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Multiracial Youths' Racial-ethnic Identification and Psychosocial Adjustment In and Across School Contexts: The Middle-to-High School Transition

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Multiracial Youths' Racial-ethnic Identification and Psychosocial Adjustment In and Across School Contexts: The Middle-to-High School Transition

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in Education

by

Jenna Breanne Felkey

2023

ABSTRACT OF THE DISSERTATION

Multiracial Youths' Racial-ethnic Identification and Psychosocial Adjustment

In and School Across Contexts: The Middle-to-High School Transition

by

Jenna Breanne Felkey

Doctor of Philosophy in Education

University of California, Los Angeles, 2023

Professor Sandra H. Graham, Chair

This dissertation consists of two studies that examined the predictors and consequences of Multiracial youths' racial-ethnic identification during the middle-to-high school transition. Both studies rely on data drawn from a large, longitudinal study that examined the psychosocial and academic benefits of attending ethnically diverse schools in adolescence. Study 1 examined how objective and subjective changes in the school racial-ethnic context from middle to high school were related to whether Multiracial youth maintained a Multiracial identification or changed to a monoracial identification across the transition to high school. Results indicated that while objective and subjective changes in the racial-ethnic context did not predict Multiracial youths' identification, the racial-ethnic context in 9th grade did predict Multiracial youths' identification. More specifically, Multiracial youth were more likely to maintain a Multiracial identification when they attended ethnically diverse high schools and were more likely to change to a

monoracial identification when they perceived a greater proportion of same-ethnic peers. Furthermore, differences emerged among Multiracial subgroups such that Latinx-White, Asian-White, and (to some extent) Black-White youth who experienced an increase in same-ethnic representation were more likely to switch to a monoracial identification than Black-Latinx youth. Study 2 assessed how identifying as Multiracial or monoracial upon the transition to high school was associated with ethnic identity and psychosocial adjustment outcomes. To further unpack the role that the school racial-ethnic context may play in shaping these associations, I also tested the moderating role of racial-ethnic diversity of adolescents' high school contexts. Results revealed that Multiracial youth who switched to a monoracial identification in 9th grade reported feeling less lonely and more ethnic identity exploration than Multiracial youth who maintained a Multiracial identification. Additionally, school racial-ethnic diversity moderated the association for ethnic exploration, such that this effect was stronger in schools that were less racially diverse. Taken together, these studies highlight the importance of taking a critical, context-dependent approach to deepening our understanding of Multiracial youths' racial-ethnic identification fluidity in order to advance our knowledge of the role that school racial-ethnic context plays in shaping racial-ethnic identification processes and the psychosocial adjustment of Multiracial youth.

The dissertation of Jenna Breanne Felkey is approved.

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2023

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ACKNOWLEDGMENTS

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General Introduction

Multiracial youth, or children born to parents from two or more racial-ethnic backgrounds, are currently the fastest growing racial-ethnic group in the United States. In the 2020 U.S. Census, 15 percent of youth under the age of 18 belonged to two or more racial-ethnic groups (U.S. Census, 2020). Additionally, current projections estimate that the Multiracial population will triple by the year 2060 (Pew Research Center, 2015). Given their rapidly growing presence, it is important to understand the racial-ethnic experiences that are pertinent to Multiracial youths' racial-ethnic identity development and psychosocial adjustment (Umaña-Taylor et al., 2014).

Racial-ethnic identity development is the developmental process by which youth come to understand and make meaning of their racial-ethnic group membership(s) (Umaña-Taylor et al., 2014). One of the key processes of Multiracial youths' racial-ethnic identity development involves defining their race/ethnicity (i.e., racial-ethnic identification), as past research suggests this is often fluid for Multiracial youth (Doyle & Kao, 2007; Echols et al., 2018; Harris & Sim, 2002; Hitlin et al., 2006; Nishina et al., 2010; Reece, 2019; Renn, 2008; Terry & Winston, 2010). For example, past research indicates that Multiracial youth are more inconsistent in their racial-ethnic identification over time than their monoracial counterparts (Echols et al., 2018; Hitlin et al., 2006; Nishina et al., 2010). In addition to changing their racial-ethnic identification over time, there is also research that shows that Multiracial youth may change how they identify their race/ethnicity across contexts, such as identifying as Multiracial at home and as monoracial at school (Harris & Sim, 2002). Taken together, these findings suggest that changing one's racial-ethnic identification is a relatively frequent and normative aspect of Multiracial youths'

experiences, and understanding the nature of this fluidity is crucial to understanding Multiracial youths' racial-ethnic identity development.

One of the contextual factors that appears to shape the racial-ethnic identification choices of Multiracial youth is the racial-ethnic context of the environments they occupy (Burke & Kao, 2013; Echols et al., 2018; Hitlin et al., 2006; Nishina et al., 2010). Nishina and colleagues (2010) found that Multiracial youth were more likely to maintain a Multiracial identification throughout middle school when they attended schools that were racially diverse. Additional research has examined how the racial-ethnic composition of more proximal peers in youths' school contexts – classmates and friends – influenced Multiracial youths' identification throughout middle school and found that exposure to racially diverse classmates was related to identifying as Multiracial at the beginning of middle school, whereas having racially diverse friends was related to identifying as Multiracial at the end of middle school (Echols et al., 2018). In contrast, youth who attend schools that are less racially diverse are more likely shift to a monoracial identification (Burke & Kao, 2013; Nishina et al., 2010). As such, these findings highlight the importance that the racial-ethnic context plays in influencing the racial-ethnic identification choices of Multiracial youth.

Past research with Multiracial youth has largely focused on unpacking the nature of their racial-ethnic identification choices. Yet, it is also important to consider how their racial-ethnic identification processes are related to their psychosocial adjustment. Prior research suggests that Multiracial youth report more symptoms of depression and anxiety compared to monoracial youth (Campbell & Eggerling-Boeck, 2006; Cheng & Lively, 2009; Fisher et al., 2014; Nishina et al., 2018). Additionally, past research assessing measures of Multiracial individuals' racial-ethnic identity outcomes indicates that Multiracial youths' scores for racial-ethnic identity

importance, affirmation, and exploration tend to fall between the scores of monoracial minoritized youth and white youth (Herman, 2004; Fisher et al., 2014; Rogers et al., 2021b). However, studies using a comparative approach to assess how Multiracial youths' psychosocial adjustment compares to monoracial youth obscures the role that racial-ethnic identification plays in shaping these developmental outcomes. For example, a cross-sectional study by Binning and colleagues (2009) found that Multiracial youth who identified with multiple groups reported greater positive affect and less stress than Multiracial youth who identified as monoracial. Moreover, a study by Phinney and Alipuria (1996) found that Multiracial youth who used a monoracial identification label did not differ in their racial-ethnic identity scores compared to Multiracial students who used a Multiracial identification label. These findings suggest that in order to best support Multiracial youths' development, it is important to directly consider how their racial-ethnic identification choices are related to psychosocial adjustment outcomes given their unique experiences as Multiracial individuals, rather than compare them to monoracial youth on outcomes of interest.

In sum, adolescence is critical period of reflection in which youth are making sense of their racial-ethnic identity(ies) (Umaña-Taylor et al., 2014). For Multiracial youth, a critical aspect of racial-ethnic identity development involves defining their racial-ethnic group membership(s), which prior research indicates is fluid across time and context and is in part influenced by the racial-ethnic context of their schools. Additionally, it is important to understand how Multiracial youths' racial-ethnic identification choices are related to ethnic identity and psychosocial adjustment outcomes, and what role the school context plays in shaping these associations. The current dissertation presents two studies that examine how changes in Multiracial youths' school contexts shape their racial-ethnic identification choices and

psychosocial wellbeing during a critical developmental period marked by change in context: the middle-to-high school transition.

Given the fluid and social nature of Multiracial youths' racial-ethnic identification, it is important to consider the contextual factors that may influence their identification choices. The racial-ethnic context of Multiracial youths' schools has shown to be related to Multiracial youths' racial-ethnic identification; however, research has not yet examined how *change* in school contexts may impact the racial-ethnic identification of Multiracial youth. Given that a major school transition – the middle-to-high school transition – occurs during adolescence, I explored the role that *change* in school racial-ethnic context has on Multiracial youths' racial-ethnic identification choices. In Study 1, I examined how objective and subjective changes in the school racial-ethnic context from middle to high school are related to whether Multiracial youth maintain a Multiracial identification or change to a monoracial identification across the transition to high school. By focusing in on the middle-to-high school transition, we can more clearly examine the role that experiencing a change in context has on the racial-ethnic identification fluidity of Multiracial youth.

Once we understand how changes in school racial-ethnic context may shape their racial-ethnic identification choices, we can begin to unpack how these choices are related to psychosocial adjustment. To examine how Multiracial youths' racial-ethnic identification choices are related to psychosocial outcomes, in Study 2 I assessed how identifying as Multiracial or monoracial upon the transition to high school was associated with ethnic identity and psychosocial outcomes. To further unpack the role that the school racial-ethnic context may play in shaping these associations, I also tested the moderating role of racial-ethnic diversity of adolescents' high school contexts. Here I explored the possibility that there is not a singular

identification outcome that is universally optimal for all Multiracial youth. Instead, I suggest that whether identifying as Multiracial or monoracial is psychosocially adaptive for Multiracial youth depends on the racial-ethnic context that they occupy. This is an important question to investigate, as past research suggests that Multiracial adolescents tend to change their racial-ethnic identification across time, yet research has not examined the role that the racial context plays in determining whether these shifts are (mal)adaptive for Multiracial youths' psychosocial adjustment.

Across both studies, I also explored whether the assessed associations vary for different subgroups of Multiracial youth. Given the varied histories and experiences for different racial-ethnic groups in the United States, it is crucial to understand how Multiracial individuals' experiences and development may differ depending on the intersection of their racial-ethnic group memberships (Harris, 2016). While there are likely processes that are relatively consistent across Multiracial youth given their shared experience of belonging to multiple racial-ethnic groups, it is also crucial to understand how racial-ethnic identity processes and psychosocial adjustment may differ across youth based on the racial-ethnic groups that comprise their racial-ethnic background. By doing so, I aim to shed light on the heterogeneity of Multiracial youths' experiences.

Together, these two studies expand on what is known about Multiracial youths' racial-ethnic identification fluidity by examining both predictors and consequences of adolescents' identification choices. Moreover, the two studies in this dissertation take a critical, context-dependent approach to unpack the nuance in how Multiracial youth may be shifting their racial-ethnic identification in a way that is developmentally normative and psychosocially adaptative given their school contexts. Data for these dissertation studies came from the UCLA Middle and

High School Diversity Project, a large longitudinal study that examines how school diversity shapes adolescents' psychosocial adjustment and academic outcomes (Graham, 2018; Juvonen et al., 2018). The initial sample includes nearly 6,000 students who were originally recruited from 26 middle schools in northern and southern California, who then transitioned to 440 high schools. Participants completed surveys during the fall and spring of 6th grade, and once every spring thereafter through 12th grade. This dissertation drew on a subsample from this dataset that includes students who identified as Biracial or Multiethnic during the spring of 8th grade (n = 692), and utilized data from the 8th and 9th grades to focus on the impact of the middle-to-high school transition on Multiracial youths' identification choices and psychosocial adjustment.

Theoretical Framework

Before turning to each individual study, the two theories that were used to frame the current dissertation are presented. First, Critical Multiracial Theory (Harris, 2016) is used to situate the (re)constructions of race and multiraciality in the U.S. context to provide the sociohistorical context needed to understand the experiences of Multiracial individuals. Next, processes of Multiracial youths' racial-ethnic identification are situated in ecological systems theories of development to understand the transactional nature of macro and micro (i.e., m(ai)cro; Rogers et al., 2021a) contexts in shaping the identity development and psychosocial wellbeing of Multiracial youth (Renn, 2008).

Critical Multiracial Theory

Critical Multiracial Theory (MultiCrit; Harris, 2016) derives from Critical Race Theory (CRT). CRT is a theoretical framework that addresses the relationships between race, racism, power, and oppression, and asserts that racial categories are socially constructed and used to maintain racial hierarchies (Delgado & Stefancic, 2012). MultiCrit modifies CRT to highlight the

(re)construction of race and multiraciality in the U.S. context and to provide a framework to account for the racialized experiences of Multiracial individuals (Harris, 2016). MultiCrit includes eight tenets that are adapted from CRT; however, the tenets most pertinent to grounding the current dissertation include the following: (1) challenge to ahistoricism, (2) a monoracial paradigm of race, and (3) intersections of multiple racial identities.

Challenge to Ahistoricism. The first tenet, *challenge to ahistoricism*, highlights the importance of foregrounding historical context when exploring past and current-day issues of race to understand the experiences of Multiracial individuals. There are various instances in the history of the United States that contribute to the Multiracial experience and (re)construction of race/multiraciality, including but not limited to– colonization, slavery, rules of hypodescent, banning interracial marriage, immigration, and the institutionalized erasure of multiraciality (e.g., not being able to check multiple racial-ethnic groups on the U.S. Census prior to 2000).

One example of how historical context has and continues to shape how Multiracial individuals are racially categorized and treated by others is the rule of hypodescent. Historically, children born to enslaved Black women and White enslavers were classified as Black via the rule of hypodescent, otherwise known as the one-drop rule (i.e., anyone with "one drop" of Black heritage was considered Black) (Hunter, 2005; Spickard, 2016). Over time, social norms of hypodescent have been applied to other Multiracial subgroups with non-Black heritage to maintain racial hierarchy (Atkin & Yoo, 2019). For example, Multiracial individuals with Japanese heritage were also imprisoned in U.S. incarceration camps following the bombing of Pearl Harbor in 1941 (Yamashiro, 2022). To this day, people still categorize Multiracial individuals via the norms of hypodescent (Ho et al., 2011; Young et al., 2021). The inability to indicate more than one race on the U.S. Census up until 2000 demonstrates how the norms of

hypodescent have been institutionalized in the United States for centuries, pressuring Multiracial individuals to ascribe to monoracial ways of being.

A Monoracial Paradigm of Race. The second relevant tenet, *a monoracial paradigm of race*, asserts that race operates and is conceptualized in the U.S. as discrete categories that only allow for the recognition of monoracial identifications (Harris, 2016). In turn, Multiracial individuals face social and societal pressure to conform to and internalize monoracial identification labels. Through this monoracial paradigm of race comes *monoracism*, which Harris describes as a social system of oppression that erases Multiracial individuals' reality while simultaneously reconstructing racial categories as fixed and discrete (Harris, 2016). Monoracism can take on different forms, such as being forced by individuals or institutions to choose one monoracial label, being objectified or exoticized for being Multiracial, or being misperceived or miscategorized as monoracial by others (Brown, 1995; Harris, 2016; Nishina et al., 2018). Importantly, monoracism works in tandem with racism and colorism to shape Multiracial youths' racial-ethnic identity development (Harris, 2016).

Intersections of Multiple Racial Identities. Although Multiracial individuals may share some common experiences because of their multiraciality, the Multiracial experience is not a monolithic one. The Multiracial population is a heterogenous group comprised of many individuals with varied racial-ethnic backgrounds, and a Multiracial adolescent's experience as a Multiracial individual will vary depending on the racial-ethnic groups that comprise their background. The final pertinent tenet, *intersections of multiple racial identities*, highlights the importance of acknowledging that the intersection of Multiracial individuals' various racial-ethnic backgrounds will shape their experiences in differential ways depending on the racial-ethnic groups they belong to (Harris, 2016).

Given the varied historical, cultural, and social realities of different racial-ethnic groups in the U.S. context, it is crucial to understand both the similarities and differences of Multiracial individuals' experiences while considering their racial-ethnic backgrounds. For example, Multiracial adolescents who are Black Multiracial may be particularly likely to experience monoracism in the form of being perceived as monoracial Black (i.e., via norms of hypodescent). In turn, Black Multiracial youth are more prone to facing challenges associated with anti-Black racism than their non-Black Multiracial counterparts. Alternatively, Multiracial youth with Latinx or Asian heritage may face challenges to being accepted as "full members" of their racial-ethnic groups if they don't speak their heritage language. Moreover, Multiracial youth with a White racial-ethnic background likely have different experiences compared to youth with two or more racially minoritized racial-ethnic backgrounds due to Whites' societal position of privilege. In order to best understand the heterogeneity of Multiracial youths' experiences, it is important to consider how the varied experiences of different racial-ethnic groups, and an individual's combination of two or more racial-ethnic groups, can impact their racial-ethnic identity development.

In summary, situating research with Multiracial populations in historical and contemporary contexts can aid in our understanding of how macro-level, sociohistorical forces shape the racialized realities of Multiracial individuals. By considering how historical events have shaped U.S. (re)constructions of multiraciality in the U.S. context, we can better understand how more distal, macro-level forces interact with and manifest through more proximal, interpersonal contexts.

Multiracial Identity Development in M(ai)cro Contexts

Bronfenbrenner's bioecological model of human development (2005) marked an important shift in developmental research that highlighted the importance of context in shaping human development. The ecological systems theory situated human development in a set of nested, interacting systems. At the center of the ecological system is the microsystem, which centers the contexts and influences most proximal to the child, such as the family, school, and neighborhood. The mesosystem includes the interactions between a child's various microsystems, while the exosystem underscores the influence of contexts that children experience indirectly, such as the school board of a child's school. The next level is the macrosystem, which includes the attitudes, beliefs, and ideologies of society. The most distal level is the chronosystem, which accounts for how historical context shapes human development. Each of these nested systems interact with one another to influence human development over time.

One of the critiques of this model is its lack of acknowledgment of systems of oppression (e.g., racism, sexism) as contexts for development (Fish & Syed, 2018; Rogers et al., 2021a). Since its inception, other researchers have extended iterations of this model to address the roles of power and oppression in human development, particularly for youth from marginalized racial-ethnic groups. Examples include García Coll's (1996) Integrative Model of Child Development and Spencer's (2017; Spencer et al., 1997) Phenomenological Variant of Ecological Systems Theory (PVEST). Rogers and colleagues (2021a) proposed intentionally centering the cultural ideologies and sociopolitical systems of power of the macrosystem in human development. They offered the term *m(ai)cro* to conceptualize the simultaneous and transactional processes of the micro and macro systems that influence human development (Rogers et al., 2021a). That is, in understanding that micro-level processes are reflections and manifestations of macro-level

processes, we can better understand how individuals engage in meaning-making to resist, disrupt, and (re)construct social structures (Rogers et al., 2021a).

To concretize how macro-level processes are reflected in micro-level contexts and interactions for Multiracial youth, I present the following example. Starting with an example of a macro-level factor discussed in MultiCrit, the U.S.'s history of hypodescent has aided in the (re)construction of a monoracial paradigm of race by forcing individuals into one racial-ethnic category. Over time, institutions (and in turn, individuals) have come to endorse monoraciality as the default for categorizing others' racial-ethnic background. This monoracial paradigm of race is reflected in the experiences that Multiracial youth have in proximal contexts, as past research suggests that Multiracial youth are often categorized as monoracial by peers, pressured by peers to choose one of their racial-ethnic backgrounds, and forced to only select one of the racial-ethnic groups on institutional forms and surveys (Nishina et al., 2018; Lopez, 2013; Brown, 1995). The mere assumption by others that Multiracial youth belong to only one racial-ethnic group demonstrates the ways in which the United States' conceptualization of race as fixed, discrete categories manifests in interpersonal encounters that Multiracial youth have in more proximal contexts. In this way, Multiracial youth are making sense of their identities through interactions within their immediate environment and are likely to shift their racial-ethnic identification across time and context in response to these m(ai)cro processes.

A Combined MultiCrit and Ecological Model Approach

By using a combination of MultiCrit and ecological models of development that highlight m(ai)cro processes, we can better understand how macro-level processes are reflected in interpersonal, micro-level processes to shape Multiracial youths' identification choices across time and contexts. I utilized the three aforementioned tenets of MultiCrit (Harris, 2016)–

challenge to ahistoricism, a monoracial paradigm of race, and intersections of multiple racial identities– as key contexts and processes of the macro and chronosystems in ecological models of development. By intentionally highlighting these tenets of MultiCrit, we can gain a better understanding of how historical context, U.S. constructions of race, and intersecting racial identities may influence Multiracial youths' racial-ethnic identification choices over time and across contexts. Moreover, I conceptualized the more proximal contexts and interactions that Multiracial youth have in their immediate environments as reflections of these more distal influences (Rogers et al., 2021a). By recognizing that the experiences that Multiracial individuals have in the microsystem are shaped in part by these macro-level forces, we will be better able to conceptualize the nuance of Multiracial youths' racial-ethnic identification choices within and across contexts, and in turn how their racial-ethnic identification choices are related to psychosocial development outcomes.

Utilizing a combined MultiCrit (Harris, 2016) and ecological model (Rogers et al., 2021a) perspective helps ground the central phenomenon of interest in both studies of the current dissertation – fluidity in Multiracial youths' racial-ethnic identification. Considering that past research has consistently documented that Multiracial youths' racial-ethnic identification often changes across contexts and over time (Doyle & Kao, 2007; Echols et al., 2018; Harris & Sim, 2002; Hitlin et al., 2006; Nishina et al., 2010; Reece, 2019; Renn, 2008; Terry & Winston, 2010), it is important to consider the macro-level forces that are driving this identification fluidity to begin with. Given the historical erasure of multiraciality in the U.S. that has (re)constructed the monoracial paradigm of race over time, Multiracial individuals are oftentimes navigating a social world were monoraciality is assumed to be the default. As such, Multiracial youth are likely shifting their racial-ethnic identification in response to social interactions or environments where

a monoracial paradigm of race is emphasized. Past research demonstrates that Multiracial youth are more likely to maintain a Multiracial identification in racially diverse schools, and more likely to switch to a monoracial identification in racially homogenous ones (Echols et al., 2018; Nishina et al., 2010). In Study 1 where I assessed how changes in school racial-ethnic context shape Multiracial youths' identification choices across the transition to high school, a combined MultiCrit (Harris, 2016) and ecological model (Rogers et al., 2021a) approach was used to understand how changes in the school racial-ethnic context may coincide with changes in racial-ethnic identification for Multiracial youth.

In Study 2 where I examined how identifying as Multiracial or monoracial upon the transition to high school was associated with psychosocial adjustment outcomes, this combined perspective was utilized to understand how the racial-ethnic context of the high school may shape the associations between youths' identification choices and psychosocial adjustment. Some theoretical models have speculated that the "optimal" identification outcome for Multiracial youth is to identify with all of their racial-ethnic backgrounds (Poston, 1990; Stonequist, 1935). However, these theoretical models do not account for the social contexts that youth occupy (Renn, 2008) or the distal, macro-level influences (Harris, 2016) that shape how Multiracial youth identify. Given that some contexts may emphasize a monoracial paradigm of race more than others, Multiracial youth may be shifting their racial-ethnic identification in ways that are psychosocially adaptive given the racial-ethnic context of the schools they occupy. As youth transition to high school, a combined MultiCrit (Harris, 2016) and ecological model (Rogers et al., 2021a) approach can aid in our understanding of how identifying as either monoracial or Multiracial youth can both be psychosocially adaptive depending on the racial-ethnic context of their schools.

Lastly, MultiCrit's (Harris, 2016) tenet of intersecting multiple racial identities was used across both studies to gain a deeper understanding of the heterogeneity of Multiracial youths' experiences. Despite shared experiences due to belonging to multiple racial-ethnic groups, Multiracial individuals' experiences will vary depending on which racial-ethnic groups that they belong to. As such, in Study 1 I assessed whether there were differences across Multiracial subgroups in the associations between the racial-ethnic context of youths' schools and the likelihood that they identify as Multiracial or monoracial across the transition to high school. Additionally, in Study 2 I examined whether the associations between Multiracial youths' 9th grade identification and psychosocial adjustment outcomes varied across subgroups of Multiracial youth. By exploring differences in these associations for different subgroups of Multiracial youth, we can gain a better understanding of how the intersection of various racial-ethnic backgrounds shape racial-ethnic identity processes and psychosocial development of Multiracial youth in adolescence.

STUDY 1

Multiracial Youths' Racial-ethnic Identification Across the Transition to High School

Multiracial Youths' Racial-ethnic Identification Across the Transition to High School

It is well-established that one of the core developmental tasks of adolescence is identity development (Erikson, 1968). One dimension of identity that becomes increasingly salient during adolescence is race/ethnicity (Umaña-Taylor et al., 2014). Moreover, one commonly explored dimension of racial-ethnic identity that is forefront for many Multiracial youth is specifying their racial-ethnic identification. Given the ambiguity and numerous ways that Multiracial youth can identify their racial-ethnic background(s), research has documented that Multiracial individuals oftentimes exhibit fluidity in how they identify (Doyle & Kao, 2007; Echols et al., 2018; Gaither, 2015; Harris & Sim, 2002; Hitlin et al., 2006; Nishina et al., 2010; Reece, 2019; Renn, 2008; Terry & Winston, 2010).

Existing literature consistently illustrates that how Multiracial youth identify their race/ethnicity is often fluid over time and across contexts (Doyle & Kao, 2007; Echols et al., 2018; Harris & Sim, 2002; Hitlin et al., 2006; Nishina et al., 2010; Reece, 2019; Renn, 2008; Terry & Winston, 2010). For example, research with an ethnically diverse sample of middle school students found that Multiracial youth were more inconsistent in the racial-ethnic identification than their monoracial counterparts throughout middle school (Echols et al., 2018). Additional research conducted with the National Longitudinal Study of Adolescent Health (Add Health) examined individuals' racial-ethnic identification choices in adolescence and again five years later (Hitlin et al., 2006; Tabb, 2016). Their results indicated that Multiracial youth were more likely to change their racial-ethnic identification than to a maintain a Multiracial identification across timepoints (Hitlin et al., 2006; Tabb, 2016). Another study utilizing the Add Health data found that roughly 25 to 40 percent of adolescents who self-identified as Multiracial

at home identified as monoracial at school (Harris & Sim, 2002), suggesting that how youth specify their racial-ethnic identification is often fluid across time and context.

Taken together, these findings indicate that racial-ethnic identification fluidity is relatively common among Multiracial individuals, and begs the question of what role the racial-ethnic context may play in predicting how youth identify their racial-ethnic background. There has been theoretical speculation that there may be no one racial-ethnic identification that is considered universally optimal for Multiracial youth (Renn, 2008; Rockquemore et al., 2009). Instead, it has been suggested that Multiracial youth may change their racial-ethnic identification depending on the racial-ethnic composition of the context(s) they are in. As such, past research has explored how the racial-ethnic context of youths' schools may inform Multiracial youths' racial-ethnic identification choices.

Past research suggests that Multiracial youth may be more likely to identify as Multiracial in contexts that are racially diverse, while Multiracial youth may opt to identify as one of their monoracial backgrounds in contexts that are less racially diverse (Burke & Kao, 2013; Echols et al., 2018; Nishina et al., 2010). For example, a study by Nishina and colleagues (2010) found that youth who identified as Multiracial at the beginning of sixth grade were more likely to continue identifying as Multiracial at the end of middle school when they attended racially diverse schools. In contrast, Multiracial youth who attended schools that were less racially diverse were more likely to change to a monoracial identification, and were most likely to align their racial-ethnic identification with the largest racial-ethnic group in school (Nishina et al., 2010). Similar findings were found in a study by Burke and Kao (2013), such that Black-White and Asian-White adolescents who attended schools with a larger proportion of White

students were more likely to opt for a White identification than their counterparts who attended schools with a lower proportion of White peers.

To summarize, these findings suggest that Multiracial youth may shift their racial-ethnic identification based on the racial-ethnic context of their school environments. Contexts that are more racially diverse may afford Multiracial youth more liberty in identifying with multiple racial-ethnic groups, while social settings that are less racially diverse may restrict Multiracial youths' reference points for who may be considered a "similar" other. In turn, this may lead youth to take advantage of the identification flexibility afforded to Multiracial individuals (Gaither, 2015), and choose to identify with one of their racial-ethnic backgrounds that is most psychologically and socially adaptive given the racial-ethnic context of their schools (Echols et al., 2018; Rockquemore & Brunsma, 2002).

Extending Past Research

In sum, adolescence is an important developmental period in which youth are making sense of their racial-ethnic identity(ies) (Umaña-Taylor et al., 2014). For Multiracial youth, a critical aspect of racial-ethnic identity development involves defining their racial-ethnic group membership(s), which prior research indicates is fluid across time and context (Doyle & Kao, 2007; Echols et al., 2018; Harris & Sim, 2002; Hitlin et al., 2006; Nishina et al., 2010; Reece, 2019; Renn, 2008; Terry & Winston, 2010). Additionally, past research suggests that the racial-ethnic context is an important contextual factor in shaping racial-ethnic identity processes of Multiracial youth (Burke & Kao, 2013; Echols et al., 2018; Hitlin et al., 2006; Nishina et al., 2010). However, there are notable gaps in the literature that the current study aims to address.

First, much of the research examining the role of school racial-ethnic context in Multiracial youths' identity development has utilized objective measures of adolescents' school

context, such as Simpson's Diversity Index (Echols et al., 2018; Nishina et al., 2010). However, there is a growing body of literature suggesting the importance of individuals' *perceptions* of their racial-ethnic contexts in shaping developmental outcomes (Syed et al., 2018). Considering that there is more ambiguity in who may be considered (dis)similar to Multiracial adolescents, it is important to consider how Multiracial youths' perceptions of their school racial-ethnic context may shape how they chose to identify their race/ethnicity in that given context.

In addition to relying on objective measures of the racial-ethnic context of youths' schools, past research that has examined Multiracial youths' identity development at school tends to focus on one school context (e.g., the middle school or high school only) (Echols et al., 2018; Nishina et al., 2010). Research to date has not yet systematically examined how *change* in racial-ethnic context can impact Multiracial youths' identification fluidity. One of the key school transitions that occurs during adolescence is the transition from middle school to high school, and past research suggests that school transitions can be a developmentally vulnerable period for youth (Cantin & Boivin, 2004; Ellerbrock et al., 2015). For Multiracial youth in particular, it is important to understand how this change in school contexts can shape their racial-ethnic identity processes.

Lastly, further research is needed to assess the heterogeneity of Multiracial youths' experiences depending on their racial-ethnic backgrounds. Past theoretical speculation and empirical evidence suggests that Multiracial individuals' experiences are shaped in part by the racial-ethnic groups that they belong to (Doyle & Kao, 2007; Harris, 2016; Phillips, 2019). Therefore, it is important to disaggregate findings for various Multiracial subgroups to better understand how associations between school racial-ethnic context and youths' identification

choices may differ for Multiracial youth depending on the racial-ethnic groups that comprise their racial-ethnic background.

The Current Study

The aims of the present study were twofold. The first aim was to understand how objective vs. subjective changes in the racial-ethnic context of Multiracial youths' middle and high schools were associated with maintaining a Multiracial identification or changing to a monoracial identification across the transition to high school. The second aim was to unpack the heterogeneity of Multiracial adolescents' experiences by exploring whether these associations differ for subgroups of Multiracial youth and to unpack the nature of youths' identification changes in relation to the racial-ethnic context of their schools. Thus, the current study was guided by the following research questions and hypotheses:

1. How are changes in the objective racial-ethnic diversity of students' middle and high school contexts associated with the likelihood that Multiracial youth will maintain a Multiracial identification or change to a monoracial identification in 9th grade?

    RQ1 Hypothesis: Guided by past research suggesting that Multiracial youth are more likely to identify as Multiracial in racially diverse contexts (Echols et al., 2018, Nishina et al., 2010), it was hypothesized that Multiracial youth would be more likely to maintain a Multiracial identification in 9th grade when transitioning to a high school that was more racially diverse than their middle school. In contrast, youth would be more likely to adopt a monoracial identification in 9th grade when transitioning to a high school that was less diverse than their middle school.

2. How are changes in perceived same-ethnic representation from middle to high school related to the likelihood that Multiracial youth will maintain a Multiracial identification or change to a monoracial identification in 9th grade?

    RQ2 Hypothesis: To my knowledge, there has not been research to date that has examined how Multiracial youths' perceptions of their racial-ethnic context – and perceptions of same-ethnic peers more specifically – may shape racial-ethnic identification choices. Social Identity Theory (Tajfel & Turner, 1979) posits that individuals base their sense of identity in part on the social groups that they do (and do not) belong to, and in turn having more reference points for "similar others" may be related to an increased likelihood of identifying as Multiracial. In other words, referring to multiple racial-ethnic groups as one's ingroup (e.g., an Asian-White youth including both Asian and White peers as same-ethnic as opposed to just one of their respective monoracial groups) would be related to an increased likelihood of identifying as Multiracial. Therefore, it was hypothesized that Multiracial youth who perceived more same-ethnic peers in their high school than they had in their middle school would be more likely to maintain a Multiracial identification, while Multiracial youth who perceived fewer same-ethnic peers in high school would be more likely to switch to a monoracial identification.

3. Do the associations between changes in objective/subjective measures of school racial-ethnic context and Multiracial youths' racial-ethnic identification differ across Multiracial subgroups?

RQ3 Hypothesis: Although I do not have specific directional hypotheses, I expected that additional differences in the associations between school racial-ethnic context and Multiracial youths' identification choices in 9th grade would emerge for Multiracial subgroups. Given the varied racialized experiences for monoracial groups in the U.S., and how the intersection of Multiracial youths' racial-ethnic backgrounds will shape their experiences in a society characterized by the monoracial paradigm of race, I hypothesized that the associations between changes in objective and subjective measures of the school racial-ethnic context and Multiracial adolescents' identification would differ across Multiracial subgroups.

4. To what extent are Multiracial youth aligning their racial-ethnic identification with the (objective vs. perceived) largest racial-ethnic group in their school?

RQ4 Hypothesis: Past research suggests that when Multiracial youth change to a monoracial identification, they may be likely to align their racial-ethnic identification with the largest racial-ethnic group in their school context (Nishina et al., 2010). Therefore, for youth who changed to a monoracial identification upon the transition to high school, it was hypothesized that they would shift their racial-ethnic identification to the largest racial-ethnic group in their high school context. Moreover, given past research that suggests the importance of subjective perceptions of individuals' racial context (Syed et al., 2018), it was expected that these patterns would be stronger when assessing subjective measures of the largest racial-ethnic group in the high school than when using objective measures of the largest racial-ethnic group.

Method

Participants

Participants for the current dissertation were drawn from the Middle and High School Diversity Project– a large, longitudinal study that examines the psychosocial and academic benefits of attending ethnically diverse schools in adolescence. The initial sample included 5,991 sixth-grade students (52% female) recruited from 26 middle schools in Northern and Southern California. Schools were recruited to represent a variety of racial/ethnic compositions based on the numerical representation of each racial-ethnic group in the school. The ethnic composition of the initial sample was 30% Latinx, 20% White, 14% Asian American, 14% Multiracial, 12% Black, 3% Filipino/Pacific Islander, 2% Middle Eastern, 1% Native American, <1% different identity, and 3% unreported.

The analytic sample will consist of 692 youth (57.1% female) who self-identified as Multiracial in the spring of 8th grade. A more detailed demographic breakdown of the analytic sample can be found in Tables 1.1 and 1.2.

Procedure

All participants were initially recruited from 26 middle schools in the fall of sixth grade in three consecutive cohorts between 2009 and 2011. Students received informational letters and parental consent forms to take home. Across the 26 middle schools, parental consent rates averaged 81% and student assent rates averaged 83%. In the fall of 6th grade and each spring thereafter, participants completed surveys that each took approximately one hour to complete. Surveys were administered by trained researchers in a classroom setting, and participants completed surveys at their own pace. Participants were compensated $5 in the fall and spring of 6th grade, $10 in 7th and 8th grades, and $20 in 9th grade for their participation. In the spring of 8th

grade, 79% of the original sample was retained. Across the transition to high school, 76% of the 8th grade sample was retained.

Students included in the analytic sample transitioned from the initial 26 middle schools to 80 high schools, with the number of participants attending each high school ranging between one and 70 participants (M = 7.70, SD = 13.31). High schools that participants attended varied in size from 90 to 3,754 students (M = 2,337, SD = 887). Across the transition to high school, 69% of Multiracial youth included in the analytic sample were retained in 9th grade. Descriptive analyses were conducted to examine if there were significant differences between youth who were retained across the transition and those who were not on the basis of sex, biracial background (8th grade), immigrant origin, heritage language use, prior Multiracial identification stability, and participants' middle school diversity index (8th grade). Results indicated that there were no significant differences between youth who were retained and youth who were not on any of the predictors or covariates of interest, with the exception of Black-Latinx youth were less likely than Black-White (p = .03) and Asian-White (p = .001) youth to have been retained across the transition to high school ($F(3, 324) = 4.71$, p = .003).

Measures

Predictor Variables

Change in School Racial-ethnic Diversity. Simpson's index of diversity was used to assess the racial-ethnic diversity of students' school environments (Simpson, 1949). The formula for calculating Simpson's index of diversity is as follows:

$$D_S = 1 - \sum_{i=1}^{g} p_i^2$$

where p is the proportion of students in the school who are in ethnic group i, which is then squared and summed across g ethnic groups and then subtracted from 1. D_S indicates the probability that any two students who are randomly selected from a given school will be members of different racial/ethnic groups. Values range from zero to one (M_{MS} = .65, SD_{MS} = .07; M_{HS} = .62, SD_{HS} = .13) with greater values indicating greater diversity. Racial-ethnic demographic data were collected from the California Department of Education (CDE) to calculate the Simpson's diversity index of each school.

To calculate a score assessing the *change* in diversity between students' middle and high schools, a difference score of Simpson's diversity index from 8th and 9th grade was calculated. The Simpson's diversity score for 8th grade was subtracted from the Simpson's diversity score for 9th grade. Values can range from –1 to 1 (M = –0.03, SD = 0.11), such that positive values indicate attending a high school that is more diverse than their middle school, while negative values indicate attending a high school that is less diverse than their middle school. Values closer to zero indicate little to no change in the racial-ethnic diversity of their middle and high schools.

Change in Perceived Same-ethnic Representation. Students' perceptions of same-ethnic representation were measured using one item that asked students how many students at their school are from their racial-ethnic group. Participants rated their response on a seven-point scale (1 = *none or hardly any (less than 10%)*), 7 = *all or almost all (90-100%)*) (M_{MS} = 2.88, SD_{MS} = 1.39; M_{HS} = 2.97, SD_{HS} = 1.44) (see Appendix B).

To calculate a score assessing the change in perceived same-ethnic representation, a difference score of perceived same-ethnic representation from 8th and 9th grade was calculated. Participants' 8th grade perceived same-ethnic representation score was subtracted from their 9th grade perceived same-ethnic representation score. Values can range from –6 to 6 (M = .09, SD =

1.40), such that positive values indicate perceiving more same-ethnic peers in high school compared to middle school, while negative values indicate perceiving fewer same-ethnic peers in their high school compared to middle school. Values closer to zero indicate little to no change in the perceived representation of same-ethnic peers from middle to high school.

Objective Largest Racial-ethnic Group in High School. Racial-ethnic demographic data were collected from the California Department of Education (CDE) to assess which racial-ethnic group comprised the largest share of the student population in each high school. These data were used to assess which racial-ethnic group was objectively the largest racial-ethnic group in each high school. Participants' high schools were split into five categories on the basis of their racial-ethnic composition. The five categories included ≥50% Black, ≥50% Asian, ≥50% White, ≥50% Latinx, and ethnically diverse. Any high schools that had a racial-ethnic group in the numerical majority (i.e., 50 percent or more of the student population was from one racial-ethnic group) were coded as a majority school for that racial-ethnic group. Any high schools that were at or above the sample mean for Simpson's Diversity index (M = .63) and did not have any racial-ethnic group that comprised more than 50 percent of the student population was considered ethnically diverse.

Perceived Largest Racial-ethnic Group in High School. Participants were asked which racial-ethnic group they perceived to be the largest (i.e., had the most students) in their school in 9th grade (see Appendix C). Participants were instructed to select only one option, and response options included African American/Black, Asian/Pacific Islander, White/Caucasian, Latino/Mexican American, and None, there is no biggest group at this school. These data were used to assess which racial-ethnic group participants perceived to be the largest racial-ethnic group in their high school.

Outcome Variables

Multiracial Identification. In both the spring of 8th and 9th grade, participants self-reported their racial-ethnic background from a list of 12 choices and an additional write-in option (see Appendix A). These data were used to create a dichotomous variable identifying youth who maintained a Multiracial identification across the middle-to-high school transition (*1*), and those who changed to a monoracial identification across the transition (*0*).

Racial-ethnic Identification. Participants self-reported their racial-ethnic background from a list of 12 choices and an additional write-in option. These data were used to assess the specific racial-ethnic identification that youth identified with in 9th grade. Data were then used to identify youth who self-identified as Black, Asian, White, Latinx, Multiracial, or a different identity in 9th grade to assess the extent to which youth aligned their identification with the objective/perceived largest group in their high school.

Moderator Variable

Racial-ethnic Background. Students who self-identified as Biracial/Multiethnic in 8th grade using the aforementioned racial-ethnic identification measure were asked to specify which racial-ethnic groups they identify with. These data were used to identify various subgroups of the Multiracial participants (e.g., Black-Asian, Latinx-White, etc.) in the sample.

Individual-level Covariates

Sex. Participants self-reported their sex in the fall of sixth grade (57.1% female). The data were dummy coded such that males served as the reference group (i.e., 0 = *male* and 1 = *female*).

Parental Education. When completing consent forms, parents provided their highest level of education on a six-point scale (1 = *elementary/junior high school*, 2 = *some high school*, 3 = *high school diploma or GED*, 4 = *some college*, 5 = *4-year college degree*, 6 = *graduate*

degree) (M = 4.48, SD = 1.17). Adolescents whose parents completed less than a high school education were recoded into one group, resulting in five dichotomous variables representing parental education. For all analyses the "high school diploma or GED" group served as the reference group.

Immigrant Generation. Participants indicated if they or their parents were born in the U.S. or another country. Participants who indicated they were born in another country were considered first-generation, participants who were born in the U.S. and had at least one foreign-born parent born were considered second-generation, and participants who themselves and their parents were born in the U.S. were considered third generation and beyond. Immigrant generation was coded into one dichotomous variable, such that first- and second-generation youth (46.1%) (i.e., immigrant-origin youth) were coded as *1* and youth who were third-generation and beyond (50.1%) were coded as *0*.

Heritage Language Use. Given that heritage language use has been associated with racial-ethnic identity processes in adolescence (Mu, 2015; Oh & Fuligni, 2010), a variable assessing heritage language use was included as a covariate. Participants indicated what language(s) were spoken in the home, and dichotomous variable was created such that any adolescents who reported the presence of a non-English language (36.4%) were categorized as *1*, while any adolescents who reported only speaking English at home (63.6%) were coded as *0*.

Prior Multiracial Identification Stability. To account for prior stability/fluidity in racial-ethnic identification among Multiracial youth, a variable assessing the number of times participants previously identified as Multiracial in middle school was computed. Using racial-ethnic identification data collected in the fall of sixth grade, spring of sixth grade, and spring of seventh grade, a count variable was created assessing the total number of times youth previously

identified as Multiracial. Values could range from zero to three, with greater values representing a more stable Multiracial identification in middle school (M = 2.01, SD = 1.07).

Perceived Same-ethnic Representation in High School. Students' perceptions of same-ethnic representation in 9th grade were measured using one item that asked students how many students at their school are from their racial-ethnic group. Participants rated their response on a seven-point scale (1 = *none or hardly any (less than 10%)*), 7 = *all or almost all (90-100%)*) (M_{HS} = 2.97, SD_{HS} = 1.44).

School-level Covariates

High School Racial-ethnic Diversity. Simpson's index of diversity was used to assess the racial-ethnic diversity of students' school environments (Simpson, 1949), and racial-ethnic demographic data were collected from the California Department of Education (CDE) to calculate the Simpson's diversity index of each school. Values range from zero to one (M_{HS} = .62, SD_{HS} = .13) with greater values indicating greater diversity. Simpson's diversity index for 9th grade was used as a level-2 covariate.

Analytic Strategy

All analyses were conducted using in Mplus 8.9 (Muthén & Muthén, 1998–2017). The CLUSTER function was used to account for the nested structure of the data (students nested within schools), and full information maximum likelihood (FIML) estimation was employed using the MLR estimation procedure to handle missing data (Enders, 2010). Prior to estimating the hypothesized models, preliminary analyses were conducted to examine the descriptive properties and bivariate correlations among study variables. Additional descriptive analyses with the sub-analytic sample (n = 328) were conducted to further unpack patterns of change among youth who switched from a Multiracial identification in 8th grade to a monoracial identification

in 9th grade. Additionally, cross-tabulation tables and chi-square analyses were used to examine the extent to which Multiracial youth aligned their racial-ethnic identification with the objective vs. perceived largest racial-ethnic group in their high school in 9th grade.

Next, binary logistic regression analyses were conducted to investigate how changes in school racial-ethnic diversity and perceived same-ethnic representation were associated with the likelihood of identifying as Multiracial (*1*) or monoracial (*0*) upon the transition to high school. Additional moderated multilevel logistic regression models were conducted to assess whether these associations varied for Multiracial subgroups with a sub-analytic sample (n = 328) consisting of the four largest Multiracial subgroups in the sample (Latinx-White (n = 125), Black-White (n = 85), Asian-White (n = 75), and Black-Latinx (n = 43)). All analyses controlled for participant self-reported sex, parental education, immigrant generation, heritage language use, and prior Multiracial identification stability at level-1. Models that examined changes in perceived same-ethnic representation also controlled for 9th grade perceived same-ethnic representation at level-1, while models that examined changes in school racial-ethnic diversity controlled for 9th school diversity at level-2.

Results

The results are divided into three main sections. First, I present descriptive analyses unpacking the nature of Multiracial youths' identification changes and analyses assessing the extent to which Multiracial youth aligned their racial-ethnic identification with the objective vs. perceived largest group in their high school. Next, I present the findings regarding how relative changes in school racial-ethnic diversity predict the likelihood that youth maintain a Multiracial identification or change to a monoracial identification in 9th grade, followed by analyses assessing whether these associations differ for Multiracial subgroups. Last, I present the findings

regarding how relative changes in perceived same-ethnic representation predict the likelihood that Multiracial youth maintained or changed their identification across the high school transition, again followed by analyses testing the moderating effect by Multiracial subgroup.

Descriptive Analyses

Descriptive information and bivariate correlations between study variables can be found in Table 1.3. First, I describe patterns of racial-ethnic identification from 8th to 9th grade among Multiracial youth. Next, I descriptively unpack how Multiracial youths' identification aligns with objective vs. subjective measures of the largest racial-ethnic group in their high school for youth who change to a monoracial identification.

Describing Patterns of Changing/Maintaining Identification Among Multiracial Youth

Figure 1.1 displays the proportion of participants from the whole sample and the four largest Multiracial subgroups who maintained a Multiracial identification vs. changed to a monoracial identification in 9th grade. As displayed in Figure 1.1, youth who identified as Multiracial in 8th grade were just as likely to maintain a Multiracial identification or change to a monoracial identification in 9th grade. However, differential patterns emerge among Multiracial subgroups. Latinx-White youth were equally likely to maintain a Multiracial identification or change to a monoracial identification in 9th grade. In contrast, a greater proportion of Black-White, Asian-White, and Black-Latinx youth maintained a Multiracial identification rather than changed to a monoracial identification. Binary logistic regression analyses were conducted with the sub-analytic sample to examine the main effects of Multiracial subgroup on the likelihood of maintaining a Multiracial identification or changing to a monoracial identification across the transition to high school. Reference groups were rotated to ensure all comparisons were explored. Results indicated that Black-Latinx (b = 1.00, p = .012) and Asian-White (b = 0.99, p =

.009) youth were more likely to maintain a Multiracial identification compared to Latinx-White youth. There were no significant differences for Black-White youth.

Next, Figure 1.2 illustrates the racial-ethnic identification choices among youth who changed to a monoracial identification in 9th grade by Multiracial subgroup. As depicted in Figure 1.2, Latinx-White and Black-White youth who changed to a monoracial identification were more likely to identify as Latinx and Black, respectively, as opposed to identifying as monoracial White. In contrast, Asian-White and Black-Latinx youth who changed to a monoracial identification were relatively equally likely to adopt the monoracial identification of either of their racial-ethnic backgrounds.

Racial-ethnic Identification and Objective/Subjective Perceptions of School Racial Context

Next, I descriptively examined how Multiracial youths' racial-ethnic identification aligned with objective and subjective measures of the racial-ethnic context of youths' schools using cross-tabulation tables and chi-squared tests. In addition to examining patterns for the whole Multiracial sample (Table 1.4), I also examined patterns by Multiracial subgroups using the sub-analytic sample of Latinx-White (Table 1.5), Black-White (Table 1.6), Asian-White (Table 1.7), and Black-Latinx (Table 1.8) youth. The top panel in the tables indicates the objective racial-ethnic context of participants' schools, while the bottom panel includes information regarding the racial-ethnic group that youth perceived to be the largest in their school. The columns represent the racial-ethnic identification of Multiracial youth in 9th grade. The diagonals are highlighted in gray to show to what extent Multiracial youth aligned their racial-ethnic identification with the objective largest racial-ethnic group in their school compared to the perceived largest racial-ethnic group in their school.

As shown in Table 1.4, results indicated that there was not a significant association between objective measures of the racial-ethnic context of participants' high schools and Multiracial youths' racial-ethnic identification in 9th grade ($X^2(32) = 45.48$, $p > .05$). However, there was a significant association between the racial-ethnic group Multiracial youth perceived to be the largest racial-ethnic group in their high school and their racial-ethnic identification in 9th grade ($X^2(32) = 49.25$, $p = .03$). These findings suggest that Multiracial youth are more likely to align their racial-ethnic identification with the group they perceive to be largest in their school, rather than the group that constitutes the numerical majority. Cell sizes were too small to conduct chi-squared tests to test for statistical significance by Multiracial subgroups, although cross-tabulation tables for Multiracial subgroups can be found in Tables 1.5–1.8 for descriptive purposes.

Summary of Descriptive Analyses

In summary, changing racial-ethnic identification was relatively common in the sample, with 51 percent of participants changing to a monoracial identification in 9th grade. Additionally, roughly half Latinx-White and Black-White youth changed to a monoracial identification across the transition to high school (51% and 43%, respectively), while Asian-White and Black-Latinx youth were more likely to maintain a Multiracial identification (73% for each group). Latinx-White and Black-White youth who changed to a monoracial identification were more likely to identify as monoracial Latinx (64%) and Black (74%), respectively. In contrast, Asian-White (53% vs 47%) and Black-Latinx (50% vs 50%) youth who changed to a monoracial identification were equally likely to identify with either of their racial-ethnic backgrounds.

When assessing to what extent Multiracial youth aligned their racial-ethnic identification according to the racial-ethnic context of their high schools, youth were more likely to align their

identification to the group they *perceived* to be the largest in the school, whereas objective measures of the school racial-ethnic context were not associated with how youth identified. Taken together, these findings highlight the relatively high frequency of racial-ethnic identification fluidity among Multiracial youth, as well as the role of subjective perceptions over objective measures of youths' racial-ethnic context in shaping their identification choices.

Change in School Racial-ethnic Diversity and Youths' Racial-ethnic Identification

Multilevel binary logistic regression analysis was used to assess how relative changes in the racial-ethnic diversity between youths' middle and high school was associated with the likelihood that Multiracial youth maintained a Multiracial identification or changed to a monoracial identification across the transition to high school. Results are presented in Table 1.9. Model 1 assessed the association between relative change in school diversity between youths' middle and high schools and the likelihood that youth would maintain a Multiracial identification or change to a monoracial identification in 9th grade. Turning first to the covariates, girls were more likely to maintain a Multiracial identification than boys, and youth who more stably identified as Multiracial in middle school were more likely to continue identifying as Multiracial in 9th grade. The main predictor of interest, change in school diversity, was not significantly associated with Multiracial youths' identification in 9th grade (b = 0.34, p = .808).

Model 2 added the high school (9th grade) diversity index as a level-2 predictor to assess whether it was *change* in school diversity or the school diversity of the high school that was associated with Multiracial youths' identification choices across the middle-to-high school transition. Results revealed that the change in school diversity predictor was not related to Multiracial youths' identification (b = –2.06, p = .074). However, consistent with past research, high school diversity in 9th grade was significantly associated with youths' identification, such

that Multiracial adolescents who attended high schools that were more racially diverse were more likely to maintain a Multiracial identification in 9th grade ($b = 2.14$, $p < .001$).

Moderations by Multiracial Subgroup

Model 3 utilized the sub-analytic sample consisting of the four largest Multiracial subgroups to examine whether the associations between change in school diversity and Multiracial youths' identification choices differed across Multiracial subgroups. Reference groups were rotated to ensure all comparisons were assessed. Examining the main effects of Multiracial subgroups, Latinx-White ($b = –0.56$, $p = .049$) and Black-White adolescents ($b = –0.73$, $p = .044$) were more likely to change to a monoracial identification compared to Black-Latinx adolescents. However, none of the interaction terms emerged as significant, suggesting that associations between changes in school racial-ethnic diversity and Multiracial youths' identification did differ across Multiracial subgroups.

Change in Perceived Same-ethnic Representation and Youths' Racial-ethnic Identification

Binary logistic regression analysis was used to assess how relative changes in perceived same-ethnic representation from middle to high school were associated with the likelihood that Multiracial youth maintained a Multiracial identification or changed to a monoracial identification upon the transition to high school. Results are presented in Table 1.10. Model 1 examined the association between the relative change in perceived same-ethnic representation and youths' likelihood of maintaining a Multiracial identification or changing to a monoracial identification in 9th grade. Turning first to the covariates, girls were more likely to maintain a Multiracial identification than boys, and youth who more stably identified as Multiracial throughout middle school were more likely to continue to identify as Multiracial in high school. Unexpectedly, youth who reported an increase in perceived same-ethnic representation from

middle to high school were more likely to change to a monoracial identification in 9th grade, rather than maintain a Multiracial identification ($b = –0.21$, $p = .023$).

Model 2 added 9th grade perceived same-ethnic representation as a predictor to assess whether it was *change* in perceived same-ethnic representation or perceived same-ethnic representation in high school that predicts youths' identification choices upon the transition to high school. Results revealed that the main effect of change in perceived same-ethnic representation became non-significant ($b = 0.03$, $p > .05$), while the main effect for 9th grade perceived same-ethnic representation was significant such that youth who perceived a greater proportion of same-ethnic peers in high school were more likely to have changed to a monoracial identification ($b = –0.43$, $p < .001$).

Moderations by Multiracial Subgroup

Model 3 utilized the sub-analytic sample consisting of the four largest Multiracial subgroups and entered interaction terms into the model to assess whether the association between change in perceived same-ethnic representation and Multiracial adolescents' identification differed for Multiracial subgroups. Reference groups were rotated to ensure all comparisons were examined. With Black-Latinx youth as the reference group, significant interactions emerged for Latinx-White ($b = –1.50$, $p = .015$) and Asian-White youth ($b = –1.44$, $p = .021$), in addition to a marginally significant interaction for Black-White youth ($b = –1.23$, $p = .054$).

The decomposed interaction effect is displayed in Figure 1.3. Probing the simple slopes revealed that for Black-Latinx youth, change in perceived same-ethnic representation was not associated with identifying as Multiracial or monoracial in 9th grade ($b = 0.25$, $p = .207$). However, for Latinx-White ($b = –1.23$, $p = .028$) and Asian-White youth ($b = –1.19$, $p = .030$), perceiving more same-ethnic peers in high school compared to middle school was associated

with an increased likelihood of identifying as monoracial as opposed to Multiracial in 9th grade. Black-White youth ($b = –0.99$, $p = 0.081$) followed a similar pattern, although the interaction term and simple slope analyses were both marginally significant.

Summary of Hypothesized Model Analyses

In general, results suggest that it is the 9th grade racial-ethnic context, rather than the *change* in racial-ethnic context between youths' middle and high schools, that is associated with Multiracial youths' identification outcomes. Multiracial youth were more likely to continue identifying as Multiracial in high schools that were more racially diverse. Additionally, Multiracial youth who perceived more same-ethnic peers in their high school were more likely to change to a monoracial identification in 9th grade. However, Latinx-White, Asian-White, and Black-White youth who reported an increase in same-ethnic representation from middle to high school were more likely to change to a monoracial identification, whereas there was no significant association between changes in perceived same-ethnic representation and identifying as Multiracial or monoracial for Black-Latinx youth.

Discussion

The goal of the current study was to develop a more nuanced understanding of how changes in Multiracial youths' racial-ethnic identification may coincide with changes in school racial-ethnic context. Moreover, objective and subjective measures of adolescents' racial context were assessed to understand how they may differentially impact the racial-ethnic identification choices of Multiracial youth upon the transition to high school. Consistent with past research (Echols et al., 2018; Hitlin et al., 2006; Nishina et al., 2010; Tabb, 2016), half of the sample in the current study had changed from a Multiracial identification to a monoracial identification

between 8th and 9th grade, highlighting the common nature of racial-ethnic identification fluidity in adolescence.

The Role of School Racial-ethnic Context in Shaping Multiracial Youths' Identification

Although changes in school racial-ethnic context from middle to high school were not associated with Multiracial youths' identification when accounting for the high school context, findings from the current study underscore the importance of accounting for Multiracial youths' perceptions of the racial-ethnic context of their schools when researching racial-ethnic identification processes. Multiracial youth were more likely to align their identification with the racial-ethnic group they perceived to be the largest in their school, rather than the group that was objectively the largest. Additionally, Multiracial youth who perceived a greater number of same-ethnic peers in their high school were more likely to have switched to a monoracial identification, in contrast to what was originally hypothesized. In accordance with Social Identity Theory (Tajfel & Turner, 1979), I originally hypothesized that more same-ethnic peers would signify more reference points for "similar others" (e.g., Latinx-White youth considering both monoracial Latinx and White youth as same-ethnic), and in turn an increased likelihood of identifying as Multiracial. However, it could be the case that Multiracial youth may not always consider their respective monoracial groups to be same-ethnic. Instead, youth who change to a monoracial identification may in turn take on that group as their reference point for who they consider to be similar to them.

Consistent with past research (Echols et al., 2018; Nishina et al., 2010), participants were more likely to maintain a Multiracial identification when they attended ethnically diverse high schools. However, there are a few reasons why the current study may have found that subjective measures of youths' racial-ethnic context played a more integral role in their racial-ethnic

identification choices than objective measures. First, past studies examining how objective measures of the racial-ethnic context are related to Multiracial youths' identification have examined youths' identification after spending multiple years in the same school context, such as at the end of middle school (Echols et al., 2018; Nishina et al., 2010). Given that the current study examined how youth identified in the spring of 9th grade (i.e., recent exposure to a new school context), subjective measures of their racial-ethnic context may not correspond with objective measures of their school context. Additionally, the racial-ethnic composition of the school may not be reflected in the day-to-day exposure that youth have to peers from certain racial-ethnic groups due to schooling practices that oftentimes segregate students on racial-ethnic lines, such as academic tracking (Graham, 2018; Juvonen et al., 2018; Moody, 2001). Given that how youth experience the racial-ethnic context of their schools may be different than the objective racial-ethnic composition, subjective measures can help us better understand how youths' subjective experiences in these contexts may shape their identification choices across time and contexts.

It is also important to note that the schools that the Multiracial youth in the sample attended were particularly high in racial-ethnic diversity. The average Simpson's diversity indices were .65 and .62 for middle and high school, respectively, meaning that the average likelihood that two randomly selected students from a given school would be members of different racial-ethnic groups was 65 percent in middle school and 62 percent in high school. Given the relatively high diversity of the schools that Multiracial youth in this sample attended, the generalizability of these findings may be limited.

Exploring the Heterogeneity of Multiracial Youths' Experiences

In addition to understanding how school racial context shapes racial-ethnic identification choices, the present study also aimed to unpack the heterogeneity of Multiracial youths' experiences by exploring differences in these associations by subgroups of Multiracial youth. MultiCrit postulates that Multiracial youths' experiences are shaped in part by the intersection of their racial-ethnic identities. When assessing the relative frequency of maintaining a Multiracial identification or changing to a monoracial identification, Asian-White and Black-Latinx youth were more likely to continue identifying as Multiracial compared to Latinx-White and Black-White youth. Moreover, when youth did change to a monoracial identification, Latinx-White and Black-White youth showed a preference in identifying with their minoritized racial-ethnic group (i.e., Latinx or Black), while Asian-White and Black-Latinx youth were equally likely to identify as either of their racial-ethnic backgrounds.

Latinx-White and Black-White youth who changed to a monoracial identification may show a stronger preference to identify as Latinx and Black respectively because there may be more "distance" between their respective monoracial groups. For example, past research suggests that negative social experiences, such as discrimination, is related to Multiracial individuals' perceptions of group conflict and distance (Cheng & Lee, 2009; Reid Marks et al., 2020). Black-White youth showed a particularly strong preference for identifying as monoracial Black, likely attributable in part to the rigid Black/White boundary in the U.S. In contrast, Asian-White and Black-Latinx youth may have more flexibility in adopting either monoracial identification because they may perceive less social distance between their respective monoracial groups (Davenport et al., 2022; Gay et al., 2016). Taken together, findings suggest that there are differences across subgroups of Multiracial youth in who might be more likely to change or

maintain their identification, as well as differences in how they choose to identify when they switch to a monoracial identification.

Moreover, Latinx-White, Asian-White, and Black-White youth who reported an increase in same-ethnic representation were more likely to change to a monoracial identification than Black-Latinx youth. While part of identity development involves negotiating "*who am I (dis)similar to?*", identity development also involves negotiating "*who thinks I am (dis)similar to them?*" (Tajfel & Turner, 1979). Multiracial youth with a White racial-ethnic background may have less flexibility in who they consider to be similar to them on the basis of race/ethnicity, especially when taking into account how they are perceived by their White peers. In other words, White Multiracial youth may not feel similar to monoracial White peers, and monoracial White peers may not feel similar to White Multiracial youth. For example, past research indicates that White individuals are more likely to categorize White Multiracial individuals as their minoritized racial-ethnic background (Ho et al., 2011). As youth transition to high school and are trying to find their "niche" in their new social context, Multiracial youth with a White racial-ethnic background may experience more dissonance between their respective monoracial groups. As a result, this change in who they consider to be same-ethnic may be particularly impactful on how they choose to identify their own race/ethnicity.

Limitations and Directions for Future Research

Although the present study makes important contributions to our understanding of Multiracial youths' racial-ethnic identification, there were several limitations. First, racial-ethnic identification was assessed by seeing whether Multiracial youth maintained a Multiracial identification or changed to a monoracial identification across the transition to high school. Although descriptive analyses further explored the nature of youths' racial-ethnic identification

choices, I did not explicitly examine how change in racial-ethnic context may predict identifying with a *particular* racial-ethnic group. For example, Burke and Kao (2013) found that Black-White and Asian-White adolescents who attended schools with a larger proportion of White students were more likely to opt for a White identification than their counterparts who attended schools with a lower proportion of White peers. Future research should further explore how the racial-ethnic context of Multiracial youths' schools is related to identifying with a particular racial-ethnic group for youth who change to a monoracial identification.

The results of the current study also suggest that youth who perceived more same-ethnic peers in their high school context were more likely to change to a monoracial identification. However, we do not yet have a clear understanding of who Multiracial youth consider to be same-ethnic peers. Social Identity Theory (Tajfel & Turner, 1979) posits that individuals base their sense of identity in part on the social groups that they do (and do not) belong to. Some literature has explored how monoracial individuals categorize Multiracial individuals' racial-ethnic background (Ho et al., 2011; Young et al., 2021), yet there is limited research that assesses who Multiracial individuals consider to be ingroup and outgroup members. Considering these notable gaps, future research should explore (1) who Multiracial youth consider to be (dis)similar on the basis of race/ethnicity, and (2) the potential bidirectional associations between Multiracial youths' own racial-ethnic identification and their perceptions of who they consider to be same- and cross-ethnic peers over time.

Though the current study explored differences for some subgroups of Multiracial youth, the Multiracial population is diverse, and the Multiracial subgroups examined in this study by no means represent the experiences of all Multiracial youth. Notably, the largest subgroups of Multiracial youth in this sample included youth with a White racial-ethnic background (i.e.,

Latinx-White, Black-White, and Asian-White). Although I also examined differences for one Multiracial subgroup with a non-White background (i.e., Black-Latinx), the other Multiracial subgroups did not have large enough sample sizes to include in subgroup analyses. Moreover, there is likely variation in the experiences of youth *within* subgroups of Multiracial youth. Considering the variety of cultural groups that exist within broader panethnic categories, Multiracial youth may have different experiences depending on the cultural groups they belong to. For example, two Asian-White youth may have differing experiences depending on whether they identify as East Asian, Southeast Asian, or South Asian. Future research would greatly benefit from using qualitative methods to further unpack the heterogeneity of Multiracial youths' experiences and understand how the intersection of youths' racial-ethnic backgrounds shapes their identification choices.

Conclusion

In summary, results from the current study suggest that changes in racial-ethnic identification across the transition to high school coincide with changes in who they consider to be same-ethnic peers and which racial-ethnic group they perceive to be the largest in their new school context. Additionally, Multiracial youth were most likely to maintain a Multiracial identification when they attended high schools that were racially-ethnically diverse. Taken together, these findings underscore the importance of the school racial-ethnic context in shaping Multiracial youths' identification choices, and the need for future research to incorporate measures that assess Multiracial adolescents' perceptions of the racial-ethnic contexts they occupy. By investigating how Multiracial youth experience the racial-ethnic contexts of their schools, we can better understand how these contexts shape their identity processes.

Table 1.1

Demographics of Analytic Sample at 8th Grade

	Overall Sample (*n* = 692)	
	n	%
Sex		
Female	395	57.1%
Male	297	42.9%
Racial-ethnic Background		
Latinx-White	125	18.1%
Black-White	85	12.3%
Asian-White	75	10.8%
Black-Latinx	43	6.2%
Other Biracial	226	32.5%
Multiracial (3 or more groups)	138	19.9%
Parent Education		
Less than high school	39	5.6%
High school diploma	54	7.8%
Some college	240	34.7%
4-year degree	180	26.0%
Graduate degree	143	20.7%
Immigrant Generation		
First generation	23	3.3%
Second generation	296	42.8%
Third+ generation	347	50.1%
Heritage Language Use		
Yes	235	36.4%
No	411	63.6%

Note. *n* = sample size. % = percentage. 'Other Biracial' includes all Biracial subgroups with a sample size less than 30.

Table 1.2

Breakdown of Racial-ethnic Backgrounds of 8th Grade Multiracial Sample

	n	%
Multiracial (3+ groups)	138	19.9
Latinx – White	125	18.1
Black – White	85	12.3
E/SE Asian - White	75	10.8
Black – Latinx	43	6.2
Filipino/PI – White	27	3.9
Middle Eastern – White	26	3.8
E/SE Asian – Latinx	18	2.6
Black – Native American	14	2.0
E/SE Asian – Filipino/PI	14	2.0
Native American – White	14	2.0
Latinx – Filipino/PI	14	2.0
Black – E/SE Asian	12	1.7
Black – Filipino/PI	12	1.7
Latinx – Middle Eastern	8	11.6
Latinx – Native American	7	1.0
E/SE Asian – South Asian	7	1.0
White – South Asian	6	0.9
Black – South Asian	4	0.6
Black – Middle Eastern	3	0.4
E/SE Asian – Middle Eastern	2	0.3
Latinx – South Asian	2	0.3
South Asian – Filipino/PI	2	0.3
Filipino/PI – Middle Eastern	2	0.3
South Asian – Middle Eastern	1	0.1
Filipino/PI – Native American	1	0.1
Biracial Unspecified	30	4.3
TOTAL	692	100

Note. *n* = sample size. % = percentage.

Table 1.3

Intercorrelations, Means, and Standard Deviations for Study 1 Variables

	1	2	3	4	5	6	7
Level 1							
1. Multiracial Identification (9^{th})	–						
2. Perceived Same-ethnic Rep. (8^{th})	–.171***	–					
3. Perceived Same-ethnic Rep. (9^{th})	–.325***	–.498***	–				
4. Change in Perceived Same-ethnic Rep.	–.167***	–.464***	.538***	–			
5. Change in School Diversity	.024	–.092*	.006	.087	–		
Level 2							
6. Middle School Racial Diversity	.170***	–.124***	–.199***	–.057	–.075	–	
7. High School Racial Diversity	1.24***	–.142***	–.113*	.040	.832***	.462***	–
M	.51	2.88	2.97	0.09	–0.03	.65	.63
SD	.50	1.39	1.44	1.40	.11	.07	.13
Range	0 - 1	1 - 7	1 - 7	–5 - 5	–.65 - .26	.51 - .77	.03 - .76
N	477	675	473	461	495	692	576

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. For Multiracial Identification 1 = Multiracial, 0 = Monoracial. "Rep." stands for Representation.

Table 1.4

Multiracial Youths' Racial-ethnic Identification by Objective and Subjective Measures of School Racial-ethnic Context in 9th Grade (Frequencies)

			Racial-ethnic Identification (9th Grade)						
			Black	Asian	White	Latinx	Multiracial	Different Identity	Total
Objective	School Classification as ≥50% of a Racial-ethnic Group or Ethnically Diverse (9th Grade)	≥50% Black	6	0	0	1	8	0	15
		≥50% Asian	1	1	1	2	9	2	16
		≥50% White	0	0	1	0	3	0	4
		≥50% Latinx	16	8	19	20	55	8	126
		Ethnically Diverse	34	16	35	26	158	17	286
		Total	57	25	56	49	233	27	447
Subjective	Participant Reported Perceived Largest Racial-ethnic Group in School (9th Grade)	Black	14	4	6	9	32	0	65
		Asian	2	4	5	7	21	5	44
		White	15	5	21	8	82	11	143
		Latinx	18	7	18	11	50	10	114
		None, there is no biggest group at this school	14	4	11	19	57	2	107
		Total	63	25	61	54	242	28	473

Table 1.5

Latinx-White Youths' Racial-ethnic Identification by Objective and Subjective Measures of School Racial-ethnic Context in 9th Grade (Frequencies)

			Racial-ethnic Identification (9th Grade)			
			Latinx	White	Multiracial	Total
Objective	School Classification as ≥50% of a Racial-ethnic Group or Ethnically Diverse (9th Grade)	≥50% Black	1	0	0	1
		≥50% Asian	2	0	0	2
		≥50% White	0	0	2	2
		≥50% Latinx	11	6	18	35
		Ethnically Diverse	14	9	22	45
		Total	28	15	42	85
Subjective	Participant Reported Perceived Largest Racial-ethnic Group in School (9th Grade)	Black	5	4	1	10
		Asian	3	2	3	8
		White	4	4	15	23
		Latinx	6	3	10	19
		None, there is no biggest group at this school	11	3	15	29
		Total	29	16	44	89

Table 1.6

Black-White Youths' Racial-ethnic Identification by Objective and Subjective Measures of School Racial-ethnic Context in 9th Grade (Frequencies)

			Racial-ethnic Identification (9th Grade)			
			Black	White	Multiracial	Total
Objective	School Classification as ≥50% of a Racial-ethnic Group or Ethnically Diverse (9th Grade)	≥50% Black	1	0	2	3
		≥50% Asian	0	1	1	2
		≥50% White	0	1	0	1
		≥50% Latinx	5	3	5	13
		Ethnically Diverse	12	2	28	42
		Total	18	7	36	61
Subjective	Participant Reported Perceived Largest Racial-ethnic Group in School (9th Grade)	Black	3	0	9	12
		Asian	0	2	4	6
		White	6	3	13	22
		Latinx	4	2	3	9
		None, there is no biggest group at this school	7	0	6	13
		Total	20	7	35	62

Table 1.7

Asian-White Youths' Racial-ethnic Identification by Objective and Subjective Measures of School Racial-ethnic Context in 9th Grade (Frequencies)

			Racial-ethnic Identification (9th Grade)			
			Asian	White	Multiracial	Total
Objective	School Classification as ≥50% of a Racial-ethnic Group or Ethnically Diverse (9th Grade)	≥50% Black	0	0	0	0
		≥50% Asian	0	0	0	0
		≥50% White	0	1	1	2
		≥50% Latinx	0	3	8	11
		Ethnically Diverse	9	4	34	47
		Total	9	8	43	60
Subjective	Participant Reported Perceived Largest Racial-ethnic Group in School (9th Grade)	Black	0	0	4	4
		Asian	3	1	2	6
		White	3	2	17	22
		Latinx	2	4	8	14
		None, there is no biggest group at this school	1	1	14	16
		Total	9	8	45	62

Table 1.8

Black-Latinx Youths' Racial-ethnic Identification by Objective and Subjective Measures of School Racial-ethnic Context in 9th Grade (Frequencies)

			Racial-ethnic Identification (9th Grade)			
			Black	Latinx	Multiracial	Total
Objective	School Classification as ≥50% of a Racial-ethnic Group or Ethnically Diverse (9th Grade)	≥50% Black	0	0	1	1
		≥50% Asian	0	0	1	1
		≥50% White	0	0	0	0
		≥50% Latinx	1	0	3	4
		Ethnically Diverse	2	2	11	15
		Total	3	2	16	21
Subjective	Participant Reported Perceived Largest Racial-ethnic Group in School (9th Grade)	Black	0	1	3	4
		Asian	0	0	0	0
		White	1	1	7	9
		Latinx	1	1	3	5
		None, there is no biggest group at this school	1	0	3	4
		Total	3	3	16	22

Table 1.9

Multilevel Binary Logistic Regression Models Examining School Diversity and Multiracial Youths' Identification in 9th Grade

	Model 1 (n = 692)		Model 2 (n = 692)		Model 3 (n = 328)	
	b	*SE*	*b*	*SE*	*b*	*SE*
Individual-level						
Change in School Diversity	**0.34**	**1.40**	**–2.06†**	**1.15**	**–1.42**	**1.24**
Sex	0.65*	0.28	0.70*	0.29	0.24†	0.20
Immigrant Origin	–0.22	0.23	–0.27	0.23	–0.33†	0.22
Heritage Language Use	0.01	0.26	–0.00	0.26	0.07	0.23
Parent Education						
Less than HS	–0.83	0.55	–0.74	0.55	–0.83	0.65
Some college	–0.06	0.39	–0.01	0.36	–0.28	0.37
4-year degree	0.34	0.40	0.37	0.36	0.19	0.39
Graduate degree	0.06	0.40	–0.02	0.37	–0.10	0.39
Identification Stability	1.02***	0.10	1.03***	0.10	0.57***	0.10
Racial-ethnic Background						
Black-White	—	—	—	—	–0.12	0.27
Black-Latinx	—	—	—	—	0.56*	0.37
Asian-White	—	—	—	—	0.33	0.25
Interaction Terms						
Change in Diversity X B-W	—	—	—	—	**–1.05**	**1.51**
Change in Diversity X B-L	—	—	—	—	**–1.14**	**1.95**
Change in Diversity X A-W	—	—	—	—	**–0.37**	**1.56**
School-level						
High School Diversity Index	—	—	**2.14*** **	**0.54**	**1.64†**	**1.18**

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Note. Reference group for racial-ethnic background is Latinx-White. Sex is a binary variable (1 = female). Immigrant generation is a binary variable (1 = 1st + 2nd generation). Heritage language use is a binary variable (1 = yes). Bolded rows indicate main predictor of interest.

Table 1.10

Binary Logistic Regression Models Examining Perceived Same-ethnic Representation and Multiracial Youths' Identification in 9th Grade

	Model 1 (n = 692)				Model 2 (n = 692)				Model 3 (n = 328)			
	b	*SE*	*Exp(b)*	*95% CI*	*b*	*SE*	*Exp(b)*	*95% CI*	*b*	*SE*	*Exp(b)*	*95% CI*
Individual-level												
Change in Perceived Same-ethnic Rep.	**–0.21***	**0.09**	**0.81**	**[0.67, 0.97]**	**0.03**	**0.10**	**1.03**	**[0.85, 1.24]**	**0.25**	**0.20**	**1.28**	**[0.87, 1.88]**
9th Grade Perceived Same-ethnic Rep.	—	—	—	—	**–0.43*****	**0.08**	**0.65**	**[0.56, 0.75]**	**–0.80*****	**0.17**	**0.45**	**[0.32, 0.62]**
Sex	0.65*	0.29	1.92	[1.08, 3.39]	0.63*	0.30	1.87	[1.05, 3.34]	0.49	0.41	1.63	[0.73, 3.67]
Immigrant Origin	–0.19	0.21	0.83	[0.55, 1.25]	–0.32	0.23	0.73	[0.46, 1.14]	–0.67*	0.34	0.51	[0.27, 0.99]
Heritage Language Use	0.03	0.25	1.03	[0.63, 1.67]	–0.03	0.26	0.97	[0.58, 1.61]	0.02	0.34	1.02	[0.52, 1.99]
Parent Education												
Less than HS	–0.91	0.57	0.40	[0.13, 1.23]	–0.94†	0.54	0.39	[0.14, 1.13]	–1.59	1.08	0.20	[0.02, 1.70]
Some college	–0.14	0.40	0.87	[0.40, 1.89]	–0.10	0.39	0.91	[0.42, 1.94]	–0.65	0.73	0.52	[0.13, 2.17]
4-year degree	0.28	0.42	1.33	[0.59, 3.01]	0.28	0.40	1.32	[0.60, 2.88]	0.07	0.60	1.08	[0.33, 3.52]
Graduate degree	0.02	0.41	1.02	[0.46, 2.26]	–0.12	0.40	0.89	[0.41, 1.93]	–0.61	0.76	0.54	[0.12, 2.40]
Identification Stability	1.01***	0.10	2.74	[2.27, 3.32]	0.93***	0.09	2.53	[2.11, 3.05]	0.75***	0.17	2.12	[1.44, 3.10]
Racial-ethnic Background												
Black-White	—	—	—	—	—	—	—	—	–1.36	0.84	0.26	[0.05, 1.34]
Asian-White	—	—	—	—	—	—	—	—	–0.75	0.71	0.47	[0.12, 1.90]
Latinx-White	—	—	—	—	—	—	—	—	–1.25	0.70	0.29	[0.07, 1.14]
Interaction Terms												
Change in PSER X B-W	—	—	—	—	—	—	—	—	**–1.23†**	**0.64**	**0.29**	**[0.08, 1.02]**
Change in PSER X A-W	—	—	—	—	—	—	—	—	**–1.44***	**0.62**	**0.24**	**[0.07, 0.80]**
Change in PSER X L-W	—	—	—	—	—	—	—	—	**–1.50***	**0.62**	**0.22**	**[0.07, 0.75]**

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Note. Reference group for racial-ethnic background is Black-Latinx. Sex is a binary variable (1 = female). Immigrant generation is a binary variable (1 = 1st + 2nd generation). Heritage language use is a binary variable (1 = yes). PSER = Perceived Same-ethnic Representation. Bolded rows indicate main predictors and interactions of interest.

Figure 1.1

Proportion of Youth who Identified as Multiracial vs Monoracial in 9th Grade

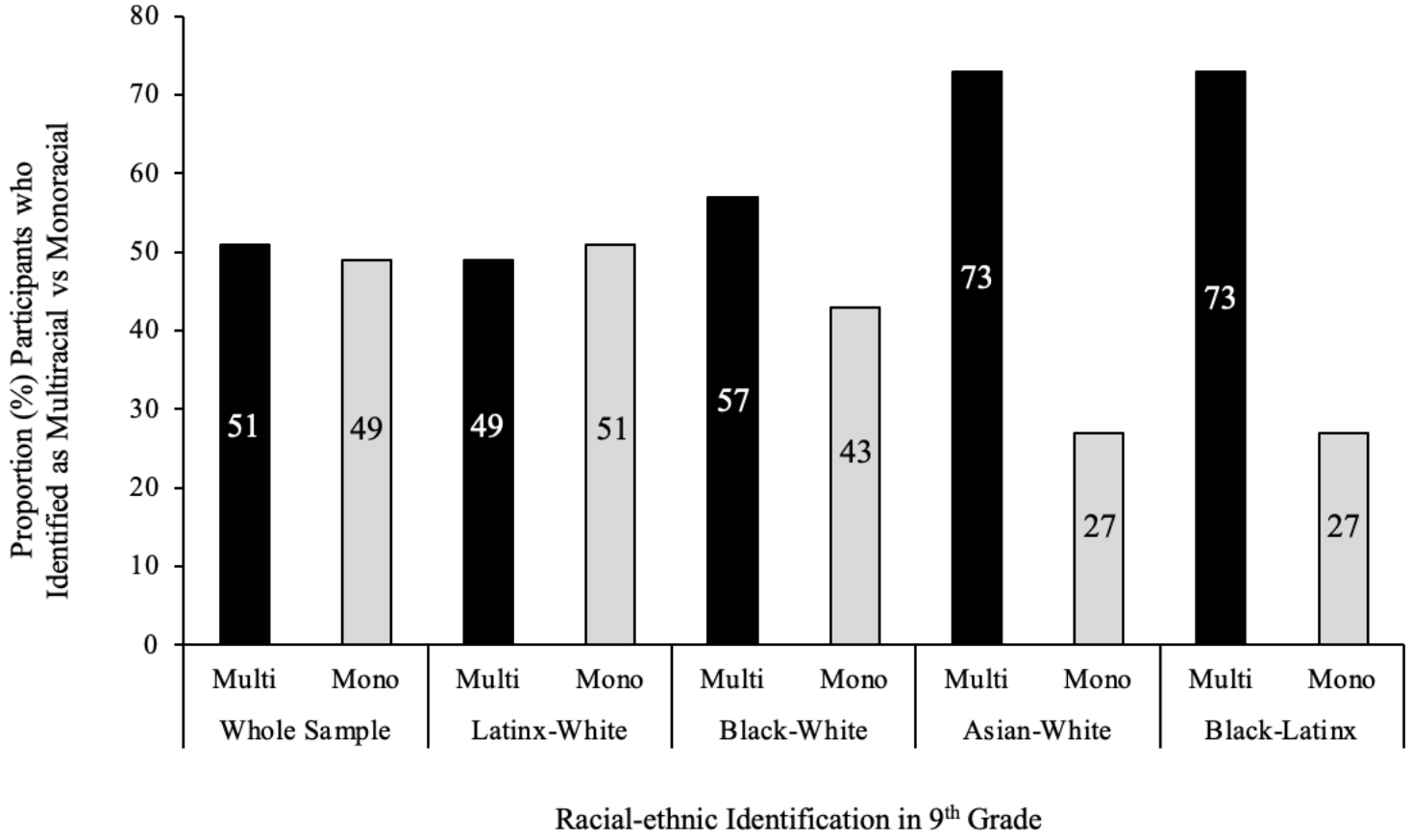


Figure 1.2

Racial-ethnic Identification of Youth who Changed to a Monoracial Identification in 9th Grade by Multiracial Subgroup

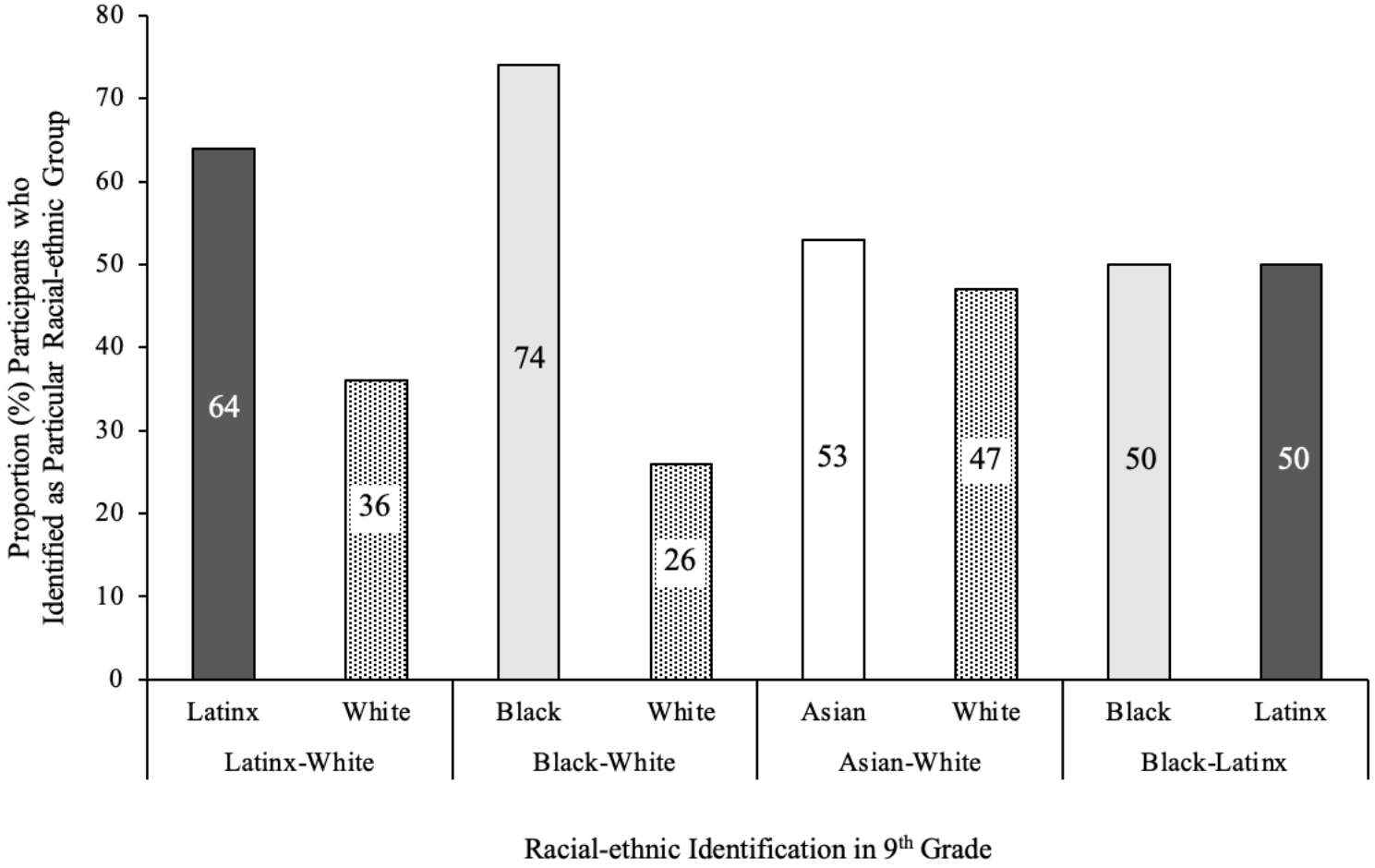
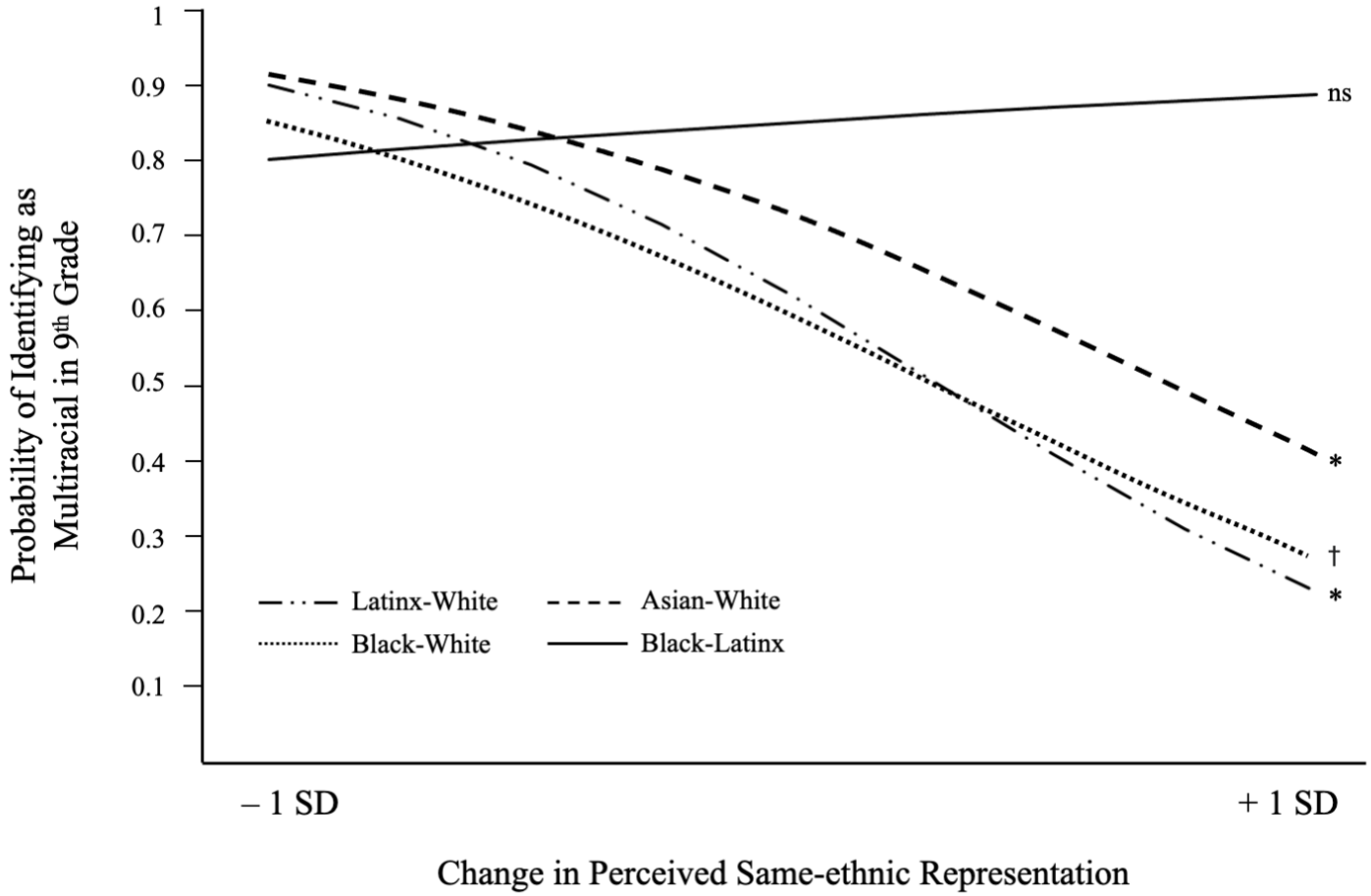


Figure 1.3

Interaction Effect of Change in Perceived Same-ethnic Representation on the Probability of Identifying as Multiracial by Multiracial Subgroup



STUDY 2

Multiracial Youths' Racial-ethnic Identification and Psychosocial Adjustment: The Role of School Racial-ethnic Context

Multiracial Youths' Racial-ethnic Identification and Psychosocial Adjustment: The Role of School Racial-ethnic Context

There is an extensive body of research that indicates that racial-ethnic identity development is related to important developmental domains in adolescence, including psychological, social, and academic outcomes (Rivas-Drake et al., 2014). Past research on the racial-ethnic identity development of Multiracial youth has largely focused on unpacking the nature of the fluidity in their racial-ethnic identification (Chong & Kuo, 2015; Doyle & Kao, 2007; Echols et al., 2018; King, 2013; Reece, 2019). Early theoretical speculation suggested that Multiracial identity development is a linear process in which the optimal end outcome was to identify as Multiracial (Poston, 1990), and that those who opted for a monoracial identification label experienced internal turmoil (Stonequist, 1935). However, more recent models situate Multiracial youths' racial-ethnic identification as a fluid, non-linear process that is dependent on youths' social contexts (Renn, 2008) and macro-level forces (Harris, 2016). Yet, there has been limited research that examines how Multiracial youths' racial-ethnic identification is related to other developmental domains, and what role the school racial-ethnic context plays in shaping these associations. Thus, the goal of the present study was to take a context-dependent approach to understand when and in which contexts identifying as monoracial or Multiracial is most psychosocially adaptive for Multiracial youth. First, I provide a review of existing research that examines the racial-ethnic identity, mental health, and social adjustment outcomes of Multiracial youth.

Racial-ethnic Identity Outcomes Among Multiracial Youth

As previously discussed, racial-ethnic identity development is the developmental process by which youth come to understand and make meaning of their racial-ethnic group

membership(s) (Umaña-Taylor et al., 2014). While racial-ethnic identification refers to the racial-ethnic label(s) that an individual chooses to identify with, racial-ethnic identity reflects (1) how an individual feels about their racial-ethnic group membership(s) (e.g., pride, affirmation, private regard; Phinney, 1992; Sellers et al., 1998; Umaña-Taylor, 2004) and (2) the processes by which these attitudes about their group membership(s) develop over time (e.g., exploration; Phinney, 1992; Umaña-Taylor, 2004) (Umaña-Taylor et al., 2014). Although most of the research with Multiracial adolescents has focused on racial-ethnic identification, other domains of racial-ethnic identity have also been studied.

Past research assessing measures of Multiracial youths' racial-ethnic identity outcomes has mostly compared scores of racial-ethnic identity between Multiracial and monoracial youth. Findings from past studies suggest that Multiracial youths' scores for racial-ethnic identity importance (Herman, 2004; Rogers et al., 2021b), affirmation (Fisher et al., 2014), and exploration (Fisher et al., 2014) tend to fall between different monoracial youths' scores on these measures. More specifically, Multiracial youths generally report higher racial-ethnic identity scores compared to White youth but report lower scores than monoracial youth of color. However, given the fluid nature of how Multiracial youth identify, cross-sectional studies that solely rely on self-identification from Multiracial youth may fail to capture the experiences of Multiracial youth who identify with a monoracial label.

One study by Phinney and Alipuria (1996) identified Multiracial high school students based on parental racial-ethnic data. In this study, they examined how these adolescents self-identified their race/ethnicity and assessed whether youth who identified as monoracial differed in their racial-ethnic identity scores (combined score measuring both pride and exploration) compared to those who identified as Multiracial. Results indicated that Multiracial youth who

used a monoracial identification label did not differ in their racial-ethnic identity scores from Multiracial students who used a Multiracial identification label. These findings provide some preliminary insights into how Multiracial youths' racial-ethnic identification is related to other domains of racial-ethnic identity development, suggesting that Multiracial youth who identify as Multiracial or monoracial may not differ in their ethnic identity scores. However, this study used a combined pride and exploration ethnic identity score, potentially obscuring differences in how Multiracial youths' identification may be differentially related to exploration or pride as separate domains of racial-ethnic identity.

Mental Health Outcomes of Multiracial Youth

Similar to the racial-ethnic identity literature, much of the research examining the mental health outcomes of Multiracial youth takes a comparative approach to assess how Multiracial youth fare compared to their monoracial peers. Multiple research studies suggest that Multiracial youth report more depressive symptoms compared to monoracial youth (Campbell & Eggerling-Boeck, 2006; Cheng & Lively, 2009; Fisher et al., 2014; Nishina et al., 2018). However, studies examining Multiracial youths' reports of anxiety show mixed results, with some studies finding that Multiracial youth report greater levels of anxiety compared to monoracial youth (Fisher et al., 2014), while other studies do not find significant differences (Nishina et al., 2018).

There is additional research that examines how Multiracial youths' own racial-ethnic identification choices are related to their psychological wellbeing. For example, a cross-sectional study by Binning and colleagues (2009) found that Multiracial adolescents who identified with multiple groups reported greater positive affect compared to Multiracial adolescents who primarily identified as Black or Latinx. Furthermore, Multiracial youth who identified with multiple groups reported less stress compared to those who identified as monoracial (Binning et

al., 2009). Despite these findings that suggest it may be more adaptive for youth to identify with their multiple racial-ethnic backgrounds, it is also important to consider how the racial-ethnic groups that comprise youths' racial-ethnic background may differentially shape psychological outcomes.

A study by Phillips' (2019) with a sample of Multiracial girls found that Black-White and Asian-White participants who identified with their minoritized racial-ethnic identification (i.e., Black or Asian) reported less psychological stress than those who identified as White. However, Latinx-White youth did not differ in their reports of psychological distress when they identified as Latinx or White (Phillips, 2019). These findings highlight the nuance of how Multiracial youths' identification choices may differentially impact their psychological wellbeing depending on the intersection of their racial-ethnic backgrounds. Challenges to selecting a racial-ethnic identification, such as being perceived as monoracial by others, have been associated with higher depressive and somatic symptoms and lower self-worth in Multiracial youth (Nishina et al., 2018). Latinx-White youth may have more liberty to opt for either a White or Latinx identification label, while Black and Asian Multiracial youth may have less flexibility to identify as monoracial White. Given the social nature of racial-ethnic identification processes for Multiracial youth, it is important to consider the ways in which the social context may play a key role in shaping Multiracial youths' psychosocial adjustment.

Multiracial Youths' Social Adjustment in School Contexts

Multiracial youth are well-integrated into their social networks at school and tend to have friendships with racially diverse peers (Quillian & Redd, 2009). Moreover, Multiracial youth may even serve a unique role in their social networks, acting as "bridges" to facilitate cross-ethnic friendships between monoracial peers at their schools (Echols & Graham, 2020).

Additional research suggests that Multiracial youth have either comparable or greater sociability compared to their respective monoracial groups (Cheng & Lively, 2009), indicating that Multiracial youth appear to be socially well-adjusted.

In general, Multiracial youth appear to be well-integrated into their school contexts. Still, it is also important to consider how Multiracial youths' racial-ethnic identification choices may shape social adjustment outcomes. Cross-sectional research by Binning et al. (2009) found that Multiracial adolescents who identified as Multiracial reported feeling less alienated at school compared to Multiracial youth who primarily identified as monoracial White or monoracial Asian. In contrast, Multiracial adolescents who primarily identified as monoracial Black or monoracial Latinx did not differ in their reports of school alienation compared to Multiracial youth who identified with their multiple racial-ethnic groups (Binning et al., 2009), suggesting that there may be important group differences in youths' social adjustment depending on the intersection of their racial-ethnic backgrounds. In addition to taking the heterogeneity of the Multiracial population into consideration, it is also important to consider how the racial-ethnic context of youths' schools may also serve a role in influencing their social adjustment.

Research by Cheng and Klugman (2010) assessed how the racial-ethnic composition of Multiracial adolescents' schools was associated with their school attachment. They found that Black Multiracial youth reported a greater sense of belonging in schools with a larger proportion of Black students at school. However, the racial-ethnic composition of youths' schools was not associated with White Multiracial youths' school attachment (Cheng & Klugman, 2010). Taken together, these findings suggest that the racial-ethnic context and youths' racial-ethnic backgrounds are important factors to consider when studying Multiracial youths' social adjustment in school settings. Again, these findings highlight that there may be no one

universally optimal racial-ethnic identification for Multiracial youth. Alternatively, the racial-ethnic identification that is most psychosocially adaptive for Multiracial youth may depend on their racial-ethnic backgrounds and the social contexts they occupy.

Extending Past Research

In summary, racial-ethnic identity development is associated with other important developmental domains, including psychosocial adjustment (Rivas-Drake et al., 2014). Much of the literature examining the racial-ethnic identity development of Multiracial youths has focused on racial-ethnic identification processes; yet, there is limited research that directly examines how Multiracial adolescents' racial-ethnic identification choices are associated with psychosocial adjustment outcomes and other domains of ethnic identity. Thus, the current study aims to address the following gaps in the literature.

First, much of the literature examining Multiracial youths' ethnic identity and psychosocial adjustment outcomes takes a comparative approach to examine how Multiracial youth fare compared to their monoracial peers. In doing so, we are not able to directly assess how the racial-ethnic identification choices of Multiracial youth are related to other psychosocial and ethnic identity domains. Considering that Multiracial youths' racial-ethnic identification is fluid across time and contexts, it is crucial to understand how this fluidity is related to other developmental outcomes.

Although the racial-ethnic context of Multiracial youths' schools appears to shape their racial-ethnic identification choices (Echols et al., 2018; Nishina et al., 2010), it is less clear how the school racial-ethnic context influences Multiracial youths' psychosocial adjustment. Theoretical speculation suggests that there may be no one definite, optimal racial-ethnic identification for Multiracial youth (Renn, 2008), and instead the identification that is most

adaptive for Multiracial youth likely depends on the context that Multiracial youth occupy. Research by Fisher and colleagues (2014) found that Multiracial youth who attended more racially diverse schools reported fewer mental health challenges compared to Multiracial youth who attended less racially diverse schools. By taking a context-dependent approach, we can further understand how Multiracial youth may be shifting their racial-ethnic identification in ways that are psychosocially adaptive given the school contexts they occupy.

Lastly, the Multiracial population are a heterogenous group of youth, and their experiences are largely shaped by the racial-ethnic groups that comprise their racial-ethnic background (Harris, 2016). Existing research suggests that how racial-ethnic identification choices are related to psychosocial adjustment may differ for Multiracial subgroups depending on the intersection of their racial-ethnic backgrounds (Binning et al., 2009; Harris, 2016; Phillips, 2019). By disaggregating findings for various Multiracial subgroups, we can better understand how certain racial-ethnic identification choices may be more or less psychosocially adaptive for different groups of Multiracial youth.

The Current Study

The purpose of the current study was to take a developmental, context-dependent approach to gain a more nuanced understanding of how adolescents' racial-ethnic identification is associated with developmental outcomes among Multiracial youth. More specifically, I examined in which contexts identifying as Multiracial or monoracial may be (mal)adaptive for Multiracial youths' ethnic identity and psychosocial adjustment outcomes. Moreover, the present study aimed to unpack how the relations between Multiracial youths' identification and psychosocial adjustment outcomes could vary depending on their racial-ethnic background and

the racial-ethnic diversity of Multiracial youths' high school contexts. Therefore, the current study addressed the following research questions:

1. How is identifying as Multiracial or monoracial upon the transition to high school related to ethnic identity and psychosocial adjustment outcomes among youth who identified as Multiracial in 8th grade before the transition?
    1.1 How does the high school racial-ethnic diversity moderate the associations between Multiracial youths' identification and psychosocial adjustment?
    1.2 Do the relations between racial-ethnic identification and psychosocial adjustment differ across Multiracial subgroups?

It was hypothesized that when and how racial-ethnic identification is related to psychosocial adjustment outcomes would depend on the racial-ethnic diversity of the school context, such that Multiracial youth who identified as monoracial in schools that were less racially diverse would report better psychosocial outcomes than youth who continue to identify as Multiracial. Although I did not have specific directional predictions, I expected that additional differences in these associations would emerge for different Multiracial subgroups given their varied experiences based on the intersection of their racial-ethnic backgrounds.

Method

Participants

Participants for this study consisted of the same 692 participants from the analytic sample in described in Study 1 (see Table 1.1). Additional analyses that explore differences among Multiracial subgroups also utilized the same sub-analytic sample of 328 participants who identified as Latinx-White (n = 125), Black-White (n = 85), Asian-White (n = 75), and Black-Latinx (n = 43) in the spring of 8th grade.

Procedure

The procedure for this study was the same as the procedure described in Study 1. Again, descriptive analyses were conducted to examine if there were significant differences in baseline (8th grade) measures of outcome variables being examined between youth who were retained across the transition and those who were not. Results indicated that there were no significant differences between youth who were retained and youth who were not on any of the predictors or covariates of interest, with the exception of youth who were retained had significantly higher reports of school belonging in 8th grade ($M = 3.67$) compared to youth who were lost across the transition ($M = 3.45$), $t(687) = 3.50$, $p < .001$.

Measures

Predictor Variable

Multiracial Identification. In both the spring of 8th and 9th grade, participants self-reported their racial-ethnic background from a list of 12 choices and an additional write-in option (see Appendix A). These data were used to create a dichotomous variable identifying youth who maintained a Multiracial identification across the middle-to-high school transition (*1*), and those who changed to a monoracial identification across the transition (*0*).

Moderator Variables

High School Racial-ethnic Diversity. Simpson's index of diversity (as measured in Study 1) was used to assess the racial-ethnic diversity of students' high school environments (Simpson, 1949).

Racial-ethnic background. Participants self-reported their racial-ethnic background from a list of 12 response options, and students who self-identified as Biracial/Multiethnic were asked to specify which racial-ethnic groups they identify with. These data were used to identify

various subgroups of the Multiracial participants in the sample for exploratory moderation analyses by Multiracial subgroups.

Outcome Variables

Ethnic Pride. Ethnic pride was measured using three items from the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) (see Appendix D). Participants responded to items (e.g., I feel like I really belong to my ethnic group) on a five-point Likert scale of 1 (*definitely yes!*) to 5 (*definitely no!*). Items were reverse coded and averaged to create a mean composite score for ethnic pride (M = 4.12, SD = 0.65) with higher values indicating greater ethnic pride ($\alpha = .76$).

Ethnic Exploration. Ethnic exploration was measured using one item from the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) (see Appendix D). Participants indicated to what degree they felt that they have done things that help them understand their ethnic background better on a five-point scale of 1 (*definitely yes!*) to 5 (*definitely no!*). This item was reverse coded such that higher values indicate greater ethnic identity exploration (M = 3.62, SD = 0.97).

Social Anxiety. Social anxiety was measured using six items from the Social Anxiety Scale for Adolescents (SAS-A; La Greca & Lopez, 1998) (see Appendix F). Participants responded to items (e.g., I worry what others think of me) and were asked how much they thought each statement was true for them. Participants responded on a five-point Likert scale of 1 (*not at all*) to 5 (*all of the time*). A mean composite score was computed to create a single social anxiety score (M = 2.35, SD = 0.82) with higher values indicating more symptoms of social anxiety ($\alpha = .86$).

Loneliness. Five items were used to assess the degree to which participants felt lonely at school (Asher & Wheeler, 1985) (see Appendix E). Participants responded to items (e.g., I feel left out of things) on a five-point Likert scale of 1 (*always true*) to 5 (*not true at all*). Items were reverse coded and averaged to create a mean composite score for loneliness (M = 1.92, SD = 0.93) with higher values indicating feeling more lonely at school ($\alpha = .95$).

School Belonging. Six items adapted from the school climate subscale of the Effective School Battery (ESB; Gottfredson, 1986) measured the degree to which students felt that they belong at their school (see Appendix H). Participants responded to items (e.g., I feel like I am a part of this school) on a five-point Likert scale of 1 (*for sure, yes!*) to 5 (*no way!*). Items were reverse coded and averaged to create a mean composite score for school belonging (M = 3.61, SD = 0.79) with higher values indicating greater feelings of belong at school ($\alpha = .89$).

School Safety. Six items adapted from the school climate subscale of the Effective School Battery (ESB; Gottfredson, 1986) assessed students' perceived safety at school (see Appendix G). Participants responded to items (e.g., How often do you feel safe at school?) on a five-point Likert scale of 1 (*always*) to 5 (*never*). Items were reverse coded and averaged to create a mean composite score for school safety (M = 4.41, SD = 0.60) with higher values indicating feeling more safe at school ($\alpha = .82$).

Individual-level Covariates

In addition to the covariates mentioned in Study 1 (i.e., sex, parental education, immigrant generation, heritage language use, and prior Multiracial identification stability), students' eighth grade (i.e., baseline) reports of ethnic pride, ethnic exploration, loneliness, social anxiety, school safety, and school belonging were included as controls to examine the

associations between Multiracial youths' racial-ethnic identification and psychosocial adjustment over and above baseline levels of specified outcomes.

Analytic Strategy

Given the nested structure of the data (i.e., students nested within schools), multilevel analyses were conducted using in Mplus 8.9 (Muthén & Muthén, 1998–2022). The CLUSTER function was used to account for the nested structure of the data (students nested within high schools), and full information maximum likelihood (FIML) estimation was employed using the MLR estimation procedure to handle missing data (Enders, 2010). Prior to estimating the hypothesized models, preliminary analyses were conducted to examine the descriptive properties and bivariate correlations among study variables.

Multilevel models were built in two stages. First, a series of multilevel regression analyses were conducted to investigate how changing to a monoracial identification (*0*) or maintaining a Multiracial identification (*1*) upon the transition to high school was associated with ethnic identity (e.g., pride, exploration) and psychosocial adjustment (e.g., social anxiety, loneliness, school safety, school belonging) outcomes. Second, to assess if school diversity moderated these associations, the cross-level interaction between school diversity (level-2) and Multiracial identification (level-1) was modeled.

Lastly, to examine whether patterns of racial-ethnic identification and psychosocial adjustment differ across Multiracial subgroups, additional moderated regression models were conducted with a sub-analytic sample (n = 328) consisting of the four largest Multiracial subgroups in the sample (Latinx-White (n = 125), Black-White (n = 85), Asian-White (n = 75), and Black-Latinx (n = 43)). All analyses controlled for participant self-reported sex, parental

education, immigrant generation, heritage language use, prior Multiracial identification stability, and baseline outcomes measures assessed at 8th grade.

Results

Descriptive Analyses

Descriptives and bivariate correlations between study variables can be found in Table 2.1. First, independent samples t-tests were conducted to examine if there were mean differences in ethnic identity or psychosocial adjustment outcomes for youth who maintained a Multiracial identification compared to youth who changed to a monoracial identification. On average, Multiracial youth who changed to a monoracial identification (M = 3.77, SD = 0.96) reported greater levels of ethnic exploration in 9th grade compared to youth who maintained a Multiracial identification (M = 3.47, SD = 0.95), $t(473) = 3.31$, $p < .001$. Additionally, youth who changed to a monoracial identification in 9th grade (M = 1.80, SD = 0.92) reported feeling less lonely than youth who maintained a Multiracial identification (M = 2.03, SD = 0.92) $t(468) = –2.70$, p = .007. There were no significant differences in youths' reports of ethnic pride, social anxiety, school belonging, or school safety whether Multiracial youth changed to a monoracial identification or maintained a Multiracial identification in 9th grade.

Next, regression analyses were conducted to examine differences in ethnic identity and psychosocial adjustment outcomes by Multiracial subgroups. Reference groups were rotated to ensure all differences were assessed. Results indicated that Black-White youth reported significantly greater ethnic pride compared to Asian-White youth (b = –0.26, p = .003). Moreover, Asian-White youth reported significantly greater ethnic exploration compared to Black-White (b = –0.31, p = .012) and Latinx-White (b = –0.40, p = .002) youth. Additional results indicated that Asian-White (b = 0.42, p = .002) and Latinx-White (b = 0.35, p = .030)

youth reported significantly more social anxiety compared to Black-Latinx youth. There were no significant differences in youths' reports of loneliness, school belonging, or school safety among Multiracial subgroups.

Multilevel Models

Intraclass correlations (ICC) were estimated by testing unconditional models, nesting students (level-1) in high schools (level-2) separately for each dependent variable. The ICC for ethnic pride was .007, and the ICC for ethnic exploration was .030. The ICCs for social anxiety and loneliness were .081 and .017, respectively, and the ICCs for school belonging and school safety were 0.018 and 0.065, respectively. Given the relatively small intraclass correlations (ICCs ranging from roughly 1–8%), this suggests that the variance in ethnic identity and psychosocial adjustment outcomes were primarily attributable to variance between individuals, rather than variance between schools.

Main Effect Models of Racial-ethnic Identification Choices on Psychosocial Adjustment

The results of the main effects models examining how Multiracial youths' identification is associated with ethnic identity and psychosocial adjustment outcomes are presented in Table 2.2. Turning first to the covariates, results indicated that 8th grade (baseline) measures of the outcome variables were significant, indicating the relative stability of Multiracial youths' ethnic identity and psychosocial adjustment outcomes. Girls reported less school belonging than boys, and youth who attended high schools that were more racially diverse reported significantly less school belonging and lower reports of ethnic pride.

Controlling for the covariates, I turn next to the predictor of interest: whether Multiracial youth maintained a Multiracial identification or changed to a monoracial identification in high school. Multiracial youth who maintained a Multiracial identification had greater reports of

loneliness in 9th grade compared to youth who switched to a monoracial identification ($b = 0.21$, $p < .01$). Additionally, Multiracial youth who maintained a Multiracial identification in high school reported less ethnic identity exploration compared to youth who changed to a monoracial identification ($b = –0.26$, $p < .01$). The main effect of identification on school belonging was marginally significant, suggesting that Multiracial youth who maintained a Multiracial identification reported less school belonging than youth who adopted a monoracial identification in 9th grade ($b = –0.11$, $p = .054$). In summary, Multiracial youth who changed to a monoracial identification in 9th grade reported feeling less lonely at school, more school belonging, and greater ethnic identity exploration compared to youth who maintained a Multiracial identification. Whether Multiracial youth maintained a Multiracial identification or changed to a monoracial identification was not associated with youths' 9th grade reports of social anxiety ($b = 0.05$, $p > .05$), school safety ($b = –0.05$, $p > .05$), or ethnic pride ($b = 0.01$, $p > .05$).

Moderations by School Racial-ethnic Diversity

To examine whether the associations between Multiracial youths' identification choices and psychosocial adjustment varied depending on the racial-ethnic diversity of their high school, I tested the cross-level interaction between Multiracial youths' identification (level-1) and the high school index of racial diversity (level-2). I expected that for youth who had transitioned to a high school that was less racially diverse, switching to a monoracial identification would be more psychosocially adaptive. Results are presented in Table 2.3. A significant cross-level interaction between the two indicators was found for ethnic exploration ($b = 0.08$, $p < .001$), and a marginally significant cross-level interaction was found for school belonging ($b = 0.09$, $p = .079$). Tests of simple slopes were conducted and are depicted in Figures 2.1 and 2.2.

Figure 2.1 shows the moderation effect for ethnic exploration. As hypothesized, changing to a monoracial identification was associated with greater ethnic identity exploration compared to maintaining a Multiracial identification, and this effect was stronger in schools that were less racially diverse. More specifically, for participants in schools that were one standard deviation below the mean ($b = –0.25$, $p < .001$), at the mean ($b = –0.24$, $p < .001$), and one standard deviation above the mean ($b = –0.22$, $p < .001$) for racial-ethnic diversity, changing to a monoracial identification was related to greater ethnic identity exploration. Figure 2.2 demonstrates a similar pattern for school belonging. For participants in schools that were one standard deviation below the mean ($b = –0.14$, $p < .001$), at the mean ($b = –0.13$, $p < .001$), and one standard deviation above the mean ($b = –0.11$, $p = .01$) for racial-ethnic diversity, changing to a monoracial identification was related to higher reports of school belonging compared to youth who maintained a Multiracial identification, and this effect was stronger in schools that were less racially diverse.

Moderation Models Assessing Differences by Multiracial Subgroups

Results of the regression models examining whether associations between Multiracial youths' racial-ethnic identification and psychosocial adjustment vary across Multiracial subgroups are presented in Table 2.4. Significant interactions between identification and Multiracial subgroups emerged for social anxiety and school safety. Tests of simple slopes were conducted and are depicted in Figures 2.3 and 2.4

Figure 2.3 illustrates the moderation effect for social anxiety. Findings indicated that there was a significant difference between Latinx-White and Asian-White youth ($b = –0.41$, $p = .012$), such that Latinx-White youth who changed to a monoracial identification reported significantly less social anxiety compared to Latinx-White youth who maintained a Multiracial

identification (b = 0.37, p = .004). In contrast, Asian-White youth who changed to a monoracial identification did not significantly differ in their reports of social anxiety compared to Asian White-youth who maintained a Multiracial identification (b = –0.04, p = 0.744).

Figure 2.4 demonstrates the moderation effect for school safety. Results indicated that there were significant interactions indicating differences between Black-Latinx and Latinx-White youth (b = 0.58, p = .026), and differences between Black-Latinx and Asian-White youth (b = 0.78, p < .001). Tests of simple slopes revealed that Black-Latinx youth who changed to a monoracial identification reported feeling more safe at school compared to Black-Latinx youth who maintained a Multiracial identification (b = –0.45, p = .027). In contrast, Asian-White (b = 0.33, p = .119) and Latinx-White (b = 0.12, p = .191) youth did not significantly differ in their reports of school safety whether they maintained a Multiracial identification or changed to a monoracial identification.

Discussion

The aim of the present study was to understand how Multiracial youths' racial-ethnic identification choices upon the transition to high school were related to ethnic identity and psychosocial adjustment outcomes. Given that how Multiracial youth identify is fluid in adolescence, it is important to understand how their identification choices are associated with other ethnic identity and psychosocial outcomes. Moreover, by understanding how the racial-ethnic context may shape the relations between Multiracial youths' racial-ethnic identification and developmental outcomes, we can better understand when and how this racial-ethnic identification fluidity may be psychosocially adaptive.

Multiracial Youths' Racial-ethnic Identification and Psychosocial Adjustment

Results from this study indicated that Multiracial youth who changed to a monoracial identification in 9th grade reported feeling less lonely and greater ethnic identity exploration compared to youth who maintained a Multiracial identification. Past research suggests that school transitions can be a socially vulnerable time for adolescents (Cantin & Boivin, 2004; Ellerbrock et al., 2015) where youth may be particularly looking for social acceptance and finding their "niche" in their new school context. Switching to a monoracial identification may be particularly adaptive as they are navigating a new social context, as youth may be aligning their racial-ethnic identification as a means to feel less lonely in school. Moreover, adolescence is a time where youth are still exploring what it means to be a member of their racial-ethnic group(s) (Rivas-Drake et al., 2014; Umaña-Taylor et al., 2014). Racial-ethnic identification and racial-ethnic identity are interrelated processes, and it is important to consider the dynamic and interconnected nature of these processes, especially for Multiracial youth. For example, the extent to which Multiracial youth have explored each of their racial-ethnic backgrounds may influence the racial-ethnic group(s) they choose to identify with. Alternatively, "trying on" different racial-ethnic labels may be a form of racial-ethnic identity exploration in and of itself. In this way we can see that although racial-ethnic identity and identification are distinct concepts, they are nevertheless deeply interconnected processes informing Multiracial youths' sense of self.

Additionally, maintaining a Multiracial identification or changing to a monoracial identification was not related to adolescents' reports of social anxiety, school safety, or ethnic pride, suggesting that youth who maintain a Multiracial identification may not necessarily feel anxious, unsafe, or unsure of their identity. Instead, shifting racial-ethnic identification appears to be more so related to measures of social connectedness and identity exploration, highlighting the

social nature of identity and identification processes for Multiracial youth (Tajfel & Turner, 1979). Racial-ethnic identity development is a social process, and individuals position themselves in their social world by aligning with social groups (Tajfel & Turner, 1979). When a Multiracial adolescent changes their racial-ethnic identification in response to a change in the racial-ethnic context of their school, this could be a way they are adapting to their new social context. Additionally, being exposed to a new social context can act as an opportunity to explore one of their racial-ethnic backgrounds more deeply. This may not be an explicitly negative experience for Multiracial youth, and rather it may be a normative experience that youth have. In contrast, it may be that having explicitly negative social experiences related to Multiracial youths' racial-ethnic identity development, such as experiencing discrimination or being socially pressured to identify with a particular monoracial label, that are more predictive of outcomes related to mental health and feelings of pride in one's identity (Brown, 1995; Kelcholiver & Leslie, 2007; Nishina et al., 2018). By developing a more nuanced understanding of when shifts in racial-ethnic identification are developmentally normative as opposed to detrimental to psychosocial adjustment, we can better support Multiracial youths' racial-ethnic identity and psychosocial development.

The Role of School Racial-ethnic Context

Findings also suggested that the racial-ethnic diversity of students' high school context shapes some of these associations between racial-ethnic identification and psychosocial adjustment. For example, Multiracial adolescents who switched to a monoracial identification reported more school belonging and ethnic identity exploration, and these associations were stronger in schools that were less racially diverse. Past research suggests that Multiracial youth are more likely to switch to a monoracial identification in schools that are less racially diverse

(Echols et al., 2018; Nishina et al., 2010), and these findings shed light on how youth may be shifting their identification in ways that are psychosocially adaptive given the racial-ethnic context of their schools (Burke & Kao, 2013; Nishina et al., 2010).

As the diversity of the school decreases, there are less groups that are equally represented. In schools that are particularly low in diversity, there is likely one racial-ethnic group that comprises a large numerical majority in the school. Racial-ethnic contexts such as these can oftentimes highlight an "us vs them" dynamic, as there is a numerical imbalance of power (Graham, 2018). Multiracial youth who change to a monoracial identification may be shifting in a way that aligns with the largest racial-ethnic group in the school (Nishina et al., 2010), which could be socially protective and result in greater feelings of belonging. Moreover, a shift in racial-ethnic identification appears to coincide with more racial-ethnic identity exploration. If youth are aligning their racial-ethnic identification with the largest group in school, there are likely more peers and opportunities in these contexts to explore what it means to be a member of that particular racial-ethnic group.

Unpacking the Heterogeneity of Multiracial Adolescents' Experiences

The final aim of this study was to assess whether the relations between racial-ethnic identification and psychosocial adjustment outcomes varied across Multiracial subgroups. While most of the findings did not indicate differences between Multiracial subgroups, there were significant interaction effects for social anxiety and school safety. Latinx-White youth who changed to a monoracial identification in 9th grade reported less socially anxiety compared to youth who maintained a Multiracial identification. Additionally, Black-Latinx youth who changed to a monoracial identification reported feeling more safe at school compared to Black-Latinx youth who maintained a Multiracial identification. Past research suggests that there is

considerable variability in how Latinx individuals identify both as a group and individually over time (Liebler et al., 2017; Perez & Hirschman, 2009) given the ambiguity in Latinx being considered a racial and/or an ethnic group in the United States (Atkin et al., 2022; Cross & Cross, 2008). In turn, Multiracial youth with a Latinx background may be afforded more flexibility in their racial-ethnic identification choices than other Multiracial subgroups.

Although the current study only examined whether youth identified as monoracial and not which monoracial group they identified as, findings from Study 1 indicated that Latinx-White youth who changed to a monoracial identification were more likely to identify as Latinx, while Black-Latinx youth who changed to a monoracial identification were equally likely to identify as Latinx or Black. An important contextual factor to consider is that Latinx youth make up the largest share of students in California public schools, where data for this study were collected (California Department of Education, 2016). Perhaps when Latinx Multiracial youth transition to high schools that have a relatively high presence of Latinx peers, switching to a monoracial Latinx identification results in feeling safer and less anxious as youth align with the largest racial-ethnic group in their school. Given the lack of clarity of Latinx as a racial and/or an ethnic group, Latinx Multiracial youth in particular may be more apt to take advantage of the racial-ethnic identification fluidity afforded to them in order to identify in ways that are psychosocially adaptive for them.

Limitations and Directions for Future Research

Despite its contributions, there were several limitations of the current study that raise important questions for future research. Due to the small sample sizes when only examining Multiracial youth who changed to a monoracial identification, I did not examine the specific racial-ethnic group that Multiracial youth changed to when they changed to a monoracial

identification, and how adopting different monoracial labels may be differentially related to youths' psychosocial adjustment. For example, Phillips (2019) found that Black-White and Asian-White girls reported less psychological stress when they identified as Black and Asian (respectively) than when they identified as White. In contrast, Latinx-White youth who identified as monoracial Latinx and monoracial White did not differ in their reports of psychological distress (Phillips, 2019). More research is warranted to further unpack how changing to a specific monoracial group may have differential impacts on youths' psychosocial adjustment.

Additionally, in this study I examined how the racial-ethnic diversity of Multiracial youths' high school contexts can shape the associations between youths' identification and adjustment. However, I did not take into account the presence and relative size of the racial-ethnic groups that make up youths' Multiracial backgrounds, which could also greatly impact both the likelihood that youth change to a particular racial-ethnic identification and their psychosocial outcomes. Consider, for example, two Asian-White adolescents who transitioned to two different high schools that are both relatively low in racial-ethnic diversity. In one of the high schools the largest racial-ethnic group is Asian, while in the other school Asian peers only comprise 10 percent of the student population. Both Asian-White adolescents change to a monoracial Asian identification, but because the presence and size of the racial-ethnic groups in their schools differ, their identification choices in these contexts could differentially impact their adjustment. Future research could benefit from further unpacking the nuance that the racial-ethnic context plays in shaping racial-ethnic identity processes and psychosocial adjustment for Multiracial youth by taking into the account the relative size and presence of various racial-ethnic groups in the school.

Last, the current study exclusively used two timepoints of data to focus on the middle to high school transition. Although focusing in on this critical developmental transition can provide informative insights into how context can shape racial-ethnic identity processes and psychosocial adjustment for Multiracial youth, it is also important to consider both the antecedents and long-term consequences of racial-ethnic identification on developmental outcomes. Future research should take a long-term longitudinal approach to examine how Multiracial youths' racial-ethnic identification is related to ethnic identity and psychosocial adjustment outcomes over time.

Conclusion

Taken together, findings from this study provide significant contributions to the literature on Multiracial youths' racial-ethnic identification and developmental outcomes. In contrast to early theoretical models that suggest there is a singular, optimal identification for Multiracial youth, Multiracial youth appear to be shifting their racial-ethnic identification in ways that are psychosocially adaptive given the racial-ethnic contexts of their schools. These findings highlight the importance of taking both a developmental and context-dependent approach to understanding how racial-ethnic identification choices are related to Multiracial youths' ethnic identity and psychosocial adjustment so that we can best support youth in their racial-ethnic identity development.

Table 2.1

Intercorrelations, Means, and Standard Deviations for Study 2 Variables (9th grade)

	1	2	3	4	5	6	7	8
Level 1								
1. Multiracial Identification	–							
2. Ethnic Pride	–.068	–						
3. Ethnic Exploration	–.152***	.518***	–					
4. School Belonging	–.043	.274***	.152***	–				
5. School Safety	–.023	.147***	–.009	.281***	–			
6. Loneliness	.124**	–.329***	–.100*	–.465***	–.374***	–		
7. Social Anxiety	.053	–.223***	–.099*	–.293***	–.331***	.607***	–	
Level 2								
8. High School Racial Diversity	.124**	–.103*	–.029	–.011	.016	.054	.004	–
M	.51	4.12	3.62	3.61	4.41	1.92	2.35	.63
SD	.50	0.65	0.97	0.89	0.60	0.92	0.82	.13
Range	0 - 1	2 - 5	1 - 5	1 - 5	1.25 - 5	1 - 5	1 - 5	.03 - .76
N	477	475	472	476	476	470	470	576

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

Table 2.2

Multilevel Models Predicting Multiracial Youths' Psychosocial Adjustment in 9th Grade (Level-1 n = *692; Level-2* n = *80)*

	Social Anxiety		Loneliness		School Belonging		School Safety		Ethnic Pride		Ethnic Exploration	
	b	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Individual-level												
Multiracial Identification	**0.05**	**0.11**	**0.21****	**0.10**	**–0.11**†	**0.06**	**–0.05**	**0.07**	**0.01**	**0.06**	**–0.26****	**0.09**
Sex	0.10	0.08	0.15†	0.08	–0.24***	0.05	0.01	0.05	–0.12†	0.06	0.02	0.10
Immigrant Generation	0.09	0.07	0.11	0.08	0.00	0.07	0.07	0.06	–0.02	0.06	0.04	0.10
Heritage Language Use	0.08	0.06	0.03	0.09	–0.10	0.07	–0.07	0.06	–0.01	0.06	0.17	0.12
Parent Education												
Less than HS	0.47**	0.18	0.19	0.15	–0.11	0.17	–0.29*	0.14	–0.10	0.20	–0.46†	0.27
Some college	0.31*	0.12	0.19	0.13	–0.07	0.13	–0.14	0.10	–0.08	0.08	–0.17	0.14
4-year degree	0.39**	0.12	0.27*	0.10	–0.14	0.12	–0.14	0.10	–0.03	0.08	–0.19	0.17
Graduate degree	0.24†	0.13	0.18	0.13	–0.12	0.11	–0.10	0.10	–0.09	0.08	–0.12	0.17
Identification Stability	0.00	0.03	–0.05	0.04	0.06	0.04	–0.01	0.02	0.01	0.03	0.04	0.05
Baseline Outcome (8th grade)	0.62***	0.04	0.61***	0.06	0.51***	0.05	0.34***	0.05	0.54***	0.04	0.37***	0.04
School-level												
High School Diversity Index	–0.04	0.23	0.25	0.19	–0.20*	0.10	0.05	0.19	–0.28*	0.11	–0.10	0.29

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Note. Multiracial Identification is a binary variable (1 = Multiracial, 0 = monoracial). Sex is a binary variable (1 = female). Immigrant generation is a binary variable (1 = 1st + 2nd generation). Heritage language use is a binary variable (1 = yes). Bolded row indicates main predictor of interest.

Table 2.3

Multilevel Models Examining Moderating Role of School Diversity on 9th Grade Psychosocial Adjustment (Level-1 n *= 692; Level-2* n *= 80)*

	Social Anxiety		Loneliness		School Belonging		School Safety		Ethnic Pride		Ethnic Exploration	
	b	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Individual-level												
Multiracial Identification	**–0.07**	**0.05**	**–0.08***	**0.05**	**0.00**	**0.00**	**0.01**	**0.01**	**–0.02***	**0.02**	**–0.01**	**0.00**
Sex	0.08	0.08	0.16*	0.07	–0.24***	0.06	0.00	0.05	–0.12*	0.06	0.02	0.10
Immigrant Origin	0.09	0.06	0.13	0.08	0.00	0.06	0.06	0.06	–0.02	0.06	0.04	0.10
Heritage Language Use	0.07	0.07	0.03	0.09	–0.10	0.08	–0.06	0.06	–0.01	0.06	0.17	0.12
Parent Education												
Less than HS	0.46†	0.25	0.29	0.20	–0.11	0.15	–0.30*	0.15	–0.12	0.14	–0.47†	0.27
Some college	0.30*	0.15	0.32**	0.12	–0.06	0.11	–0.14	0.10	–0.10	0.09	–0.16	0.14
4-year degree	0.39**	0.14	0.40**	0.13	–0.14	0.11	–0.15	0.09	–0.05	0.10	–0.20	0.16
Graduate degree	0.25	0.16	0.32*	0.14	–0.12	0.12	–0.10	0.10	–0.11	0.10	–0.12	0.16
Identification Stability	0.01	0.04	–0.05	0.04	0.06†	0.03	–0.01	0.02	0.01	0.03	0.04	0.05
Baseline Outcome (8th grade)	0.61***	0.04	0.59***	0.05	0.51***	0.04	0.35***	0.05	0.54***	0.04	0.36***	0.04
School-level												
High School Diversity Index	**–0.53**	**0.60**	**–0.30**	**0.45**	**–0.08***	**0.01**	**–0.01**	**0.31**	**–0.62***	**0.32**	**–0.23**	**0.63**
Cross-level Interaction												
Identification X Diversity	**0.88**	**0.46**	**0.81**	**0.74**	**0.09†**	**0.05**	**0.05**	**0.50**	**0.66**	**0.44**	**0.08*****	**0.02**

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Note. Multiracial Identification is a binary variable (1 = Multiracial, 0 = monoracial). Sex is a binary variable (1 = female). Immigrant origin is a binary variable (1 = 1st and 2nd generation youth). Heritage language use is a binary variable (1 = yes). Bolded rows indicate main predictors and cross-level interaction of interest.

Table 2.4

Models Examining Moderating Role of Multiracial Subgroup on 9th Grade Psychosocial Adjustment (Level-1 n = 328; Level-2 n = 80)

	Social Anxiety		Loneliness		School Belonging		School Safety		Ethnic Pride		Ethnic Exploration	
	b	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Predictors												
Multiracial Identification	**0.37****	**0.13**	**0.23**†	**0.14**	**0.01**	**0.14**	**0.12**	**0.09**	**–0.06**	**0.08**	**–0.44***	**0.20**
Racial-ethnic Background												
Black-White	**–0.05**	**0.18**	**0.19**	**0.17**	**0.07**	**0.15**	**0.15**	**0.09**	**0.18**	**0.19**	**0.23**	**0.22**
Black-Latinx	**–0.30**	**0.19**	**0.19**	**0.30**	**0.37***	**0.17**	**0.26**†	**0.16**	**–0.17**	**0.16**	**–0.01**	**0.23**
Asian-White	**0.24**†	**0.12**	**–0.20**	**0.25**	**0.01**	**0.19**	**–0.32**	**0.22**	**–0.04**	**0.15**	**0.27**†	**0.16**
Sex	**0.09**	**0.12**	**–0.07**	**0.10**	**–0.27****	**0.10**	**–0.01**	**0.07**	**–0.06**	**0.09**	**0.16**	**0.15**
Immigrant Origin	–0.16	0.11	0.10	0.11	0.08	0.08	0.09	0.08	–0.04	0.07	–0.01	0.12
Heritage Language Use	0.09	0.08	–0.08	0.16	–0.03	0.10	–0.03	0.07	–0.02	0.05	–0.02	0.13
Parent Education												
Less than HS	0.19	0.28	0.03	0.29	0.06	0.21	–0.59*	0.29	0.05	0.19	–0.19	0.34
Some college	0.36	0.22	0.10	0.26	0.10	0.12	0.05	0.11	–0.13	0.16	–0.09	0.21
4-year degree	0.22	0.17	0.19	0.18	0.09	0.12	–0.11	0.11	–0.22	0.17	–0.33	0.20
Graduate degree	0.06	0.26	0.20	0.23	0.10	0.13	–0.05	0.10	–0.21	0.13	0.07	0.19
Identification Stability	–0.09†	0.05	–0.08	0.05	0.06	0.04	–0.05	0.03	0.02	0.04	0.08†	0.05
Baseline Outcome (8th grade)	0.65***	0.08	0.76***	0.09	0.36***	0.06	0.32***	0.07	0.50***	0.05	0.35***	0.05
Interaction Terms												
Identification X B-W	**–0.11**	**0.24**	**–0.07**	**0.31**	**–0.12**	**0.17**	**–0.22**	**0.14**	**0.06**	**0.21**	**–0.09**	**0.28**
Identification X B-L	**–0.14**	**0.20**	**–0.10**	**0.25**	**–0.29**	**0.33**	**–0.58***	**0.26**	**0.26**	**0.25**	**0.51**	**0.44**
Identification X A-W	**–0.41***	**0.16**	**0.02**	**0.31**	**–0.05**	**0.22**	**0.20**	**0.26**	**0.26**	**0.19**	**0.20**	**0.18**

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Note. Reference group for racial-ethnic background is Latinx-White. Multiracial Identification is a binary variable (1 = Multiracial, 0 = monoracial). Sex is a binary variable (1 = female). Immigrant origin is a binary variable (1 = 1st and 2nd generation youth). Heritage language use is a binary variable (1 = yes). Bolded rows indicate main predictors and cross-level interaction of interest.

Figure 2.1

Interaction Effect of Identification and School Diversity on Ethnic Exploration

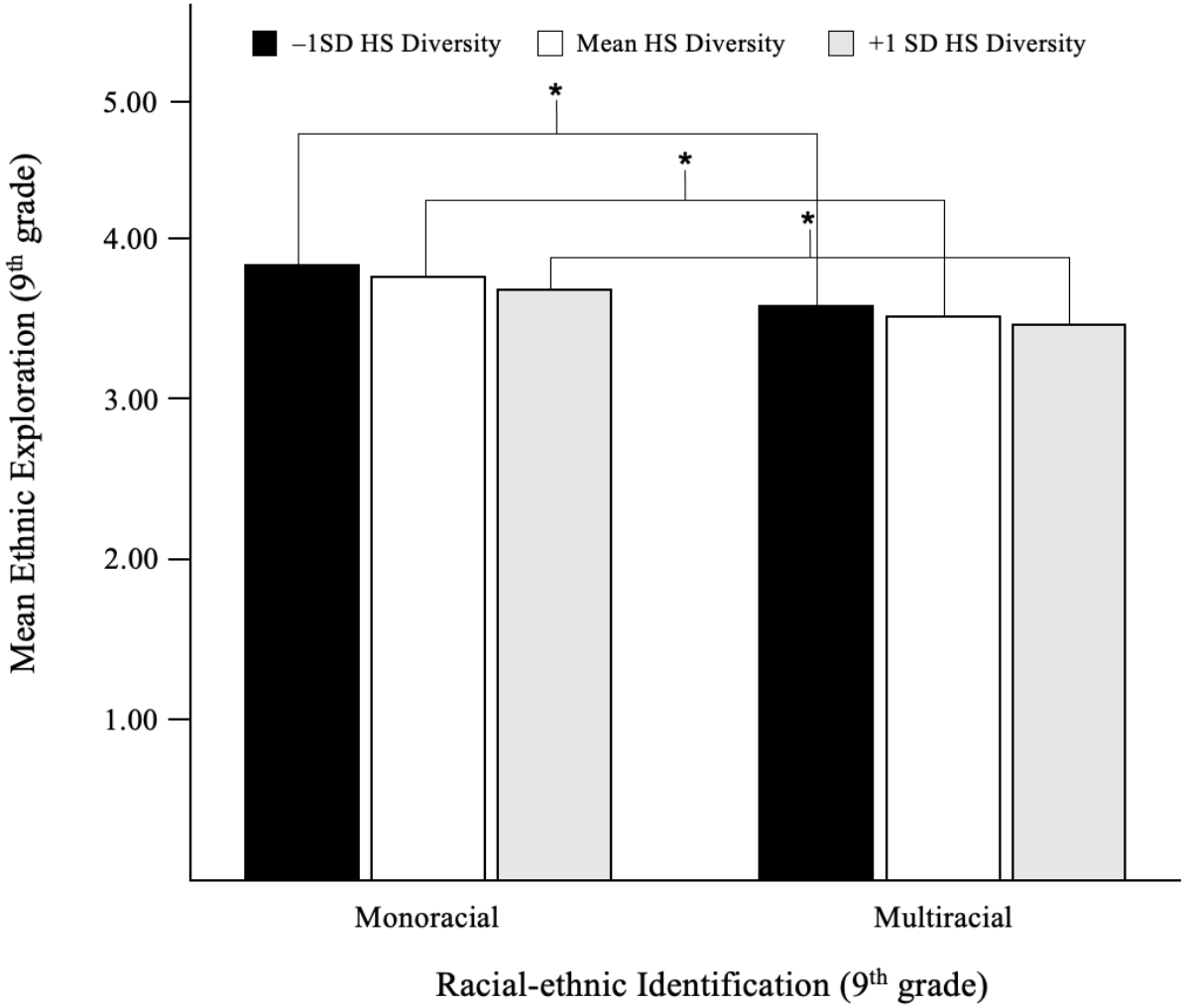


Figure 2.2

Interaction Effect of Identification and School Diversity on School Belonging

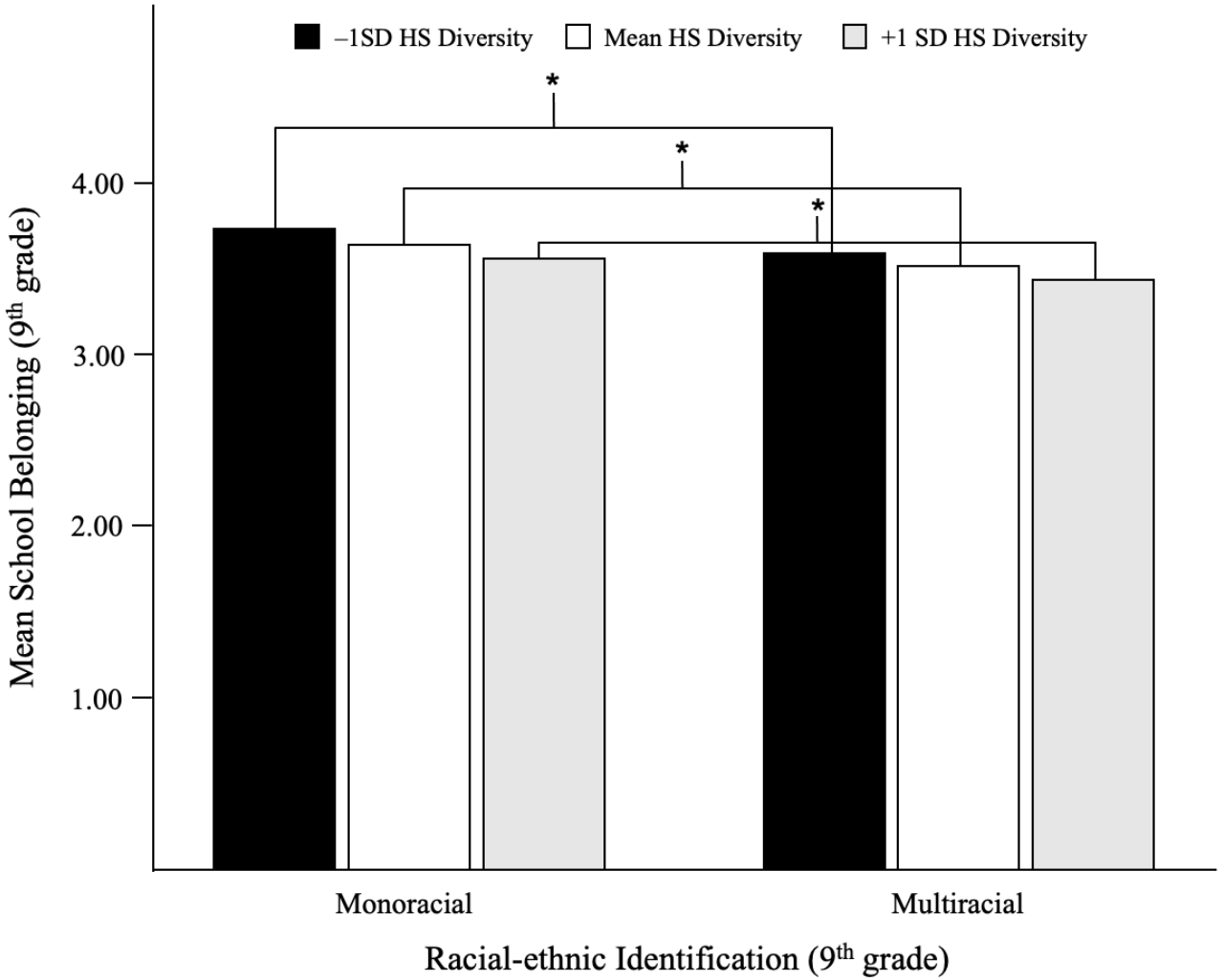


Figure 2.3

Interaction Effect of Identification on Social Anxiety by Biracial Subgroup

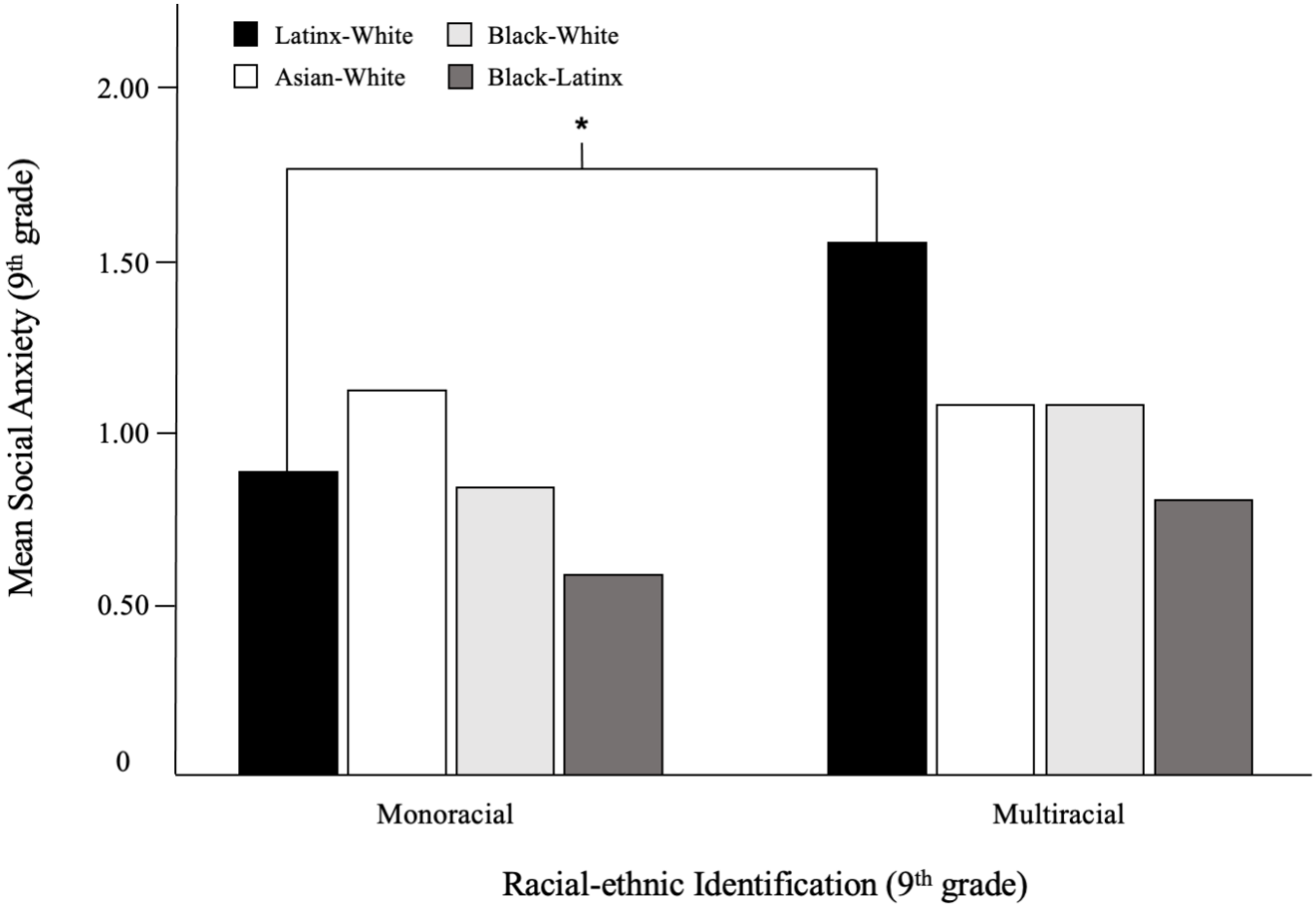
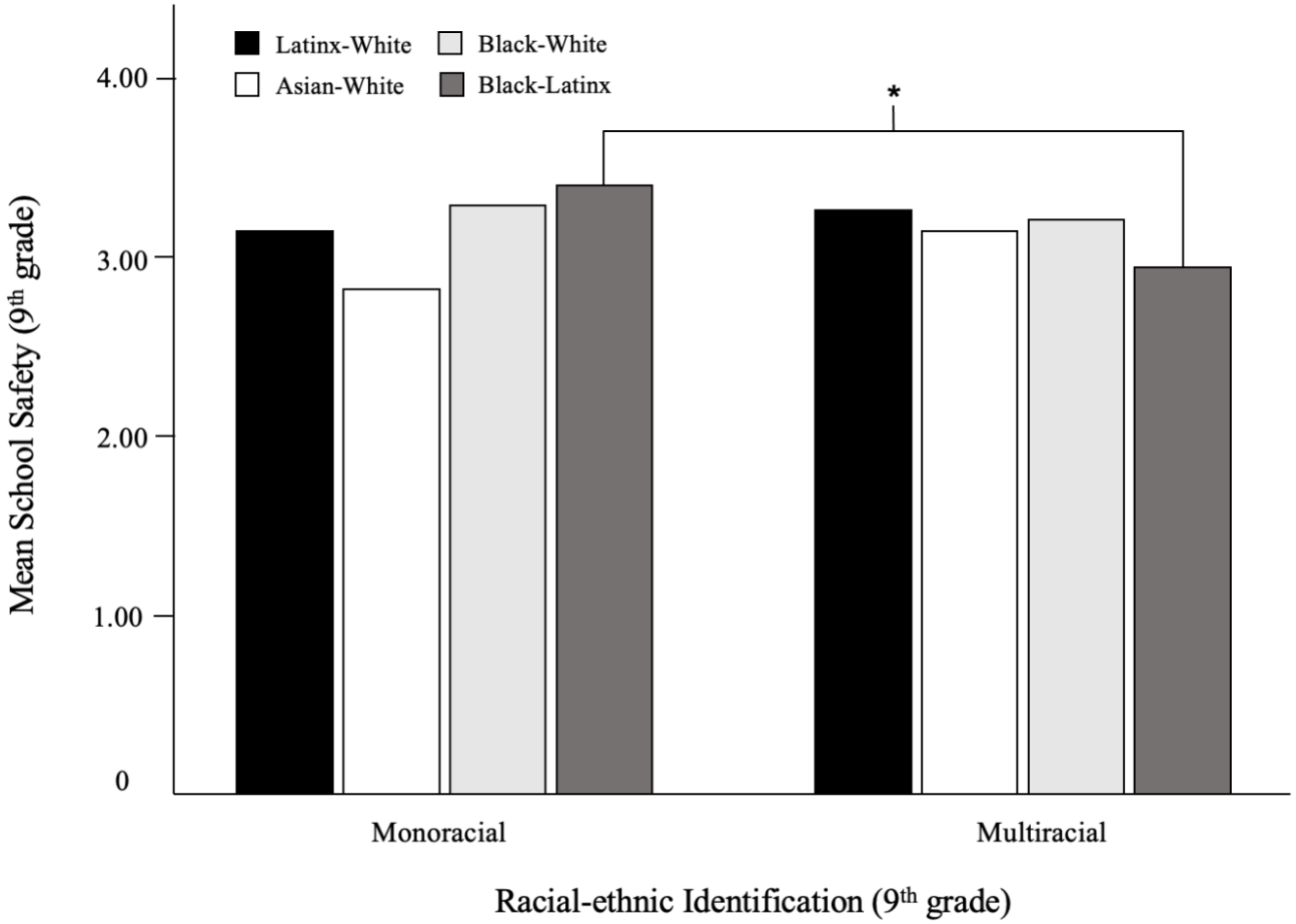


Figure 2.4

Interaction Effect of Identification on School Safety by Biracial Subgroup



General Discussion

Due to their multiple racial-ethnic backgrounds, many Multiracial youth engage in a unique identity process whereby they may change how they identify their race/ethnicity across time and context (Gaither, 2015). The racial-ethnic context of their environments has been shown to shape these racial-ethnic identification processes, particularly in school contexts (Burke & Kao, 2013; Echols et al., 2018; Hitlin et al., 2006; Nishina et al., 2010). However, there has been little empirical research that assesses how *changes* in the racial-ethnic context of youths' school environments can shape identification and adjustment outcomes in adolescence. Across my two dissertation studies, I situate this phenomena in the middle-to-high school transition to examine how changes in youths' school contexts can influence Multiracial youths' racial-ethnic identification and psychosocial adjustment outcomes.

In Study 1, I examined how changes in the racial-ethnic context of Multiracial youths' middle and high schools are related to the likelihood that they maintain a Multiracial identification or change to a monoracial identification across the transition. Consistent with past research (Echols et al., 2018; Nishina et al., 2010), Multiracial adolescents were more likely to maintain a Multiracial identification across the transition to high school when they attended high schools that were racially diverse. However, youth who perceived a greater proportion of same-ethnic peers in high school were more likely to change to a monoracial identification, highlighting the social nature of Multiracial youths' identity processes. Moreover, Multiracial youth were more likely to align their racial-ethnic identification with the racial-ethnic group they perceived to be the largest in their schools, while objective measures of their school racial-ethnic context were not related to which racial-ethnic group they identified with. Taken together,

findings from Study 1 highlight the importance of accounting for Multiracial youths' subjective experiences of their racial-ethnic contexts in shaping their racial-ethnic identification choices.

Once we have gained an understanding of the predictors of Multiracial youths' racial-ethnic identification, we can begin to unpack the consequences of youths' racial-ethnic identification choices. In Study 2, I examined how identifying as monoracial or Multiracial across the transition to high school was related to Multiracial youths' ethnic identity and psychosocial adjustment outcomes. I found that Multiracial youth who changed to a monoracial identification in 9th grade reported more ethnic exploration, in addition to feeling less lonely at school. Switching to a monoracial identification may be particularly adaptive for youth who transitioned to high schools that are racially homogenous, as these associations were stronger in schools that were less racially diverse. Rather than placing a value judgment on how Multiracial youth *should* identify, findings from the current dissertation suggest that Multiracial youth may be capitalizing on the identification fluidity afforded to them and identifying in ways that are the most psychosocially adaptive to them based on the racial-ethnic contexts of their schools. As Multiracial youth navigate a world in which monoraciality is the assumed default (Harris, 2016), youth may be adopting monoracial labels as a protective mechanism as they navigate their immediate social context and interpersonal interactions (Rogers et al., 2021a).

Across both studies, I also examined the nuance in these processes across different Multiracial subgroups to unpack the heterogeneity of Multiracial youths' experiences. In Study 1, Multiracial youth with a White racial-ethnic background were more likely to change to a monoracial identification when they reported an increase in same-ethnic peers at school, whereas Black-Latinx youths' identification choices were not associated with changes in perceived same-ethnic representation. There may be something about being White Multiracial that makes these

youth more perceptive to who they consider same- or cross-race peers. Additionally, in Study 2, I found that changing to a monoracial identification resulted in Latinx-White youth feeling less socially anxious and Black-Latinx youth feeling more safe at school. While there is importance in identifying more general developmental patterns for Multiracial youth as a group, it is also critical to consider and examine the differences for different Multiracial subgroups given each racial-ethnic group's varied culture, history, and experiences (Harris, 2016).

Taken together, these findings highlight the importance of the school racial-ethnic context in shaping Multiracial youths' racial-ethnic identification choices and their psychosocial adjustment. Moreover, subjective perceptions of the racial-ethnic context of youths' schools may be particularly important in influencing whether Multiracial youth choose to identify as Multiracial or monoracial. Differences in associations also differed to some extent across subgroups of Multiracial youth, supporting the notion that Multiracial individuals' experiences are shaped in part by the intersection of their racial-ethnic group memberships. The findings from the current dissertation have several implications future for research with Multiracial youth.

Multiracial Youths' Racial-ethnic Identity and Psychosocial Development in M(ai)cro Contexts

Considering that prior research consistently demonstrates that Multiracial youth are fluid in how they identify their race/ethnicity over time and across contexts, it is important to consider both the proximal and distal influences that shape these experiences (Harris, 2016; Rogers et al., 2021a). Findings from the current studies reiterate that the racial-ethnic diversity of Multiracial youths' schools plays an important role in shaping their racial-ethnic identification choices and psychosocial adjustment. Consistent with existing research (Echols et al., 2018; Nishina et al., 2010), Multiracial adolescents who attended more racially diverse high schools were more likely

to maintain a Multiracial identification across the transition to high school. Given the historical erasure of multiraciality in the U.S. that has (re)constructed the monoracial paradigm of race over time, Multiracial individuals are oftentimes navigating a social world were monoraciality is assumed to be the default (Harris, 2016). Multiracial youth experience this monoracial paradigm of race in proximal ways, such as in their social interactions with others (e.g., being miscategorized by peers as monoracial). Additionally, Multiracial youth experience the monoracial paradigm of race in more distal, systemic ways, such as only being allowed to select one racial-ethnic category when filling out institutional forms and surveys (e.g., on standardized tests). As such, Multiracial youth may be taking agency in their racial-ethnic identity development by shifting their racial-ethnic identification in response to social interactions or environments where a monoracial paradigm of race is emphasized. School contexts that are more racially diverse may afford Multiracial youth more liberty in identifying with multiple racial-ethnic groups. In contrast, social settings that are less racially diverse may restrict Multiracial youths' reference points for who may be considered a "similar" other. In turn, this may lead youth to take advantage of the identification flexibility afforded to Multiracial individuals (Gaither, 2015), and choose to identify with one of their monoracial backgrounds that is most psychosocially adaptive given their immediate racial-ethnic context and the larger sociopolitical climate of the U.S. (Echols et al., 2018; Rockquemore & Brunsma, 2002).

Past research has suggested that attending racially diverse schools may be protective for Multiracial youths' psychosocial outcomes. For example, Fisher and colleagues (2014) found that Multiracial youth who attended more racially diverse schools reported fewer mental health challenges compared to Multiracial youth who attended less racially diverse schools. However, this study used participants' self-reported racial-ethnic identification at one timepoint. Instead, it

may be the case that Multiracial youth *who identify as Multiracial* report better mental health outcomes when they attend racially diverse schools. Future research should continue to explore other ways to intentionally capture Multiracial youth in our samples in order to best assess how racial-ethnic identification is related to psychosocial adjustment among Multiracial youth (Grilo et al., 2023; Mauer et al., 2020). For example, future studies could identify Multiracial participants based on parent race/ethnicity data and measure whether these youth self-identify as Multiracial or monoracial, or future research could capitalize on longitudinal research designs by assessing Multiracial youths' racial-ethnic identification at multiple timepoints.

Although there is a growing body of research examining the role of school racial-ethnic diversity in Multiracial youths' development, it is also important to consider the role of group representation. The concept of critical mass discusses the importance of having a meaningful representation of same-ethnic peers in school contexts (Garces & Jayakumar, 2014; Graham, 2018), which poses several important inquiries when thinking about the future of research with Multiracial youth. First, how does the presence and relative size of the racial-ethnic groups that comprise a Multiracial adolescents' background influence their racial-ethnic identification choices? It may be the case that if one of Multiracial youths' racial-ethnic groups is largely represented in their schools, they may be more likely to adopt that racial-ethnic identification (Burke & Kao, 2013). Alternatively, how might a Multiracial youth choose to identify their race/ethnicity when they attend a school that is racially diverse, but their racial-ethnic groups are not adequately represented? Same-ethnic peers play a crucial role in youths' development, providing spaces for youth to explore their identities and buffer from negative experiences with cross-ethnic peers (e.g., discrimination, victimization) (Graham et al., 2014; Tatum, 2017).

Future research could benefit from including measures of group representation when studying the role of racial-ethnic context of Multiracial youths' development.

Toward a Deeper Understanding of Same-/Cross-ethnic Perceptions of Multiracial Youth

Given the importance of Multiracial youths' perceptions of their social context in shaping their racial-ethnic identification, there is also a great need to understand who Multiracial youth consider to be same- and cross-ethnic peers (Nishina & Witkow, 2019). The intergroup relations literature largely focuses on friendships as contexts for studying same- and cross-ethnic relations in adolescence (Kawabata & Crick, 2008; Pettigrew, 1998; Tropp & Prenovost, 2008), as friendships take on increasing importance during adolescence and are unique from other social relationships in that they are characterized by equal status and high levels of intimacy (Hartup, 1996). Past research examining the friendships of Multiracial youth suggests that they tend to have friendship networks that are racially diverse (Quillian & Redd, 2009), and youth are more likely to maintain a Multiracial identification when they have ethnically diverse friendships (Echols et al., 2018). Moreover, Multiracial youth are uniquely situated in their social networks, acting as "bridges" between monoracial peers to facilitate cross-ethnic friendships in their schools (Echols & Graham, 2020). These findings indicate that Multiracial youth are surrounded by and/or surround themselves with racially diverse peers, which may suggest more flexible boundaries for who they consider to be same-ethnic peers. However, it is important to explicitly assess *who* Multiracial youth perceive to be same-ethnic.

Considering that the same- and cross-ethnic perceptions of Multiracial youth do not develop in a vacuum, it is also important to understand monoracial individuals' social perceptions of Multiracial individuals. The social perceptions literature has examined how monoracial individuals categorize Multiracial individuals' race/ethnicity (Ho et al., 2011; Ho et

al., 2017; Young et al., 2021). Methodologically, these social perception studies typically present adult participants with a target image and ask the participant to specify the racial-ethnic group of the individual in the target image, and findings demonstrate the individuals are more likely to categorize White Multiracial individuals as their minoritized racial-ethnic background (Ho et al., 2011; Young et al., 2021). When considering how monoracial individuals racially perceive Multiracial individuals, it is important to consider the variability in same- or cross-ethnic categorization across different monoracial groups. For example, both White and Black monoracial individuals tend to categorize Black-White biracial individuals as Black (Ho et al., 2017), but for White monoracial individuals this would indicate a cross-ethnic group relation, while for Black monoracial individuals this would signify a same-ethnic group relation. Just as it is important to understand who Multiracial youth consider to be same- and cross-ethnic, understanding to what extent monoracial youth consider Multiracial youth to be same- or cross-ethnic has important implications for our understanding of Multiracial youths' experiences and racial-ethnic identity development.

There is additional support from other research indicating that Multiracial individuals report experiencing racial-ethnic miscategorization and pressure to identify with monoracial labels from monoracial peers (Brown, 1995; Kelcholiver & Leslie, 2007; Kerwin et al., 1993; Lopez, 2003; Townsend et al., 2009), suggesting that Multiracial youth are, to some extent, aware of monoracial youths' perceptions of them as same- or cross-ethnic. As the monoracial paradigm of race suggests (Harris, 2016), Multiracial individuals experience instances where they are confronted with the dominant ideology where race is conceptualized as fixed, discrete categories (Harris, 2016). These experiences likely shape the degree to which Multiracial youth are able to adopt certain racial-ethnic identification labels over others. Given the social nature of

identity development in adolescence, future research should take a critical, developmental approach to understanding the potential bidirectional influence of adolescents' social perceptions on Multiracial youths' identification choices over time (Harris, 2016; Rogers et al., 2021a). Examining (1) who Multiracial youth consider to be same- and cross-ethnic, (2) to what extent monoracial youth consider Multiracial youth to be same- or cross-ethnic, and (3) how these social perceptions are impacted by the racial-ethnic context and change over time, are crucial next steps for future research to gaining a deeper understanding of the role that social perceptions play in shaping Multiracial youths' identity development and social adjustment.

Adequately Measuring and Exploring the Heterogeneity of Multiracial Youths' Experiences

Last, future research will greatly benefit from continuing to explore the heterogeneity of Multiracial youths' experiences and utilizing methods and measures that adequately assess their experiences. Harris's (2016) MultiCrit tenet of intersections of multiple racial-ethnic identities highlights that the experiences of Multiracial individuals will differ depending on the intersection of the racial-ethnic groups that comprise their racial-ethnic background. Due to the varied social realities of different racial-ethnic groups in the U.S. context, Multiracial individuals' social experiences and challenges will also differ depending on their racial-ethnic group memberships. Although the current studies explored differences across different subgroups of Multiracial youth, there are some limitations. First, only four subgroups of Biracial youth were examined, of which three subgroups included Biracial youth with a White background. This is a consistent pattern in the field, as most studies that study Multiracial populations have samples that consist of Black-White, Asian-White, Latinx-White, or Native American-White participants (Charmaraman et al., 2014). However, Multiracial youth who do not have a White racial-ethnic background likely have unique experiences compared to White Multiracial youth. Additionally,

Multiracial individuals who belong to three or more racial-ethnic groups also likely have varied experiences from Biracial individuals. For example, Multiracial youth who belong to three or more racial-ethnic groups have a Bi/Multiracial parent, and their Bi/Multiracial parent may engage in different racial-ethnic socialization strategies that the monoracial parents of Biracial youth do not (Atkin & Jackson, 2021). Given the heterogeneity of the Multiracial population, it is imperative that researchers are intentional about unpacking the nuance in individuals' experiences based on the intersection of their racial-ethnic backgrounds.

Additionally, while quantitative methods are useful to examine associations between variables, they are oftentimes not able to adequately capture the nuance of Multiracial individuals' experiences. For example, Study 2 of the current dissertation utilized the Multigroup Ethnic Identity Measure (Phinney, 1992) to assess Multiracial youths' ethnic pride and exploration. However, the items in this scale are designed to pull from a single racial-ethnic identity (e.g., "I feel like I really belong to my ethnic group", "I have often done things that help me understand my ethnic background better"). This can create ambiguity in how youth may be thinking about and responding to these questions, as Multiracial youth may have different responses to the same question depending on which racial-ethnic identity they are pulling from. For example, a Black-Latinx youth may feel like they have oftentimes explored their Black racial-ethnic background, but may not have had the same opportunities to explore their Latinx racial-ethnic background. There have been new measures that have been developed that take a more nuanced approach to assessing Multiracial youths' experiences, such as the Multiracial Experiences Measure (Yoo et al., 2016). Future research could also capitalize on the strengths of qualitative research methods to further unpack the nuance of Multiracial individuals' experiences to assess differences in experiences across subgroups of Multiracial individuals. By centering the

voices of Multiracial individuals, we can gain deeper insights into *why* they select a particular racial-ethnic identification in a particular context and *how* they perceive their racial-ethnic context of their schools and other environments.

Conclusion

In summary, the findings from these two studies highlight the importance of utilizing a critical, developmental approach to understanding Multiracial youths' racial-ethnic identity development in context. By examining how Multiracial youth navigate important developmental transitions and the role of their social contexts, we can gain a deeper understanding of how Multiracial youth are making meaning of their identities in adolescence. Multiracial youth are the fastest growing racial-ethnic group in the U.S. (U.S. Census, 2020), and as the number of individuals who identify as Multiracial continues to grow it becomes increasingly important to understand the racial-ethnic experiences that are pertinent to their psychosocial and racial-ethnic identity development.

Appendix A

Racial-ethnic Identification

Every person belongs to an ethnic group, or more than one group. Please select the circle that describes your ethnic group.

What do you consider your ethnic group to be? (Please mark only one group)

- o American Indian
- o Black/African American
- o Black/Other country of origin (e.g., Belize, Guyana, Caribbean, West Indies)
- o East Asian (e.g., Chinese, Korean, Japanese)
- o Latino/other country of origin (e.g., Guatemala, Argentina, Caribbean, Puerto Rico, Dominican Republic)
- o Mexican/Mexican American
- o Middle Eastern (e.g., Persian)
- o Pacific Islander (e.g., Samoan, Filipino)
- o South Asian (e.g., Indian, Pakistani)
- o Southeast Asian (e.g., Vietnamese, Cambodian, Thai, Laotian)
- o White/Caucasian
- o Multiethnic/Biracial Please specify _____
- o Other Please specify _____

Appendix B

Perceived Same-ethnic Representation

How many students at this school are from <u>YOUR</u> ethnic group?

- o None or hardly any (less than 10%)
- o A few (10 – 20%)
- o Some (20 – 40%)
- o About half (40 – 60%)
- o More than half (60 – 80%)
- o Most (80 – 90%)
- o All or almost all (90 – 100%)

Appendix C

Perceived Largest Racial-ethnic Group in School

Which is the biggest ethnic group at your school? (i.e., which group has the most students?) Mark only ONE.

- o African American/Black
- o Asian/Pacific Islander
- o Caucasian/White
- o Latino/Mexican American
- o None. There is no biggest group at this school.

Appendix D

Ethnic Pride and Ethnic Exploration

Being in an ethnic group means different things to different people. For example, belonging to an ethnic group is important to some kids, but for other kids it isn't very important. Some kids think a lot about their ethnic group, but other kids hardly think about it at all.

Below are some questions about how you think about your ethnic group.

	Definitely Yes!	**Yes**	**Sort Of**	**No**	**Definitely No!**
1. I feel like I really belong to my ethnic group	○	○	○	○	○
2. I know what it's like to be a member of my ethnic group	○	○	○	○	○
3. I have often done things that will help me understand my ethnic background better	○	○	○	○	○
4. I am proud that I am a member of my ethnic group	○	○	○	○	○

* Note: Questions 1, 2 and 4 capture ethnic pride. Question 3 assesses ethnic exploration.

Appendix E

Loneliness

Now we are interested in the feelings you have while at school. Do you think this?

	Always true	**True most of the time**	**Sometimes true**	**Hardly ever true**	**Not true at all**
1. I have nobody to talk to	○	○	○	○	○
2. I feel alone	○	○	○	○	○
3. I feel left out of things	○	○	○	○	○
4. There's nobody I can go to when I need help	○	○	○	○	○
5. I'm lonely at school	○	○	○	○	○

Appendix F

Social Anxiety

We would also like to know a little more about you and how you feel around others.
How much is each statement true for you?

	Not at all	Hardly ever	Sometimes	Most of the time	All the time
1. I worry about what others think of me	○	○	○	○	○
2. I'm afraid that others will not like me	○	○	○	○	○
3. I am quiet when I'm with a group of people	○	○	○	○	○
4. I'm afraid to invite others to do things with me because they might say no	○	○	○	○	○
5. I feel shy even with students I know very well	○	○	○	○	○
6. It's hard for me to ask others to do things with me	○	○	○	○	○

Appendix G

School Safety

How often…

	Always	**Most of the time**	**Some of the time**	**Hardly ever**	**Never**
1. do you feel safe at school?	O	O	O	O	O
2. are you afraid that someone will hurt or bother you at school?	O	O	O	O	O
3. do you feel safe during breaks?	O	O	O	O	O
4. do you feel safe in hallways or stairs?	O	O	O	O	O
5. are you afraid that someone will hurt or bother you in your school restrooms?	O	O	O	O	O

Appendix H

School Liking and Belonging

We also want to know your opinions about YOUR high school. Do you think this…

	Always true	**True most of the time**	**Sometimes true**	**Hardly ever true**	**Not true at all**
1. I like school	○	○	○	○	○
2. I look forward to going to school	○	○	○	○	○
3. I feel like I am part of this school	○	○	○	○	○
4. I feel close to people at this school	○	○	○	○	○
5. I feel that I belong in this school	○	○	○	○	○
6. I feel respected and valued at this school	○	○	○	○	○

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