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Perceived Macrolevel Social Pressure Regarding Racial Identification and the Biracial Experience

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PERCEIVED MACROLEVEL SOCIAL PRESSURE REGARDING RACIAL IDENTIFICATION AND THE BIRACIAL EXPERIENCE

by

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Acknowledgements and Dedication

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This work is dedicated to the memory of my father, Thomas Nanney, and my grandparents, L.M. McBride and James and Iris Nanney.

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Abstract

Contemporary multiracial theory posits that racial identifications are a product of perceptions of the macrolevel social environment in which they are embedded (Renn, 2003; Rockquemore, Brunsma, & Delgado 2009; Rockquemore, Laszloffy, & Noveske, 2006; Root, 1996; Root, 2003). This conceptualization of the multiracial experience suggests that research attention should begin examining the specific macrolevel factors that influence the process of biracial identification (Rockquemore et al., 2009). To date, however, relatively little empirical research has done so. The present study sought to examine the extent to which perceived macrolevel social pressure regarding racial identification impacts the multiracial experience. Structural equation modeling on a sample (N= 254) of biracials found that, as hypothesized, perceived macrolevel social pressure regarding racial identification may have a broad and substantial impact on the biracial experience, both in expected ways and unexpected ways. Perceiving greater social pressure regarding racial identification in the macrolevel social environment appears to create a racial identification based insecurity in the need for social relatedness. This insecurity then seems to predispose biracials to base their racial identifications in microlevel situations on the perceived expectations of that immediate context, leading to greater inconsistency in identification. Higher levels of perceived macrolevel social pressure regarding racial identification also predispose multiracials to experience poorer psychological health, but this does not appear to be related to increased relatedness insecurity. Future research should thus attend to the ways perceived macrolevel pressure influences psychological health. Scholarship should also consider how multiracials respond to racial identification based relatedness insecurity, as it may be that certain

responses, including featuring greater inconsistency in identification, may buffer any negative effects of relatedness insecurity on psychological health.

Introduction

American society has been traditionally divided into distinct, mutually exclusive racial categories (Omi & Winant, 1994). Individuals with parents from different monoracial groups exist on the border of this division (Rockquemore, Brunsma, & Delgado, 2009). Over eighty years of theory and qualitative study in the social sciences speak to the variety of ways that biracials[1] and the society around them respond to this unique social position. The past twenty years has seen a significant paradigm shift in the study of multiracial identity. Earlier theories were rooted in linear models of identity development. In these earlier approaches, identity was assumed to represent an inherent characteristic of the individual that developed over time toward a single optimal endpoint (Poston, 1990). This linear process was assumed to be universal to all multiracials, regardless of their social and political environment in which they lived (Rockquemore et al., 2009). Contemporary multiracial theory, however, posits that racial identities are not trait-like entities that inhere in the individual, but rather are active manifestations of a larger dynamic process within a social ecology (Renn, 2003; Rockquemore et al., 2009; Rockquemore, Laszloffy, & Noveske, 2006; Root, 1996; Root, 2003). Each multiracial's racial identity is a thus a product of the individual's interpretation of cultural, political, institutional and social forces at play within their broad social environment. As these macrolevel forces vary over time and place, so do the ways that biracials come to understand and enact their racial identities (Brunsma, 2006; Davis, 2006; Rockquemore et al., 2009). This conceptualization of the multiracial experience, labeled the ecological approach, suggests that research attention should begin examining the specific ways perceptions of social ecologies form multiracial identities

(Rockquemore et al., 2009). To date, however, relatively little empirical research has done so.

One dimension of the perceived social ecology that may be particularly relevant to the study of multiracial identity is the degree to which biracials perceive pressure to adopt certain forms of racial identification as a condition of social relatedness. Though some social ecologies allow multiracials to believe they can be socially connected and accepted by others, regardless of the racial identities they adopt, in other ecologies multiracials may perceive considerable social pressure to racially identify in specific ways as a condition of relatedness. Existing research from a variety of domains suggests that this variable, implicitly described across the span of multiracial research, may have a broad impact on the multiracial experience.

Perceived Macrolevel Social Pressure Regarding Racial Identification. Having parents from more than one race entails a degree of racial ambiguity (Root, 1990). In a society built along rigid, biologically inherited, monoracial categories, the racial identity of those with parents from different monoracial categories is not a given. Within this traditional racial schema, biracials are, to a certain extent, undefined (Rockquemore et al, 2009). But the assumption that all are to have a racial category remains ingrained into U.S society (Omi & Winant, 1994; Williams, 1996). Americans automatically categorize people racially in daily social interaction, including those who appear racially ambiguous (e.g., Peery & Bodenhaus, 2008), and each individual is expected to have some way of defining themselves with respect to race (Williams, 1996). Biracials thus report being frequently asked "What [race] are you?" and otherwise facing persistent questioning about their race (Houston, 1997; Wehrly, Kenney, & Kenney,

1999). Thus, in the contemporary United States, the question of race seems to demands a response from all. All are expected to racially identify themselves in some way, including those who do not fit neatly into the traditional monoracial regime.

Many biracials come to believe that social relatedness depends upon their answer to this question of race, as they experience considerable explicit or implicit social pressures to adopt or to eschew certain racial identities (Coleman & Carter, 2007; Herman, 2004; Kerwin & Ponterotto, 1995; Kerwin, Ponterotto, Jackson, & Harris, 1993; Miville, Constantine, Baysden, & So-Lloyd, 2005; Renn, 2000; Rockquemore & Brunsma, 2008). Traditionally, in order to secure some degree of social relatedness, biracials have felt compelled to adopt a monoracial minority identity (Davis, 2006; Taylor, 2004; Taylor & Nanney, 2010). To preserve the racial hierarchy underlying the institution of slavery, European Americans created the rule of hypodescent or the "one-drop-rule" to socially categorize the children of Black/White interracial unions (Davis, 2006). Under this regime, all individuals who had even "one-drop" of "African blood" were assigned by law to be Black (Davis, 2006). Even though the *de jure* rule of hypodescent was abolished in the mid-twentieth century, many Black/White biracials perceive that in their macrolevel ecology a *de facto* rule of hypodescent remains firmly in place, as they believe they must adopt a Black racial identity to maintain social connections (Hall, 1992; Miville et al., 2005; Poston, 1990; Renn, 2003; Root, 1992; Rockquemore et al., 2009). Multiracial scholars have also noted that an implicit rule of hypodescent may likewise operate in some social contexts among the children other monoracial pairings, with biracials believing they are forced to adopt a monoracial identity of the racial group that is "lower" on the hierarchy within their social ecology

(e.g., Root, 1990), Increasingly, some biracials, particularly those in predominantly White ecologies, perceive pressure to adopt an explicitly "multiracial" identity or to identify themselves as "beyond" racial categorization (Childs, 2005; Twine, 1997), as these forms of racial identification may be seen as less threatening to White communities than monoracial minority identities (Rockquemore, 1999; Rockquemore et al., 2006).

Since the late 1990s, an explicitly "multiracial" social movement has advocated that the progeny of interracial unions should be allowed to identify according to their own preferences (Root, 1992; Root, 1996). Recent qualitative studies reveal biracials increasingly reporting that, in some social ecologies, they experience social relatedness irrespective of the way they racially identify (Kerwin et al., 1993; Miville et al., 2005; Renn, 2003) and that many contemporary biracials now feel free to adopt a variety of racial self-understandings (Brunsma, 2006; Renn, 2003; Rockquemore & Brunsma, 2002b; Rockquemore & Brunsma, 2008),

Though perceived macrolevel social pressure regarding racial identification has been often noted in previous biracial scholarship, no previous research has provided or empirically evaluated a conceptual account of how this pressure influences the multiracial experience. Infusing aspects of Self-determination Theory (SDT) (Deci & Ryan, 2000; Ryan & Deci, 2000a, 2000c) and other empirical research regarding the need for social acceptance into multiracial scholarship may provide the theoretical grounding necessary to do so.

Macrolevel Social Pressure Regarding Racial Identification and Racial Identification Based Relatedness Security. Self-determination theory is a broad metatheory of human functioning that argues that all humans, across cultures, have

inherent tendencies to pursue basic psychological needs that are essential for optimal functioning (Deci & Ryan, 2000; Ryan & Deci, 2000a, 2000c). SDT understands identities as an active, socially motivated attempt to meet the basic psychological need for social relatedness. That is, humans adopt and enact identities in order to secure connections to social groups and thus to feel valued and accepted by others (Ryan & Deci, 2003). But SDT, like the ecological approach to multiracial studies, also conceptualizes identities as being informed by the individual's perceptions of the macrolevel social ecologies from which they emerge. SDT posits that identification always occurs within the perceived parameters of social ecology and that individuals differ in extent to which they feel pressured to adopt identifications as a condition of relatedness (Ryan & Deci, 2003).

SDT posits that the extent to which individuals feel pressured to adopt certain forms of identification as a condition of relatedness determines the relative security of this psychological need (Ryan & Deci, 2003; LaGuardia, 2009). When individuals experience less pressure to adopt a specific identity in their macrolevel ecologies, they feel more confident that they will be accepted and valued by others, and their need for relatedness satisfied, regardless of their identification (Ryan & Deci, 2003). Individuals who perceive less pressure may thus experience a relatively stable sense that their need for relatedness is secure, irrespective of their identifications, and may thus be relatively less concerned with how their identification choices impact their acceptance from others. When individuals perceive that their social ecologies pressure certain forms of identification, however, they tend to believe that their need for relatedness is always tenuous, as failing to comply with perceived identity demands may risk rejection and

isolation. These individuals thus often experience a relatively chronic, underlying sense of vulnerability and insecurity in their basic need for social relatedness and they may be persistently concerned with how the way in which they identify may lead to acceptance or rejection of others (Assor, Roth, & Deci, 2004; La Guardia, 2008).

The relationship between perceived social pressure and the relative security of the need for relatedness, as described by SDT, is consistent with depictions of the multiracial experience found in qualitative research. Biracials who believe their social ecologies accept them irrespective of the way they racially identify report feeling a strong and secure sense of relatedness to others and a relative lack of concern for how their identification choices influence their relatedness to others (Kerwin et al., 1993; Miville et al., 2005; Renn, 2003). For those who experience higher pressure in their social ecologies to adopt certain racial identifications, however, they may feel the need for relatedness is tenuous, as any form of racial otherness entails the risk of rejection (Miville et al., 2005; Renn, 2003; Root, 1990). They thus experience a racial identification based relatedness insecurity, as they believe that social acceptance is only contingent upon the racial identity they adopt and enact. In sum, as hypothesized by SDT, multiracials may experience relative degrees of racial identification based relatedness security, depending upon the degree to which they perceive their social ecology as pressuring them to adopt certain racial identities as a condition of relatedness.

The Effects of Relatedness Insecurity: How Perceived Macrolevel Social Pressure Regarding Racial Identification Influences the Biracial Experience. That perceived macrolevel social pressure regarding racial identification may lead to relative degrees of racial identification based relatedness security may help to explain two

phenomena that research suggests may be more common among biracials experience themselves as living pressuring social ecologies. Specifically, the SDT account of identity, in combination with other research regarding the security of the need for relatedness, suggests that a racial identification based insecurity in the need for social relatedness may contribute to individual differences in the consistency of racial identification across daily situations as well as individual differences in overall psychological health.

Perceived Macrolevel Social Pressure Regarding Racial Identification and Consistency in Racial Identification. For the past twenty years, multiracial scholarship has documented that biracials feature varying degrees of consistency in how they identify racially across the micro-level interactions that make up their daily lives (Hall, 1992; Renn, 2000; Rockquemore & Brunsma, 2002b; Sanchez, Shih, & Garcia, 2009; Wallace, 2001). Though some inconsistency in identification may be present for most if not all multiracials (Renn, 2000), differences in the degree of consistency are apparent in the qualitative literature. Some biracials maintain a relatively stable racial identity across their day-to-day interactions, basing their microlevel identifications more on an internally defined self-understanding. Other biracials, however, alter their racial identifications considerably across microlevel contexts, adjusting their identifications to better suit the specific external demands of the immediate situation.

Though previous scholarship has often noted individual differences in the consistency of racial identification, no previous scholarship has posited an explanation for this variation. Some qualitative accounts of this phenomenon suggest, however, that it may be more common among biracials who perceive more pressure in their

macrolevel social ecologies. For example, one qualitative study cites a biracial describing inconsistency in identification as a response to a macrolevel ecology in which she felt pressured to enact a specific racial identity in order to be accepted by others (Miville et al., 2005). No quantitative research has directly examined whether perceiving greater social pressure predicts more inconsistent racial identifications among biracials, but existing research on the consistency in identification among bicultural individuals (i.e., ethnic minority or immigrant groups) indicates biculturals who endorsed their parents exerting more pressure regarding cultural identification identified less consistently across microlevel contexts (Downie & Koestner as cited in Downie, Mageau, Koestner, & Liodden, 2006). To summarize, it seems that perceiving greater pressure in macrolevel social ecologies may predispose biracials to identify less consistently across their daily microlevel interactions. The question remains, however, why it is that these ecologies lead to this inconsistency.

Racial Identity Based Relatedness Insecurity and Consistency in Racial Identification. An account of multiracial identity rooted in SDT, in combination with other research on the effects of threats to social relatedness, suggests that racial identity based relatedness security may explain how perceived macrolevel pressure regarding racial identification influences the consistency of racial identification across microlevel interactions. Those who experience in their macrolevel social ecologies less pressure regarding identification feel secure that they will be accepted and connected to others, irrespective of the identities they choose (Ryan & Deci, 2003; LaGuardia, 2009). Security in the basic need for relatedness means that individuals are chronically less concerned that identification risks social rejection. In any immediate social encounter, they will be

more likely to base their identifications on their own internally defined preferences, rather than seeking guidance from the immediate external conditions of approval. Because their identifications are more internally rather externally based, across day-to-day encounters, their identifications are likely to be relatively consistent.

When the basic need for relatedness is insecure, however, the process of identification seems to entail a risk of social rejection. To alleviate this threat, identification may become persistently aimed at gaining the acceptance of others (Assor et al., 2004; LaGuardia, 2008). This chronic focus on gaining acceptance from others may lead to greater inconsistency in identification across microlevel interactions. General research on the need for acceptance indicates that concerns about this basic need leads to broad and persistent effects on social perception and behavior (Williams, Forgas, & Von Hippel, 2005). In microlevel situations, those who are more concerned about social acceptance are more vigilant for signs of rejection (Downey & Feldman, 1996; Pickett, Gardner, & Knowles, 2004) and are highly attuned to immediate social norms (Pickett et al., 2004). To maintain affiliation and thus assuage their insecurity, those who are more concerned about acceptance then adapt themselves to meet these norms (Ellemers, Spears, & Doosje, 2002; Lakin, Chartrand, & Arkin, 2008; Noel, Wann, & Branscombe, 1995). That is, those who are more concerned about gaining social acceptance are highly focused on recognizing and adapting themselves to meet immediate, micro-level social expectations. When the process of identification is primarily aimed at gaining social acceptance and alleviating an insecure need for relatedness, individuals may likewise become highly focused on distinguishing microlevel social norms and adjusting their identifications to meet them. Because their identification in any micro-level

interactions is more based on the immediate social norms, across daily microlevel encounters, those with a less secure need for relatedness are thus likely to be less consistent in their identifications.

Qualitative accounts of the relative consistency of biracial identification also suggest that relatedness insecurity may drive this phenomenon. Biracials who acknowledge less consistency in their racial identifications across microlevel situations often note that they are adapting themselves to the norms of the immediate situations in order to better "fit in" and gain a modicum of social relatedness (Miville et al., 2005; Rockquemore & Brunsma, 2008). Similarly, Taylor (2004) described inconsistency in racial identification as emerging from the sense that to avoid social rejection he is "compelled to ask, 'Whom do you wish to know?'" and then to identify accordingly "like a magician pulls a rabbit out of a hat" (p. 98).

In sum, the relative consistency of racial identification among biracials is likely to be a function of racial identity based relatedness security. Biracials who are more secure in their need for relatedness are more likely to base their identifications in any given microlevel encounter upon their own internally defined self-understandings, leading to greater consistency in identification across day-to-day encounters. Multiracials with a greater degree of racial identification based relatedness insecurity, however, believe that racial identification entails a risk of rejection. They attempt to alleviate this threat by recognizing and conforming themselves to the norms of the immediate situation. Across microlevel situations, this is likely to manifest as less consistency in racial identification.

Perceived Macrolevel Social Pressure Regarding Racial Identification and Psychological Health. Early accounts of the multiracial experience assumed that being

"marginal" to monoracial social groups would necessarily lead to poorer psychological health (McRoy & Freeman, 1986; Piskacek & Golub, 1973; Stonequist, 1937). Much early research on biracials thus hypothesized that they would have worse psychosocial health as compared to monoracials (see Shih & Sanchez, 2005 for a review). Results from these studies, however, indicate that biracials have similar psychological outcomes to monoracials (Shih & Sanchez, 2005). Later theories posited that certain choices in racial identity (e.g., monoracial minority, monoracial majority or "biracial") may predict better or worse psychological health (e.g., Poston, 1990), but empirical research has failed to identify any consistent relationship between identity choices and mental health outcomes (Rockquemore et al., 2009; Shih & Sanchez, 2005). Contemporary multiracial theory now posits that no specific identity choice should be considered more or less healthy than any others (Renn, 2000; Rockquemore & Brunsma, 2002b; Root, 1996, 2003).

Consistent with the ecological approach in multiracial studies, recent scholarship has suggested that researchers turn their attention to how perceptions of the social ecology that may account for differing outcomes among biracials (Rockquemore et al., 2009; Rockquemore et al., 2006). Perceived macrolevel social pressure regarding racial identification may be such a factor that contributes to differing mental health outcomes among multiracials. Indeed, in early clinical case studies that described adverse psychological health among biracials, the clinicians often described their clients' distress as related to their experience of strong social pressure to adopt or eschew certain racial identities (McRoy & Freeman, 1986; Piskacek & Golub, 1973). For example, some case studies described Black/White biracials in predominantly White communities believing they are forced by others to avoid any indicators of "Blackness" in order to maintain

social connections (e.g., McRoy & Freeman, 1986), whereas others described biracials in predominantly monoracial minority ecologies who feared being excluded if they demonstrated any indication of their White heritage (e.g., Pisckacek & Golub, 1973). Recent quantitative studies of multiracials also suggests that feeling pressured or forced to choose a monoracial identity may be associated with poorer psychological health (Coleman & Carter, 2007; Sanchez, 2010). Taken together, this evidence suggests that perceiving greater macrolevel pressure regarding racial identification may predispose biracials to have poorer psychological health.

Racial Identity Based Relatedness Security and Psychological Health. Racial identity based relatedness insecurity may help to explain why perceived macrolevel social pressure regarding racial identification predicts poorer psychological health. Insecurity in social relatedness reflects a threat to a basic psychological need, one that is likely to predict adverse mental health (Assor, et al, 2004; Baumeister & Leary, 1995). Indeed, several recent theories argue that certain constructs traditionally associated with psychological health, including anxiety (Baumeister & Leary, 1995) and self-esteem (Leary & Baumeister, 2000) originally evolved in humans as "sociometers," or psychological systems that evolved to monitor and signal to humans that their relatedness to others is threatened. Empirical research consistently indicates that threats to social relatedness are associated with variety of indicators of poor psychological health, including greater anxiety (Baumeister, & Tice, 1990) and depression (e.g., Gilbert, Allen, Brough, Melley, & Miles, 2002). Racial identity based relatedness insecurity, like all other threats to this basic psychological need, is also likely to predict poorer psychological health.

Summary and Hypotheses

Contemporary multiracial theory assumes that racial identities reflect perceptions of the macrolevel social ecologies from which they emerge, but to date, little empirical research has examined how specific perceptions of these ecologies impact the multiracial experience. Examining the extent to which multiracials perceive their macrolevel ecology as pressuring certain forms of identification as a condition of social relatedness may be particularly fruitful. The present study will evaluate in a sample of biracials the broad of effects of perceived macrolevel pressure regarding racial identification on the multiracial experience. A conceptual model of the proposed effects of perceived macrolevel social pressure regarding racial identification is depicted in Figure 1. To evaluate this conceptual model, this study will test the following specific hypotheses:

Hypothesis 1: Perceived macrolevel social pressure regarding racial identification will predict racial identification based relatedness security. Greater perceived macrolevel social pressure regarding racial identification is expected to predict more racial identification based insecurity in the need for relatedness.

Hypothesis 2: Perceived macrolevel social pressure regarding racial identification will predict the consistency of racial identification. Greater perceived macrolevel social pressure regarding racial identification is expected to predict less consistency in racial identification.

Hypothesis 3: Racial identification based relatedness security will predict the consistency in racial identification. More racial identity based relatedness insecurity is expected to predict less consistency in racial identification.

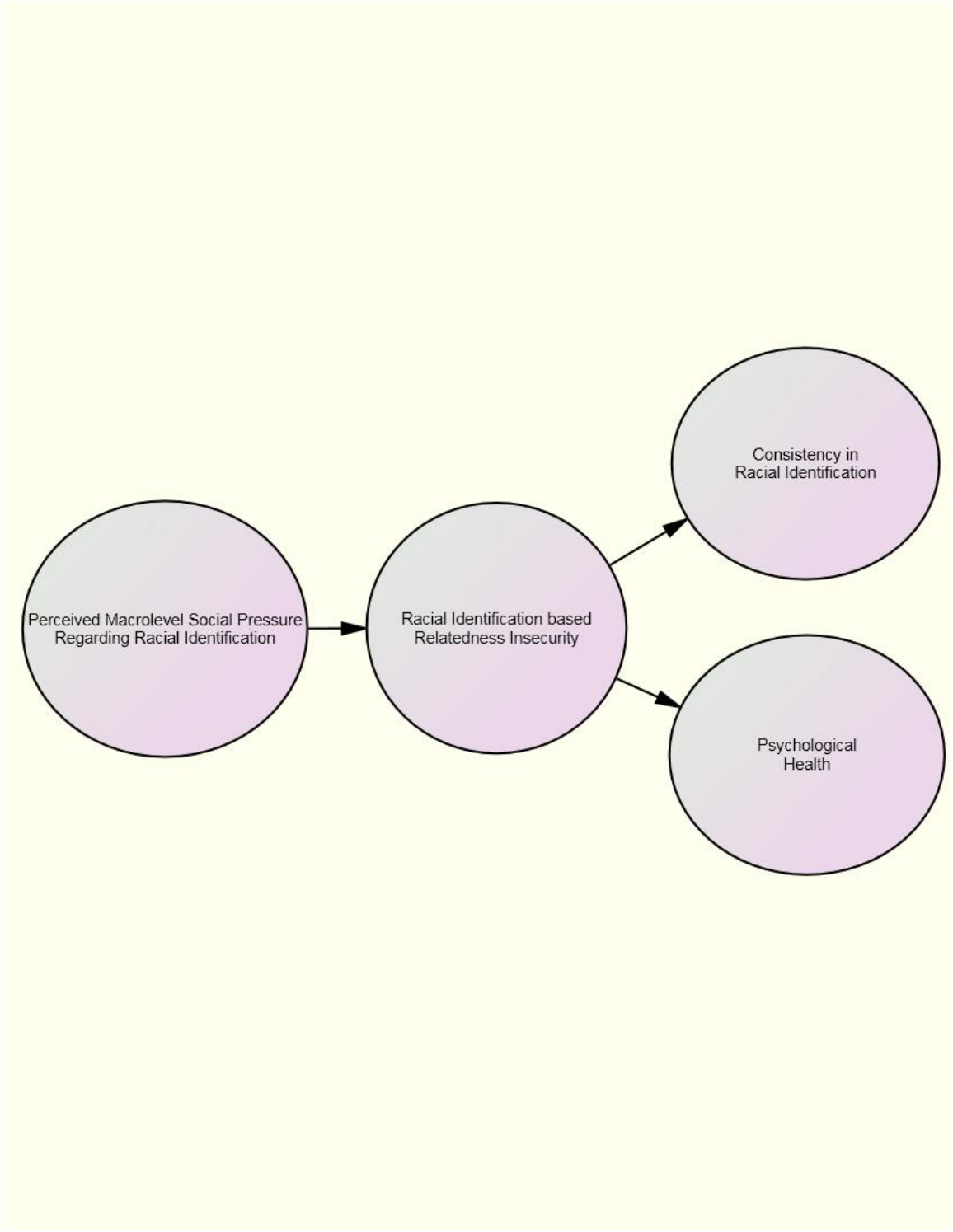
Hypothesis 4: Racial identification based relatedness security will mediate the relationship between perceived macrolevel social pressure regarding racial identification and the consistency in racial identifications.

Hypothesis 5: Perceived macrolevel social pressure regarding racial identification will predict psychological health. Greater perceived macrolevel social pressure regarding racial identification is expected to predict poorer psychological health.

Hypothesis 6: Racial identification based relatedness insecurity will predict psychological health. More racial identification based relatedness insecurity will predict poorer psychological health.

Hypothesis 7: Racial identification based relatedness security will mediate the relationship between perceived macrolevel social pressure regarding racial identification and psychological health.

Figure 1. Conceptual Model



Methods

Participants

Participants were 254 biracial adults. Defining “biracial” or “multiracial” is problematic as this is an emerging social category with no clear criteria for inclusion. The present study followed the most common operationalization found in previous studies of multiracials (e.g., Renn, 2000; Root, 1990, 1992, 1996; Shih & Sanchez, 2005; Sanchez, 2010; Sanchez et al., 2009) by defining the population as those who identify their biological parents as having different racial backgrounds. Participants did not need to identify themselves explicitly as multiracial or biracial. Fifteen individuals indicated having parents from the same racial background and thus were not included as part of the final sample (N = 254).

Participants from all multiracial combinations were included in this study. Treating the broad multiracial population as a distinct group has elicited some debate (e.g. Spencer, 2006), but the preponderance of contemporary scholarship and empirical research assumes biracials share certain common experiences based on their multiracial heritage (e.g., Renn, 2000; Root, 1990, 1992, 1996; Shih & Sanchez, 2005; Sanchez, 2010; Sanchez et al., 2009). Participants indicated the race of their parent using the racial categories published by the United States Office of Management and Budget for use in government surveys and statistics (American Indian or Alaska Native/ White, Asian, Black or African-American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, and White; Lew, 2000). Participants were allowed to check any number of racial categories for each parent. They were also permitted to indicate a parent as "Multiracial" or as "Other." Respondents reported 84 distinct combinations for their parents' racial categories. The most frequently endorsed combinations were Asian/White (18.9%),

Black/White (17.3%), and Latino/White (12.6%). All other combinations were endorsed by less than 3% of the sample. The majority of participants (64.2%) identified each of their parents as monoracial. A minority of participants reported having at least one multiracial parent, either by explicitly describing one as "multiracial" (12.2%) or by indicating multiple racial categories for at least one parent (23.6%).

Participants ranged in age from 18 to 61 (Mean = 29. 6; Standard Deviation = 8.8 Median = 27.5). The age range was skewed toward younger adults (Skew= 1.10). Indeed, only 12% of participants were older than 40. Approximately one out of five participants (18.9%) did not report their age. The majority of participants were women (78.0%). The remaining participants were men (22.0%); no participants identified themselves as transgendered. The majority of participants (56.6%) had at least completed a bachelor's degree; a substantial minority (19.4%) had completed a graduate or professional degree. Only 9.1% had not participated in some form of higher education.

Respondents from each of the geographic regions of the United States, as defined by the U. S. Census Bureau, participated in the study. The greatest portion of participants (35.4%) reported living in the Pacific region. Substantial portions of the sample hailed from the Middle Atlantic (16.5%), East North Central (11.4%), New England (9.8%), and South Atlantic (9.4%) regions. Smaller portions of the sample reported living in the Mountain (5.9%), West South Central (4.7%), West North Central (3.1%), and East South Central (2.0%).

Materials

Demographic Questionnaire. Participants completed a demographic questionnaire including items regarding age, the racial identification of each biological parents, educational attainment, ZIP code, and referral source.

Perceived Macrolevel Social Pressure Regarding Racial Identification. Perceived macrolevel social pressure regarding racial identification was assessed using items adapted specifically for this study. These items assessed the degree to which individuals feel that others in their environment pressure certain forms of racial identification as a condition of social relatedness. Items for this scale were closely modeled after items on previously published scales that assess social pressure to engage in particular behaviors (Work Climate Questionnaire; Baard, Deci, & Ryan, 2004; College Student Perception of Parents Scale; Robbins, 1994; Learning Climate Questionnaire; Williams, Wiener, Markakis, Reeve, & Deci, 1994) or adopt certain identities (Downie, Chua, Koestner, Barrios, Rip, & M'Birkou, 2007). Representative items are "Others seem to accept me and my choices regarding my racial identity" (reverse scored) and "Others have pressured me to choose a particular racial identity." Participants were asked to rate how true each statement is for them using a Likert-type scale ranging from 1 (*not at all true*) to 6 (*very true*). A complete set of these items is included in Appendix A. The internal consistency of these items was good (alpha = .87). Because item psychometrics are central to assessment of a measurement model, a more extended discussion of these is found in the results section.

Racial Identification Based Relatedness Insecurity. Racial identification based relatedness insecurity was measured using items adapted specifically for this study from

the Brief Fear of Negative Evaluation Scale (Leary, 1983a). Items were reworded to reflect an individual's concern over being negatively evaluated by others due to the way they racially identify. Representative items are "I worry about what other people will think of me because of how I racially identify" and "I am unconcerned even if I know people are forming an unfavorable impression of me because of how I racially identify" (reverse scored). Participants are asked to respond to each item using a 6-point Likert-type scale ranging from 1 (*Not at all true of me)* to 6 (*Very true of me).* A complete set of these items is included in Appendix A. The internal consistency of these items was good (alpha =.84). Additional discussion of item psychometrics is found in the results section.

Consistency in Racial Identification. Consistency in racial identification was assessed using the five-item Malleable Racial Identification Scale (Sanchez et al., 2009). This scale includes items relating to whether situations, activities, and time-points influence racial identification (e.g., "In different situations, I will identify more closely with one of my racial identities than another"). Participants are asked to indicate their agreement with each statement using a Likert-type scale ranging from 1 (*not at all true of me*) to 6 (*very true of me).* A complete set of these items is included in Appendix A. The internal consistency of these items was excellent (alpha =.90). The results section includes a more extended discussion of the item psychometrics.

Psychological Health. Psychological health was assessed using items from scales assessing depression and anxiety. These scales have been used to assess psychological health in previous research on the implications of having a multiracial identity (Brook, Garcia, & Fleming, 2008; Sanchez et al., 2009). Depressive symptoms were measured

using items from the Center for Epidemiological Studies Depression (CES-D) scale for nonclinical populations (Radloff, 1977). For this scale, participants respond to items representing various symptoms of depression using a 4-point Likert-type scale ranging from *rarely or none of the time* (1) to *most or all of the time* (4). A representative item is, "During the past week, I felt sad." Anxiety symptoms were measured using items from Bradley and Lewis's (1990) anxiety subscale. Representative items include, "I feel nervous and anxious" and "I feel calm and can sit still easily." Participants indicate how much each of these items applies to them using a 6-point scale that ranges from 1 (*Not at all true of me*) to 6 (*Very true of me)*. Because of the different scales traditionally used for the items measuring depression (4 point Likert) and anxiety (6-point Likert), item scores were standardized prior to analysis. The internal consistency of these items, together, was excellent (alpha = .94). The results section provides a more extended discussion of the item psychometrics.

Procedure

The investigator solicited participants by placing messages on Internet discussion boards and social networking groups devoted to general online volunteer opportunities or to biracial issues. These messages provided a brief description of the study's aims and informed potential participants that respondents would be eligible for a raffle drawing for an Apple Ipad 2. The messages include an HTML link to online survey material. The study webpages were constructed in accordance with recommendations for scientific research on the Internet (Eysenbach, 2004). Individuals who navigated to the study's webpage first read a general description of the study and details of informed consent. Consenting participants were then presented with the study survey items. Four

individuals who declined consent were navigated away from the survey. The site provided a prompt to participants who do not fully complete the set of measures. Seventy individuals consented to participate but provided no responses to substantive items and thus were not included as part of the final sample (N = 254). Those who completed the survey were provided with a brief discussion of the study's purposes and hypotheses and an invitation to have results of the study provided to them when the project is complete. Participants were provided contact information for the investigator and the investigator's faculty supervisor and invited to ask any questions or present any complaints.

Results

Preliminary Analyses

Missing Data. Prior to conducting substantive analyses, data were analyzed to ascertain the extent of missing values and to identify any patterns in data loss. Age was the only variable that included a substantial (>5%) number of missing values. All other survey items had very low rates of non-response (<1.6% missing). Those who did not report their age were compared with those who did report age on each survey item. Using a conservative alpha level (.01) due to the number of comparisons, there were no significant differences on any demographic variable or survey item between those who did and those who did not report their age.

To maximize the amount of analyzable data, estimated values for each missing data point on substantive scales were imputed. Analyses of missing data patterns identified linear regression as the most suitable means for imputing missing values. This method uses a linear regression equation to estimate missing values based upon the

individual's response to other items. This approach is commonly used in model testing research as it maximizes the amount of analyzable data as compared to list-wise deletion and creates it less bias to sample statistics than other simple value imputation approaches (i.e., mean substitution) (Kline, 2010).

Power Analysis. The power to differentiate between good and poor fitting models was calculated using procedures specified by MacCallum and colleagues (MacCallum, Brown, & Kai, 2006; MacCallum, Brown, & Sugawara, 1996; MacCallum & Hong, 1997). These analyses revealed adequate power to differentiate between good and poor fitting measurement models for both the measurement (.83) and structural (.81) models given the present study's sample size (N = 254) and complexity. The power to detect statistically significant (p <.05) parameter estimates for paths in the structural model was calculated using G Power 3. Given the sample size, there was sufficient power (.99) to detect medium effects.

Model Testing

The hypothesized relations between variables were assessed using structural equation modeling (SEM). SEM allows researchers to assess the validity of entire conceptual path models as a whole (like the hypothesized model in Figure 1) as well as the specific total, direct, and indirect paths that are thought to comprise it (e.g., Hypotheses 1-7). Structural equation modeling also estimates the relationships between latent variables rather than observed variables, allowing researchers to estimate relations between variables that control for the effects of measurement error that are inherent in observed scores.

Structural equation modeling is a multistep process (Byrne, 2010; Kline, 2010). First, observed variables or indicators for each latent variable are identified. These are the set of actual observations (responses to questions or a set of questions) that are thought to reflect the latent variable. Second, a measurement model is tested to determine its goodness of fit to the obtained data. This is equivalent to a confirmatory factor analysis that tests the assumption that the variance in indicator variables can be explained by precisely the number of latent variables hypothesized in the model. If the measurement model is found to fit the data adequately, the third step in SEM is conducted. In this step, the model of hypothesized path relations between latent variables (referred to as the structural model) is then assessed. If the structural model does not fit the data adequately, the model is then respecified to identify a model that best represents the data obtained from the sample. Because a poor fit between the hypothesized model as a whole and the obtained data does not mean that all of the hypothesized path relations are invalid, the respecified model can be used to evaluate each specific hypothesized path. Finally, conceptually plausible alternative path models can also be tested to rule them out as better explanations of the obtained data.

Specification of Observed Indicators: Item Parceling. The first step in evaluating a structural model of relations between latent variables is to specify what observations that will serve as indicators of each latent variable (Byrne, 2010; Kline, 2010). In survey research, indicators may consist of responses to individual items or to the combination of responses across several items or item parcels (Bandalos, 2002; Bandalos & Finney, 2001). The present study utilized the item parceling approach. This process allows researchers to construct multiple indicators of a hypothesized latent

variable from a set of items. Because a combination of several items generally will have better reliability than individual items, item parcels may provide a better estimation of the latent variable's reliable variance as compared to using the same number of single-item indicators (Little, Cunningham, Shahar, & Widaman, 2002). A fewer number of parceled indicators may thus be needed to measure a latent construct adequately as compared to single item indicators, allowing researchers to create and test more parsimonious SEM models that require smaller sample sizes (Little et al., 2002).

Dimensionality of Item Sets. Before parceling items into indicators, the dimensionality of the item sets selected to measure each construct needs to be assessed (Bandalos, 2002; Bandalos & Finney, 2001; Little et al., 2002). The dimensionality of the item set guides the specific techniques used to parcel items into indicators. As suggested by Little and colleagues (2002) exploratory factor analyses (EFAs) were conducted on each of item set selected to measure each of the study constructs.

EFA using maximum likelihood estimation and an oblique promax rotation of the perceived macrolevel social pressure regarding racial identification item set extracted two factors with Eigenvalues greater than one. The scree plot revealed a sharp break between the first and second factor, however, and the second factor was strongly correlated with the first factor (r = .61). Based upon these results, the factor analysis was then re-run to extract a single-factor. In this single-factor solution, the majority of items loadings were excellent to good. Two items had factor loadings that were considered fair. Cronbach's alpha for the item set was good (.87). Based these results, the macrolevel social pressure item set was taken to be unidimensional for the purposes item parceling.

The dimensionality of the racial identification based relatedness insecurity item set was also assessed with EFA using maximum likelihood estimation and oblique promax rotation. Two factors were first extracted with Eigenvalues greater than one. The scree plot revealed a sharp break between the first and second factor. The second factor was highly correlated (r = .76) with the first factor. Factor analysis was then re-run to extract a single factor. In this single factor, five of the seven items had factor loading considered excellent. Two items, however, had factor loadings that were poor. It is noteworthy that both of these items were worded in the reverse as compared to other items in the set. For these reasons, these two items were then deleted from the item set, and an EFA with oblique rotation was conducted on the remaining five items. This procedure extracted one factor with an Eigenvalue greater than 1.0. Each of the five remaining items had excellent loadings on this factor, and the internal consistency of this five-item set was good (.90). Based upon these results, these five items were concluded to be unidimensional for the purposes of item parceling.

Previous research has found the item set used to measure consistency of racial identification to be unidimensional (Sanchez et al., 2010). To confirm this in the present sample, EFA using maximum likelihood estimation and an oblique promax rotation was conducted. Consistent with previous research indicating unidimensionality of these items, EFA extracted one factor with an Eigenvalue greater than 1. A scree plot revealed a sharp break after the first factor; each item on the scale had excellent loading on this factor. Cronbach's alpha for the items was good (.90). Taken together, these findings indicate the consistency in racial identification item set can be understood as unidimensional for the purposes of item parceling.

Previous research has found that the item set used to measure psychological health can be treated unidimensionally (Brook et al., 2008). That is, previous results are consistent with the assumption that there is a single broad construct (here labeled psychological health) that contributes variance to all items. To confirm this in the present sample, EFA's using maximum likelihood estimation and oblique promax rotation were conducted. EFA extracted four factors with Eigenvalues greater than 1. These factors were all positively correlated (*r* ranging between .66 and .19) and inspection of the scree plot revealed a steep decline between the first and second factor. The factor analysis was then re-run to extract a single factor. The majority of items (22/26) loaded on this single factor in the excellent to good range. Four items had loadings that were only fair. Cronbach's alpha (.94) for the overall set was excellent. Taken together, the correlations between extracted factors, the scree-plot, the generally good item loadings, and the excellent internal reliability all suggest the psychological health items can be taken as unidimensional for the purposes of item parceling

Item parcels. Because of the relative unidimensionality of our constructs, an item-to-construct method was employed to create the item parcels (Little et al., 2002). In this method, parcels are created by matching the highest and lowest loading items from each set into the first parcel and the next highest loading item and the next lowest loading item into the next parcel. This process is then repeated until all items are parceled. This approach produces parcels that are each relatively equivalent to the latent variable and leads to better estimation of its variance as compared to other approaches (e.g., placing items into parcels at random or grouping highest and lowest loading items together; Little et al., 2002) To create a parsimonious model testable using a feasible sample size, two

parcels were created for each construct. The item composition of each parcel is detailed in Appendix B.

Means, standard deviations, and assessments of normality for each indicator variable are presented in Table 1. Structural equation modeling assumes both univariate and multivariate normality of the indicator variables (Byrne, 2010, Kline, 2010). Because of the relatively large sample size of the present study, examination of univariate skewness and kurtosis focused on the absolute values of their statistics, rather than their statistical significance (Tabachnick & Fidell, 2008). Absolute values of the skew index greater than 3.0 are indicative of problematic skewness (Kline, 2010). In the present sample, the absolute value of all skewness statistics is less than 1.0, indicating that skewness is not a substantial concern in the data. Though even extreme skewness tends to have little effect on analyses of variance and covariance like SEM (DeCarlo, 1997), kurtosis is a greater concern (Byrne, 2010). Absolute values of the kurtosis index greater than 7.0 reflect a variable that is problematically kurtotic (Byrne, 2010; Kline, 2010). As the highest kurtosis index absolute value for the variables in the present study is 1.02, univariate kurtosis does not appear to be a concern. Multivariate kurtosis can be severely detrimental to SEM analyses and its assessment is essential, even when there is no evidence of substantial univariate kurtosis (Byrne, 2010). The primary measure of multivariate kurtosis is Mardia's (1970) normalized estimate of multivariate kurtosis. Absolute values of this index greater than 5.00 are indicative of significant multivariate kurtosis (Yuan, Bentler, and Zhang, 2005). Mardia's normalized estimate of multivariate kurtosis for the present data is 3.79, indicating that this is not a concern in our sample.

There were no univariate outliers. Inspection of Mahalanobis's D^2 values revealed no multivariate outliers.

Table 1.

Descriptive Statistics of Item Parcels

Parcel	Mean	Standard Deviation	Skew	Kurtosis
PMSPRI Parcel 1	2.32	1.05	-0.06	-0.30
PMSPRI Parcel 2	2.20	0.96	0.00	-0.21
RIRI Parcel 1	1.61	1.35	0.50	-0.50
RIRI Parcel 2	1.83	1.51	0.33	-0.98
Consistency Parcel 1	2.06	1.49	0.38	-0.84
Consistency Parcel 2	2.29	1.59	0.24	-1.02
Psych. Health Parcel 1	0.00	0.68	-0.57	-0.38
Psych. Health Parcel 2	0.00	0.66	-0.79	-0.02

Note: PMSPRI = Perceived Macrolevel Social Pressure regarding Racial Identification; RIRI = Racial Identification based Relatedness Insecurity; Consistency = Consistency in Racial Identification; Psych. Health = Psychological Health.

Measurement Model. Once indicators have been identified for each latent construct and their normality has been confirmed, the next step in structural equation modeling is to test the measurement model (Byrne, 2010; Kline, 2010). The measurement model for the present study is depicted in Figure 2. By convention, latent variables are depicted as circles and indicator variables are depicted as rectangles. The presumed relationships between are depicted as arrows from the latent variable to each indicator variable thought to measure it. Variance in each indicator that is not attributable to the latent variable is presumed to be error variance, as indicated by the error term associated with each indicator variable and the arrow from it to the indicator. The latent variables are allowed to covary with each other as shown in the curved arrows between them.

A valid measurement model is necessary to proceed to the next step of structural equation modeling (Byrne, 2010; Kline, 2010). Measurement models are assessed by conducting a confirmatory factor analysis. This analysis tests the assumption that the precise number of latent variables included in the model sufficiently explains the covariance within the indicator variables. Assessing a measurement model also provides a test of convergent and discriminant validity, as it evaluates whether the indicators specified for each latent variable, indeed, covary together, but that those thought to measure different latent variables do not (Kline, 2010).

To best understand the various indexes used to evaluate the validity of the measurement model through CFA, it is necessary to provide a brief explanation of the underlying statistical procedures. The CFA for evaluating a measurement model assesses the degree of fit between the matrix of covariances between indicators that is

implied by the relations depicted in the measurement model (i.e., the paths between indicator and latent variables) and the actual covariance matrix between indicators for the sample data (Byrne, 2010; Kline, 2010). The CFA tests the null hypothesis that there is no significant difference between these implied and actual covariance matrices (Byrne, 2010; Kline, 2010). Thus, in general, a valid model is one that so closely fits the obtained data that the null hypothesis of no difference between these matrices would be accepted. For poorer fitting models, however, there will be a significant difference between covariance matrices and the null hypothesis will be rejected.

There are a number of indices of model fit employed to assess this null hypothesis. Because the chi-squared distribution, the primary index of model fit in parametric statistics, is sensitive to sample size, sole reliance on the chi-squared statistic to assess model fit may lead to erroneous rejections of the null hypothesis even for good-fitting models if the sample size is large (Joreskog, 1993). For this reason, a variety of model fit indices have been proposed that correct for this bias in chi-square (Hu & Bentler, 1999) and the best practice is to consider multiple model fit indices when assessing the adequacy of measurement models (Byrne, 2010; Hu & Bentler, 1999; Kline, 2010).

The root mean squared error of approximation (RMSEA) is recognized as one of the most informative fit indices and it is routinely cited in SEM analyses (Byrne, 2010; Kline, 2010; Hu & Bentler, 1999. Specifically, RMSEA estimates how well the implied covariance matrix would fit the population covariance matrix if it were available. RMSEA values lower than .05 indicate good model fit (Hu & Bentler, 1999). Also frequently reported is the probability that RMSEA is less than .05 in the population. This

latter value is referred to as PCLOSE as it tests the probability of a close model fit. PCLOSE values greater than .50 are taken as good evidence of close model fit.

Other commonly cited fit indices include the Normed Fit Index (NFI; Bentler & Bonett, 1980), the Comparative Fit Index (CFI; Bentler 1990), the Relative Fit Index (RFI; Bollen 1986) and the Incremental Fit Index (IFI, Bollen, 1989b). These similar measures of model fit that range from .00 to 1.00, with 1.00 representing perfect model fit. For each of these indices, values greater than .95 are taken to be evidence of close model fit.

Model fit indices for the measurement model in the present study are found in Table 2. Based upon published criteria for assessing goodness of fit, each of these indices suggests that the measurement model fits the data well. The obtained chi-squared value (15.84; $df = 14, 254$) indicates the implied covariance matrix of the measurement model is not significantly different than the covariance matrix of the actual data ($p = .323$). In the present study, the point-estimate of RMSEA for the measurement model is .023, below the cutoff value for good-fit of .05 and the PCLOSE is .81, above the recommended value of .50. As seen in Table 2 the NFI (.990), RFI (.979), IFI (.999), and CFI (.999) are all greater than .95 cutoff value. Because each goodness-of-fit index was consistent with a close fitting model, it was concluded that the measurement model depicted in Figure 2 closely fits the sample data. More specifically, it is concluded that, as assumed, there are four latent variables found in the covariances between indicator variables and that each indicator variable measures the specific latent variable it was presumed to reflect.

Figure 2. Measurement Model

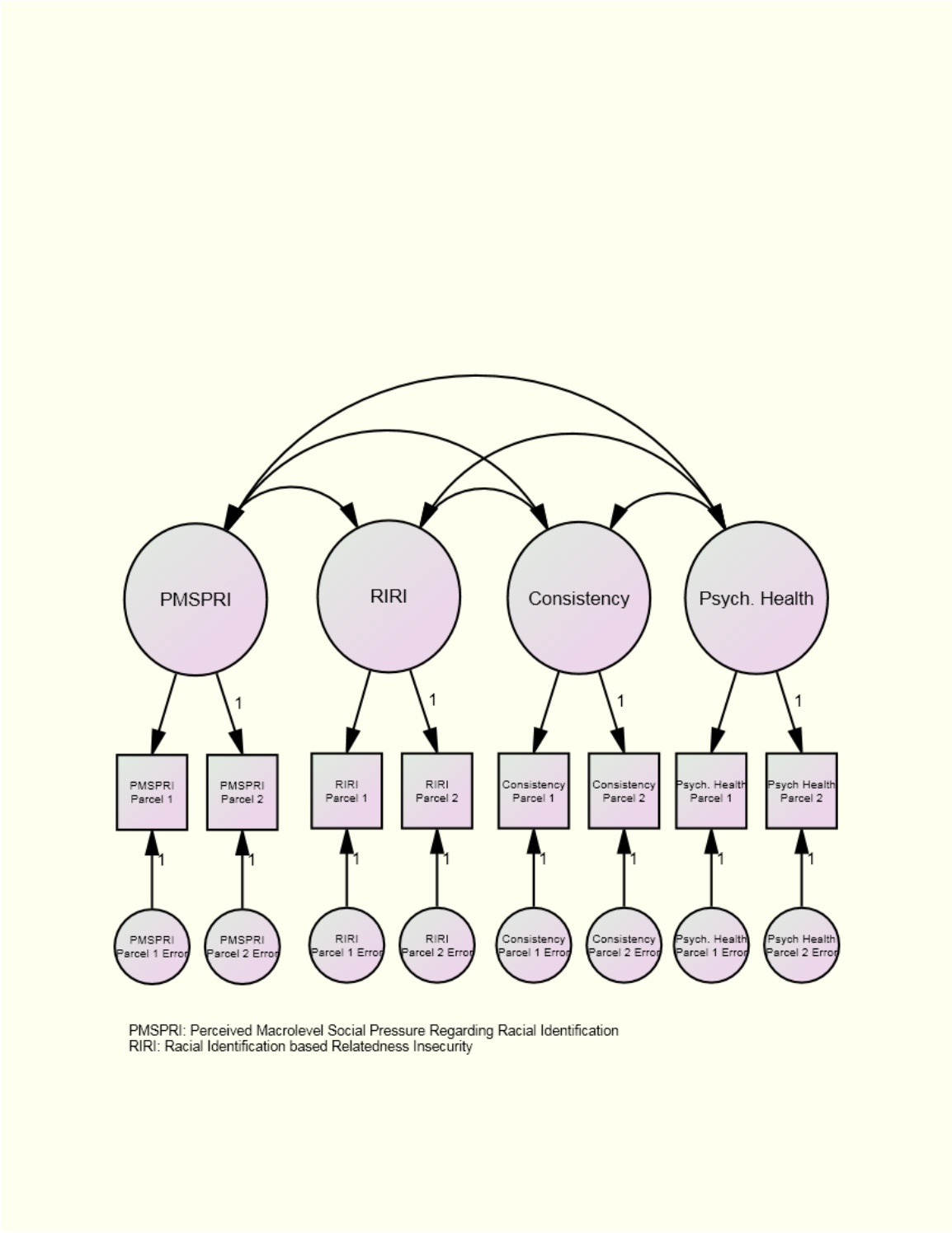


Table 2.

Measurement Model Fit Indices

Fit Index	Value	Recommended Value
Chi-Squared Probability	.323	>.001
Root mean squared error of approximation (RMSEA)	.02	<.05
PCLOSE	.81	>.50
Normed Fit Index (NFI)	.990	>.950
Incremental Fit Index (IFI)	.999	>.950
Relative Fit Index (RFI)	.979	>.950
Comparative Fit Index (CFI)	.999	>.950

Note: PCLOSE = probability of a RMSEA value less than .05

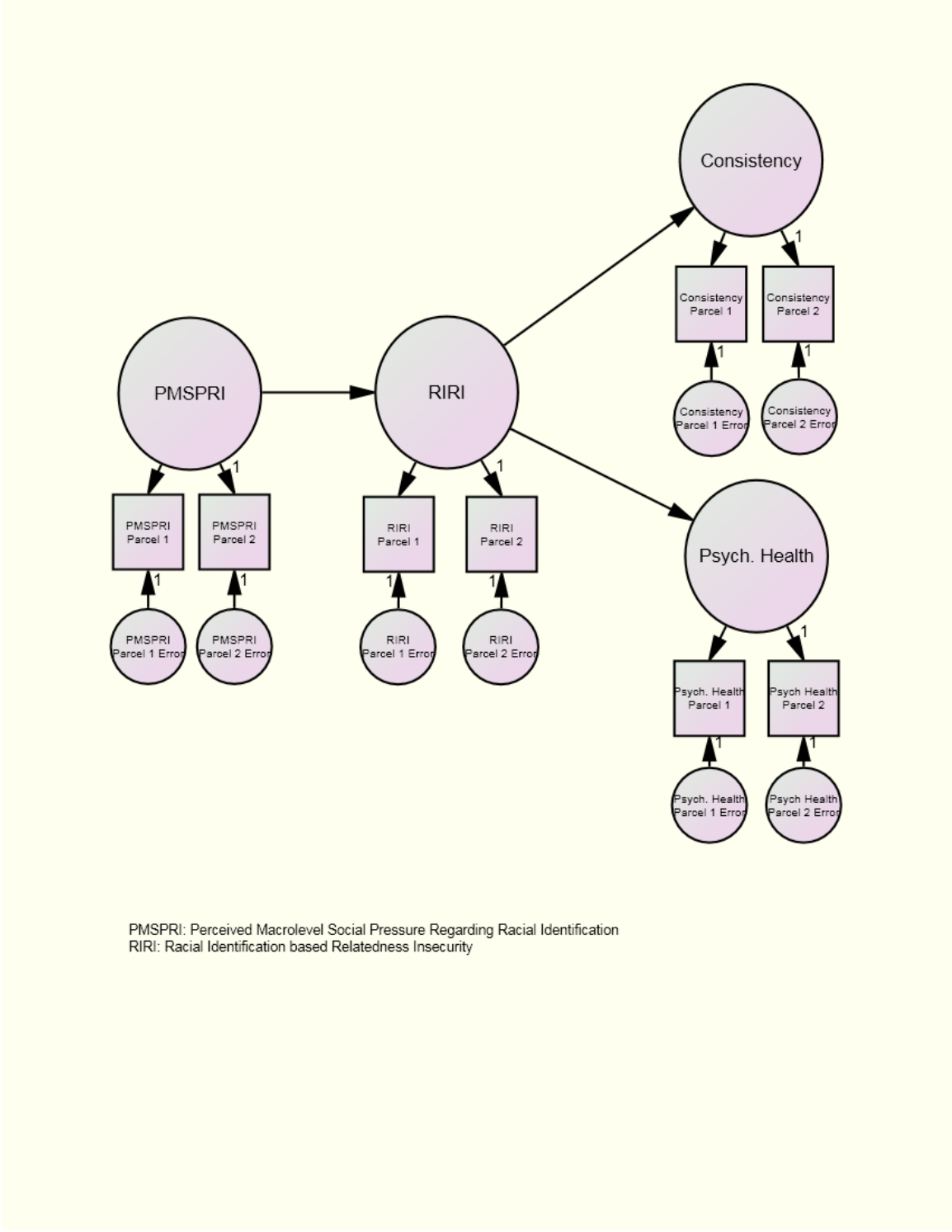
Structural Model. Once the validity of the measurement model is established, researchers can then test models including paths of influence between the latent variables therein. Such path models between latent variables are the structural models that give SEM its name. The structural model comprising the hypotheses of the present study is found in Figure 3. It is, in essence, a combination of the conceptual path model depicted in Figure 1 and the measurement model, linking indicator variables to latent variables, depicted in Figure 2.

Structural models, like measurement models, are assessed by comparing the covariance matrices implied by the hypothesized model with the actual covariance matrices obtained in the sample. As with the measurement model, analysis of the structural model tests the null hypothesis that there is no significant difference between the implied and actual covariance matrices. A valid structural model is one that so closely fits the obtained data that the null hypothesis of no difference between these matrices is accepted. As the process for assessing structural models is similar to that for assessing measurement models, the indices of model fit are the same.

Model fit indices for the study's overall structural model (Figure 3) are presented in Table 3. The chi-squared statistic (40.85, df = 17, 254) indicates there is a significant difference between the implied covariance matrix and the actual covariance matrix (p = .001). Likewise, the RMSEA point-estimate of .074 is higher than recommended cut-off for good model fit (Hu & Bentler, 1999). The PCLOSE value of .08 indicates that there is only an 8% chance that the covariance matrix implied by the structural model is a close fit to the covariance matrix that obtains in the population. In contrast to these analyses, however, the NFI, RFI, IFI, and CFI are all greater than .95, which in isolation would

suggest adequate fit. Taken together with the significant chi-squared statistic and the RMSEA and PCLOSE values, however, it must be concluded that the structural model comprising the study's hypotheses, as a whole, does not adequately fit the data.

Figure 3. Hypothesized Structural Model



PMSPRI: Perceived Macrolevel Social Pressure Regarding Racial Identification
RIRI: Racial Identification based Relatedness Insecurity

Table 3.

Hypothesized Structural Model Fit Indices

Fit Index	Value	Recommended Value
Chi-Squared Probability	.001	>.01
Root mean squared error of approximation (RMSEA)	.07	<.05
PCLOSE	.08	>.50
Normed Fit Index (NFI)	.974	>.950
Incremental Fit Index (IFI)	.984	>.950
Relative Fit Index (RFI)	.956	>.950
Comparative Fit Index (CFI)	.984	>.950

Note: PCLOSE = probability of a RMSEA value less than .05

The conclusion that the study's conceptual model, as a whole, poorly fits the data does not, however, provide any information regarding the tenability of the specific study hypotheses. In order to evaluate the validity of these individual hypotheses, the structural model that best reflects the relationships between variables found in the data was sought. To this end, the original structural model was respecified to include direct paths from macrolevel social pressure to consistency in racial identification and to psychological health (Figure 4). This respecified model allows for possible effects of macrolevel social pressure on consistency in racial identification and psychological health beyond that mediated by racial identification based relatedness-insecurity.

The respecified model was evaluated using procedures similar to those utilized to assess the measurement and original structural model. Fit indices for the respecified model are found in Table 4. The chi-squared statistic (16.01, df = 15, 254, p = .376) indicates no significant difference between the model implied covariance matrix and the covariance matrix obtained in the data. The RMSEA (.02) suggests a close fit between the model and the actual data, and the PCLOSE value of .85 is well above the recommended value of .50, reflecting an 85% chance the RMSEA value is less than .05. The NFI, RFI, IFI, and CFI all range between .98 and .99, all above the recommended cut-off value of .95. These results, in combination, provide strong evidence the respecified model closely fits the obtained data.

Figure 4. Respecified Structural Model

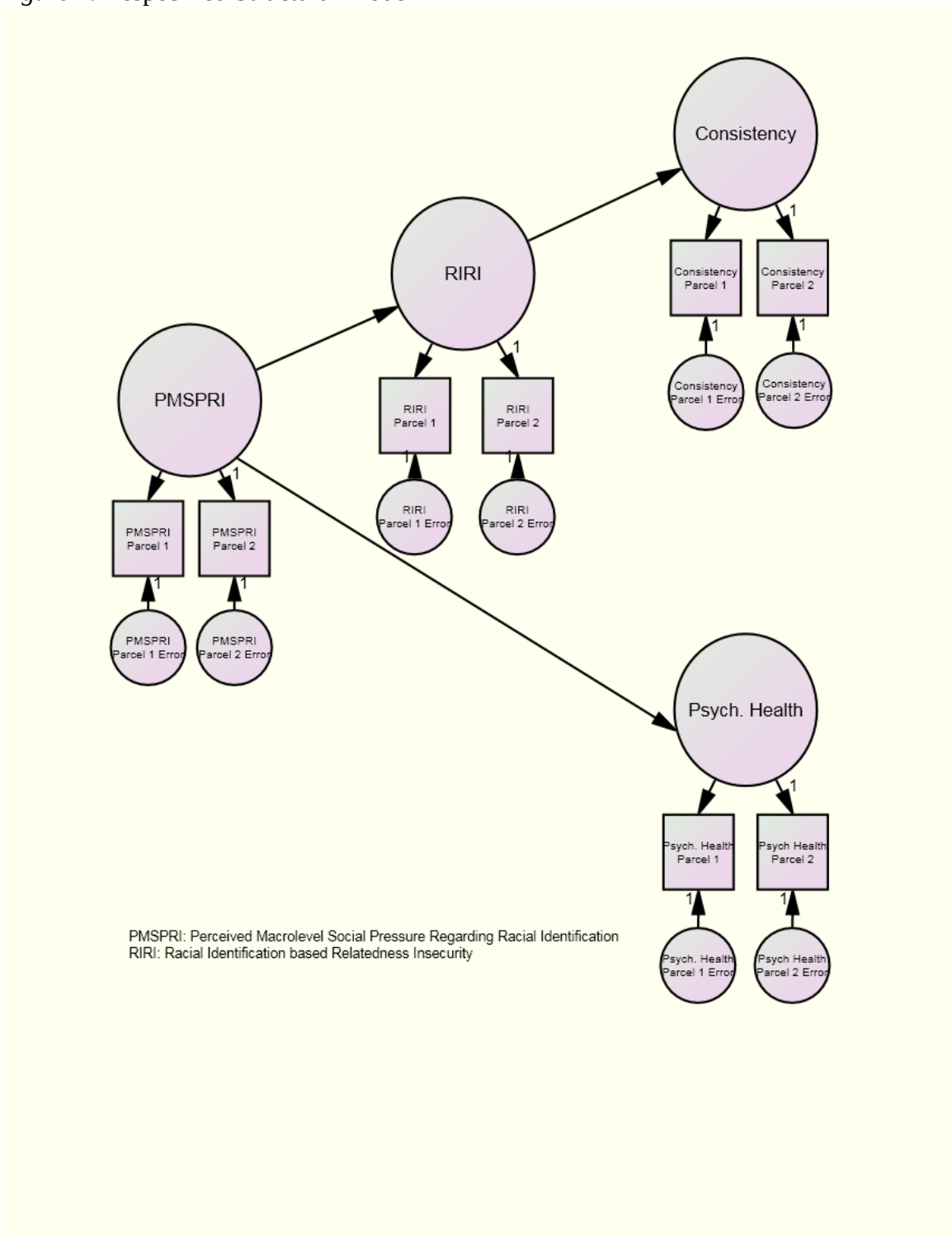


Table 4.

Respecified Structural Model Fit Indices

Fit Index	Value	Recommended Value
Chi-Squared Probability	.376	>.01
Root mean squared error of approximation (RMSEA)	.02	<.050
PCLOSE	.85	>.50
Normed Fit Index (NFI)	.990	>.950
Incremental Fit Index (IFI)	.999	>.950
Relative Fit Index (RFI)	.981	>.950
Comparative Fit Index (CFI)	.999	>.950

Note: PCLOSE = probability of a RMSEA value less than .05

Inspection of the parameter estimates for each individual path in this revised model (depicted in Table 5), however, indicates the direct path from macrolevel social pressure regarding racial identification to consistency in racial identification (p = .23) and the path from racial identification based relatedness insecurity to psychological health (p =.21) are not significantly different from zero. In the interest of parsimony, these paths were then trimmed from the structural model. As seen in Table 6, evaluation of this trimmed model (Figure 5) using model fit procedures confirmed this more parsimonious model fit the data well (χ^2 = 18.99, df = 17, p = .33; RMSEA = .02; PCLOSE = .85; NFI = .99; RFI = .98; IFI = .99; CFI = .99).

Table 5.

Estimated Parameter Values for Paths in Respecified Model

Path	*B*	*t*	*p*
PMSPRI →RIRI	.76	8.28	<.001
RIRI → Consistency	-.50	-5.10	<.001
RIRI→Psych. Health	-.05	-1.25	.21
Direct Effect of PMSPRI → Consistency	.15	1.19	.23
Direct Effect of PMSPRI→ Psych. Health	-.29	-4.98	<.001

Note: PMSPRI = Perceived Macrolevel Social Pressure regarding Racial Identification; RIRI = Racial Identification based Relatedness Insecurity; Consistency = Consistency in Racial Identification; Psych. Health = Psychological Health.

Figure 5. Final Trimmed Structural Model

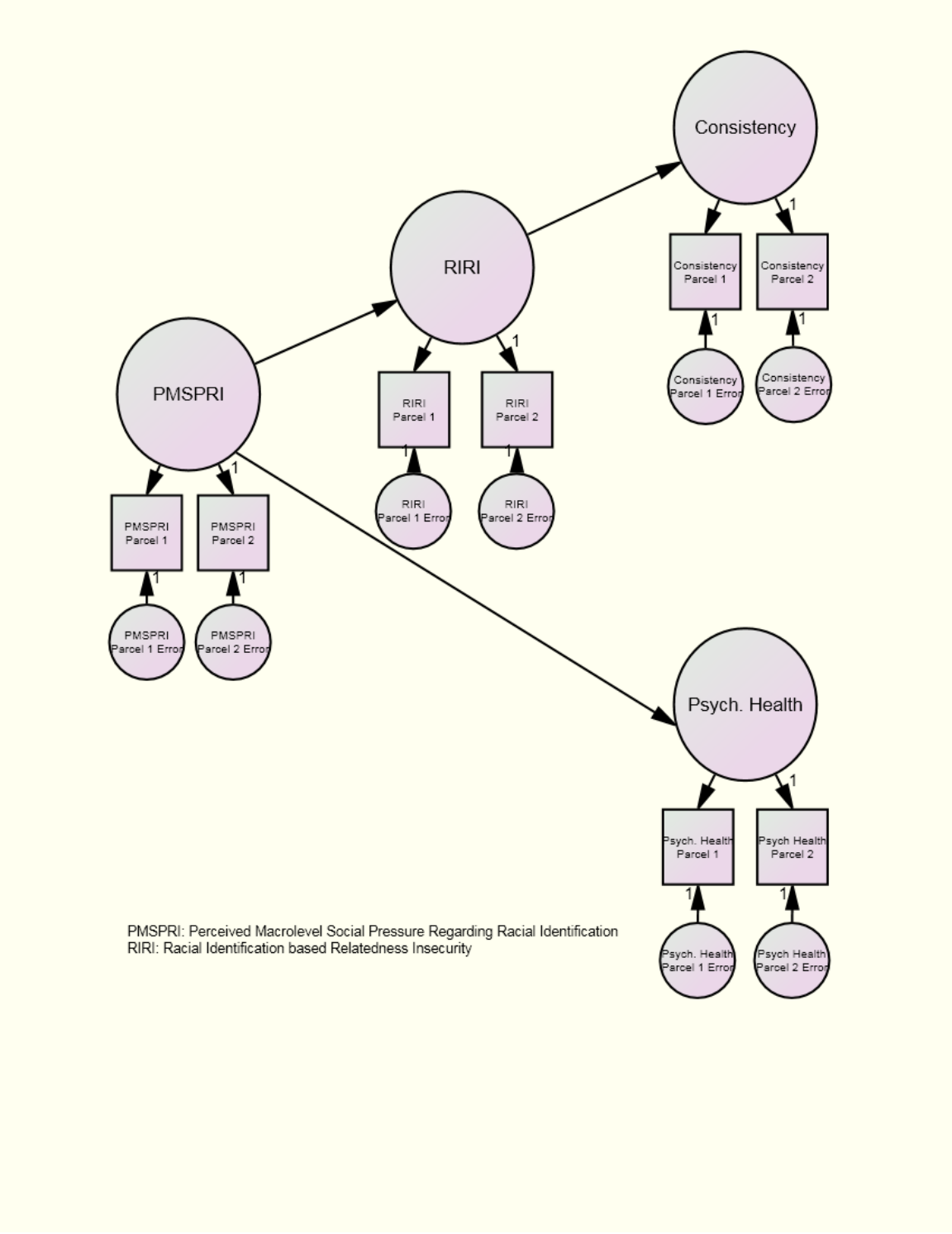


Table 6.

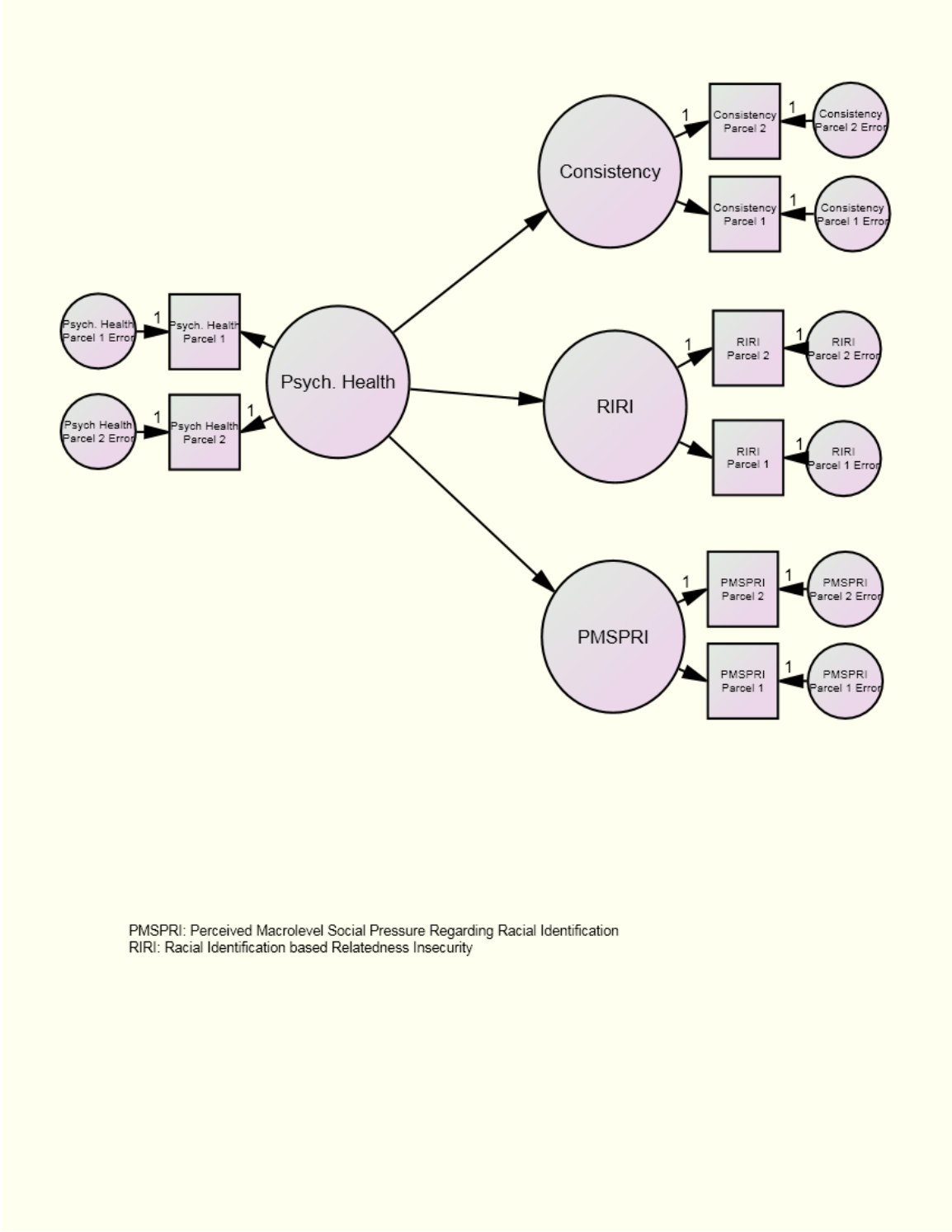
Final Trimmed Structural Model Fit Indices

Fit Index	Value	Recommended Value
Chi-Squared Probability	.339	>.01
Root mean squared error of approximation (RMSEA)	.02	<.050
PCLOSE	.85	>.50
Normed Fit Index (NFI)	.988	>.950
Incremental Fit Index (IFI)	.999	>.950
Relative Fit Index (RFI)	.980	>.950
Comparative Fit Index (CFI)	.999	>.950

Note: PCLOSE = probability of a RMSEA value less than .05

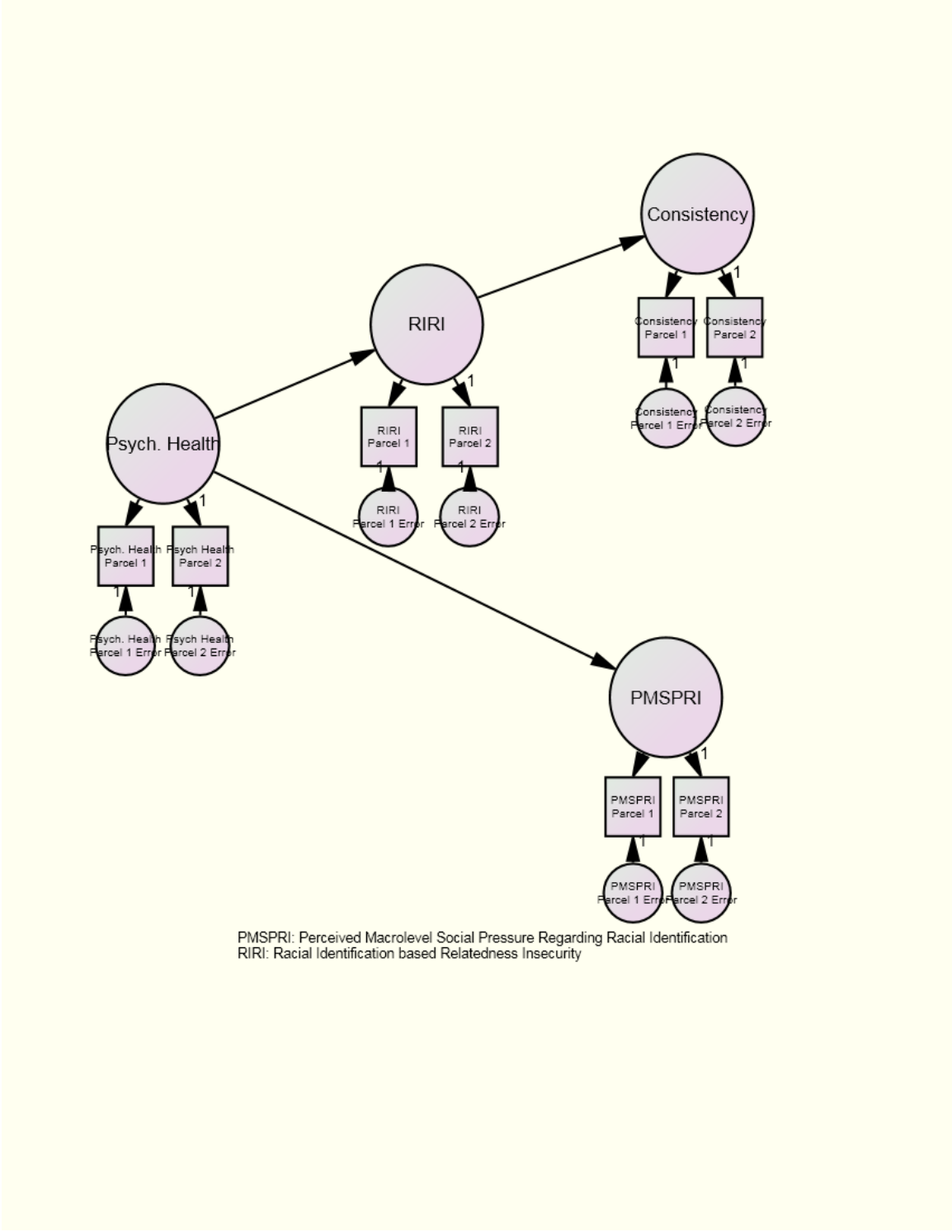
An important final step in testing structural equation models is to rule out alternative, plausible explanations of the relationships among latent variables (Kline, 2010). A plausible alternative explanation of the data is that psychological health predicts all other variables (Figure 6). Model fit indices indicate this model does not fit the data well (χ^2 = 97.52, *df* = 17, 254, *p* < .000; RMSEA = .14; PCLOSE = .000; NFI = .94; RFI = .90; IFI = .95; CFI = .95). A second plausible alternative explanation is that psychological health predicts macrolevel social pressure regarding racial identification and racial identification based relatedness insecurity, and that, in turn, relatedness insecurity predicts consistency identification (Figure 7). This structural model is also a poor fit for the obtained data (χ^2 = 68.70, *df* = 17, 254; RMSEA = .11; PCLOSE = .000; NFI = .96; RFI = .93; IFI =.97 CFI = .97). Based on these results, the trimmed model (Figure 5) was taken as the structural model that best reflects the relationships between variables found in the data.

Figure 6. Alternative Structural Model 1



PMSPRI: Perceived Macrolevel Social Pressure Regarding Racial Identification
RIRI: Racial Identification based Relatedness Insecurity

Figure 7. Alternative Structural Model 2



Hypothesis Testing

Estimates of path parameters (i.e., the estimated regression weight of the causal influence of one variable upon another) generated with the final structural model (i.e., Figure 5) were used to evaluate each of the individual study hypotheses. This model's close fit to the data indicates its accompanying parameter estimates are good estimates of the specific relations between study variables (Byrne, 2010; Kline, 2010). Estimated path parameters, including total, direct, and indirect effects, are found in Table 7.

Hypothesis 1. The estimate of the direct effect of perceived macrolevel social pressure regarding racial identification on racial identification based relatedness insecurity was used to assess Hypothesis 1. Consistent with the hypothesis, greater perceived macrolevel social pressure regarding racial identification significantly predicted greater racial identity based relatedness insecurity (B = .76, t = 8.35, p <.001; R^2 =.34). Hypothesis 1 was thus supported.

Hypothesis 2. The estimate of the total effect of perceived macrolevel social pressure regarding racial identification on the consistency of racial identification was used to assess Hypothesis 2. Consistent with the hypothesis, greater perceived macrolevel social pressure regarding racial identification significantly predicted less consistency in racial identification (B = -.33, t = -5.00, p < .001; $R^{2 =}$ .05). Hypothesis 2 was thus supported.

Hypothesis 3. The estimate of the effect of racial identity based relatedness insecurity on the consistency in racial identification was used to evaluate Hypothesis 3. Consistent with this hypothesis, greater racial identification based relatedness insecurity

predicted less consistency in racial identification (B = -.44, t = -5.65, p < .001; R^2 = .14). Hypothesis 3 was thus supported.

Hypothesis 4. The estimated indirect effect of perceived macrolevel social pressure regarding racial identification on the consistency of racial identification, as mediated by racial identification based relatedness insecurity, was used to assess Hypothesis 4. The indirect effect was calculated and assessed using the distribution of the product method (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; MacKinnon, Lockwood, & Williams, 2004). Following this method, the indirect effect was calculated as the product of the direct effect of perceived macrolevel social pressure regarding racial identification on racial identification based relatedness insecurity and the direct effect of racial identification based relatedness security on consistency in racial identification. To assess for statistical significance, 95 percent confidence intervals were then created around this point estimate. Consistent with Hypothesis 4, racial identification based relatedness insecurity was a significant mediator of the effect of macrolevel social pressure regarding racial identification on the consistency of racial identification (Indirect Effect = .32, 95% Confidence Interval = -.49 to -.20; Estimated R^2 = .05). Hypothesis 4 was thus supported.

Hypothesis 5. The total effect of perceived macrolevel social pressure regarding racial identification on psychological health was used to assess Hypothesis 5. Consistent with this hypothesis, greater perceived macrolevel social pressure regarding racial identification predicted poorer psychological health (B = -.34, t = -7.25, p = .001; R^2 = .23). Hypothesis 5 was thus supported.

Hypothesis 6. This hypothesis proposed a direct effect of racial identification based relatedness security on psychological health. Contrary to the hypothesis, this path was trimmed from the final model (Figure 5) due to its lack of statistical significance in the respecified model (Figure 4) (B = -.05, t = -1.25, p =.21; R^2 =.01). Hypothesis 6 was thus not supported.

Hypothesis 7. The lack of a significant direct effect of racial identification based relatedness insecurity on psychological health precludes the possibility that racial identification based relatedness insecurity would mediate the relationship between perceived macrolevel social pressure regarding racial identification and psychological health (Baron & Kenny, 1986). Empirical evaluation of the indirect effect using parameters generated in the respecified model confirmed no significant indirect effect (Estimated Indirect Effect = -.04, 95% Confidence Interval = -.10 to .02). Hypothesis 7 was thus not supported.

Table 7.

Estimated Parameter Values for Paths and Effects in Trimmed Structural Model

Path	*B*	*t*	*p*	R^2
PMSPRI →RIRI	.76	8.35	<.001	.34
RIRI → Consistency	-.44	-5.65	<.001	.14
PMSPRI→ Psych. Health	-.34	-7.25	<.001	.23
Total Effect of PMSPRI on Consistency	-.33	-5.00	<.001	.05
Total Effect of PMSPRI on Psych. Health	-.34	-7.25	<.001	.23
Indirect Effect of PMSPRI on Consistency	-.32†			.05

Note: PMSPRI = Perceived Macrolevel Social Pressure regarding Racial Identification; RIRI = Racial Identification based Relatedness Insecurity; Consistency = Consistency in Racial Identification; Psych. Health = Psychological Health.
†95% Confidence Interval = -.49 to -.20

Secondary Analyses

Demographics and Study Constructs. Estimated scores for each latent variable were produced from parcel scores using linear regression. These latent variable scores were then used to assess the relations between study constructs and demographic variables. These analyses found age to be a significant predictor of relatedness insecurity, with older participants reporting less relatedness insecurity (r = -.15, p = .04). Age was not significantly associated with other study constructs. Education was found to be associated with psychological health; those with more education reported better psychological health (r = .15, p = .02). Education was not significantly correlated with any other study construct. There were no differences on any study construct based upon geographic region or referral source.

To confirm the validity of the study's findings when controlling for the influence of age and education, path models of the study's hypotheses were analyzed using Hayes's (2009) procedures for estimating direct, indirect, and total effects in a mediation model. Separate path models were analyzed for each of the study's outcome variables, consistency in racial identification and psychological health. Hayes's procedure employs a combination of ordinary-least-squares regression and bootstrapped simulations to estimate each path in a mediation model, while controlling for any covariates. This approach to assessing path models was employed because including covariates in structural equation modeling can so substantially increase model complexity that the models can only be assessed with very large sample sizes (Fletcher, Germano, & Selgrade, submitted for publication). Indeed, for this reason, covariate analyses are only

rarely used in published structural equation models (Fletcher, et al., submitted for publication).

Path estimation using Hayes's (2009) procedures show results entirely consistent with the study's primary findings, when controlling for age and education (Table 8). As in the primary analyses, greater perceived macrolevel social pressure regarding racial identification significantly predicted greater racial identification based relatedness insecurity (B = .89, t = 12.83, p <.001, R^2 = .43). Consistent with the main findings, there was a significant total effect of perceived macrolevel social pressure on consistency in racial identification, with those reporting greater social pressure reporting less consistency in racial identification (B = -.28, t =-2.52, p = .01, R^2 = .03). Greater relatedness insecurity also predicted less consistency in racial identification (B = -.55, t = -5.11, p < .001, R^2 = .14), and relatedness insecurity mediated the effect of perceived macrolevel social pressure on consistency in racial identification (Estimated Indirect Effect: -.48, 95% Confidence Interval: -.76 to -.30, R^2 = .06), just as with the primary analyses. Consistent the main findings, there was no significant direct effect of perceived macrolevel social pressure regarding racial identification on consistency in racial identification (B = .20, t = 1.44, p =.15, R^2 = .01).

Results related to psychological health when controlling for Age and Education were also consistent with the main findings. Greater perceived macrolevel social pressure regarding racial identification predicted poorer psychological health (B = -.39, t = 8.93, p <.001, R^2 = .28). As in the primary analyses, racial identification based relatedness insecurity did not significantly influence psychological health (B = -.01, t =-.22, p = .83, R^2 = .00) when controlling for age and education, and it was not a significant mediator of

the effect of perceived macrolevel social pressure on psychological health (Estimated Indirect Effect: -.01, 95% Confidence Interval: -.08 to .06, R^2 = .00). There was a significant direct effect of perceived macrolevel social pressure on psychological health (B = -.38, t = -6.47, p <.001, R^2 = .26)

Table 8.

Parameter Values Controlling for Age and Education

Path	*B*	*t*	*p*	R^2
PMSPRI →RIRI	.89	12.83	<.001	.43
RIRI → Consistency	-55	-5.11	<.001	.14
Direct Effect of PMSPRI on Consistency	-.20	1.44	.15	.01
Total Effect of PMSPRI on Consistency	-.28	-2.51	.01	.03
Indirect Effect of PMSPRI on Consistency	-.48†			.06
RIRI→Psych. Health	-.01	-0.22	.82	.00
Direct Effect of PMSPRI on Psych. Health	-.38	-6.47	<.001	.26
Total Effect of PMSPRI on Psych. Health	-.39	-9.93	<.001	.28
Indirect Effect of PMSPRI on Psych. Health	-.01††			.00

Note: PMSPRI = Perceived Macrolevel Social Pressure regarding Racial Identification; RIRI = Racial Identification based Relatedness Insecurity; Consistency = Consistency in Racial Identification; Psych. Health = Psychological Health.
†=95% Confidence Interval = -.68 to -.30
††=95% Confidence Interval = -.09 to .06

Parents' Racial Identity and Study Constructs. Exploratory analyses assessed for differences along study constructs between participants subgrouped based upon the racial identity of their parents. First compared were participants with the three most commonly reported combinations of parent racial identity: Black/White (n = 44), Asian/White (n = 48), and Latino/White (n = 32). Analysis of variance found no significant differences between these groups in perceived macrolevel social pressure regarding racial identification (F = .34, p =.71), racial identification based relatedness insecurity (F = .20, p = .82), consistency in racial identification (F = 1.74, p = .18), or psychological health (F = 1.04, p = .36).

Analyses of the path relations between study variables using Hayes's (2009) procedures found results that are generally similar across each group and comparable to those found in the overall sample (See Tables 9, 10, and 11). As in the combined sample, greater perceived macrolevel social pressure regarding racial identification predicted greater racial identification based relatedness insecurity in each group (Black/White: B =. 97, t = 5.04, p < .001, R^2 = .37; Asian/White: B =.76, t = 4.94, p = .001, R^2 = .35; Latino/White: B =.83, t = 5.85, p =.001, R^2 =. 53). Consistent with the overall sample, greater relatedness insecurity predicted less consistency in in each group (Black/White: B = -.58, t = -3.00, p < .001, R^2 = .36; Asian/White: B = -.58, t = -2.95, p = .01, R^2= .25; Latino/White: B = -.97, t = -2.75, p = .01, R^2= .44). There was also a significant indirect effect of perceived macrolevel social pressure on consistency in racial identification through relatedness insecurity in each of these groups, as with the combined sample (Black/White Estimated Indirect Effect: -.57, 95% Confidence Interval = -1.18 to -.22, R^2= .10; Asian/White Estimated Indirect Effect: -.44, 95% Confidence

Interval = -.82 to -.18, R^2 = .09; Latino/White Estimated Indirect Effect: -.85, 95% Confidence Interval = -1.57 to -.25, R^2 = .23). There are between group differences in the total effects of perceived macrolevel social pressure regarding racial identification on consistency in racial identification. Among Black/White biracials, as with the combined sample, there is a significant total effect (B = -.56, t = -2.12, p = .02, R^2 = .10), but there is no significant total effect among Latino/Whites (B = -.15, t = -0.50, p = .61, R^2 =.00) or Asian/Whites (B = .02, t = 0.10, p = .92, R^2 = .01). These differences in the total effect of perceived macrolevel social pressure on consistency parallel differences in the direct effects of perceived macrolevel pressure on consistency. Though among Black/White, as with the overall sample, there is no direct effect of perceived macrolevel social pressure on consistency (B =.00, t = 0.01, p = .99, R^2 = .00), there is a trend toward a significant direct effect among Asian/Whites (B =.46, t = 1.82, p = .08, R^2 = .09) and Latino/Whites (B = .66, t = 1.62, p =.12, R^2 = .15).

Results regarding psychological health in each group are generally consistent with the results of the overall sample. In each group as in the combined sample, perceived macrolevel social pressure regarding racial identification predicted poorer psychological health (Black/White: B = -.41, t = 4.97, p <. 001, R^2 = .36; Asian/White: B = -.43, t = 3.95, p < .001, R^2 =. 25; Latino/White: B = -.29, t = 2.38, p = .02, R^2 = .16). And as in the overall sample, there was no significant effect of racial identification based relatedness insecurity on psychological health in any of these groups (Black/White: B = -.03, t = -.57, p = .57, R^2 = .01 ; Asian/White: B = .19, t = 1.88, p = .07, R^2 = .08; Latino/White: B = .01, t = .10, p = .92, R^2 =.00) and no significant indirect effect of perceived macrolevel social pressure regarding racial identification on psychological

health through racial identification based relatedness insecurity (Black/White Estimated Indirect Effect: -.05, 95% Confidence Interval = -.21 to .07, R^2 = .00; Asian/White Estimated Indirect Effect: .14, 95% Confidence Interval = -.01 to .33, R^2 = .03; Latino/White Estimated Indirect Effect: .01; 95% Confidence Interval -.29 to .26; R^2 = .00). As in the overall sample, there was a significant direct effect of perceived macrolevel social pressure regarding racial identification on psychological health among Black/White multiracials (B = -.38, t = -3.54, p < .01, R^2= .30) and Asian/White multiracials (B =-.58, t = -4.40, p < .001, R^2 = .36). Among the Latino/White group, this effect trended toward significance (B = -.31, t = -1.67, p = .10; R^2 = .17).

Table 9.

Parameter Values for Black/White Participants

Path	*B*	*t*	*p*	R^2
PMSPRI →RIRI	.97	5.04	<.001	.37
RIRI → Consistency	-.58	3.00	<.01	.26
Direct Effect of PMSPRI on Consistency	.00	0.01	.99	.00
Total Effect of PMSPRI on Consistency	-.56	2.12	.04	.10
Indirect Effect of PMSPRI on Consistency	-.56†			.10
RIRI→Psych. Health	-.04	-0.57	.56	.01
Direct Effect of PMSPRI on Psych. Health	-.38	-3.54	<.001	.30
Total Effect of PMSPRI on Psych. Health	-.41	-4.97	<.001	.36
Indirect Effect of PMSPRI on Psych. Health	-.06††			.00

Note: PMSPRI = Perceived Macrolevel Social Pressure regarding Racial Identification; RIRI = Racial Identification based Relatedness Insecurity; Consistency = Consistency in Racial Identification; Psych. Health = Psychological Health.
†=95% Confidence Interval = -1.11 to -.20
††=95% Confidence Interval = -.21 to .07

Table 10.

Parameter Values for Asian/White Participants

Path	*B*	*t*	*p*	R^2
PMSPRI →RIRI	.76	4.93	<.001	.35
RIRI → Consistency	-.58	2.94	<.001	.25
Direct Effect of PMSPRI on Consistency	.46	1.82	.08	.09
Total Effect of PMSPRI on Consistency	.02	0.10	.91	.00
Indirect Effect of PMSPRI on Consistency	-.44†			.09
RIRI→Psych. Health	.19	1.88	.07	.08
Direct Effect of PMSPRI on Psych. Health	-.44	-3.95	<.001	.36
Total Effect of PMSPRI on Psych. Health	-.39	-9.93	<.001	.25
Indirect Effect of PMSPRI on Psych. Health	.14††			.03

Note: PMSPRI = Perceived Macrolevel Social Pressure regarding Racial Identification; RIRI = Racial Identification based Relatedness Insecurity; Consistency = Consistency in Racial Identification; Psych. Health = Psychological Health.
†=95% Confidence Interval = -.82 to -.19
††=95% Confidence Interval = -.01 to .33

Table 11.

Parameter Values for Latino/White Participants

Path	*B*	*t*	*p*	R^2
PMSPRI →RIRI	.84	5.84	<.001	.53
RIRI → Consistency	-.98	-2.74	.01	.44
Direct Effect of PMSPRI on Consistency	.66	1.62	.11	.15
Total Effect of PMSPRI on Consistency	-.15	-0.50	.61	.01
Indirect Effect of PMSPRI on Consistency	-.85			.23
RIRI→Psych. Health	.02	0.10	.91	.00
Direct Effect of PMSPRI on Psych. Health	-.31	-1.67	.10	.17
Total Effect of PMSPRI on Psych. Health	-.30	-2.38	.02	.16
Indirect Effect of PMSPRI on Psych. Health	.01††			.00

Note: PMSPRI = Perceived Macrolevel Social Pressure regarding Racial Identification; RIRI = Racial Identification based Relatedness Insecurity; Consistency = Consistency in Racial Identification; Psych. Health = Psychological Health.
†=95% Confidence Interval = -1.57 to -.26
††=95% Confidence Interval = -.29 to .26

Comparisons were also made between those participants who reported having two monoracial parents (n = 163) and those participants who reported having at least one parent who was multiracial (n = 91). Analysis of variance found no significant differences between these groups on perceived macrolevel social pressure regarding racial identification (F = .48, p = .49), racial identity based relatedness insecurity, (F = 1.40, p = .31), consistency in racial identification (F = .15, p = .77), or psychological health (F = .03, p = .78)

Analyses of the path relations among those with only monoracial parents (Table 12) and among those who have a multiracial parent (Table 13) found results that are similar between groups and comparable to those found in the overall sample. In each group as in the combined sample, greater perceived macrolevel social pressure regarding racial identification predicted greater racial identification based relatedness insecurity (Monoracial Parents: B =. 87, t = 9.91, p <.001, R^2 = .37; Multiracial Parents: B =.83, t = 8.40, p < .001, R^2= .44). Consistent with the overall sample, greater relatedness insecurity predicted less consistency in racial identification for each group (Monoracial Parents: B = -.64, t = -6.09, p < .001, R^2=.30; Multiracial Parents: B = -.44, t = -2.86, p < .01; R^2 = .14). There was also a significant indirect effect of perceived macrolevel social pressure on consistency in racial identification through relatedness insecurity in each of these groups as with the combined sample (Monoracial Parents Estimated Indirect Effect: -.51, 95% Confidence Interval = -.77 to -.36, R^2 = .11; Multiracial Parents: -.36, 95% Confidence Interval = -.61 to -.12, R^2= .06).

There were differences between groups in the total effects of perceived macrolevel social pressure regarding racial identification on consistency in racial

identification. Among biracials with a multiracial parent, as in the combined sample, there was a significant total effect (B = -.38, t = -2.56, p =.01, R^2 = .07) but there was no significant total effect among those with monoracial parents (B = -.17, t = -1.33, p =.18, R^2= .01). The direct effect of perceived macrolevel social pressure on consistency also differed between groups. As with the combined sample, there was no significant direct effect among those with a multiracial parent (B= -.01, t = -0.10, p =.99, R^2 =.00), but there was a trend toward a significant direct effect found among those with only monoracial parents (B = .38, t= 2.59, p =.01, R^2= .05).

Results regarding psychological health in both groups were generally consistent with the results of the overall sample. In each group as in the overall sample, perceived macrolevel social pressure regarding racial identification predicted poorer psychological (Monoracial Parents: B = -40, t =-7.41, p <.001, R^2 = .25; Multiracial Parents: B = -.36, t = 6.12, p < .001, R^2 = .29). And, as in the overall sample, there was no significant effect of racial identification based relatedness insecurity on psychological health in either group (Monoracial Parents: B = -.03, t = -0.72, p = .47, R^2=.00; Multiracial Parents: B = -.02, t = 0.39, p = .69, R^2=.00) and no significant indirect effect of perceived macrolevel social pressure on psychological health through relatedness insecurity (Monoracial Parents Estimated Indirect Effect: -.03, 95% Confidence Interval = -.14 to .06, R^2=.00 ; Multiracial Parents Estimated Indirect Effect: -.02, 95% Confidence Interval = -.12 to .06), R^2=.00). As in the overall sample, there was a significant direct effect of perceived macrolevel social pressure on psychological health both among those with only monoracial parents (B = -.37, t =-5.39, p < .001, R^2=.22) and those with multiracial parents (B =-.33, t = -4.29, p <.001, R^2=.26).

Table 12.

Parameter Values for Participants with only Monoracial Parents

Path	*B*	*t*	*p*	R^2
PMSPRI →RIRI	.87	9.91	<.001	.37
RIRI → Consistency	-.63	-6.09	<.001	.30
Direct Effect of PMSPRI on Consistency	.38	2.59	.01	.05
Total Effect of PMSPRI on Consistency	-.17	-1.33	.18	.01
Indirect Effect of PMSPRI on Consistency	-.56			.11
RIRI→Psych. Health	-.03	-0.72	.47	.00
Direct Effect of PMSPRI on Psych. Health	-.37	5.39	<.001	.22
Total Effect of PMSPRI on Psych. Health	-.40	7.41	<.001	.25
Indirect Effect of PMSPRI on Psych. Health	.03††			.00

Note: PMSPRI = Perceived Macrolevel Social Pressure regarding Racial Identification; RIRI = Racial Identification based Relatedness Insecurity; Consistency = Consistency in Racial Identification; Psych. Health = Psychological Health.
†=95% Confidence Interval = -.79 to -.37
††=95% Confidence Interval = -.14 to .06

Table 13.

Parameter Values for Participants with a Multiracial Parent

Path	*B*	*t*	*p*	R^2
PMSPRI →RIRI	.82	8.40	<.001	.44
RIRI → Consistency	-.44	-2.86	.01	.14
Direct Effect of PMSPRI on Consistency	-.01	-0.10	.92	.00
Total Effect of PMSPRI on Consistency	-.38	-2.57	.01	.07
Indirect Effect of PMSPRI on Consistency	-.36†			.06
RIRI→Psych. Health	-.02	-0.39	.69	.00
Direct Effect of PMSPRI on Psych. Health	-.33	-4.29	<.001	.26
Total Effect of PMSPRI on Psych. Health	-.35	-6.12	<.001	.29
Indirect Effect of PMSPRI on Psych. Health	-.02††			.00

Note: PMSPRI = Perceived Macrolevel Social Pressure regarding Racial Identification; RIRI = Racial Identification based Relatedness Insecurity; Consistency = Consistency in Racial Identification; Psych. Health = Psychological Health.
†=95% Confidence Interval = -.61 to -.12
††=95% Confidence Interval = -.12 to .06

Discussion

Contemporary biracial theory proposes that perceptions of the macrolevel social environments determine the process of racial identification for this population (Renn, 2003; Rockquemore et al., 2009; Rockquemore et al., 2006; Root, 1996; Root, 2003), but relatively little empirical research has specifically examined how this may occur. The present study sought to examine how perceived macrolevel social pressure regarding racial identification impacts the biracial experience. Though some multiracials perceive that their social ecologies allow them to be socially connected and accepted by others, regardless of the racial identities they adopt, others view their social ecologies as pressuring or dictating specific ways of racially identifying as a condition of social relatedness. A higher degree of perceived macrolevel social pressure was expected to predict greater insecurity of biracials' basic need for social relatedness. This, in turn, was hypothesized to reduce the consistency of racial identification across microlevel situations and to produce poorer psychological health.

Main Analyses

Perceived Macrolevel Social Pressure Regarding Racial Identification and Racial Identity Based Relatedness Security. As hypothesized, perceived macrolevel social pressure regarding racial identification strongly predicted racial identification based relatedness insecurity. Among those who perceived their macrolevel ecologies as pressuring the adoption of certain racial identifications, there was a greater insecurity in the need for relatedness associated with racial identification. Multiracials who perceived less pressuring social ecologies, however, were relatively less concerned with how racial identification may impact social relatedness. This finding provides quantitative

confirmation of suggestions from qualitative and conceptual accounts of the biracial experience (Kerwin et al., 1993; Miville et al., 2005; Renn, 2003; Root, 1990). Though the impact of perceived social pressure regarding racial identification on relatedness has been an implicit topic of these accounts, results from the present study provide the first empirical demonstration of this effect. Results are also consistent with a line of research within the Self-Determination Theory literature (e.g., Deci & Ryan, 2003, Assor et al., 2003; LaGuardia, 2008), which has found that, across various populations and contexts, perceiving high degrees of social pressure promotes an insecurity in the need for relatedness. This general process appears to be equally relevant to the process of multiracial identification.

Racial Identification: Perceived Macrolevel Social Pressure, Relatedness Insecurity, and Consistency. Perceived macrolevel social pressure regarding racial identification, as expected, predicted the consistency of racial identification. Biracials experiencing more pressuring environments tended to adjust their racial identifications according to the specific demands of microlevel situations, while those experiencing less pressuring contexts exhibited a relatively stable racial identity in their day-to-day interactions. This finding provides the first empirical evidence of intimations across qualitative and theoretical accounts that less consistent identifications may be more common among biracials perceiving greater pressure regarding racial identification in their macrolevel social ecologies (Miville et al., 2005; Taylor, 2004). This result is also consistent with research on study of cultural identification among biculturals, which found less consistency in cultural identification among those perceiving more pressuring environments (Downie & Koestner as cited in Downie et al., 2006).

Racial identification based relatedness insecurity, as hypothesized, strongly influenced consistency in racial identification. Those who experienced greater racial identification based relatedness insecurity were less consistent in their racial identifications across microlevel contexts. This provides the first quantitative support for qualitative descriptions of inconsistency in racial identification which suggest such inconsistency may be rooted in concerns regarding social relatedness (Rockquemore & Brunsma, 2009; Taylor, 2004).

Racial identification based relatedness insecurity mediated the influence of perceived macrolevel social pressure on consistency of identification as expected. This finding, in combination with those described above, accords with a comprehensive explanation--rooted in Self-Determination Theory (Assor et al., 2004; Deci & Ryan, 2000; LaGuardia, 2008; Ryan & Deci, 2000a, 2000c) and other general research on threats to social relatedness (Downey & Feldman, 2006; Ellemers, et al., 2002; Lakin, et al., 2008; Noel, et al., 1995; Pickett et al., 2004; Williams et al., 2005)--of what may be, at least in part, driving variation in the consistency of racial identification for biracials. Among biracials perceiving greater macrolevel pressure regarding racial identification in their macrolevel ecologies, racial identification based relatedness insecurity is likely. Stated otherwise, in those experiencing more pressuring contexts, the process of racial identification seems to entail a risk of social rejection. Such multiracials are likely to be vigilant for race-based signs of rejection and attuned to the immediate norms for how they are expected to racially identify. They are then likely to adapt themselves to meet these immediate norms, leading to less consistency in identification across situations. But among those who experience less pressure regarding racial identification in their

macrolevel ecologies, there is relatively less concern with the implications of racial identification on social relatedness, as they are relatively secure that they will be accepted irrespective of the identities they choose. In any immediate social encounter, multiracials perceiving less pressuring contexts are more likely to base their identifications on their own internally defined preferences, rather than seeking guidance from the immediate external conditions of approval. Thus, across day-to-day encounters, their identifications are likely to be relatively consistent.

The present study provides the first explanation for why some multiracial are less consistent in their racial identifications than others. Though pieces of this explanation are suggested in qualitative and conceptual writings on the multiracial experience (Miville et al., 2005; Rockquemore & Brunsma, 2009; Taylor, 2004), no previous scholarship has explicitly proposed an account of consistency in racial identification. Moreover, the present study provides the first quantitative evidence for any explanation of this phenomenon as all previous scholarship that has addressed the question-at least implicitly-has been qualitative or theoretical. Finally, as stated above, this explanation accords with the tenets of Self-Determination Theory (Deci & Ryan, 2000; LaGuardia, 2008; Ryan & Deci, 2000a, 2000c) and other general research on threats to relatedness (Downey & Feldman, 2006; Ellemers, et al., 2002; Lakin, et al., 2008; Noel, et al., 1995; Pickett et al., 2004; Williams et al., 2005, providing further evidence that such general processes may also underlie multiracial identification.

Perceived Macrolevel Pressure Regarding Racial Identification, Racial Identification based Relatedness Insecurity, and Psychological Health. Multiracials perceiving more pressuring social environments, as hypothesized, reported significantly

poorer psychological health (R^2= .23). This is consistent with early clinical case studies that described poor psychological health among biracials who experienced social pressure to adopt or eschew certain racial identities (McRoy & Freeman, 1986; Piskacek & Golub, 1973), as well as more recent quantitative findings that perceiving pressure to choose a specific racial identity may be psychologically harmful (Coleman & Carter, 2007; Sanchez, 2010; Townsend, Markus, & Bergsieker, 2009).

In contrast to expectations, however, racial identification based relatedness security did not predict psychological health, and thus it does not appear to be the mechanism by which macrolevel social pressure impacts mental health. This finding is surprising given a long line of research linking insecurity in social relatedness to poorer psychological health (Assor, et al, 2004; Baumeister & Leary, 1995; Baumeister, & Tice, 1990; Gilbert et al., 2002). Indeed, it seems intuitive that insecurity in the need for relatedness would negatively impact psychological health. There may, however, be several explanations for the lack of a significant relationship between these variables that are plausible. Multiracials who do experience racial identification based insecurity in their need for relatedness may be able to mitigate the impact of this on overall psychological by finding ways to adapt. That is, multiracials who experience racial identification as a threat to their need for relatedness may still be able to find ways of adequately meetings this basic need. This could be potentially accomplished by downplaying race and connecting with others around racially neutral points or by networking with other multiracials through explicitly multiracial groups. It is possible inconsistency in racial identification may also serve as an adaptive defense against racial identification based relatedness insecurity. By constantly adapting their racial

identifications to meet the immediate social settings, multiracials who are less consistent in their racial identification may be able to preserve some sense of relatedness to others, limiting any negative effects of racial identification based relatedness insecurity on psychological health.

The question remains how perceiving greater macrolevel social pressure influences psychological health, if not through its effects on social relatedness. One possible explanation is that perceiving macrolevel social pressure not only imperils the basic need for social relatedness, but is also experienced as a limit on a biracial's autonomy. Reduced autonomy predicts a host of negative psychological outcomes, including increases in anxiety and depression (Brehm, 1956; Brehm & Brehm, 1981; Iyengar & Lepper, 2002). Limited autonomy in racial identification may be particularly detrimental to multiracials who have a more middle-class North American cultural orientation in which freedom of choice is a fundamental value (Kim & Markus, 1999; Snibbe & Markus, 2005). A second explanation is that, for multiracials who do have a relatively firm understanding of their racial identity, any pressure to identify in ways contrary to their self-understanding may be experienced as a misperception or denial of an aspect of their identity. Such invalidation of important social identities is associated with poorer psychological health in general (Barreto & Ellemers, 2002; Cheryan & Monin, 2005; Lemay & Ashmore, 2004) and among biracials in particular (Coleman & Carter, 2007; Lusk et al., 2010; Townsend et al. 2009). Pressuring social environments may produce poorer psychological health through a combination of constrained choice and identity invalidation, rather than through their effects on relatedness security. Finally, it may be that perceiving pressure to adopt certain identifications may be

reflections of a more general impression that being multiracial is a stigmatized identity within the macrolevel ecology. Experiencing oneself as a potentially stigmatized "other" is strongly associated with poorer psychological health across a variety social contexts (e.g., Major & O'Brien, 2005; Williams, Neighbors, & Jackson, 2003).

Secondary Analyses

Demographic Variables. Analysis of demographic variables suggests relatively minimal impact of these factors on the study variables. Gender, geographic region, and referral source had no relation to any of the constructs examined. Though age was associated with racial identification based relatedness insecurity, it was not correlated with other variables. Likewise, education was associated with psychological health, but no other constructs. Controlling for age and education in the study path models did not alter the study's findings.

The lack of significant differences according to geographic region is particularly noteworthy. This result is surprising given that, traditionally, there have been considerable geographic differences in the social and political dynamics around both race and multirace (Davis, 2006). Previous empirical research has found significant differences in certain dimensions of the multiracial experience between samples from different geographic regions (Brunsma, 2006). One possible explanation for the lack difference in the present sample is the way geographic region was operationalized. Participants were categorized according to the guidelines utilized by the U.S. Census Bureau. This categorization scheme, however, does not preserve the traditional social and political fault lines around race. For example, states from the American South are divided into two different geographic regions (East South Central and Southern Atlantic) and

combined with states outside of the South's traditional borders. Moreover, this approach may obfuscate considerable variation in racial climate within each designated region. It may be that the multiracial experience does differ between various geographic regions, but that this operationalization is too obtuse to capture this variation. Finally, because race and multirace are sensitive to social and political events at the national level, the historical time frame of data collection may contribute to greater uniformity across geographic regions. All data were collected during the Presidency of Barack Obama, the first U.S. president of explicitly non-White and multiracial descent. This national historical event may contribute to greater racial tension across the country, further limiting differences between geographic regions.

The significant relationship between age and racial identification based relatedness security also requires consideration. The current ecological approach in multiracial studies emerged as a reaction to earlier approaches that utilized stage-based, developmental models (Rockquemore et al., 2009; Shih & Sanchez, 2005). Much like more general stage based models of development (e.g., Erickson, 1970), these stage theories of multiracial identity (e.g., Poston, 1990; Kich, 1992) described challenges and developmental tasks that biracials would need to confront and accomplish at various stages in their life-course. In contrast, the current ecological approach pays minimal attention to the role of age or life-span development on the process of multiracial identification. That age is significantly related to at least one potentially important aspect of biracial identification (relatedness insecurity) suggests life-span development may still be an important dimension to consider when examining the biracial identity. Given the impact of socio-historical factors the identification process of multiracial

(Davis, 2006), it is also possible cohort effects may be, in part, driving the relationship between age and racial identification based relatedness insecurity. It may be that because older multiracials may have experienced less ambiguity in their racial identification (Davis, 2006), as they were more likely to have been assumed to be a monoracial minority, there racial identification was less in question for themselves and for others. Multiracials from an older cohort may thus have at least experienced less social pressure to adopt or eschew certain identities and may have thus developed less racial identification based relatedness insecurity.

Parents' Racial Identity. Comparisons between participants grouped according to the racial identity of their parents revealed minimal differences between these subgroups. Mean levels of the study constructs did not differ between subgroups. In each subgroup as in the overall sample, greater perceived macrolevel social pressure predicted more racial identification based relatedness insecurity, which, in turn, predicted less consistency in identification. And, in each subgroup as in the overall, greater perceived macrolevel social pressure predicted poorer psychological health, but this was not mediated by racial identification based relatedness insecurity. The minimal differences between Black/White, Asian/White, and Latino/White participants provide some support for the current trend in multiracial scholarship to treat all multiracials as a single population, rather than looking specifically at biracials from certain racial combinations (e.g., those with one Black and one White parent or those with one Asian and one White parent). As no previous research has compared multiracials who have parents who are themselves multiracial and those whose parents each identify as monoracial, the minimal differences between these groups is particularly noteworthy. As

the children of the generation of multiracials who immediate followed invalidation of antimiscegenation laws are entering early adulthood, it will be critical to determine what if any differences exist between them and multiracials who have monoracial parents. Although more research is needed before drawing any conclusions about this distinction, the relative uniformity of these groups suggests that multiracials who have multiracial parents may be fruitfully studied in combination with those with only monoracial parents.

There are some differences between biracials grouped according to parents' racial identity that require consideration. The lack of a total effect of perceived macrolevel social pressure regarding racial identification on consistency in racial identification among Asian/Whites and Latino/Whites is curious, as is the trend toward a significant direct effect of social pressure on consistency in these groups. Such results run contrary to the study hypotheses and were not found among the overall sample or in other subgroups.[2] It is likely the non-significant total effect and the significant direct effect are linked. That is, the non-significant total effect appears to result from of a positive direct effect and negative indirect effect cancelling each other out (Hayes, 2009). What is less clear is the explanation for how perceived macrolevel social pressure may directly predict greater consistency in racial identification. Such a direct effect might be plausible in social environments in which the norms for racial identification for multiracials are highly uniform across microlevel situations. If there were a single form of racial identification that was socially acceptable for multiracials, perceiving greater pressure to conform to this norm may produce a relatively rigid compliance to this uniform expectation and thus more, rather than less, consistent identification across microlevel contexts. Parallel results have been found in general SDT research in contexts in which

social pressure was perceived to be high and the expectations uniform (Deci & Ryan, 2003). Such uniformity in expectation may indeed be more likely to occur for the subpopulations in which the possible effect was found: Asian/White and Latino/White multiracials. These multiracials hail from racial groups that may be more proximal to each other within the American social hierarchy, and at least in some social environments, these groups may be quite socially and culturally integrated (Bonilla-Silva & Embrick, 2006). In such highly integrated environments, some Asian/White and Latino/White multiracials may find expectations for racial identification to be highly stable across various microlevel situations (Cheng & Lee, 2009; Benet-Martinez & Haritatos, 2005). For those who also experience more intense social pressure to conform to this singular expectation, their identifications may be highly consistent.

Implications and Future Directions

This study provides the explicit examination of the possible effects of perceived macrolevel social pressure regarding racial identification on the multiracial experience, and represents first operationalization of the construct in the biracial literature. Similarly, this study introduces racial identification based relatedness insecurity as a construct into the biracial research literature. Both phenomena are implicit in numerous depictions of the multiracial experience (Kerwin et al., 1993; Miville et al., 2005; Park, 1927; Renn, 2003; Root, 1990, 1992, 1996, 2000, 2003; Stonequist, 1937), but they have not previously been isolated, labeled, and operationalized. The present results provide initial support for the validity of these constructs, but they represent only the first step in developing a research literature around them. More systematic psychometric studies will be necessary to more thoroughly validate both of these constructs and the measures

utilized here to assess them. Future work may even consider alternative methods of assessing these variables. For example, it may be possible to measure more directly macrolevel social pressure *per se*, rather than merely measuring individual's perceptions of it. Composites of sociological variables related to social pressure regarding racial could be used to estimate the degree of social pressure in a given macrolevel context. Such estimates of social pressure for specific contexts could then potentially guide systematic sampling of multiracials across contexts that vary in their degree of social pressure as in a quasi-experimental design. This approach would confirm that the perception of greater social pressure, indeed, reflects actual differences in pressure in the environments themselves, rather than just individual differences in interpretations. Racial identification based relatedness insecurity and possible correlates could be measured through daily diaries of actual social interactions. This would provide information regarding the real-time predicates and effects of racial identification based relatedness insecurity as compared to more retrospective survey items.

Initial results examining the relationship between perceived macrolevel social pressure regarding racial identification and racial identification based relatedness insecurity are consistent with the account of identity proposed by Self-Determination Theory (Deci & Ryan, 2000; LaGuardia, 2008; Ryan & Deci, 2000a, 2000c). This suggests the SDT account of identity may be useful in examining the identification process of multiracials more generally and for examining other possible outcomes of macrolevel social pressure in particular. For example, certain threads of Self-Determination Theory suggest variation in perceived macrolevel social pressure may, in part, explain variation in another phenomenon mentioned in the multiracial literature: the

authenticity of racial identifications (Taylor & Nanney, 2010). Whereas some biracials report racially identifying in ways that are experienced as authentic or "true" reflections of themselves, many others report identifying in ways that are experienced as inauthentic or "false." SDT theory suggests authenticity in identification may also be a function of the degree of perceived pressure in the social ecology (Deci & Ryan, 2000; LaGuardia, 2008; Ryan & Deci, 2000a, 2000c). Perceiving lower pressure regarding identification tends to predict more authentic or "true" identifications, though perceiving higher pressure is associated with identifications that are more inauthentic or "false" (Deci & Ryan, 2000). Whether or not this relationship obtains for biracials may be an important question for future study.

This study provides the first model explaining variation in the consistency of identification among multiracials. In the general sample, and across each subgroup, perceptions of macrolevel social pressure predicted greater relatedness insecurity, which in turn predicted less consistency in identification across microlevel social contexts. Results from the secondary analyses, however, raise the possibility this relationship may be more complex than it first appears. For multiracials who perceiving uniform expectations for racial identification, experiencing increased social pressure could lead to relatively rigid conformity to this perceived expectation. Such multiracials may then enact more rather than less consistent racial identifications across situations. Future research on consistency in identification should measure both the perceived social pressure in the macrolevel environment as well as the perceived variability in expectations for racial identification and assess for possible interactions between them.

Results regarding perceived macrolevel social pressure, relatedness insecurity, and psychological health also suggest directions for future research. Greater perceived macrolevel social pressure predicted poorer psychological health, but it did not do so through its effects on relatedness insecurity. Future research should thus examine other possible explanations of this effect, including, as suggested above, constrained autonomy, identity invalidation, and stigmatization. Evaluating more complex models including these variables along with relatedness insecurity would provide a more comprehensive evaluation of these potential explanations. Relatedness insecurity did not predict poorer psychological health, raising the possibility multiracials may find ways of compensating for this insecurity. That is, there may be defensive maneuvers that buffer the any negative impact of relatedness insecurity on psychological health. Future research should attempt to identify how multiracials respond to racial identification based relatedness insecurity and evaluate whether any of these responses may moderate the relationship between relatedness insecurity and psychological health.

This study represents the first examinations of how specific perceptions of the macrolevel social environment may impact the biracial experience. The current approach to multiracial studies, the ecological approach, emphasizes the role perceptions of the social environment in shaping this experience, but to date this scholarship has been broad and conceptual (Renn, 2003; Rockquemore et al., 2006; Root, 1996; Root, 2003). Continuing to focus on specific dimensions of the multiracials experience of their social environment may provide a sharper and more fine-grained understanding of the multiracial experience. Other aspects of the social ecology that may be worthy of study include perceptions of the degree racial integration and of the degree of conflict between

racial groups in a given social environment. Research regarding bicultural individuals indicates perceptions of integration and conflict between groups may be important in shaping the process of identification and the psychological health of those from two distinct social groups (Roccas & Brewer, 2002; Benet-Martinez & Haritatos, 2005). It may be that they are similarly important among multiracials (Cheng & Lee, 2009).

Results of comparisons between participants subgrouped according to race also speak to the broad question of whether those of multiracial descent should be studied as a single omnibus population, or rather considered as distinct populations-differentiated according to the racial identities of their parents. Most findings were consistent across the various subgroups, suggesting that, in accord with the current trend in the multiracial literature, there may some processes that are relatively general to the experience of having parents from different racial groups and that it may be justifiable to treat multiracials as a single population. There were, however, some potentially meaningful differences between subgroups (e.g., in the direct effects of perceived macrolevel social pressure on consistency in identification), indicating that combining groups should be done with caution. At the very least, researchers should collect data regarding parents' race and evaluate for possible differences between various groups. Optimally, the equivalence of conceptual models across various subgroups could be specifically evaluated using structural equation modeling.

Limitations

Structural equation modeling is still a correlational analysis and, as such, cannot provide firm conclusions regarding causation (Kline, 2010). SEM determines if causal relations are, at best, consistent with the data. Though SEM analyses may rule out

plausible alternatives as less consistent with the data, there may be models that are mathematically equivalent and thus not amenable to statistical comparison. For example, it cannot be mathematically ruled out that a causal path hypothesized to be unidirectional, is in fact, bidirectional. In the present study, plausible arguments for bidirectional causation among certain relationships are possible, particularly when considering that all measures are self-report. It is quite possible that greater racial identification based relatedness insecurity may predispose multiracials to perceive greater social pressure regarding racial identification in their environment. Poorer psychological health, in the form of greater anxiety and depression, may also predispose participants to perceive others as more pressuring. Teasing apart these complications and establishing firm regarding causation can only be established through experimental designs and measures that do not rely exclusively on self-report. Use of non-self-report measures would also mitigate the limitations of that approach to measurement, including retrospective bias and social desirability concerns (Podsakoff, McKenzie, Lee, & Podsakoff, 2003), and might also tap aspects of the study constructs that may be outside of conscious awareness (see Bargh & Chartrand, 1999 and Bargh & Morsella, 2008 for a discussion of automatic processes in social and psychological functioning).

Measures of perceived macrolevel social pressure regarding racial identification and racial identification based relatedness insecurity were developed specifically for this study, posing certain limitations. Results indicate good reliability and validity for these item sets, but they have not been systematically validated. It cannot be ruled-out that these items assess a different latent construct than is assumed, and measures with better reliabilities could potentially be constructed. Test-retest reliabilities are also not available

due to the use of cross-sectional design. Such estimates of temporal stability may particularly revealing, given the potentially dynamic nature of these variables. Future psychometric consideration of these measures would be particularly important before using them in research designs that, unlike SEM, do not account for the impact of measurement error or provide evidence of convergent and discriminant validity as part of the analysis.

Certain characteristics of the sample may also substantially limit the generalizability of the present findings. Participants were exclusively recruited through use of the Internet. Though this provided the opportunity for recruiting a large sample, internet recruitment may limit participation of lower socioeconomic status participants (Ono & Tsai, 2008), and the present sample indeed appeared to be better educated than the general multiracial population. Participants also self-selected by responding to advertisements recruiting those who are multiracial or have parents from different races. Social networking groups specifically focused on multiracial issues for targeted for recruitment. Thus multiracial issues may be more salient to our sample than to the multiracial population in general. Previous qualitative and conceptual scholarship has suggested those for whom a multiracial background is more central may have greater latitude in the racial identification process, experience relatively fewer conflicts and challenges in determining their racial identification, and experience better psychosocial outcomes (Kerwin et al., 1995; Poston, 1990; Root, 1990, 1992, 1996). If this is indeed the case, our sample may have a relatively restricted range on certain variables. The present sample was also disproportionately composed of women. Finally, comparison with the most recent census data suggests our sample may under-represent multiracials

who have a Native American/White heritage (Humes et al., 2011). These sample characteristics suggestion the present findings may best generalize to multiracial women of higher socioeconomic status and educational attainment for whom having multiple racial heritages is more central to their identity. It also may not generalize well to those who report a Native/American/White heritage.

Despite these limitations it is important to note that the present study examines one of the larger and more diverse samples found in the nascent biracial scholarship. Moreover, the use of quantitative measures and model testing procedures is also relatively rare in a research base that remains largely conceptual and qualitative (Rockquemore et al., 2009; Sanchez & Shih, 2005). The present study thus represents a step forward in the continuing development of the empirical research in this area.

Conclusion

Contemporary multiracial theory posits that racial identifications are a product of biracials perceptions of the macrolevel social environment in which they are embedded (Renn, 2003; Rockquemore et al., 2009; Rockquemore, Laszloffy, & Noveske, 2006; Root, 1996; Root, 2003). This conceptualization of the multiracial experience suggests that research attention should begin examining the specific perceptions of the macrolevel ecology that influence process of multiracial identification (Rockquemore et al., 2009). To date, however, relatively little empirical research has done so. The present study sought to examine the extent to which perceived macrolevel social pressure regarding racial identification impacts the multiracial experience.

Results of this work indicate that, as expected, perceived macrolevel social pressure regarding racial identification may have a broad and substantial impact on the

biracial experience, both in expected ways and unexpected ways. Greater perceived social pressure regarding racial identification in the macrolevel social environment appears to create a racial identification based insecurity in the need for social relatedness. This insecurity then seems to predispose biracials to base their racial identifications in microlevel situations on the perceived expectations of that immediate context, leading to greater inconsistency in identification. Higher levels of perceived macrolevel social pressure regarding racial identification also predisposes multiracials to experience poorer psychological health, but this does not appear to be related to increased relatedness insecurity. Future research should thus attend to other possible mechanisms by which perceived macrolevel social pressure may impact psychological health. Scholarship should also consider how multiracials respond to racial identification based relatedness insecurity, as it may be that certain responses, including featuring greater inconsistency in identification, may buffer any negative effects of relatedness insecurity on psychological health.

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Appendix A
Study Items

Perceived Macrolevel Social Pressure Regarding Racial Identification Items

Please read each of the following items carefully, thinking about how your social world influences and responds to how you *understand and display* your racial identity, and then indicate how true it is for you. Use the following scale to respond:

1 2 3 4 5 6

Not at all True of Me **Very True of Me**

1. When it comes to my racial identity, I feel understood by others. (R)
2. Others accept me and my choices regarding my racial identity. (R)
3. I am able to be open about my own understanding of my racial identity. (R)
4. I have been pressured to choose a particular racial identity.
5. I have been allowed to create my own understanding of my racial identity. (R)
6. Others value my personal perspective on my racial identity. (R)
7. I have felt that I had to choose a certain racial identity to be accepted.
8. People would value me regardless of how I choose to racially identify. (R)
9. Others respect my choices regarding my racial identity. (R)
10. I have been allowed to choose my own racial identity. (R)
11. Others try to understand how I personally see my racial identity. (R)
12. People try to tell me how I should identify racially.

Racial Identity Based Relatedness Insecurity Items

Please read each of the following items carefully, thinking about how you believe the ways you may *understand and display your racial identity* may influence your connections with others. Indicate how characteristic each item is of you using the following scale:

1 2 3 4 5 6

Not at all True of Me **Very True of Me**

1. I worry about what other people will think of me because of how I racially identify.

2. I am unconcerned even if I know people are forming an unfavorable impression of me because of how I racially identify (R)

3. I am afraid that others may not approve of me because of how I racially identify.

4. I am afraid that people might find fault with how I racially identify.

5. When I am talking to someone, I worry about what they may be thinking about me because of how I racially identify.

6. Sometimes I think I am too concerned with what other people think of how I racially identify.

7. If I know someone is judging me because of how I racially identify, it has little effect on me. (R)

Consistency in Racial Identification Items

Please read each of the following items carefully, thinking about how it relates to your racial identity, and then indicate how true it is for you. Use the following scale to respond:

1 2 3 4 5 6

Not at all True of Me **Very True of Me**

1. In different situations, I will identify more closely with one of my racial identities than another.
2. I often identify more with one racial identity than another depending on the race of the person that I am with.
3. Depending on the activity, I feel closer to one racial identity than another.
4. I feel that I adapt to the situation at hand by identifying as one racial identity or another.
5. One racial identity can be more important than another in the moment depending on the race of the people I am with.

Psychological Health Items

Anxiety

Please read each of the following items carefully and then indicate how true it is for you. Use the following scale to respond:

1 2 3 4 5 6

Not at all True of Me **Very True of Me**

1. I feel nervous and anxious.

2. I feel afraid for no reason at all.

3. I get upset easily or feel panicky

4. I feel like I'm falling apart and going to pieces.

5. I feel calm and can sit still easily.

6. I fall asleep easily and get a good night's rest.

Depression

Below is a list of the ways you might have felt or behaved. Please tell us how often you have felt this way recently using the following scale:

1-Rarely or None of the Time

2-Some or a Little of the Time

3-Occasionally or a Moderate Amount of Time

4-Most or All of the Time

1. I was bothered by things that usually don't bother me.

2. I did not feel like eating; my appetite was poor.

3. I felt that I could not shake off the blues even with help from my family or friends.

4. I felt that I was just as good as other people.

5. I had trouble keeping my mind on what I was doing.

6. I felt depressed.

7. I felt that everything I did was an effort.

8. I felt hopeful about my future. (R)

9. I thought my life had been a failure.

10. I felt fearful.

11. My sleep was restless.

12. I was happy.

13. I talked less than usual.

14. I felt lonely

15. People were unfriendly.

16. I enjoyed life.

17. I had crying spells.

18. I felt sad.

19. I felt that people dislike me.

20. I could not get “going.”

Appendix B
Composition of Item Parcels

Perceived Macrolevel Social Pressure Regarding Racial Identification: Parcel 1

Item	Factor Loading
9. Others respect my choices regarding my racial identity.	.82
10. I have been allowed to choose my own racial identity.	.70
5. I have been allowed to create my own understanding of my racial identity.	.66
11. Other try to understand how I personally see my racial identity.	.52
7. I have felt that I had to choose a certain racial identity to be accepted.	.51
4. I have been pressured to choose a particular racial identity.	.45

Perceived Macrolevel Social Pressure Regarding Racial Identification: Parcel 2

Item	Factor Loading
6. Others value my personal perspective on my racial identity.	.74
2. Others accept me and my choices regarding my racial identity.	.74
3. I am able to be open about my understanding of my racial identity.	.56
8. People would value me regardless of how I choose to racially identify.	.55
12. People try to tell me how I should identify racially.	.50
1. When it comes to my racial identity, I feel understood by others.	.47

Racial Identification based Relatedness Insecurity: Parcel 1

Item	Factor Loading
3. I am afraid that others may not approve of me because of how I racially identify.	.90
5. When I am talking to someone, I worry about what they may be thinking about me because of how I racially identify.	.77
6. Sometimes I think I am too concerned with what other people think of how I racially identify.	.70

Racial Identification based Relatedness Insecurity: Parcel 2

Item	Factor Loading
1. I worry about what other people will think of me because of how I racially identify	.84
4. I am afraid that people might find fault with how I racially identify.	.81

Consistency in Racial Identification: Parcel 1

Item	Factor Loading
2. I often identify more with one racial identity than another depending on the race of the person I am with.	.90
5. One racial identity can be more important than another in the moment depending on the race of the person I am with.	.78
3. Depending on the activity, I feel closer to one racial identity than another	.72

Consistency in Racial Identification: Parcel 2

Item	Factor Loading
4. I feel that I adapt to the situation at hand by identifying as one racial identity or another.	.83
1. In different situations, I will identify more closely with one of my racial identities than another.	.82

Psychological Health: Parcel 1

Item	Factor Loading
12. I felt depressed	.86
4. I feel like I'm falling apart and going to pieces.	.76
15. I thought my life had been a failure	.74
20. I felt lonely	.70
16. I felt fearful	.69
3. I get upset easily or feel panicky	.65
1. I feel nervous and anxious	.63
17. My sleep was restless	.61
13. I felt that everything I did was an effort.	.60
14. I felt hopeful about my future	.55
6. I fall asleep easily and get a good night's rest.	.54
11. I had trouble keeping my mind on what I was doing.	.49
5. I feel calm and can sit still easily	.48

Psychological Health: Parcel 2

Item	Factor Loading
9. I felt that I could not shake off the blues even with the help from my family or friends.	.82
24. I felt sad.	.81
26. I could not get going.	.71
22. I enjoyed life.	.71
18. I was happy	.67
25. I felt that people dislike me.	.66
19. I talked less than usual.	.63
2. I feel afraid for no reason.	.62
23. I had crying spells.	.60
7. I was bothered by things that usually don't bother me.	.56
8. I did not feel like eating; my appetite was poor.	.52
10. I felt that I was just as good as other people.	.49
21. People were unfriendly.	.44

Figure Captions

Figure 1. Conceptual Model

Figure 2. Measurement Model

Figure 3. Hypothesized Structural Model

Figure 4. Respecified Structural Model

Figure 5. Final Trimmed Structural Model

Figure 6. Alternative Structural Model 1

Figure 7. Alternative Structural Model 2

Footnotes

[1] For the sake of clarity and flow, the terms biracial and multiracial will be used synonymously.

[2]Similar findings among those with two monoracial parents are likely the result of the overlap between this group and the Asian/White and Latino/White subgroups. Together these subgroups constitute a substantial portion of the monoracial parent group, and results among Black/White biracials-the other substantial group of those with monoracial parents- are more akin to the findings from the overall sample.