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School Context, Ethnic Identity, and Attributions for Failure in Urban Middle Schools

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Publication Date
2019

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA

Los Angeles

School Context, Ethnic Identity, and Attributions for Failure in Urban Middle Schools

A thesis submitted in partial satisfaction

of the requirements for the degree Master of Arts in Education

by

Manisha Kaur Chase

2019

ABSRACT OF THE THESIS

School Context, Ethnic Identity, & Attributions for Failure in Urban Middle Schools

by

Manisha Kaur Chase

Master of Arts in Education

University of California, Los Angeles, 2019

Professor Sandra Graham, Chair

School context, ethnic identity, and attributions for failure may be possible factors behind students' decline in performance during middle school. Using data from a survey of 1,735 urban eighth-graders throughout California, the current study seeks to explore the relationship between school context, ethnic identity, and attributions for failure. Results suggest citing external attributions for failure are not protective of academic achievement across the board, highlighted by ethnic group differences. Additionally, ethnic identity was found to have differential effects on academic achievement given varying same-ethnic peer contexts. Understanding how ethnic identity affects students' encounters with failure in urban contexts is important for designing supports to help students persevere.

The thesis of Manisha Kaur Chase is accepted.

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2019

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In eighth-grade, adolescents are on the cusp of transitioning to high school. Adolescence, as established in existing research, is a time of much change: from neurological and pubertal changes (Jaworska & MacQueen, 2015) to identity development (Erikson, 1968; Marcia, 1980; Phinney, 1993), as well as a school transition. Such change may result in various physical, emotional, and academic consequences for the adolescent student.

School transitions, for example, have been shown to result in a decline in academic performance (Felmlee, McMillan, Rodis, & Osgood, 2018; Benner & Graham, 2009; McCallumore & Sparapani, 2010; Finger & Silverman, 1966). Such transitions have also been linked to decreases in feelings of belonging and self-esteem (Hughes, Um, Kwok, Cham, & West, 2015; Barber & Olsen, 2004), particularly among minority students (Murphy & Zirkel, 2015). It is well established that the way in which a student perceives these adjustments or instances of failure can provide clues about the way in which they respond to that environment (Hazari, 2014; Forsyth, Story, Kelley, & McMillan, 2009). Thus it is important to understand how failure is perceived, such that students may approach possible instances of failure in adaptive ways.

One factor that may impact students' perception of academic failure is ethnic identity (Fuligni, Witkow, & Garcia, 2005). Ethnic identity refers to a person's understanding of and identification with their respective ethnic group (Phinney, 1992). This identification may be an important way in which students perceive challenges and as a result, react to them.

As perception, and perhaps perception through the lens of their ethnic identity, plays a role in the way students view failure, it is also important to understand the attributions or causes

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students believe are responsible for a certain outcome (Weiner, 1986; Weiner, 2010). This is in part because students' attributions play a role in how and to what extent they put forth effort, which may ultimately affect their overall academic achievements (Bell, McCallum, Bryles, Driesler, McDonaled, Park, & Williams, 1994; Sukariyah & Assaad, 2015).

Students approach school transitions with history, including but not limited to their identity and previous academic experiences, all of which take place in particular contexts and affect how students adjust (Benner & Graham, 2009). Thus, school context is also essential toward understanding minority student perception, particularly in regards to ethnic identity and attributions for failure, and how that ultimately affects student academic outcomes. Understanding the ways in which minority students conceptualize and respond to instances of failure at school might then serve to suggest more adaptive outcomes. The current study seeks to explore how school context affects student ethnic identity, how ethnic identity may serve as lens through which students make attributions for instances of failure, and how these attributions affect their overall achievement.

Theoretical Framework

The current study employs a theoretical borderlands approach (Abes, 2009) by utilizing two prevailing theories in the field of identity development. Social Identity Theory (Tajfel, 1969) posits that groups are a source of pride, self-esteem, and belongingness for individuals. Via a three-step process of social categorization, identification, and group comparison, one is able to characterize what defines certain groups, align oneself with a particular group based on such characterizations, and finally, engage in group comparison in order to bolster one's own ingroup membership. This theory, while it may be criticized for phenomena it fails to explain such as intergroup similarities (Brown, 2000), helps frame the current study of ethnic identity and the

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ways in which students may view their academic environment as a result of ethnic group membership. For example, a student with strong ethnic identity may view academic failure as institutional bias against their ethnic group. Additionally, Erikson's theory of psychosocial development (Erikson, 1968) is used here to accentuate the importance of adolescence as a period of identity development, as well as the need for exploring identity in order to avoid decreased self-esteem and feelings of belongingness as a result of role confusion.

Identity

Identity is a conceptualization of self that, while generally known to fluctuate over time, is most turbulent during adolescence (Phinney, 1992). Developmental psychologist, Erik Erikson, suggests a model of identity formation that eventually leads to what he coins "achieved identity" (Erikson, 1968). An achieved identity results in a "secure sense of self," which is considered to be the ideal goal in the process of identity formation (Phinney, 1992, p. 160). When one is unable to achieve such a self, Erikson claims this leads to "identity diffusion" wherein a person is unsure of one's individuality and thereby one's societal position (Erikson, 1968). This process is particularly important for those from minority groups (Spencer, 1999). Identity can have implications for students' disposition toward learning in school. For example, in a study by Anderman and Anderman (1999), those students who reported feeling a sense of belongingness (a by-product of identity formation) were more likely to have a mastery goal mindset versus a performance goal mindset. It is well established that those with mastery goals are more adaptive in their academic outcomes in comparison to those with performance-oriented goals (Elliott & Dweck, 1988). Moreover, mastery students are more likely to view failure as part of the learning process, rather than an ultimate judgement on their ability as a learner (Dweck, 1986). Thus, a students' sense of self in the school context is an important factor in

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understanding students' motivations to learn. One aspect of identity that becomes particularly salient in adolescence is ethnic identity.

Student ethnic identity.

Ethnic identity has been defined as "that part of an individual's self-concept that derives from his or her knowledge of membership in a social group (or groups) together with the value and emotional significance attached to that membership." (Phinney, 1992, p.156). Thus, ethnic identity can be understood as being constructed of two different pieces. The first is the mere specialized knowledge of one's ethnic identity and their belonging to that group, while the second piece addresses the affect and importance one places on such knowledge. The interaction between the two results is what is currently defined as ethnic identity.

A longitudinal study by Phinney and Chavira (1992) found that significant progress occurs between age 16 to 19 in regards to ethnic identity formation. Thus, it is of interest what processes take place in the years approaching this achievement. In a meta-analysis of 184 studies, researchers found a positive relationship between ethnic identity and personal well-being across various demographic factors (Smith & Silva, 2011). High ethnic identity has been associated with higher reported levels of self-esteem, given that self-esteem is based on social perception of one's self in relation to others (Pyszczynski, Greenberg, & Solomon, 1997; Roberts et al., 1999), in addition to higher reports of school belongingness (Fuligni, Witkow, & Garcia, 2005). More generally, high ethnic identity has been conceptualized in the current literature as a protective factor for academic achievement (Rivas-Drake et al., 2014).

Ethnic identity and academic outcomes

In a two-year longitudinal study, Altschul, Oyserman and Bybee (2006), found that racial-ethnic identity, specifically one's feeling of connectedness and embedded achievement,

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predicted grades for low SES African American and Latino students. Students found to be high in racial-ethnic identity had better grades on average during all four assessments. This, the authors claim, demonstrates racial-ethnic identity's role in protecting and perhaps even boosting academic achievement. Such findings illuminate the idea that for "minority group members, identification with others who share their origins and traditions is critical in developing both a positive personal identity and feelings of self-esteem and efficacy, rather than self-blame and powerlessness" (Arce, 1981, p.163; Garcia Coll & Marks, 2009). Thus, the context and availability of peers with whom one can share ethnic identity may bolster ethnic identity achievement such that it produces an adaptive attributional style towards success.

School Context

In the words of Phinney (1990), "ethnic identity is to a large extent defined by context" (p.509). Thus, a study of ethnic identity would be incomplete without an examination of the context in which the identity is potentially developing. This is particularly so in middle school, where interaction with peers and teachers is required more frequently throughout the day than compared to elementary school, leaving students with more opportunity for peer interaction and comparison (Eccles & Roeser, 2009). School context is additionally paramount for the study of minority students who may be ethnically "isolated" (Brown & Chu, 2012, p. 1479).
The positive effects of school diversity on academic outcomes has been widely cited (Hurtado, 2007; Chang, Denson, & Saenz, 2006). Ethnic identity, while an important developing facet for students in general, has been suggested to be more important for those students lacking diversity or more specifically, same ethnic peers at school (Umana-Taylor, 2004). It has been found that those students attending schools that are diverse—where no clear majority exists—reported higher perception of same ethnic peers and subsequently higher ethnic identity exploration and

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pride, than their peers attending clear-majority schools (Saafir & Levy, 2017). Thus, the number of same ethnic peers at one's school has an effect on student reports of ethnic identity. Ortiz and Santos (2010) found that having same ethnic peers not only made students feel more comfortable at school, but also contributed to the development of ethnic identity as students had "role models" who could demonstrate the ways in which their ethnic peers could explore and solidify their ethnic identity. Concurrently though, authors cite that other ethnic peers could play a similar role if they are high in ethnic identity, as they can provide inspiration for exploring and engaging within one's own ethnic group. Overall, it is clear that school context may provide clues toward understanding how and to what extent students are able to develop ethnic identity.

Attributions

In any action-result pairing, one often makes a judgement as to whether a given result is positive or negative. Following this evaluation, it is typical to deduce what produced such a result in order to either repeat the result if such is considered positive, or to perhaps avoid the result in the future, if such is considered negative—a phenomena that Heider (1958) considers the "naïve psychologist" in all of us. In the field of psychology, this assessment of the moderation between action and result, is known as attribution. Attribution theory, a prominent theory of motivation, proposes a suggestive lens through which people explain the mediation between actions and their subsequent results (Weiner, 1986). The intrapersonal theory of motivation within attribution theory focuses on the attributions that people make about their personal results, while the interpersonal theory of motivation focuses on the attributions people make about others' results (Graham & Taylor, 2016). For the purpose of the current study, we are solely interested in the intrapersonal theory of motivation, and how students form attributions regarding their own personal academic outcomes.

According to attribution theory, any perceived cause of an event can be classified along three underlying dimensions: something internal versus external, something stable or unstable, and something one that has the ability to change or not (Graham & Taylor, 2016). The attributions people make can dictate the emotional reaction people have to successes and failure (Likupe & Mwale, 2016). It should be noted that motivation in general, but specifically the locus people attribute to any given result (i.e. internal versus external), are a result of one's context and may vary from situation to situation (Linnenbrink & Pintrich, 2002). In the school context, it can be important to understand what attributions students hold about their academic achievement in order to understand how students then respond to them. This is particularly important as adolescents use their assessment of failure and success as implications for their potential in future endeavors (Likupe & Mwale, 2016). A trend that is typical of studies conducted in Western contexts, but also replicated in countries such as Malawi, Pakistan, and Brazil, finds that students on average, attribute successful academic outcomes to internal factors such as effort or ability, whereas failure outcomes are associated with external factors such as test difficulty or the perception of an unfair teacher (Likupe & Mwale, 2016; Adibba, 2004; Boruchovitch, 2004). While the magnitude of these findings has been found to be smaller in East Asian populations in comparison to Western contexts (Mezulias et al., 2004), these studies suggest a pattern of student behavior in regards to certain facets of attribution, and demonstrate credibility in applying attribution theory to diverse settings.

Attributions for failure.

.While it is necessary to explore both the attributions people make for success in addition to those they make for failure, the current study will focus on those attributions students make for failure as it is these attributions that are meant to-- arguably-- serve the purpose of avoiding

such a result in the future. As mentioned in the previous section, a common finding among psychological studies, including those assessing students, show that instances of failures are often ascribed to external sources—this outward blaming is called "hedonic bias" (Miller & Ross, 1975). It is argued that such a stance serves a self-preserving purpose, by distancing oneself from the cause of failure. This is because, according to Weiner (1986), ascribing failures to internal workings can lower self-esteem, while ascribing them to external workings can preserve self-esteem (Major, Quinton, & Schmader, 2003). In fact, it has been suggested that associating failure with external causes is so good at preserving self-esteem, that one's experience of negative emotions as a result of this type of attribution, can resemble that of one who has experienced a successful outcome (McFarland & Ross, 1982). In this way, it appears that having an external locus when it comes to attributions for failure is an adaptive disposition. Thus, knowing how students make causal attributions about failure in addition to what kind of attributions they make, may better contextualize their respective outcomes.

Ethnic identity and attributions for failure

In the assessment of one's actions and its emerging result, it is not uncommon to compare with a peer who engaged in similar actions but with differing results. This phenomenon, social comparison theory, is particularly evident with African American college students, where studies have found that they do not believe their similar actions will produce the same results as those of their White counterparts (Van Laar, 2000). In the external attribution model (Van Laar, 2000), those students who see equal action resulting in varying degrees of outcomes, blame institutional biases as the reason for lower achievement. This external blame can then become extrapolated to future instances of failure, too. In fact, it has been argued that the acknowledgement of institutional bias to one's own group may actually serve a self-preserving function, by attributing

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negative outcomes to external and uncontrollable factors (Oyserman et al., 1995). The idea that ethnic identity can preserve self-esteem through the use of external attributions for failure is consistent with previous literature (Hillman, Wood & Sawilosky, 1996; Dietz-Uhler & Murrell, 1998; Cialdini & Richardson, 1980).

In this way, one might assume that a high ethnic identity is more adaptive for all students. While high ethnic identity has been correlated with high levels of self-esteem and agency (Grossman et al., 1985; Arce, 1981), there exist some counter arguments in the current literature. Van Laar's (2000) self-esteem hypothesis poses that in certain cases, African American students high in ethnic identity may "internalize the negative stigma surrounding their group" (p. 37), and resort to self-blame when they experience poor academic outcomes. Consistent with Social Identity Theory (Tajfel, 1969), this internalization may also serve as a way to preserve the perception of one's ethnic in-group, by individualizing the problem, rather than perpetuating a certain group stereotype. In the same way the "stigma" surrounding their group is considered stable, the internal self-blame also becomes a stable attribution for these students. Thus, there may be instances in which a higher ethnic identity leads to maladaptive attributions for failure and possible negative consequences for academic achievement.

Much like the individual "hedonic bias" (Miller & Ross, 1975), Taylor and Jaggi (1974) discuss ethnocentric attributions, or those attributions about one's ethnic group that are meant to produce positive social comparison. Positive results of an ingroup member and negative results of outgroup members are typically attributed to internal forces (e.g. effort), whereas negative ingroup results and positive outgroup results are typically attributed to external forces (e.g. luck) [Hewstone et al., 1982]. This conception of ethnocentric attributions complicates the self-esteem hypothesis, as following this logic, one would expect an ingroup member to blame failure on

internal factors rather than externalize failure. However, both of these concepts demonstrate the complexity of ethnic identity in regards to attributions for failure, including the various ways in which failure may be viewed through the lens of one's ethnic identity and ethnic ingroup.

A study conducted in the UK (Hewstone, Jaspars & Lalljee, 1982) demonstrates ingroup versus outgroup attributions in regards to class group differences. The study compared public-school boys (what we in the US would consider private schooling and of a wealthier class) and comprehensive-school boys (what we would consider public schooling and of a lower class). Researchers found the public-school boys consistently cited their successful outcomes as a result of their ability and effort (Hewstone et al., 1982). In a "groupserving" (Taylor & Dona, 1979) manner, public-school boys essentially claimed "they [comprehensive-school boys] fail because they're stupid, we fail because we don't try" (Hewstone et al., 1982, p.256). By attributing outgroup failure to internal and stable causes, the public-school boys enhance their ingroup status by insisting they simply choose not to try but have the ability to improve, whereas the outgroup comprehensive-school boys have no ability to improve even in the presence of effort. In contrast, the comprehensive-school boys attributed the public-school boys' success as merely a product of luck (as opposed to hard-work or internal attributions). These findings suggest that attributions in regards to various identity groups serve a social purpose in distinguishing ingroup versus outgroup members. Thus, it is imperative to study attributions of identity *in context* in order to understand the nuances that accompany ingroup identification. Graham (2010) theorizes that school contexts in which many ethnic identity groups are equally represented may provide the opportunity to avoid experiencing the potential "stigma" (Van Laar, 2000) of one's identity group (particularly students from minoritized groups) and thereby abstain from self-blame.

While the existing literature rarely explicitly connects ethnic identity and attributions for failure, a recent study investigated cultural differences for attributions for failure and motivation in secondary New Zealand school students (McClure, Meyer, Garisch, Fischer, Weir & Walkey, 2011). In a sample of 533 European, Asian, Maori, and Pacific Islander students, researchers probed success and failure in school based on attributions (i.e. ability, effort, task difficulty, and luck) and social influences. Results showed students following the patterns of hedonic bias for their respective success and failure, with the caveat of their highest marks being attributed to luck more so than their lowest marks. Researchers believe this finding to be a product of "Tall Poppy culture" prevalent in New Zealand culture, where success is often "cut down" (like the tallest poppies) as opposed to being lauded. Additional findings included Asian and Pacific students attributing failure to lack of effort more so than their European or Maori counterparts, in addition to Asian, Pacific, and Maori students attributing their success to external factors (e.g. the teacher's support) in comparison to their European counterparts. While ethnic identity is not directly explored in this study, findings do illuminate the idea that attributions are context-specific and may manifest differentially for various cultural and ethnic groups.

As indicated by the sparse literature above, there exists a gap in research linking student ethnic identity and attributions for failure in the school context. Most research in this area has investigated either the relationship between attributions and academic outcomes on one hand (Forsyth et. al, 2009; Eppler, Carsen-Plentl, & Harju, 2000; McKenzie & Schweitzer, 2010), and ethnic identity and academic outcomes on the other (Miller-Cotto & Byrnes, 2016; Harris & Mylroie, 2016; Wright; 2009; Santos & Collins; 2015). Thus, the current study looks to explicitly explore the relationship between ethnic identity and attribution for failure in the academic context.

Current Study

Felmlee et al. (2018) call for a need to understand the mechanism underlying decline in performance during school transitions. It is posited here that ethnic identity and attributions are two mechanisms that may contribute to the understanding of such a phenomenon. The current study seeks to explore the relationship between school context, students' ethnic identity, and attributions just prior to the point students are transitioning to high school. Understanding how ethnic identity may affect situations in which students encounter failure in urban contexts, and how this ultimately impacts academic outcomes, it might be possible to design supports to help students persevere through such failure and mitigate its effects on academic success. It is expected that school context may be a factor that determines student reports of ethnic identity (as accessibility to same-ethnic peers may provide a catalyst for ethnic identity development), and that ethnic identity may provide a potential lens through which students experience failure at school. Further, those students who report high ethnic identity in seventh grade are hypothesized to report external attributions for failure, given the salience of their ethnic group identity. It is suggested that attributing failure to external forces will play a self-protective role in preserving academic achievement. The current study is significant in that it seeks to explore antecedents of attributions for failure, whereas most of the research in this area focuses on the consequences of particular attribution patterns. The research questions include:

1) What are the cumulative effects of school context, ethnic identity, and attributions for failure on students' academic outcomes?

2) How do the effects of school context, ethnic identity, and attributions for failure on academic outcomes vary for different ethnic groups?

3) Do attributions for failure mediate the effect of ethnic identity on GPA? How does that mediation vary by school context and ethnicity?

Attributions for failure are expected to mediate the relationship between ethnic identity and GPA, as it is argued ethnic identity in this case will be the lens through which students perceive failure. A stronger ethnic identity is expected to predict external attributions for failure, as opposed to internal attributions for failure. Attributing failure to external forces such as test difficulty or teacher bias, is hypothesized to predict higher GPA than attributing failure to internal forces such as low ability. It is expected that higher ethnic identity in the context of lower percent same ethnic peers will predict more external attributions for failure. Finally, it is predicted that the relationship between ethnic identity and attributions for failure will be mediated by percent same ethnic peers and ethnic group, such that each ethnic group will demonstrate a unique relationship between ethnic identity and subsequent attributions for failure, given how many students there are like them in their respective schools.

Method

Participants

The current study uses data from the larger Middle School Diversity Project. This study drew 5,991 participants from 26 middle schools, in both Northern and Southern California across a span of three years (2009-2011). Schools were intentionally selected such that they represented a variety of ethnic demographics. Eleven schools had one ethnic group with a numerical majority, nine schools had two ethnic groups with about equal numerical representation, and six schools were diverse enough that there is no clear ethnic majority group. Participants were asked to choose an ethnic group they most identify with, from a list totaling 13 possible ethnicities, with an additional fill-in option (e.g., American Indian, Black/African American, Black/other

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country of origin, East Asian, Latino/other country of origin, Mexican/Mexican American, Middle Eastern, Pacific Islander, South Asian, Southeast Asian, White/Caucasian, Multiethnic/Biracial).

The current study uses a subset of this larger sample, with a total of 1,735 students. The subset focuses on four specific ethnic groups: African American (n=216; 12.4%), Latino (n=760; 43.8%), Asian (including south and southeast, n=294; 16.9%), and White (n=465; 26.8%). Approximately half of the subset identified as male (49.1%) and female (50.9%) respectively; this ratio is also found within each ethnic group. Average parent education is "some college". This subset is the result of the following exclusions.

Multiethnic students were excluded from the current sample as their identification does not allow for clear calculation of ethnic group representation, as is the same for those that marked "Other". The remaining ethnic groups were also excluded as their sample sizes were too small to produce statistical power, and each only comprised about three percent or less of the overall sample (six percent total). Those students who did not have a GPA were excluded, (n= 170) as GPA is a required outcome variable for the current study. Finally, those who did not complete the ethnic identity and attributions for failure measures (n= 1,895), were also excluded from the current subsample, as variables that were computed from these overall measures required complete cases. An analysis of those participants who had missing data versus those that did not, on variables of interest in the current study, revealed no significant differences between the groups (Tabachnik & Fidell, 2012). This finding suggests that the forthcoming analyses and interpretations use a sample that is as representative of the larger population as possible.

Procedure

Data was collected at four total times points in nonacademic classes: fall and spring of 6th grade, spring of 7th grade, and finally, spring of 8th grade. UCLA IRB approval was obtained for the larger study. Parent consent was first sought, followed by student assent forms, prior to engagement in the study. Questionnaires were read aloud by a trained researcher, and participants were given paper copies to complete. Monetary compensation was offered in exchange for their time ($5 for each semester in 6th grade, and $10 for 7th and 8th grade respectively), and participants were entered into a raffle for an iPad and two iPod Shuffles. Data were later digitally recorded by graduate students or research assistants in secure computer labs.

Measures

Ethnic Identity

Ethnic identity was assessed using items from The Multigroup Ethnic Identity Measure (Phinney, 1992). Sample items include: "I feel like I really belong to my ethnic group" and "I am proud that I am a member of my ethnic group." Participants responded on a Likert scale ranging from 1= "Definitely yes!" to 5= "Definitely no!" (See Appendix A).

In order to further operationalize ethnic identity in alignment with Phinney's original conception, a factor analysis was performed on the 12 questionnaire items. Principal factoring extraction using the varimax method was used as it results in the least number of factors that account for the most about of variance. Eigenvalues above 1.0 were considered as potential factors representing the current variable of interest. This resulted in a total of three factors, each with eigenvalues indicating an account for 32%, 18%, and 11% of the respective variance, and

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with internal consistency Cronbach's alpha scores of equal to or greater than $\alpha > 0.75$. Six items comprised *pride/belonginess* (to what extent a participant feels proud of their ethnic identity or feels they belong to their ethnic group), while the remaining six (three each) refer to *exploration* (to what extent a participant cites themselves as seeking out knowledge about their ethnic identity) and *outgroup orientation* (to what extent a participant seeks out knowledge about other ethnic identities) respectively.

Attribution for failure

In the current study attributions for failure are defined as the perceived causes of failure. While these causes can fall into three simultaneous causal dimensions—internal vs. external, controllable vs. uncontrollable, and stable vs. unstable—the current study focuses on the internal vs. external dimension, or whether failure is perceived to be caused by something internal to the student (i.e. effort or ability) or whether the failure is perceived to be caused by something external to the student (i.e. teacher bias or test difficulty). Students' attribution for failure is assessed by a series of prompts designed originally for the purpose of this study. With a free response, participants were first asked to write about a time they performed poorly on a test, report the subject of the test, why they suspect they did poorly, and how it made them feel. Students were then prompted to respond to a series of statements related to why they believed they did poorly. Sample items include: "I'm not good at the subject" and "The teacher didn't like me." Participants responded on a Likert scale ranging from 1= "Definitely a reason" to 5= "Definitely NOT a reason" (See Appendix A). For analyses conducted in the current study, responses were reverse coded such that a higher value indicated greater agreement with survey items.

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An additional exploratory factor analysis was run for these 18 items (see previous section for details). Attributions for failure items were best fitted to a four-factor matrix using factor analysis. 14 out of 18 items had eigenvalues accounting for 31%, 13%, 11%, and 9% of the respective total variance with internal consistency Cronbach's alpha scores of equal to or greater than $\alpha > 0.69$. Four items related to teacher bias, three items related to test difficulty, three items related to ability, and four items related to effort as perceived causes for failure. These factors best represent the overall constructs, while allowing nuanced interpretations of results. In regards to the locus dimension of attributions for failure, ability and effort are considered internal attributions, while teacher bias and test difficulty are considered external attributions for failure.

School Context

School context herein refers to the proportion of same ethnic peers one has at their respective school. A proportion of same ethnic peers was calculated for each student relative to their school, given California Department of Education (CDE) school demographic data.

Academic Achievement

Overall weighted GPA listed on available student transcripts is used as a proxy for academic achievement. GPA was scored using a 5.0 scale with a grade of F=0 and A=4, averaged by number of courses taken.

Covariates

Gender is included as a covariate, as gender roles and expectations are known to be differentially emphasized in various cultures (Phinney, 1990). Additionally, an intersectional understanding of identity would reveal that gender identity can also potentially affect attributions for failure (Bell et al., 1994). Socioeconomic status is another important factor to consider, as

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ethnic identity may differ given various socioeconomic contexts (Phinney, 1990). Self-reported parent education is used as a proxy for SES in the current study. Parent education was indicated on a 6-point scale from 1= "elementary/junior high school," 2= "some high school," 3= "high school diploma or GED," 4= "some college," 5= "4-year college degree," and 6= "graduate degree." Finally, ethnicity is also being used as a covariate in the first research question as it is posited that ethnicity may account for certain outcomes, only in as much as the ethnic group has meaning for a person (Smith & Silva, 2011; Phinney, 1996).

Results

Descriptive Statistics

Means, standard deviations, and bivariate correlations of variables of interest are presented in Table 1. The overall mean GPA of the subsample was 3.07 (SD=1.03). Participants had more agreement with the pride and belongingness facet of ethnic identity (M=4.19, SD=.63), than with exploration (M=3.06, SD=.81) or outgroup orientation (M=3.12, SD=.82). Teacher bias had the highest agreement as reason for failure (M=3.94, SD=.61), followed by effort (M=3.43, SD=.86), test (M=2.95, SD=1.00), and ability (M=2.80, SD=1.13). GPA was positively correlated with exploration (r=.10, p<.01) and outgroup orientation (r=.12, p<.01), but negatively correlated with citing failure to teacher bias (r=-.25, p<.01) and ability (r=-.29, p<.01). Exploration was positively correlated with citing teacher bias as reason for failure (r=.05, p<.01), while outgroup orientation was positively correlated with citing effort as reason for failure (r=.07, p<.01).

Hierarchical linear regression

In order to answer the first research question about the cumulative effects of school context, ethnic identity and attributions for failure on students' academic outcomes, a dummy

coded hierarchical regression was performed with male as the reference group for sex, and White as the reference group for ethnicity (see Table 2). In the current sample, identifying as female (β = 0.30, $p<.001$) and Asian (β = 0.25, $p<.001$) predicted higher GPA outcomes, whereas identifying as Black (β = -0.58, $p<.001$) or Latino (β = -.39, $p<.001$) predicted lower GPA outcomes, in comparison to their White peers.

Percent same ethnic peers was not predictive of GPA (β = -.61, $p>.05$); moreover, neither outgroup orientation (β = .04, $p>.05$) nor pride/belongingness (β = .03, $p>.05$) were predictive of GPA. Exploration, however, was positively predictive of GPA (β = .05, $p<.05$). External attributions—teacher bias and test factors—did not preserve GPA across the board. While attributing failure to the test predicted an increase in GPA (β = .12, $p<.001$), attributing failure to teacher bias resulted in a negative relationship with GPA (β = -.11, $p<.001$). Citing failure to one's own ability, or having an internal attribution for failure, resulted in a significant negative relationship with GPA (β = -.21, $p<.001$). There was no significant main effect found for the effort attribution on GPA.

In sum, for all students in the subsample, exploration was the only significant ethnic identity measure to predict GPA outcomes. Attributing failure to one's own ability or to teacher bias predicted negative GPA outcomes, while attributing failure to test difficulty predicted positive GPA outcomes.

In order to explore the second research question of how the effects of school context, ethnic identity, and attributions for failure on GPA vary for different ethnic groups, two-way interactions were performed within the hierarchical regression described above (See Table 3).

For Latino students, blaming failure on teacher bias predicted a significant negative relationship with GPA (β = -.09, t= -2.42, $p<.05$). A simple slopes analysis revealed this

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interaction to be significant for *both* Latino students (β = -.25, *t*= -6.35, *p*<.001), and their White

reference counterparts (β = -.16, *t*= -9.23, *p*<.001), where blaming teacher bias for failure

predicted decreases in GPA. The Latino subsample did not have any significant interactions with

percent same ethnic peers, or any of the three ethnic identity measures.

Similarly, a significant interaction was found between Asian student and teacher bias,

with simple slopes suggesting this relationship as significant for the White student group (β = -

.16, *t*=-9.24, *p*<.001) in comparison to the Asian student group (β = -.04, *t*= -0.70, *p* = 0.49). This

finding was echoed with the attribution of ability, where for White students, blaming failure on

ability predicted a decrease in GPA (β = -.21, *t*=-14.85, *p*<.001), compared to Asian students (β =

-.05, *t*=-1.15, *p*=.25), for whom it did not.

Finally, a significant interaction was found between ethnic group and exploration, where

exploring one's ethnic identity predicted positive GPA outcomes. Simple slopes analysis

indicated this relationship as significant for both Black (β = .21, *t*= 2.89, *p*<.01) *and* White

students (β = .05, *t*= 2.24, *p*<.05).

In all, when exploring the effects of school context, ethnic identity, and attributions for

failure on GPA given various ethnic groups, attributing failure to teacher bias was found to

negatively predict GPA for both Latino and White students. This negative effect on GPA held for

White students when attributing failure to teacher bias and to their own ability, but resulted in no

significant effects on GPA when compared to their Asian peers. Finally, the exploration measure

of ethnic identity was found to be a positive and significant predictor of GPA for both Black and

White students.

Conditional process analysis

In order to understand whether and how attributions for failure mediate the relationship between ethnic identity and GPA, given student ethnicity and school ethnic context, a conditional process analysis was employed. More specifically, Model 60 (dual stage moderated mediation) from the SPSS macro, PROCESS (Hayes, 2017), was used to unpack this final research question. The tested model is shown in Figure 1. In this model, percent same ethnic peers moderated the relationship between ethnic identity and attributions for failure ('a' path), while ethnicity moderated *both* the relationships between ethnic identity and attributions for failure, *and* the relationship between attributions for failure and GPA outcomes (both 'a' and 'b' paths). Three models were run using this macro: one for each ethnic identity subcategory serving as the focal predictor.

In answer to the final research question of whether attributions for failure mediate the relationship between ethnic identity and GPA, the parsimonious answer is: no. However, the moderated portion of this analysis provides a nuanced understanding of the experience of students from various ethnic groups in varying school contexts.

In the pride and belongingness model (see Table 4), only test and ability (of the four attributions for failure), significantly predicted student academic achievement. Attributing failure to a difficult test predicted positive GPA outcomes (b=0.15, t(1712)=3.65, p<.01) while attributing to low ability predicted negative GPA outcomes (b=-.30, t(1712)=-7.98, p<.001). In other words, for students with the same ethnic pride and belongingness, a one unit increase in attributing failure to the test, resulted in a .15 increase in GPA, whereas a one unit increase in attributing failure to low ability led to a .30 decrease GPA effects. However, pride and belongingness served as an insignificant predictor of each of these attributions in the first stage of the model (t(1723)=.79, p=.43; t(1723)=.77, p=.44). While this finding prevents an

interpretation of significant differences in the mediation of ethnic identity and GPA *across* student ethnicity groups by attributions for failure, it does not account for the significance of this model within particular ethnic groups and within particular school contexts.

A significant interaction is found between teacher bias and the ethnic group moderator in predicting GPA ($t(1712)=-2$, $p<.05$). A simple slopes analysis revealed this relationship as significant for Latino students, compared to their White reference group peers ($t=-2.84$, $p<.01$). For every one unit increase in attributions for failure to teacher bias, Latinos were predicted to experience a .11 decrease in GPA (see Figure 2). This suggests that attributing failure to this particular external factor (teacher bias) is in fact detrimental to academic achievement for Latino, but not White students.

A significant interaction was found between the ethnic group moderator and low ability attributions for failure ($t(1712)=3.15$, $p<.01$). Simple slopes analysis revealed this relationship as significant for *both* Asian students ($t=-2.00$, $p<.05$) and their White peers ($t=-8.05$, $p<.001$). A one unit increase in citing low ability as the reason for one's failure (for students with equal pride and belongingness scores), predicted a decrease of .10 in GPA for Asian students and a decrease of .30 in GPA for White students (see Figure 3).

There were also moderating effects of the ethnic context variable defined as number of peers from one's own ethnic group in school. The indirect effect of ethnic pride and belongingness on GPA through teacher bias among Black students is positive in schools either moderate (point estimate: .04, 95% CI from .0001 to .1002) and high numbers of same-ethnic peers (point estimate: .05, 95% CI from .0033 to .1341) but not different from zero among those Black students in schools with few same-ethnic peers (point estimate:, 95% CI from -.0125 to .0689). That is, the indirect effect of pride and belongingness on GPA, when attributing failure to

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teacher bias, is significantly positive for Black students in school contexts where there are more Black peers.

Conversely, the indirect effect of pride and belongingness on GPA through teacher bias among Latino students is negative in low percent same school ethnic contexts (point estimate: -.04, 95% CI from -.0709 to -.0074). That is, it is possible that in school contexts where Latinos have fewer same ethnic peers, they are more likely to blame failure on teacher bias, than Latinos in school contexts with many same ethnic peers. Attributing failure to teacher bias, at least for Latino students, predicts lower academic outcomes. That is, it is possible the lack of availability of same ethnic peers lends itself to feelings of victimization or promoting negative ingroup stereotypes.

There were no significant interactions between ethnicity, percent same and the relationship between exploration and GPA when the model is run with exploration as representative of student ethnic identity (see Table 5).

In the outgroup orientation model (see Table 6), significant interaction is found between low ability as attribution for failure and the ethnic group moderator ($t(1712)=3.24$, $p<.01$). A simple slopes analysis revealed this to be significant for the White reference group ($t=-21.29$, $p<.001$) *and* the Asian ($t=-2.21$, $p<.05$) student group, where White students are expected to experience a .3 decrease in GPA, and Asian students are expected to experience a .1 decrease in GPA when citing low ability as the reason for their failure (see Figure 4).

The indirect effect of outgroup orientation on GPA through low ability attributions is positive among Asian students in low (point estimate: .03, 95% CI from .0013 to .0586) and moderate (point estimate: .02, 95% CI from .0018 to .0540) percent same ethnic school contexts, but not different from zero for those Asian students in high percent same ethnic school contexts

(point estimate: .02, 95% CI from -.0018 to .0565). Finally, the indirect effect of outgroup orientation on GPA through teacher bias is negative among Black students in low percent same ethnic school contexts (point estimate: .03, 95% CI from .0011 to .0929).

In summary, the pride and belongingness model revealed that for both White and Latino students, attributing failure to teacher bias resulted in negative GPA outcomes, particularly for Latino students in low same ethnic contexts. Moreover, both White and Asian students were predicted to have negative GPA outcomes as a result of attributing failure to low ability. This finding is nuanced when explored in the outgroup orientation model, where attributing ability as the reason for failure is *only* negatively significant for the White student group as compared to the Asian group. In fact, given the same outgroup orientation score, Asian students in low and moderate same ethnic contexts were predicted to have positive GPA outcomes as a result of attributing failure on their own ability.

Discussion

The current study sought to explore student ethnic identity and attributions for failure in tandem and their joint effect on student academic achievement. In general, the exploration facet of ethnic identity—or the extent to which one enjoys learning about and seeks additional knowledge about their own ethnic identity—predicted significant and higher GPA outcomes. While citing external attributions for failure was found to result in higher GPA outcomes comprehensively (as was found for attributing failure to the test), attributing teacher bias as a reason for failure was negatively associated with GPA. One explanation for this finding may be the nature of the teacher bias perceived by students, such that it is not seen as a distant, external attribution, instead something personal. As consistent with the literature, citing one's own ability

as a reason for failure is also negatively associated with academic outcomes (Perry, Hechter, Menec, & Weinberg,1993).

In the pride and belongingness model, for both Latino and White students, attributing failure to teacher bias was negatively associated with GPA; this finding was significant specifically among Latino students in low percent same school ethnic contexts. This stands in contrast to literature in which contexts where Latino students had more ethnic peers were found to be perceived as *more* discriminating (and arguably likelier to cite external attributions like teacher bias for their failure) [Brown & Chu, 2012].

When comparing Asian and White students, attributing failure to teacher bias is predictive of lower GPA outcomes *only* for White students. However, attributing failure to ability is predictive of lower GPA for *both* Asian and White students. This finding echoes existing literature that suggests internal attributions for failure as potentially harmful to academic achievement, particularly in the case of ability where this internal attribution may also intersect with a perception of failure as stable and uncontrollable (Perry, Hechter, Menec, & Weinberg,1993; Weiner, 1985). The finding here though, shows an exaggerated effect for White students in relation to their Asian peers (.03 decrease versus .01 decrease in GPA). This may reflect cultural norms explored in previous studies, where Asians show a stronger belief in the relationship between effort and achievement compared to White peers (Hsin & Xie, 2014), and compounded by existing research that finds Asian students to view cognitive ability as malleable as opposed to an inherent quality, in contrast with their White counterparts (Chen & Stevenson, 1995).

Additionally, the nuanced finding of a positive indirect effect of outgroup orientation on GPA through ability for Asian students in low and moderate same ethnic contexts suggests the

importance of context in the study of attributions. This is in contrast to the finding in the pride and belongingness model where attributing failure to ability was detrimental to Asian student academic achievement. This finding may be explained by a recent study (Tawa & Montoya, 2018) which found that Asians, who are considered to have interdependent self-construal—a perception of the self that derives from a collectivist nature that is typically associated with negative outgroup orientation—actually exhibited *more* outgroup comfort in contexts where they were the minority. That is, in school contexts where there is more ethnic diversity—and arguably more opportunity to develop outgroup orientation—Asian students seem to experience more of a GPA buffer.

As reported above, teacher bias and ability were two attributions for failures that had significant impacts on GPA for certain levels of the school context variable and for certain ethnic groups. In both the pride and belongingness model as well as the exploration model generally, the indirect effect of ethnic identity on GPA predicted a positive GPA trend; as percent same ethnic peers increased (from low, to moderate, to high), as a result of the indirect mechanism of citing teacher bias or ability for failure, GPA increased for *all* ethnic groups. Contrarily, in the outgroup orientation model, a decrease in GPA is predicted for students of all ethnic groups as percent same ethnicity increased. This suggests the importance of school ethnic context on ethnic identity, such that a moderate or high proportion of same ethnic peers bolsters or enables the development of ethnic pride and belongingness as well as exploration, while a low proportion of same ethnic peers contributes to ethnic outgroup orientation development.

For both Black and White students, indicating higher ethnic identity exploration is associated with higher GPA outcomes, suggesting the importance of spaces for adolescents to learn more about their ethnic identity. Finally, particularly in the Asian/White comparison group,

citing ability (an internal attribution for failure) was detrimental to GPA for both groups; however, when studied in context, those Asians in contexts where there is more diversity (fewer same ethnic peers), attributing failure to low ability had a *positive* effect on GPA outcomes. This calls attention for the need to study the concept of "adaptive attributions" (O'Hara et al., 1985) *in context*, when it comes to ethnically diverse student bodies in various school contexts.

A limitation of this study includes using GPA as the only proxy for academic achievement. While GPA is often considered a uni-dimensional measure of student achievement, this practice is not uncommon in education research. In fact, previous research in California schools has shown middle school GPA to be significant and indicative of future achievement (i.e. high school persistence) [Kurlander, Reardon, & Jackson, 2008]. Further limitations include issues of missing data, and not knowing qualitatively whether and how ethnic identity is a lens through which students see their academic failure. The latter suggests a future qualitative direction for the current bridging of ethnic identity and attributions for failure study.

Implications for this study include a more vested interest in understanding ethnic identity development and how it relates to the way students view their academic world (in this case, the way they view their failure). It also highlights differences in attributions styles as a result of ethnic identity by each respective ethnic group, which cautions the use of globally advocating for or reprimanding certain attributional styles. One tangible takeaway for schools might include providing more opportunities to explore and learn about one's ethnic group, in attempts to provide space for ethnic identity formation.

Conclusions

The current study sought to explore student ethnic identity and attributions for failure in tandem and their joint effect on student academic achievement all within specific school

contexts. While the attributions for failure in this study failed to mediate the relationship between ethnic identity and academic achievement for *all* students, the interactions for certain ethnic groups in certain contexts illuminate important considerations. Attributing failure to external factors is shown to not always be adaptive for academic achievement (as in the case of teacher bias and Latino students), while internal attributions for failure were shown to not always be maladaptive for all students (in the case of ability and Asian students vs. White students). This provides evidence for cautioning the idea of globally (mal)adaptive attributions for failure and points to the contextual factors that may determine the (mal)adaptiveness of them.

Moreover, the current study emphasizes the need for studying students in context, in this case peer ethnic school context, as certain variables (such as ethnic identity and attributions for failure) may otherwise be subject to incorrect interpretation. For example, without considering peer ethnic context, an interpretation of the significant outgroup orientation finding would be that for Asians, citing ability as a reason for failure leads to positive GPA outcomes across the board; while in actuality, this finding is only significant for those Asian students in low and moderate same ethnic peer contexts, *not* for those in high same ethnic peer contexts. Particularly in the study of education, which is a "fundamentally social and interpersonal process," it is necessary to consider both the processes *in addition to* the spaces in which these processes occur (Goodenow, 1992, p. 177).

Finally, the current study reiterates the importance of diversity in schools—in this case the ethnic diversity of the student body. Given current event concerns about programs such as the private school voucher system (Levy, 2018) and its critique of exacerbating social inequality, this study serves as a reminder of the potential benefits of diverse school contexts on student identity formation and ultimately, student academic achievement.

Table 1
Summary of Variable Means, Standard Deviations, and Bivariate Correlations (N= 1735)

Variable	GPA	Pride/Belongingness	Exploration	Outgroup Orientation	Teacher Bias	Ability	Effort	Test
GPA	--	.64	.10**	.12**	-.25**	-.29**	-.45	-.62
Pride/Belongingness	.06	--	.36**	.29**	.04	.02	.07	.07
Exploration	.01**	.36**	--	.28**	.05**	-.01	.03	.03
Outgroup Orientation	.12**	.29**	.28**	--	-.04	-.01	.07*	.03
Teacher Bias	-.25**	.04	.05	-.04	--	.42**	.07	.43**
Ability	-.29**	.02	-.01	-.01	.42**	--	.36**	.53**
Effort	-.05	.07	.03	.07*	.07	.36**	--	.28**
Test	-.06	.07	.03	.03	.43**	.53**	.28**	--
Black/African American	2.77 (.73)	4.40 (.57)	3.26 (.82)	4.11 (.60)	1.97 (1.02)	2.69 (1.06)	3.55 (.88)	2.96 (1.04)
Asian (East/Southeast)	3.59 (.52)	4.21 (.61)	3.36 (.78)	3.87 (.61)	1.84 (.88)	2.78 (1.09)	3.45 (.83)	2.99 (1.03)
White/Caucasian	3.33 (.67)	3.91 (.65)	2.68 (.82)	4.02 (.61)	1.91 (.94)	2.60 (1.11)	3.23 (.89)	2.95 (1.02)
Latino	2.76 (.83)	4.31 (.57)	3.28 (.73)	3.86 (.59)	1.96 (.98)	2.96 (1.15)	3.53 (.82)	2.95 (.97)
Overall	3.07 (1.03)	4.19 (.63)	3.06 (.81)	3.12 (.82)	3.94 (.61)	2.80 (1.13)	3.43 (.86)	2.95 (1.00)

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

Table 2
Summary of Hierarchical Regression Analysis for Variables Predicting GPA (N= 1735)

Variable	Model 1			Model 2			Model 3			Model 4		
	b	*SE* B	β	b	*SE* B	β	b	*SE* B	β	b	*SE* B	β
Sex	0.28	0.03	.17***	0.28	0.03	.17***	0.27	0.04	.17***	0.30	0.03	.19***
SES	0.09	0.01	.17***	0.09	0.01	.17***	0.09	0.01	.17***	0.06	0.01	.13***
Black	-.53	0.06	-.21***	-.54	0.06	-.21***	-.59	0.06	-.23***	-.56	0.06	-.22***
Asian	0.28	0.05	.13***	0.28	0.05	.13***	0.25	0.06	.11***	0.26	0.05	.12***
Latino	-.41	0.05	-.25***	-.41	0.05	-.25***	-.41	0.05	-.25***	-.39	0.05	-.24***
Percent Same							-.09	.11	-.02	-.06	.01	-.01
Pride/Belongingness							.04	0.03	.03	.03	0.03	.02
Exploration							0.04	0.02	.04	0.05	0.02	.05*
Outgroup Orientation							0.08	0.03	.06*	0.04	0.03	.03
Test										0.12	0.02	.15***
Ability										-.21	0.02	-.30***
Effort										-.02	0.02	-.02
Teacher Bias										-0.11	0.02	-.13***
R^2		.22			.23			.23			0.33	
F for change in R^2		100.03***			1.19			5.87**			63.88***	

Note: Sex is dummy coded with Male serving as the reference group; ethnicity is dummy coded with White serving as the reference group.
*p<.05, **p<.01, ***p<.001

Table 3

Summary of Interactions between Ethnicity and Variables Predicting GPA (N= 1735)

Variable	Latino			Asian			Black		
	b	*SE* B	t	b	*SE* B	t	b	*SE* B	t
Percent Same	-0.39	0.22	-1.75	-.07	0.25	-.29	0.23	0.29	.78
Outgroup Orientation	0.09	0.06	1.48	-0.14	0.08	-1.82	.15	0.09	1.59
Teacher	-0.09	0.04	-2.42*	.12	0.05	2.33*	-.03	0.05	-0.52
Ability	-0.04	0.03	-1.21	0.16	0.04	3.89**	-0.06	0.05	-1.17
Effort	0.05	0.04	1.15	0.03	0.06	.45	-0.01	0.06	-.19
Test	-0.06	0.04	-1.70	0.06	0.05	1.37	-0.02	0.05	-.36

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

Table 4

Effect of Attributions on GPA: Pride & Belongingness Model (N= 1735)

Variable	Black			Asian			Latino		
	b	*SE* B	*t*	b	*SE* B	*t*	b	*SE* B	*t*
Test	.02	.08	.31	-.08	.07	-1.25	.00	.05	.08
Teacher Bias	-.08	.08	-1.02	.00	.07	-.04	-.11*	.05	-2.00
Ability	.01	.07	.12	.20**	.06	3.15	.03	.05	.56
Effort	-.06	.08	-.73	-.06	.07	-.81	.05	.06	.94

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

Table 5
Effect of Attributions on GPA: Exploration Model (N= 1735)

Variable	Black			Asian			Latino		
	b	*SE* B	*t*	b	*SE* B	*t*	b	*SE* B	*t*
Test	.02	.08	.23	-.09	.07	-1.29	.00	.05	.03
Teacher Bias	-.08	.08	-.96	-.01	.07	-.08	-.11*	.05	-1.98
Ability	.02	.07	.21	.20**	.06	3.16	.03	.05	.59
Effort	-.06	.08	-.75	-.07	.07	-.84	.05	.06	.96

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

Table 6

Effect of Attributions on GPA: Outgroup Orientation (N= 1735)

Variable	Black			Asian			Latino		
	b	*SE* B	t	b	*SE* B	t	b	*SE* B	t
Test	.02	.08	.31	-.08	.07	-1.27	.00	.05	.09
Teacher Bias	-.08	.08	-.9839	-.01	.07	-.07	-.11	.05	-1.99*
Ability	.01	.07	.13	.20**	.06	3.23	.03	.05	.56
Effort	-.07	.08	-.84	-.07	.07	-.90	.05	.06	.89

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

Figure 1. Conceptual Model PROCESS Model 60: Dual Stage Moderated Mediation
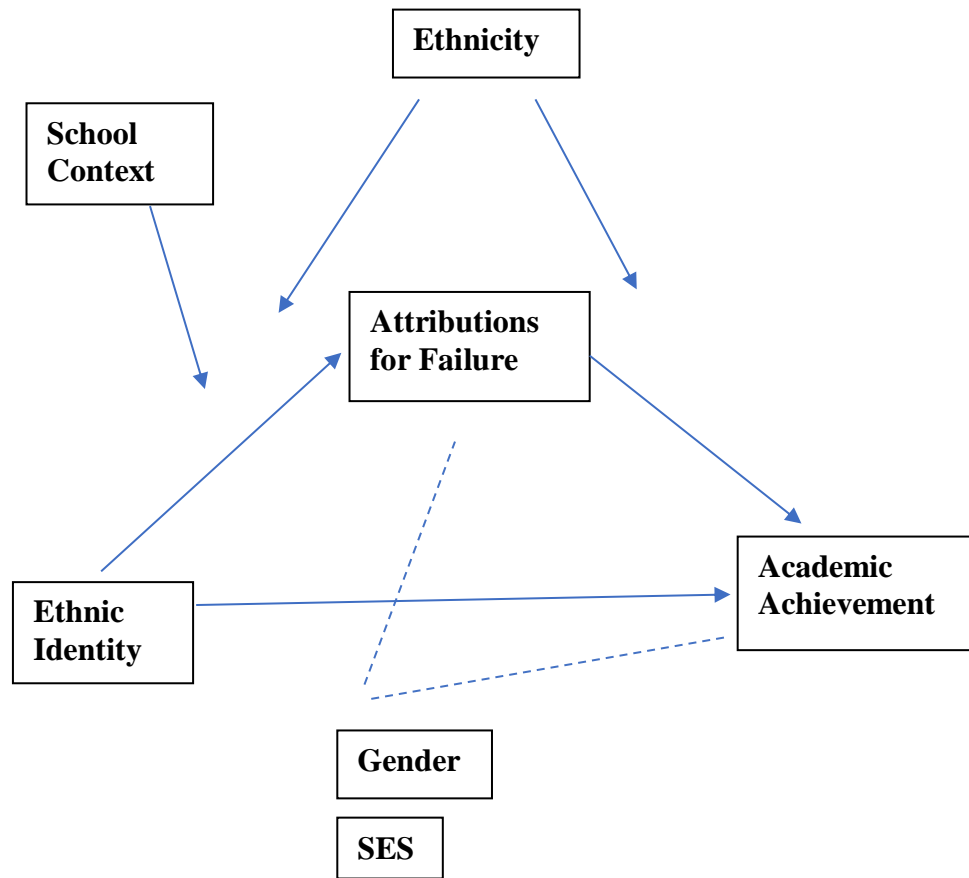
Figure 2.
Differential effect of teacher bias as attribution for failure on GPA for Latino vs. White students in Pride & Belongingness model.
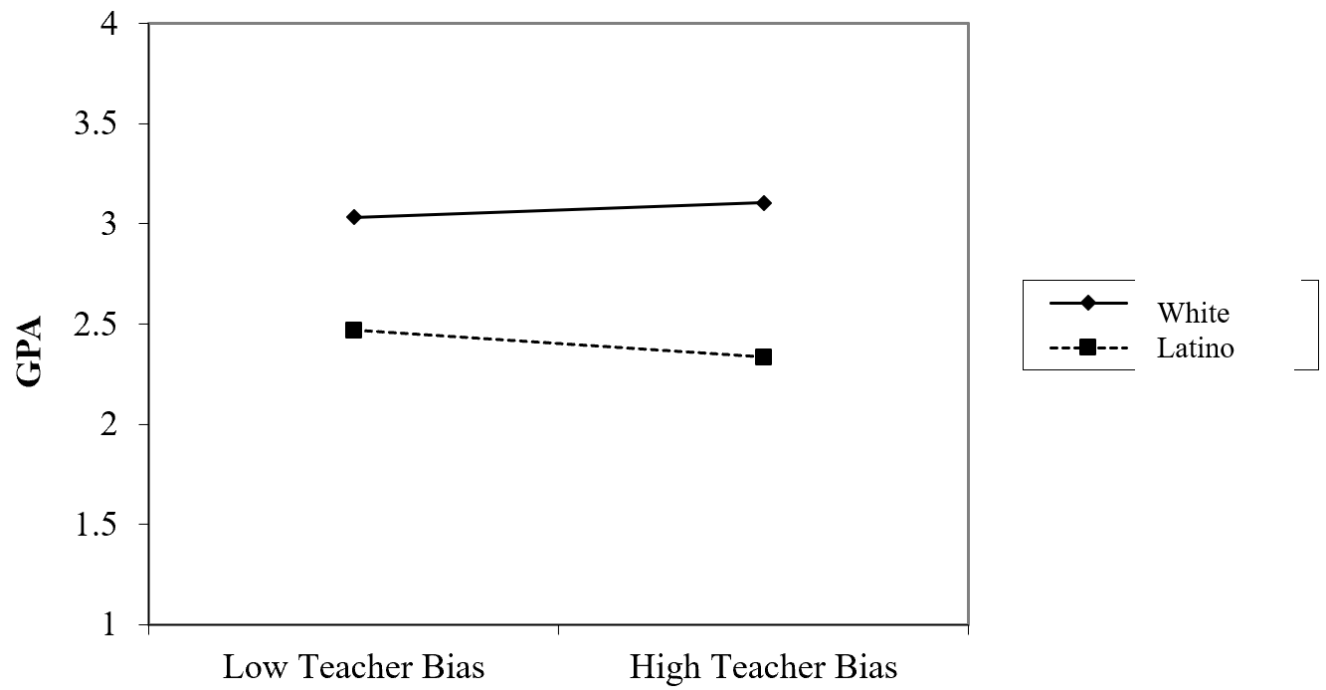
Figure 3.
Differential effect of ability as attribution for failure on predicted GPA for Asian vs. White students in Pride & Belongingness model.
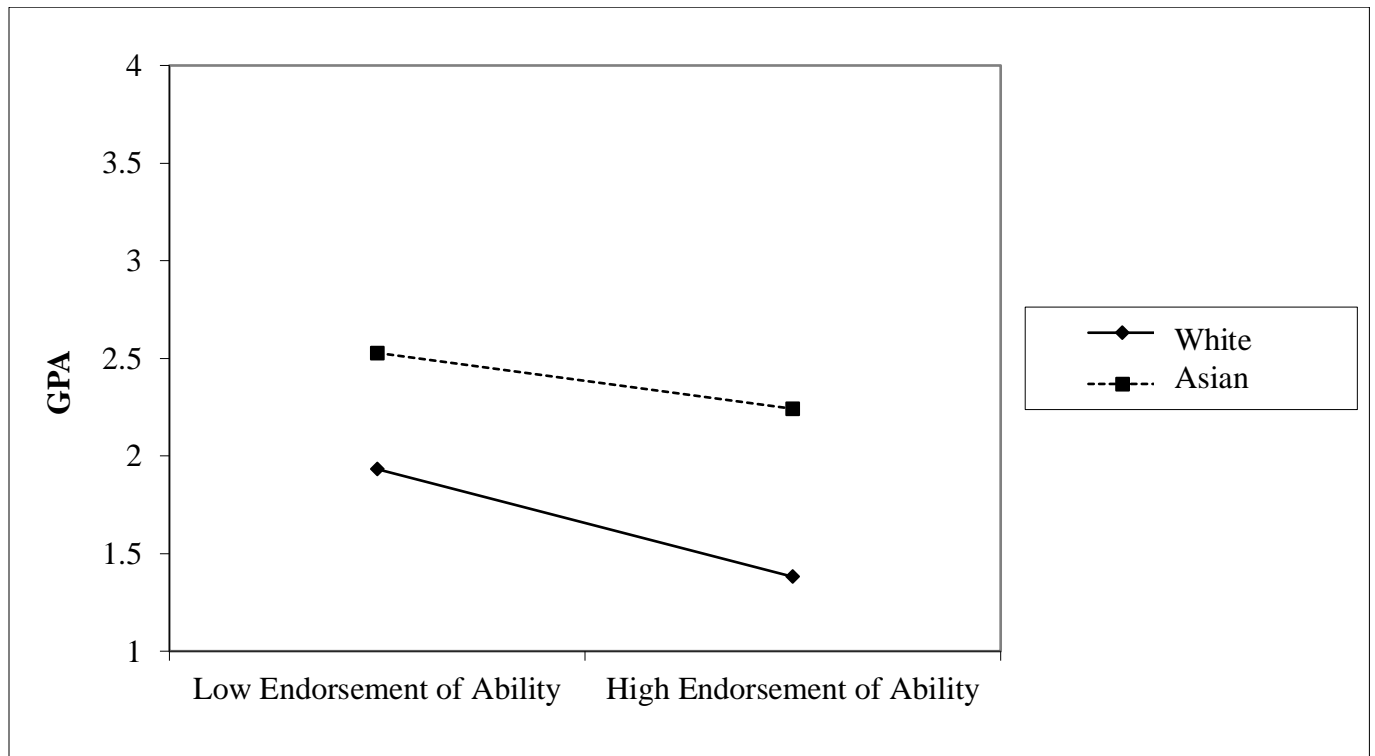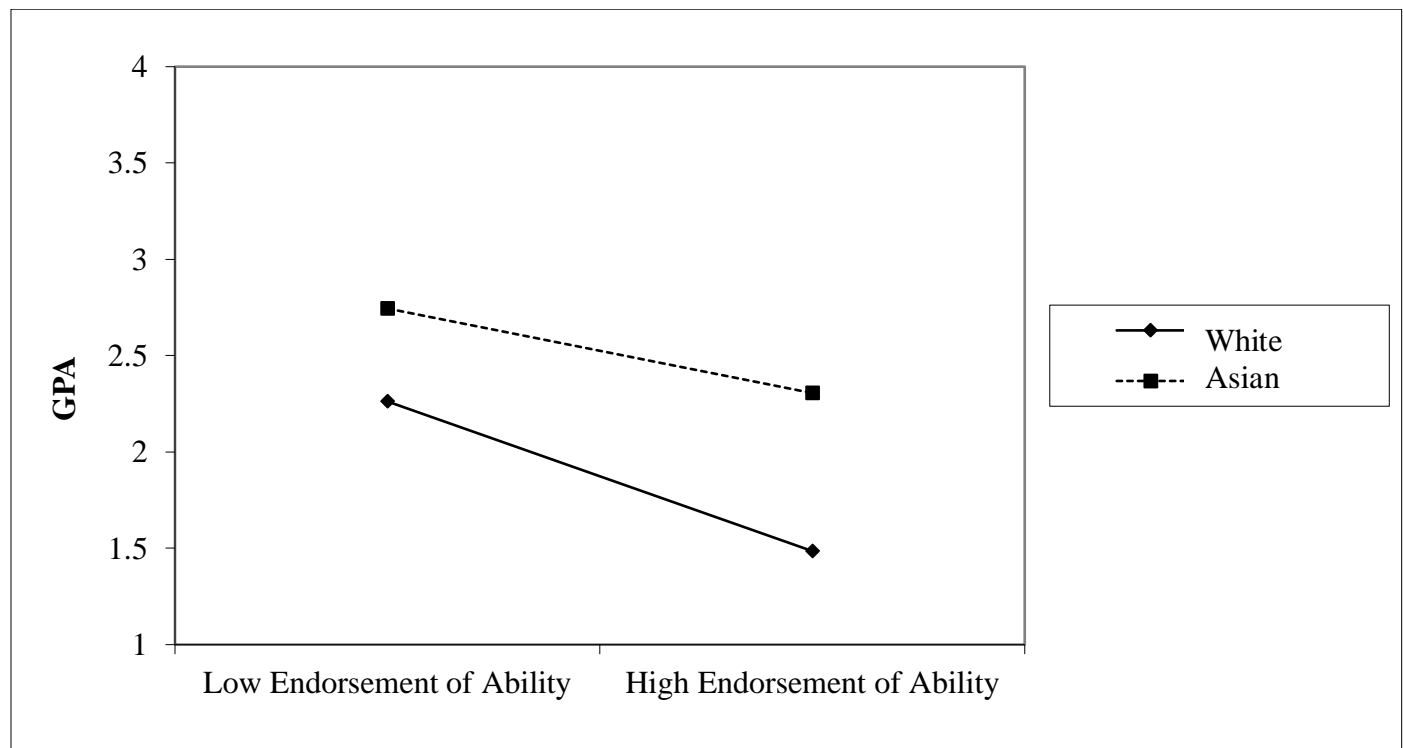
Figure 4.
Differential effect of ability as attribution for failure on GPA for Asian vs. White students in Outgroup Orientation model.

Description: Participants were asked "*what is your ethnic group?*" In response to this question, students could choose from 11 ethnic categories or could provide an open-ended answer if they identified as multi-ethnic or if their ethnicity did not fit any of the categories listed.

-Black/African American
-Asian (East/Southeast)
-European American/ White
-Latino/Mexican
-South Asian
-Filipino/Pacific Islander
-Middle Eastern
-Native American
-Multi/Biracial
-Other

Ethnic Identity (private regard and outgroup orientation)

ETHID1	*I have spent time trying to find out more about my own ethnic group, such as its history, traditions, and customs.*
ETHID2	*I feel like I really belong to my ethnic group.*
ETHID3	*I know what it's like to be a member of my ethnic group.*
ETHID4	*I have often done things that will help me understand my ethnic background better.*
ETHID5	*I have often talked to other people in order to learn more about my ethnic group.*
ETHID6	*I am proud that I am a member of my ethnic group.*
ETHID7	*I like meeting and getting to know people from other ethnic groups.*
ETHID8	*I have participated in cultural events with other ethnic groups.*
ETHID9	*I value spending time with people from other ethnic groups.*
ETHID10	*I learn new things when I am with people from other ethnic groups.*
ETHID11	*I am involved in activities with people from other ethnic groups.*
ETHID12	*I enjoy being around people from other ethnic groups.*

Responses:
1 = "Definitely yes!" – 5 = "Definitely no!"

Achievement Attributions

Item: *...Think about a time in middle school when you did poorly on an important test...Try to remember what subject the test is in, what happened, why you got the poor grade, and how you felt about it.*

WRATTR   *Take a couple of minutes to write about it here...*
    Response: Open Ended Response

Items: *Do you think any of the following are the reasons why <u>you</u> did poorly on your test?*

ATTR1   *I'm not good at this subject*
ATTR2   *It is bad luck*

ATTR3   *I didn't use a good test-taking strategy*
ATTR4   *I didn't receive the extra help I needed*
ATTR5   *The teacher didn't like me*
ATTR6   *If I were a smarter kid, I wouldn't have gotten this grade*

ATTR7   *The stuff I studied isn't on the test*
ATTR8   *I should have studied more*
ATTR9   *The teacher is an unfair grader*
ATTR10   *The class is always noisy when we took tests, so it is hard to concentrate*
ATTR11   *I'm just not smart enough*
ATTR12   *The teacher always gives me a worse grade than I deserve*
ATTR13   *I is sick that day and couldn't concentrate*
ATTR14   *I should have paid more attention in class*
ATTR15   *The test is too hard for everyone*
ATTR16   *I didn't have a good teacher*
ATTR17   *I did not try hard enough*
ATTR18   *The test is too hard*

Responses:
1 = "Definitely a reason" – 5 = "Definitely NOT a reason"

References

Abes, E. S. (2009). Theoretical borderlands: Using multiple theoretical perspectives to challenge inequitable power structures in student development theory. *Journal of College Student Development*, 50(2), 141-156.

Adiba, F. (2004). Study of attributions of low achievers and high achievers about the perceived causes of their success and failure. Unpublished Doctoral Dissertation in Education.

Altschul, I., Oyserman, D., & Bybee, D. (2006). Racial-ethnic identity in mid-adolescence: Content and change as predictors of academic achievement. *Child Development*, 77, 1155–1169.

Anderman, E. M., & Anderman, L. H. (1999). Social predictors of changes in students' achievement goal orientations. *Contemporary Educational Psychology*, 25, 21-37.

Arce, C. H. (1981). Reconsideration of Chicano culture and identity. Daedalus, 110, 177–191.

Barber, B. & Olsen, J. 2004. ''Assessing the Transitions to Middle and High School.'' *Journal of Adolescent Research* 19(1):3–30.

Bell, S. M., McCallum, R. S., Bryles, J., Driesler, K., McDonald, J., Park, S. H., & Williams, A. (1994). Attributions for academic success and failure: An individual difference investigation of academic achievement and gender. *Journal of Psychoeducational Assessment*, 12(1), 4-13. doi:10.1177/073428299401200101

Benner, A. D., & Graham, S. (2009). The transition to high school as a developmental process among multi- ethnic urban youth. *Child Development*, 80, 356–376. doi:10.1111/j.1532-7795.2007.00519.x

Boruchovitch, E. (2004). A study of causal attributions for success and failure in mathematics among Brazilian students. *Int J Psychol* 38: 53-60.

Brown, R. (2000). Social identity theory: Past achievements, current problems and future challenges. *European journal of social psychology*, *30*(6), 745-778.

Brown, C. S., & Chu, H. (2012). Discrimination, ethnic identity, and academic outcomes of Mexican immigrant children: The importance of school context. *Child Development*, 83, 1477–1485. http://dx.doi.org/10 .1111/j.1467-8624.2012.01786.x

Buhs, E. S., Ladd, G. W., & Herald, S. L. (2006). Peer exclusion and victimization: Processes that mediate the relation between peer group rejection and children's classroom engagement and achievement?. *Journal of educational psychology*, 98(1), 1.

Chang, M. J., Denson, and V. Saenz. (2006). The educational benefits of sustaining cross-racial interaction among undergraduates. *Journal of Higher Education* 77(3): 430-455.

Chen, C., & Stevenson, H. W. (1995). Motivation and mathematics achievement: A comparative study of Asian-American, Caucasian-American, and East Asian high school students. *Child development*, *66*(4), 1215-1234.

Cialdini, R. B., & Richardson, K. D. (1980). Two indirect tactics of image management: Basking and blasting. *Journal of personality and social psychology*, 39(3), 406.

Dietz-Uhler, B., & Murrell, A. (1998). Effects of social identity and threat on self-esteem and group attributions. *Group Dynamics: Theory, Research, and Practice*, 2(1), 24.

Dweck, C. S. (1986). Motivational processes affecting learning. *American psychologist*, *41*(10), 1040.

Eccles, J. S., & Roeser, R. W. (2009). Schools, academic motivation, and stage-environment fit. In R. M. Lerner and L. Steinberg (Eds.), Handbook of adolescent psychology (3rd ed., pp. 404–434). Hoboken, NJ: John Wiley.

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and

achievement. *Journal of personality and social psychology*, *54*(1), 5.

Eppler, M. A., Carsen-Plentl, C., & Harju, B. L. (2000). Achievement goals, failure attributions, and academic performance in nontraditional and traditional college students. *Journal of Social Behavior and Personality*, 15(3), 353.

Erikson, E. H. (1968). Identity, youth, and crisis (1st ed.). New York: Norton.

Felmlee, D., McMillan, C., Rodis, P. I., & Osgood, D. W. (2018). Falling Behind: Lingering costs of the high school transition for youth friendships and grades. *Sociology of Education*, 91(2), 159-182.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Thousand Oaks: Sage.

Finger, J. A., & Silverman, M. (1966). Changes in academic performance in the junior high school. *Journal of Counseling & Development*, 45(2), 157-164.

Flook, L., Repetti, R. L., & Ullman, J. B. (2005). Classroom social experiences as predictors of academic performance. *Developmental psychology*, 41(2), 319.

Forsyth, D. R., Story, P. A., Kelley, K. N., & McMillan, J. H. (2009). What causes failure and success? Students' perceptions of their academic outcomes. *Social Psychology of Education*, 12(2), 157-174.

Fuligni, A. J., Witkow, M., & Garcia, C. (2005). Ethnic identity and the academic adjustment of adolescents from Mexican, Chinese, and European backgrounds. *Developmental psychology*, 41(5), 799.

Garcia Coll, C., Marks, A. K. (2009). *Immigrant stories: Ethnicity and academics in middle childhood.* New York: Oxford University Press.

Godsey, M. (2015). The Inequality in Public Schools. The Atlantic. Retrieved from https://www.theatlantic.com/education/archive/2015/06/inequality-public

schools/395876/http://www.newsweek.com/why-minority-students-dont-graduate college-75143.

Goodnow, C. (1992). Strengthening the links between educational psychology and the study of social contexts. *Educational Psychologist*, *27*(2), 177-196.

Graham, S., & Taylor, A. Z. (2016). Attribution theory and motivation in school. Handbook of motivation at school, 11-33.

Grossman, B., Wirt, R., & Davids, A. (1985). Self-esteem, ethnic identity, and behavioral adjustment among Anglo and Chicano adolescents in West Texas. *Journal of Adolescence*, 8, 57-68

Graham, S. (1994). Motivation in African Americans. Rev. Educat. Res. 64: 55–117.

Harris, C. A., & Mylroie, R. M. (2016). Ethnic Identity and the Adolescent's Academic Performance. *Ideas and Research You Can Use: VISTAS—Sponsored by the American Counseling Association.*

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Publications.

Hazari, A. (2014). Learning Curve : Student perceptions have a huge impact on understanding. South China Morning Post.

Heider, F. (1958). The psychology of interpersonal relations. New York: John Wiley & Sons.

Hewstone, M., Jaspars, J.M.F., & Lalljee, M. (1982). Social representations. social attribution and social identity: The intergroup Images of 'public' and 'comprehensive' school boys. *European Journal of Social Psychology*, *12*, 241-269.

Hsin, A., & Xie, Y. (2014). Explaining Asian Americans' academic advantage over whites. *Proceedings of the National Academy of Sciences*, *111*(23), 8416-8421.

Hurtado, S. (2007). Linking diversity with the educational and civic missions of higher education. *Review of Higher Education* 30(2): 185-196.

Jandt, F. E. (2010). An introduction to intercultural communication: Identities in a global community. Los Angeles: SAGE.

Kurlaender, M., Reardon, S., & Jackson, J. (2008). Middle school predictors of high school achievement in three California school districts. *Santa Barbara, CA: California Dropout Research Project, University of California, Santa Barbara*.

Levy, M. (2018). ISHINGTON, D.C. VOUCHER PROGRAM: CIVIL RIGHTS IMPLICATIONS. Retrieved from https://www.civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/ishington-d.c.s-voucher-program-civil-rights-implications/Levy-DC-VOUCHER-PAPER-FINAL-TO-POST-030218C.pdf

Likupe, G., & Mwale, M. (2016). The study of attributions of low achievers and high achievers about the perceived causes of their success and failure: the case of adolescent students in secondary schools- Malawi. *Journal of Child & Adolescent Behavior*. 4(5).

Major, B., Quinton, W. J., & Schmader, T. (2003). Attributions to discrimination and self esteem: Impact of group identification and situational ambiguity. *Journal of Experimental Social Psychology, 39*, 220–231.

Mezulis, A. H., Abramson, L. Y., Hyde, J. S., & Hankin, B. L. (2004). Is there a universal positivity bias in attributions? A meta-analytic review of individual, developmental, and cultural differences in the self-serving attributional bias. *Psychological bulletin*, *130*(5), 711.

McCallumore, K. M. * Sparapani, E. F. 2010. ''The Importance of the Ninth Grade on High School Graduation Rates and Student Success.'' Educational Digest: Essential

Readings Condensed for Quick Review 76(2):60–64

McClure, J., Meyer, L. H., Garisch, J., Fischer, R., Weir, K. F., & Walkey, F. H. (2011).

Students' attributions for their best and worst marks: do they relate to achievement?.

Contemporary Educational Psychology, 36(2), 71-81.

McKenzie, K., & Schweitzer, R. (2001). Who succeeds at university? Factors predicting

academic performance in first year Australian university students. *Higher education*

research & development, 20(1), 21-33.

McFarland, C., and Ross, M. (1982). Impact of causal attributions on affective reactions to

ccess and failure. *J. Personal. Social Psychol*. 43: 937–946.

Miller, D., & Ross, L. (1975). Self-serving biases in the attribution of causality": Fact or fiction?

Psychological Bulletin, 82, 213-225.

Miller-Cotto, D., & Byrnes, J. P. (2016). Ethnic/racial identity and academic achievement: A

meta-analytic review. *Developmental Review*, *41*, 51-70.

NCES (2018). The condition of education: Public High School Graduation Rates. Ishington,

D.C.: U.S. Dept. of Education, Office of Educational Research and Improvement,

National Center for Education Statistics.

O'Hara, M. W., French, C. J., Zekoski, E. M., Neunaber, D. J., & Schroeder, G. W. (1985).

Discriminating adaptive attributions: Agreement between self-report and objective

ratings. *Cognitive therapy and research*, *9*(3), 267-275.

Ortiz, A. M., & Santos, S. J. (2010). Campus diversity and ethnic identity development.

Diversity & Democracy, 13(2), 1-6.

Oyserman, D., Gant, L., and Ager, J. (1995). A socially contextualized model of African

American identity: Possible selves and school persistence. J. Personal. *Social Psychol.*

69: 1216–1232.

Perry, R. P., Hechter, F. J., Menec, V. H., & Weinberg, L. E. (1993). Enhancing achievement

motivation and performance in college students: An attributional retraining perspective.

Research in Higher Education, 34, 687-723.

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: A review of research.

Psychological Bulletin, 108, 499–514.

Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse

groups. *Journal of Adolescent Research, 7*, 156–176.

Phinney, J. S., & Chavira, V. (1992). Ethnic identity and self-esteem: An exploratory

longitudinal study. *Journal of adolescence*, *15*(3), 271-281.

Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths

and strategies. International journal of nursing studies, 47(11), 1451-1458.

Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why do we need what we need? A terror

management perspective on the roots of human social motivation. *Psychological Inquiry, 8*,

1–20. Rosenberg,

Rivas-Drake, D., Syed, M., Umaña-Taylor, A., Markstrom, C., French, S., Schwartz, S. J.,...the

Ethnic and Racial Identity in the 21st Century Study Group. (2014). Feeling good, happy,

and proud: A meta-analysis of positive ethnic-racial affect and adjustment. *Child

Development, 85*, 77–102. http://dx.doi.org/10.1111/cdev.12175

Roberts, R. E., Phinney, J. S., Masse, L. C., Chen, Y. R., Roberts, C. R., & Romero, A. (1999).

The structure of ethnic identity of young adolescents from diverse ethnocultural groups.

Journal of Early Adolescence, 19.

Santos, C. E., & Collins, M. A. (2016). Ethnic identity, school connectedness, and achievement

in standardized tests among Mexican-origin youth. *Cultural Diversity and Ethnic Minority Psychology*, *22*(3), 447.

Saafir, A., & Levy, H. (2017). *Contextualizing Ethnic Identity: The Combined Influence of Ethnic Representation and School Ethnic Composition In.* Society for Research in Child Development Conference.

Sciarra, D., & Seirup, H. (2008). The multidimensionality of school engagement and math achievement among racial groups. Professional School Counseling, 11(4), 218-228.

Smith, T. B., & Silva, L. (2011). Ethnic identity and personal well-being of people of color: A meta-analysis. *Journal of Counseling Psychology*, *58*(1), 42.

Tabachnick, B.G.& Fidell, L.S. (2012). *Using multivariate statistics.* 6th edition. Needham Heights, MA: Allyn & Bacon.

Tawa, J., & Montoya, A. K. (2018). Construals of self and group: How racial nominalism can promote adaptive intergroup outcomes for interdependent selves. *Group Processes & Intergroup Relations*, 1368430218784652.

Taylor, D. M., & 1aggi, V. (1974). Ethnocentrism and causal attribution in a South Indian context. *Journal of Cross-Cultural Psychology, 5*,162-171.

Taylor, D. M. & Dona, J. R. (1979). 'Self-serving and group-serving bias in attribution', McGill University, Montreal, Mimeo.

Thomas, E. (2010). Why Minority Students Don't Graduate From College. Newsweek. Retrieved from http://www.newsweek.com/why-minority-students-dont-graduate-college-75143

U.S. Department of Education. (n.d.). Progress for America's Children. Retrieved from https://www.ed.gov/priorities

Umaña-Taylor, A. J. (2004). Ethnic identity and self-esteem: Examining the role of social context. *Journal of adolescence*, 27(2), 139-146.

Weiner, B. (1986). An Attributional Theory of Motivation and Emotion, Springer-Verlag, New York.

Wood, P. C., Hillman, S. B., & Sawilowsky, S. S. (1996). Locus of control, self-concept, and self-esteem among at-risk African-American adolescents. *Adolescence*, 31(123), 597 604.

Wright, B. L. (2009). Racial-ethnic identity, academic achievement, and African American males: A review of literature. *The Journal of Negro Education*, 123-134.

Barber, B. & Olsen, J. (2004). ''Assessing the Transitions to Middle and High School.'' Journal of Adolescent Research 19(1):3–30.

Bell, S. M., McCallum, R. S., Bryles, J., Driesler, K., McDonald, J., Park, S. H., & Williams, A. (1994). Attributions for academic success and failure: An individual difference investigation of academic achievement and gender. Journal of Psychoeducational Assessment, 12(1), 4-13. doi:10.1177/073428299401200101

Benner, A. D., & Graham, S. (2009). The transition to high school as a developmental process among multi- ethnic urban youth. Child Development, 80, 356–376. doi:10.1111/j.1532-7795.2007.00519.x

Boruchovitch, E. (2004). A study of causal attributions for success and failure in mathematics among Brazilian students. Interamerican Journal of Psychology.

Buhs, E. S., Ladd, G. W., & Herald, S. L. (2006). Peer exclusion and victimization: Processes that mediate the relation between peer group rejection and children's classroom engagement and achievement?. Journal of educational psychology, 98(1), 1.

Byrd, C. M., & Chavous, T. M. (2009). Racial identity and academic achievement in the

neighborhood context: A multilevel analysis. Journal of Youth and Adolescence, 38, 544–559.

Costigan, C. L., Koryzma, C. M., Hua, J. M., & Chance, L. J. (2010). Ethnic identity, achievement, and psychological adjustment: Examining risk and resilience among youth from immigrant Chinese families in Canada. Cultural Diversity and Ethnic Minority Psychology, 16, 264–273.

Dweck, C. S. (1986). Motivational processes affecting learning. American psychologist, 41(10), 1040.

Eccles, J. S. (2004). Schools, academic motivation, and stage-environment fit. In: Lerner RM, Steinberg L, editors. Handbook of Adolescent Psychology. Hoboken, NJ: John Wiley and Sons; pp. 125–153.

Erikson, E. (1968). Identity: Youth in crisis. New York, NY: Norton. Farver,

Felmlee, D., McMillan, C., Rodis, P. I., & Osgood, D. W. (2018). Falling Behind: Lingering costs of the high school transition for youth friendships and grades. Sociology of Education, 91(2), 159-182.

Flook, L., Repetti, R. L., & Ullman, J. B. (2005). Classroom social experiences as predictors of academic performance. Developmental psychology, 41(2), 319.

Forsyth, D. R., Story, P. A., Kelley, K. N., & McMillan, J. H. (2009). What causes failure and success? Students' perceptions of their academic outcomes. Social Psychology of Education, 12(2), 157-174.

Fuligni, A. J., Witkow, M., & Garcia, C. (2005). Ethnic identity and the academic adjustment of adolescents from Mexican, Chinese, and European backgrounds. Developmental psychology, 41(5), 799.

Hazari, A. (2014). Learning Curve : Student perceptions have a huge impact on understanding. South China Morning Post.

Hughes, J. N., Im, M. H., & Allee, P. J. (2015). Effect of school belonging trajectories in grades 6–8 on achievement: Gender and ethnic differences. Journal of school psychology, 53(6), 493-507.

Hughes, J. N., Im, M., Kwok, O., Cham, H., & West, S. G. (2015). Latino Students' Transition to Middle School: Role of Bilingual Education and School Ethnic Context. Journal of Research on Adolescence : The Official Journal of the Society for Research on Adolescence, 25(3), 443–458.

Jaworska, N., & MacQueen, G. (2015). Adolescence as a unique developmental period. Journal of psychiatry & neuroscience: JPN, 40(5), 291.

Marcia, J. (1980). Identity in adolescence. In Handbook of adolescent psychology (pp. 159–187). NewYork: Wiley.

McCallumore, K. M. & Sparapani, E. F. (2010). ''The Importance of the Ninth Grade on High School Graduation Rates and Student Success.'' Educational Digest: Essential Readings Condensed for Quick Review 76(2):60–64

Murphy, M. C., & Zirkel, S. (2015). Race and belonging in school: How anticipated and experienced belonging affect choice, persistence, and performance. *Teachers College Record*, 117(12), 1-40.

Newgent, R., Lee, S., & Daniel, A. (2007). Interracial best friendships: Relationship with 10th graders' academic achievement level. Professional School Counseling, 11, 98-104.

Ortiz, A. M., & Santos, S. J. (2010). Campus diversity and ethnic identity development. Diversity & Democracy, 13(2), 1-6.

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: review of research. *Psychological bulletin*, *108*(3), 499.

Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research, 7*, 156–176.

Phinney, J. S. (1993). A three-stage model of ethnic identity development in adolescence. Ethnic identity: Formation and transmission among Hispanics and other minorities, 61, 79.

Phinney, J. S. (1996). Understanding ethnic diversity: The role of ethnic identity. *American Behavioral Scientist*, *40*(2), 143-152.

Pianta, R. C., Cox, M. J., Snow, K. L. (2007). School readiness and the transition to kindergarten in the era of accountability. Baltimore: Brookes.

Quintana, S. M. (2007). Racial and ethnic identity: Developmental perspectives and research. Journal of Counseling Psychology, 54(3), 259.

Rivas-Drake, D., Syed, M., Umana-Taylor, A., Markstrom, C., French, S., Schwartz, S. J., et al. (2014). Feeling good, happy, and proud: A meta-analysis of positive ethnic-racial affect and adjustment. Child Development, 85, 77–102.

Sciarra, D., & Seirup, H. (2008). The multidimensionality of school engagement and math achievement among racial groups. Professional School Counseling, 11(4), 218-228.

Smith, T. B., & Silva, L. (2011). Ethnic identity and personal well-being of people of color: A meta-analysis. *Journal of Counseling Psychology*, *58*(1), 42.

Spencer, M. B. (1999). Social and cultural influences on school adjustment: The application of an identity-focused. *Educational psychologist*, *34*(1), 43-57.

Sukariyah, M. B., & Assaad, G. (2015). The effect of attribution retraining on the academic achievement of high school students in mathematics. *Procedia-Social and Behavioral*

Sciences, *177*, 345-351.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion.

Psychological Bulletin, 92, 548-573.

Weiner, B. (1986). An Attributional Theory of Motivation and Emotion, Springer-Verlag,

New York.

Weiner, B. (2010). The development of an attribution-based theory of motivation: A history of

ideas. *Educational psychologist*, *45*(1), 28-36.

Weiss, C. C. (2001). Difficult starts: Turbulence in the school year and its impact on urban

students' achievement. American Journal of Education: pp. 196–227.