how racial identity affects the well-being of multiracial young adults can give researchers and practitioners some much needed insight into the health outcomes for one of the fastest growing demographics of our population. Dohrenwend (1998) suggested researchers should gather more data on diverse groups to better understand racial differences in health outcomes. Accordingly, more data is needed on the growing multiracial population to advance the contemporary racial disparities research.

Another limitation is that by employing a cross-sectional analysis, there may be issues with social-selection such that people with poorer health select to identify as multiracial. Multiracial persons tend to experience more negative social and emotional well-being when their mother identifies as a racial minority (Schlabach, 2013), so there may also be issues related to the racial group with whom a multiracial person chooses most to identify with that impact their health. For example, an individual who identifies as White-Black may identify more with Whites than Blacks, which may lead to different life experiences and subsequent health disparities than a White-Black person that identifies more with Blacks than Whites. We were also unable to control for the effects of social-selection or social-causation because half of the outcome measures we use at Wave 3 are excluded in previous waves of data. Lastly, our findings are not generalizable to all multiracial combinations since our analyses exclude multiracials with specific racial identities such as White-Asian or Asian-Black-Native American. However, we further show there are significant health disparities among multiracials and using the two primary categories of White-Nonwhite and Nonwhite-Nonwhite is one way to begin gathering more consistent research for this minority group and thereby address some of the issues raised by Shih and Sanchez (2005).

Future directions

The present study adds new insight into the racial disparities in health by demonstrating that the mental and self-rated health outcomes of young adults (ages 18-25) significantly vary by specific multiracial combinations when compared to their monoracial peers. Our findings demonstrate the way researchers categorize multiracial people can significantly challenge our understanding of race and racial disparities in health (Roberts & Gelman, 2015).

Furthermore, exploring the health of the growing multiracial population will become more paramount for health researchers and practitioners in the near future as the *biracial baby boom* (Cruz & Berson, 2001) is likely to continue and it is predicted that by the year 2040 minorities will constitute the majority of the nation's adolescent population (Fox et. al., 2007).

As such, we believe our proposed *Racialized Experiences of Multiracial Persons perspective* would benefit future researchers examining racial disparities in health because our model recognizes how the identity and social experiences of individuals with mixed racial backgrounds may influence their health outcomes. Racial identity is a complex multidimensional construct, and our model addresses one of the missing links in contemporary health disparities research by providing a framework for understanding the role self-identification plays in the health outcomes of multiracial individuals. Furthermore, there is tremendous diversity within the multiracial population and although it can be further developed, our model establishes the basis for a theoretical framework that provides a rationale to categorize the plethora of multiracial experiences into three fundamental perspectives; the white experience, the minority experience, and the blended race experience.

Our study also highlights the need to understand the role skin tone plays in racial identity particularly for intra-racial classifications. For example, lighter skin equates to greater purity within some Native American cultures as well as greater self-esteem among Blacks (Hochschild, 2005; Thompson & Keith, 2001). Therefore, future research should examine how the health of multiracial people is related to an individual's skin tone. Skin tone may also impact self-identity, particularly for White-Nonwhite and Black-Nonblack multiracials that may identify as monoracial White or Black because of their appearance despite having parents from different racial groups. As such, future research should use parent's racial identity to account for the multiracial identity gap and its effect on racial disparities in health. Future studies should also examine whether or not there are differences in the social stressors to which different multiracial and monoracial groups are exposed as well as the psychosocial resources each has available to help them cope with stressful life events. Therefore, more funding from policy makers can significantly help researchers and practitioners gain a better understanding of the association between race and health disparities as well as develop treatments that can help improve the lives of the millions of multiracial minorities.

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Appendix

Appendix A.

OLS Regressions Predicting the Mental and Self-Rated Health of Monoracial and Multiracial Young Adults (Full Models)

PANEL A: (N=10,535)				
	Depression	**Self-Esteem**	**Life Satisfaction**	**Self-Rated Health**
Monoracial	−0.53 ** (−0.26)	0.24 * (−0.14)	0.18 *** (−0.06)	0.06 (−0.05)
Female	0.97 *** (−0.10)	−0.40 *** (−0.06)	−0.02 (−0.02)	−0.18 *** (−0.02)
Age	0.07 * (−0.04)	−0.02 (−0.02)	−0.01 (−0.01)	−0.01 ** (−0.01)
Less than HS	1.42 *** (−0.18)	−0.55 *** (−0.11)	−0.13 *** (−0.04)	−0.27 *** (−0.04)
Associate degree	−0.81 *** (−0.18)	0.31 *** (−0.12)	0.17 *** −(0.04)	0.15 *** (−0.03)
Bachelor degree	−1.11 *** (−0.19)	0.47 *** (−0.10)	0.24 *** (−0.04)	0.30 *** (−0.04)
More than bachelor	−1.87 *** (−0.52)	0.82 * (−0.44)	0.21 (−0.16)	0.25 (−0.16)
Constant	3.10 *** (−0.84)	17.37 *** (−0.46)	4.18 *** (−0.15)	4.31 *** (−0.16)
R-squared	0.03	0.02	0.01	0.03
PANEL B: (N=10,535)				
	Depression	**Self-Esteem**	**Life Satisfaction**	**Self-Rated Health**
Nonwhite-Nonwhite	0.48 (−0.60)	0.68 ** (−0.32)	−0.29 (−0.18)	0.20 ** (−0.10)
White-Nonwhite	0.54 * (−0.29)	−0.38 ** (−0.15)	−0.16 ** (−0.06)	−0.11 * (−0.06)
Female	0.98 *** (−0.10)	−0.40 *** (−0.06)	−0.02 (−0.02)	−0.18 *** (−0.02)
Age	0.07 * (−0.04)	−0.03 (−0.02)	−0.01 (−0.01)	−0.01 ** (−0.01)
Less than HS	1.42 *** (−0.18)	−0.55 *** (−0.11)	−0.14 *** (−0.04)	−0.27 *** (−0.04)
Associate degree	−0.81 *** (−0.18)	0.31 *** (−0.12)	0.17 *** −(0.04)	0.15 *** (−0.03)
Bachelor degree	−1.11 *** (−0.19)	0.47 *** (−0.10)	0.24 *** (−0.04)	0.30 *** (−0.04)
More than bachelor	−1.87 *** (−0.52)	0.83 * (−0.44)	0.21 (−0.16)	0.25 (−0.16)
Constant	2.58 *** (−0.80)	17.62 *** (−0.46)	4.35 *** (−0.14)	4.38 *** (−0.15)
R-squared	0.03	0.02	0.01	0.03

Note: Unstandardized beta coefficients (β) presented and standard errors in parentheses.

* p < 0.05

** p < 0.01

*** p < 0.001

Reference groups: Multiracial, male, and high school graduate.

Reference groups: White, male, and high school graduate.

Appendix

Appendix B.

OLS Regressions Predicting the Mental and Self-Rated Health of Monoracial and Multiracial Young Adults (Full Models)

PANEL A: (N=10,535)				
	Depression	**Self-Esteem**	**Life Satisfaction**	**Self-Rated Health**
White	−0.72 *** (−0.27)	0.17 (−0.15)	0.20 *** (−0.06)	0.07 (−0.05)

PANEL A: (N=10,535)				
	Depression	**Self-Esteem**	**Life Satisfaction**	**Self-Rated Health**
Black	−0.05 (−0.29)	0.66*** (−0.15)	0.06 (−0.07)	0.07 (−0.06)
Native American	0.72* (−0.42)	0.00 (−0.21)	0.12 (−0.10)	−0.13 (−0.10)
Asian	0.46 (−0.42)	0.00 (−0.20)	0.10 (−0.08)	−0.04 (−0.08)
Female	0.98*** (−0.10)	−0.41*** (−0.06)	−0.02 (−0.02)	−0.18*** (−0.02)
Age	0.06 (−0.04)	−0.03 (−0.02)	−0.01 (−0.01)	−0.01** (−0.01)
Less than HS	1.34*** (−0.18)	−0.57*** (−0.11)	−0.13*** (−0.04)	−0.26*** (−0.04)
Associate degree	−0.75*** (−0.17)	0.35*** (−0.12)	0.16*** (−0.04)	0.15*** (−0.03)
Bachelor degree	−1.05*** (−0.18)	0.50*** (−0.10)	0.23*** (−0.04)	0.30*** (−0.04)
More than bachelor	−1.84*** (−0.52)	0.85* (−0.43)	0.20 (−0.16)	0.25 (−0.16)
Constant	3.36*** (−0.79)	17.51*** (−0.44)	4.13*** (−0.15)	4.31*** (−0.16)
R-squared	0.04	0.02	0.02	0.03
PANEL B: (N=10,535)				
	Depression	**Self-Esteem**	**Life Satisfaction**	**Self-Rated Health**
Black	0.67*** (−0.18)	0.48*** (−0.08)	−0.14*** (−0.03)	0.00 (−0.03)
Native American	1.44*** (−0.38)	−0.17 (−0.16)	−0.08 (−0.07)	−0.20** (−0.08)
Asian	1.18*** (−0.36)	−0.18 (−0.15)	−0.11** (−0.05)	−0.11** (−0.06)
Nonwhite-Nonwhite	0.67 (−0.61)	0.74** (−0.33)	−0.32* (−0.18)	0.19** (−0.10)
White-Nonwhite	0.73** (−0.29)	−0.32** (−0.16)	−0.19*** (−0.06)	−0.12** (−0.06)
Female	0.98*** (−0.10)	−0.41*** (−0.06)	−0.02 (−0.02)	−0.18*** (−0.02)
Age	0.06 (−0.04)	−0.03 (−0.02)	−0.01 (−0.01)	−0.01** (−0.01)
Less than HS	1.34*** (−0.18)	−0.57*** (−0.11)	−0.13*** (−0.04)	−0.26*** (−0.04)
Associate degree	−0.75*** (−0.17)	0.35*** (−0.12)	0.15*** (−0.04)	0.15*** (−0.03)
Bachelor degree	−1.05*** (−0.18)	0.50*** (−0.10)	0.23*** (−0.04)	0.30*** (−0.04)
More than bachelor	−1.84*** (−0.52)	0.86** (−0.43)	0.20 (−0.16)	0.26 (−0.16)
Constant	2.64*** (−0.75)	17.70*** (−0.43)	4.33*** (−0.14)	4.38*** (−0.15)
R-squared	0.04	0.02	0.02	0.03

Note: Unstandardized beta coefficients (β) presented and standard errors in parentheses.

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Reference groups: Multiracial, male, and high school graduate.

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Table 1.

Bivariate Comparison of Means for the Analytic Sample, by Racial Identity

Variable Names	Multiracial (n=437)		Monoracial (n=10,098)		Total (N=10,535)	
	% / Mean	SD	% / Mean	SD	% / Mean	SD
Health Outcomes						
Depression *	5.05	4.12	4.51	4.05	4.54	4.05
Self-Esteem *	16.64	2.34	16.88	2.28	16.88	2.28
Life Satisfaction	3.99	.88	4.17	.80	4.16	.80
Self-Rated Health	3.93	.85	3.99	.87	3.99	.87
Race						
Monoracial						
White	---	---	.77	.42	.74	.44
Black	---	---	.16	.37	.15	.36
Native American	---	---	.02	.15	.02	.15
Asian	---	---	.04	.20	.04	.20
Multiracial						
White-Nonwhite	.86	.34	---	---	.03	.18
Nonwhite-Nonwhite	.14	.34	---	---	.01	.07
Sex						
Female	.50	.50	.50	.50	.50	.50
Male	.50	.50	.50	.50	.50	.50
Age	21.29	1.62	21.39	1.65	21.39	1.65
Education *						
Less than High School	.12	.32	.10	.30	.10	.30
High School Graduate	.74	.44	.76	.43	.76	.43
Associate’s Degree	.07	.25	.06	.23	.06	.23
Bachelor’s Degree	.07	.25	.08	.28	.08	.27
More than Bachelor Degree	.01	.10	.00	.07	.00	.07

Note:

* $p < .05$. Significance measured using chi-square tests for categorical variables and one-tailed t-tests for continuous variables. Some percentages do not total 100 due to rounding.

Table 2.

OLS Regressions Predicting the Mental and Self-Rated Health of Monoracial and Multiracial Young Adults

PANEL A: (N=10,535)				
	Depression	**Self-Esteem**	**Life Satisfaction**	**Self-Rated Health**
Monoracial	−0.53 ** (−0.26)	0.24 * (−0.14)	0.18 *** (−0.06)	0.06 (−0.05)
Constant	3.10 *** (−0.84)	17.37 *** (−0.46)	4.18 *** (−0.15)	4.31 *** (−0.16)
R-squared	0.03	0.02	0.01	0.03
PANEL B: (N=10,535)				
	Depression	**Self-Esteem**	**Life Satisfaction**	**Self-Rated Health**
Nonwhite-Nonwhite	0.48 (−0.60)	0.68 ** (−0.32)	−0.29 (−0.18)	0.20 ** (−0.10)
White-Nonwhite	0.54 * (−0.29)	−0.38 ** (−0.15)	−0.16 ** (−0.06)	−0.11 * (−0.06)
Constant	2.58 *** (−0.80)	17.62 *** (−0.46)	4.35 *** (−0.14)	4.38 *** (−0.15)
R-squared	0.03	0.02	0.01	0.03

Note: Unstandardized beta coefficients (β) presented and standard errors in parentheses.

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Multiracial is the reference group for Panel A

Monoracial is the reference group for Panel B

All models adjusted for gender, age, and educational attainment.

Table 3.

OLS Regressions Predicting the Mental and Self-Rated Health of Monoracial and Multiracial Young Adults

PANEL A: (N=10,535)				
	Depression	**Self-Esteem**	**Life Satisfaction**	**Self-Rated Health**
Asian	0.46 (−0.42)	0.00 (−0.20)	0.10 (−0.08)	−0.04 (−0.0*)
Black	−0.05 (−0.29)	0.66*** (−0.15)	0.06 (−0.07)	0.07 (−0.06)
Native American	0.72* (−0.42)	0.00 (−0.21)	0.12 (−0.10)	−0.13 (−0.10)
White	−0.72*** (−0.27)	0.17 (−0.15)	0.20*** (−0.06)	0.07 (−0.05)
Constant	3.36*** (−0.79)	17.51*** (−0.44)	4.13*** (−0.15)	4.31*** (−0.16)
R-squared	0.04	0.02	0.02	0.03
PANEL B: (N=10,535)				
	Depression	**Self-Esteem**	**Life Satisfaction**	**Self-Rated Health**
Asian	1.18*** (−0.36)	−0.18 (−0.15)	−0.11** (−0.05)	−0.11** (−0.06)
Black	0.67*** (−0.18)	0.48*** (−0.08)	−0.14*** (−0.03)	0.00 (−0.03)
Native American	1.44*** (−0.38)	−0.17 (−0.16)	−0.08 (−0.07)	−0.20** (−0.08)
Nonwhite-Nonwhite	0.67 (−0.61)	0.74** (−0.33)	−0.32* (−0.18)	0.19** (−0.10)
White-Nonwhite	0.73** (−0.29)	−0.32** (−0.16)	−0.19*** (−0.06)	−0.12** (−0.06)
Constant	2.64*** (−0.75)	17.70*** (−0.43)	4.33*** (−0.14)	4.38*** (−0.15)
R-squared	0.04	0.02	0.02	0.03

Note: Unstandardized beta coefficients (β) presented and standard errors in parentheses.

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

Multiracial is the reference group for Panel A.

White is the reference group for Panel B.

All models adjusted for gender, age, and educational attainment.