June 2017

Associations between Ethnic Identity, Academic Efficacy, Achievement Goals and School Belonging among Early Adolescents

Leah Bonilla
University of South Florida, leahbonilla@mail.usf.edu

Associations between Ethnic Identity, Academic Efficacy, Achievement Goals and School Belonging among Early Adolescents

by

Leah Bonilla

A thesis submitted in partial fulfillment
of the requirements for the degree of
Education Specialist
Department of Educational Psychological Studies
College of Education
University of South Florida

Major Professor: Shannon Suldo, Ph.D.
Sarah Kiefer, Ph.D.
John Ferron, Ph.D.

Date of Approval:
June 29, 2017

Keywords: Ethnic Identity, Early Adolescents, Academic Efficacy, Achievement Goals

Table of Contents

List of Tables

List of Figures

Abstract

The United States is experiencing a major shift in the population as more students who are considered ethnic minorities enter the school system. These students are at an increased risk for school failure due to language barriers, challenges with experiencing potential discrimination, and debating their identities across two cultural contexts. Although students who are considered ethnic minorities risk many potential stressors, the literature has shown that ethnic identity is a factor that facilitates positive academic adjustment and engagement among this population. Previous literature has also documented mixed findings regarding the relationship between ethnic identity and school outcomes. The current study explored: (a) the associations between ethnic identity, academic efficacy, and achievement goals among early adolescents, (b) to what extent school belonging moderates the association of ethnic identity with academic efficacy and academic achievement goals, and (c) how associations between ethnic identity and outcomes vary by race (Black, Hispanic, Asian, Other, and White students) and gender. The archival dataset analyzed consisted of data collected from 436 participants in the Adolescent Development Longitudinal Study when they were in the spring of their 6th grade year. Findings revealed significant positive relationships between ethnic identity, academic efficacy, and achievement goals with the exception of performance-avoidance goals. School belonging did not moderate these relationships. Further, group differences (gender, race, and school) in the relationships between ethnic identity, academic efficacy, and achievement goals were not detected among the current sample. Implications for educators and researchers is discussed.

Chapter 1: Introduction

Statement of the Problem

The United States is experiencing a surge in multicultural populations as individuals who are considered ethnic minorities constitute more than 40% of the American youth population under the age of 18, and represent the majority of all births in the U.S (Pew Research Center, 2014). For example, one third (17.9 million) of the nation's Hispanic population is younger than 18 years of age (Pew Research Center, 2014). According to The Condition of Education 2014 report, public school enrollments for students who are Hispanic are increasing as the enrollments of students who are Caucasian are declining (National Center for Education Statistics, 2014). The number of Caucasian students enrolled in pre-kindergarten through 12th grade decreased from 60% to 52% of the total population from 2001 through 2011. During this same period, enrollments for Hispanic students increased from constituting 17% to 24%. In 2025, the proportion of white students enrolled in public school is projected to be 46% of the total population (National Center for Education Statistics, 2014). In contrast, Hispanic students are projected to encompass 29% of enrollments indicating a continued increase in public school enrollments for this population.

As more students who are from different cultures enter the school system, it becomes necessary for educators to understand how cultural factors impact the learning and development of these students (Belin, 2012; Jaramillo, Mello, & Worrell 2015; Pina-Watson, Lopez, Ojeda, & Rodriguez, 2015; Worrell, 2007). An important cultural factor to consider is the role of ethnic identity development of all students, particularly those from various ethnic and minority

backgrounds. Due to lower socio-economic statuses, language barriers, and identity development issues, students from ethnic and minority backgrounds are at an increased risk for school failure (Altschul, Oyserman, & Bybee, 2006).

In an effort to address the disparity in educational achievements between students who are ethnic minorities and their White peers (referred to as Caucasian in some studies), researchers have begun to examine the relationship between racial-ethnic identification (REI) and academic success (Altschul et al., 2006). Research on ethnic identity development suggests that for individuals who are considered ethnic minorities, an achieved ethnic identity is positively associated with competence in academic skills and achievement, higher self-esteem, and negatively associated with depressive symptoms (Smith et al., 2009; Smith & Sylvia, 2011). In addition, a positive connection to one's ethnic identity can serve as a buffer against the negative effects of adverse life events such as experiencing discrimination because of one's specific racial or ethnic group membership (Galliher, Jones, & Dahl, 2011).

Contrary to ethnic identity serving as a protective factor to academic success, well established theories such as cultural identity theory (CET) and stereotype threat theory (STT) posit that for students from minority backgrounds, construction of one's ethnic identity can serve as a risk for academic disengagement (Aronson, 2002; Fordham & Ogbu, 1986; Fordham, 1988; Mickelson, 1990; Steinberg, Dornbusch, & Brown, 1992). Notably, those studies are from over 20 years ago. More recently, researchers have further investigated the role of ethnic and racial identity on academic achievement with hopes of unlocking further explanations for the educational disparities among racial, ethnic, and socioeconomic groups in the U.S (White & Worrell, 2012; Worrell, 2014). Based on a review of existing literature regarding how racial and ethnic identity is associated with psychological, academic, and health outcomes, findings support

that ethnic affirmation and belonging are positively associated with academic performance and predicted higher grade point averages among early adolescents (Adelabu, 2008; Altschul, Oyserman, & Bybee, 2006; Rivas-Drake et al., 2014). However, in an earlier literature review of the ethnic identity literature conducted by Worrell (2007), several studies were highlighted that did not find ethnic and racial identity to be significantly associated with academic outcomes such as GPA among high school (Guzman, 2002; Shermak, 1996) and college students (Ivory, 2003).

Some research findings also suggest that the relationship between ethnic identity and academic achievement differs by cultural group (Smith et al., 2009; Worrell, 2007). For example, Worrell (2007) examined how ethnic identity and other group orientation attitude scores predicted global self-esteem and academic achievement among academically talented middle and high school students. The sample consisted of 319 students and the average age of the participants was 14 years old. Ethnic identity scores were substantial predictors of school GPA for African American students, but not for the Hispanic, White, or Asian American students in the sample. Given the mixed perspectives of how exactly ethnic identity contributes to future achievement, it is clear that the concept of one's ethnic identity development is an important construct to consider for understanding academic behaviors of students from diverse backgrounds.

Definition of Key Terms

Ethnic identity. Ethnic identity is a type of cultural identity that is often used interchangeably with racial identity even though scholars have made clear distinctions between the two constructs. Whereas racial identity refers to an individual's physical appearance, the term ethnic identity is typically based on cultural affiliations, languages, and religious beliefs in connection with a particular ethnic group (Frable, 1997; Phinney, 1996). An ethnic group can be

defined as a group of people who share a common ancestry, common history, and a set of cultural values that distinguishes the group from other ethnic groups (Hudley & Irving, 2012). In this study ethnic identity was discussed within the context of an individual's personal connection (sense of belonging) to his or her ethnic group. In addition, the term racial-ethnic identity (REI) was used to refer to both ethnic groups and racial groups in the current study.

Educational beliefs. Educational school-related attitudes and beliefs refer to within-student beliefs (internal factors) that underlie one's motivation purpose to (or not) engage at school. In the current study, the types of educational beliefs examined included motivational beliefs (academic efficacy) and achievement goals.

Motivational beliefs. Motivational beliefs refer to a set of beliefs about achievement that determine if students will engage themselves with academic tasks (Wigfield & Wagner, 2005). In this study, motivational beliefs were discussed in terms of beliefs about academic efficacy.

Academic efficacy. Academic efficacy refers to the level of competency and skills students perceive they have that are needed to engage in specific academic tasks (Eccles et al., 1998).

Achievement goals. Achievement goals refer to the different goals students bring to their approach of academic related tasks that justify their performance and achievement motivation (Grant & Dweck, 2003). In this study, achievement goals were made up of three specific goal orientations including mastery, performance approach, and performance avoidance. Students with *mastery goal orientations* have the desire to learn, develop, and master new material. Students with *performance-approach goal orientations* strive to outperform others or possess an ultimate goal to receive public recognition for achievement performance. Students who adopt a *performance- avoidance orientation* avoid engaging in academic tasks because they believe

others will perceive them as incompetent. Research suggests that mastery goal orientations are associated with positive academic outcomes whereas performance-avoidance goal orientations have been associated with negative academic outcomes (Wigfield & Wagner, 2005). Empirical support for performance-approach goals has been mixed regarding their relationship to academic engagement (Liem, Lau, & Nie, 2008).

School belonging. School belonging refers to a student's personal connection and sense of belonging to their school climate (Wang & Eccles, 2012). In the current study school belonging was understood as a sense of belonging or connectedness a student has to their respective school environment. Juvonen (2006) reports those students who are motivated to do well academically are presumed to feel more connected to their school community. Therefore, school belonging was assessed in the current study by examining the extent to which students felt they belong to their school.

Moderator. A moderator is, "a qualitative or quantitative variable that affects the direction and/or strength of the relationship between an independent or predictor variable and a dependent or criterion variable" (Baron & Kenny, 1986, p. 1141). In the current study, school belonging was tested as a moderator of the relationship between the predictor variable ethnic identity beliefs and the criterion variables, academic efficacy and achievement goals.

Rationale for the Current Study

As schools in the United States become increasingly diverse, there are implications for researchers in education to understand the extent to which cultural influences are associated with the academic success of youth from culturally and linguistically diverse populations. Empirical studies have identified that among youth from culturally and ethnically diverse backgrounds; ethnic identity beliefs contribute to achievement outcomes and academic attitudes. The current

study explored the association between ethnic identity beliefs, academic efficacy, and achievement goals among early adolescents.

Erikson (1968) describes adolescence as a developmental stage of identity crisis. It is a state of psychological evaluation and exploration to determine one's identity and how the manifestation of this identity will represent future adulthood. During this stage, adolescents are trying to understand themselves within the context of society while simultaneously juggling the development of racial, social, and academic identities (Oyserman, Bybee & Terry, 2006). Given that adolescents spend the majority of their time in schools and academic achievement is a central task of this developmental period, the construction of their identities is strongly influenced by school experiences (White &Worrell, 2012). In addition, research suggests that academic engagement begins to decline during middle school, especially for minority youth (Oyserman et al., 2006). Therefore, studying early adolescence is a salient developmental period to examine subscriptions to cultural identities, academic efficacy, and performance goals.

For the purpose of this study, educational beliefs were studied primarily through a motivational and achievement-focused lens. Empirical research on motivation and achievement goals among early adolescents is typically studied through understanding psychological and social factors that contribute to the learning process and the environment. For example, in a study that examined the relationships between middle school students' perceptions of the school environment, achievement motivation, and school engagement, Wang and Eccles (2012) used a multidimensional perspective to study the contextual and motivational predictors of school engagement. When the students identified school as a positive environment and felt emotionally supported in learning by both their teachers and peers, they were more likely to feel interested and to value learning activities in school. Research also suggests that when students feel a sense

of belonging in their classroom their achievement outcomes are positive (Faircloth & Hamm, 2011). This research contributes to the literature and discourse regarding ways in which multiple factors can influence academic motivation and engagement among youth from ethnically diverse backgrounds.

Significance of the Current Study

This study extends the literature in terms of understanding how the social construct of ethnic identity beliefs is related to early adolescents' educational beliefs. The study was quantitative in nature; the main effects between ethnic identity beliefs and educational beliefs was explored, as well as the possibility that the relationship depends on one's perception of belonging to the school environment (school belonging rating).

This correlational study analyzed existing data from the longitudinal Adolescent Motivation and Development Study, which explored motivational and achievement variables across the transition from elementary to middle school. Dr. Sarah Kiefer served as the Principal Investigator of the Adolescent Motivation and Development Study. Findings from this study are intended to give educational professionals insight on the different mechanisms that shape school experiences for students of diverse ethnic backgrounds. This insight has the capability to guide future professional development for understanding diverse students and expand the literature regarding ethnic identity beliefs and academic attitudes. Research that examines social factors (e.g., race and gender) and psychological factors (e.g., ethnic identity and school belonging) together is beneficial because in this way, different contextual influences that are associated with educational beliefs can be revealed. Also, examining these factors helps to further explain the learning experiences of youth from ethnically diverse backgrounds. This study focused on examining associations among youth from ethnically diverse backgrounds in the sixth grade. Due to the gaps in research that investigates the relationship between ethnic identity and

educational beliefs among youth, there has yet to emerge a coherent theoretical framework to which researchers subscribe. Figure 1 displays the hypothesized model that guided the anticipated relationships between variables to be examined in the current study.

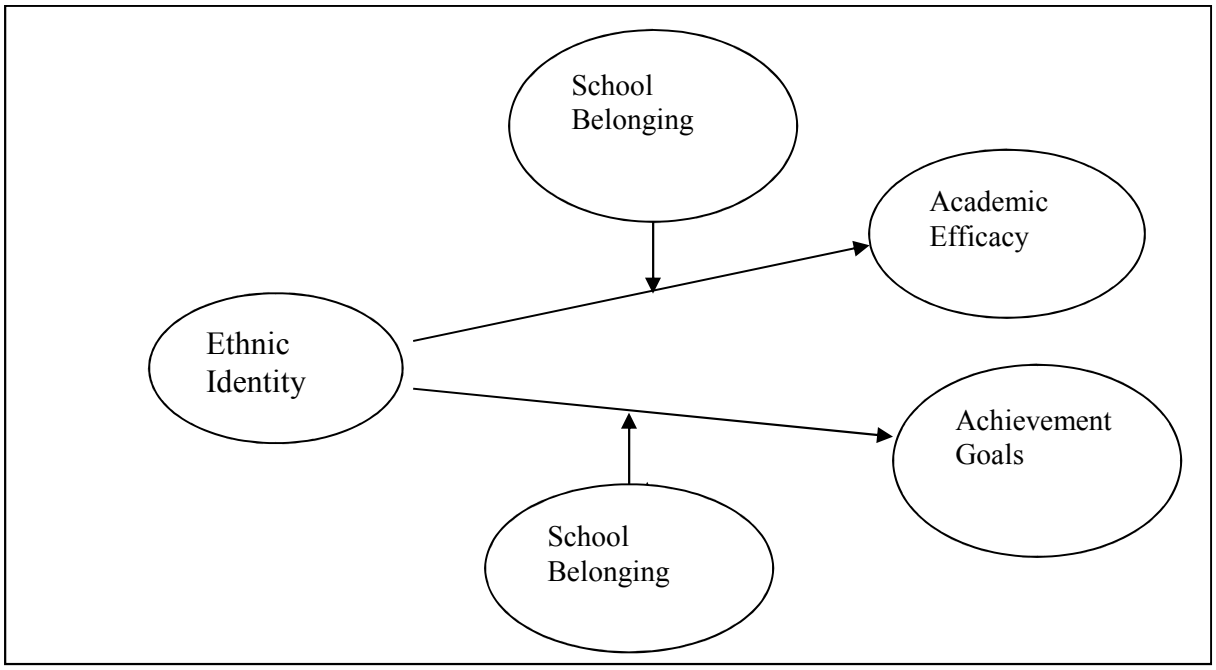


Figure 1. *Hypothesized Current model of the associations between key variables.*

This researcher was interested in the role ethnic identity beliefs plays in shaping motivation and achievement among early adolescents. Accordingly, this study examined the influence of ethnic group identity beliefs on motivational beliefs (academic efficacy) and achievement goals (mastery, performance-approach, and performance-avoidance) among a sample of sixth grade students. In addition, the current study examined school belonging as a possible moderator of the relationship between ethnic identity beliefs and educational beliefs. The study was guided by the following research questions:

Research Questions

(1) To what extent does ethnic identity beliefs predict academic efficacy?

(2) To what extent does ethnic identity beliefs predict achievement goals, specifically:

a. Mastery goals

b. Performance approach goals

c. Performance avoidance goals?

(3) To what extent is the association between ethnic identity, academic efficacy and achievement goals similar or different for demographic groups, specifically:

a. Gender

b. Race

c. School Attended?

(4) Does school belonging moderate the relationship between ethnic identity and academic efficacy?

(5) Does school belonging moderate the relationship between ethnic identity and achievement goals, specifically:

a. Mastery goals

b. Performance approach goals

c. Performance avoidance goals?

Chapter 2: Review of the Literature

The following literature review describes prior empirical research and discusses several theoretical models to further understand the relationship between ethnic identity beliefs, achievement goals, academic self-efficacy, and school belonging among early adolescents. The first section provides an overview of identity development, ethnic identity development, and how ethnic identity beliefs are measured and influence student's outcomes. The differences between ethnic and racial identity and gaps in the present literature are also addressed. In the following section, academic self-efficacy and its associated outcomes are discussed, followed by a review of achievement goals and its associated outcomes. Lastly, present literature pertaining to the associations among key variables (ethnic identity beliefs, self-efficacy, mastery goals, performance-approach, performance-avoidance, and school belonging) along with aims of the current study are discussed.

Identity Development

Identity development research focused on adolescents originated from Erikson's theory of personality development. Erikson (1968) suggests that as individuals develop, they go though 8 stages, and at each stage the individual is forced to confront a psychosocial crisis presented as a dichotomy of emotional needs versus the social environment. According to Erikson's (1968) theory of identity development, an individual's identity begins to form at the fifth stage, which occurs during adolescence approximately when youth are between the ages of 12 and 25. The crisis associated with this stage is referred to as identity versus confusion. Adolescents are faced with the task of determining who they are within themselves, who they are within the context of their social environment, and what kind of person they wish to become. The pressures of

exploring and committing to multiple roles and identities becomes particularly salient during this period as adolescents are constantly trying to construct a sense of self with which they can be happy (Marcia, 1980).

Although Erikson's theory of personality development is widely used as a foundation to explain how identity development takes place during adolescence (Klimstra, 2013; Pop, Negru-Subtirica, Crocetti, Opre, & Meeus, 2015), Moshman (2005) notes that his theory lacked solid empirical evidence. Since Erikson's initial work with understanding identity development during adolescence, researchers have extended his work in an effort to break down Erikson's concept of identity formation into a relatively clearer theory that can be tested through empirical studies (Kroger, 1993; Marcia, 1966; Waterman, Mateson, Archer, & Orlofsky, 1993).

A large body of empirical studies pertaining to identity development use Marcia's (1966) approach to understanding the developmental pathways of identity formation that he calls identity commitments (Crocetti, Rubini, & Meeus, 2008; Meesus, 1996; Meesus, Schoot, Keijsers, & Branje, 2012). These commitments are made up of four identity statuses (i.e., foreclosure, diffusion, moratorium, and achievement) and are attained through two developmental process called exploration and commitment. Marcia suggests that adolescents either commit to one of two categories during the development of their identity, which are the identity-diffused and foreclosure stages, before they commit to an achieved identity status.

Identity-diffused individuals are not strongly committed to any identity and do not seek to have any commitment to an identity in a specific context. In other words, identity-diffused individuals have not committed to an identity and are not exploring potential identities. In contrast, foreclosed individuals have clearer commitments to an identity, have not considered any alternatives, and their commitments to their identity is largely attributed to what they have

internalized from parents and their cultural contexts. Thus, individuals in the foreclosure stage have committed to an identity but have not explored any alternatives. Individuals in an identity crises in which Marcia (1966) refers to as moratorium means that an individual is in a stage where his or her commitments to their identity - whether they have made them or not - are changing and possible commitments to an identity are being considered. After individuals have actively explored identity alternatives and decided to actively commit to an identity, the individual is considered to represent the fourth identity status, which is an achieved identity. These individuals have a clear commitment to their identity that remains stable.

Meesus, Schoot, Keijsers, and Branje (2012) tested Marcia's original identity statuses with two cohorts of adolescents in a five wave longitudinal study. The purpose of the study was to examine the extent to which identity status are trajectories that change over time. The sample consisted of a younger cohort ($N = 923$) ages 12 to 16 and an older cohort ($N = 390$) ages 16 to 20, the majority of both cohorts were predominately female. Findings confirm identity status progression over time and for the younger cohort identity achievement was lower than that of the older cohort. Early to middle aged adolescents had a higher prevalence of moratorium statuses, which indicates that younger adolescents were exploring alternative identities as opposed to committing to one identity.

Both Erikson and Marcia recognize the importance of identity development and its implications for youth development. Erikson's stages provide a good foundation for understanding that youth are in a stage of overall exploration and recognize that adolescence are in a state of crisis regarding what identities they wish to express in society. A limitation to Erikson's theory is that it recognizes that an individual may choose an identity and does not explain how one resolves an identity crises and what decisions are made in effort to achieve an

identity. Marcia's identity statuses provide categories of identity commitments, further elaborate on the process of identity development, and expose the fluidity of identity development.

Erikson's (1950) theoretical and Marcia's (1966) extension of his theory through empirical application has been widely supported in the literature for explaining how identity is formed in four particular domains such as career, sexuality, religion, and political ideology (David, 2005; Marcia, 1993; Schwarts, 2001). Social cognitive developmental theorists like Erikson and Marcia suggest that personal identity development is a multidimensional construct that consists of processes that integrate multiple identities. The integration of multiple identities is assumed to ultimately produce an individual's sense of self, which influence how one behaves within their social context.

Researchers have applied these frameworks to determine the extent to which different dimensions of identity (e.g., commitment, exploration) contribute positively to adolescent adjustment (Davis, 2005; Hudley & Irving, 2012). For example, Crocetti, Rubini, and Meesus (2008) created a measure called the U-MICS, which assessed commitment, in-depth exploration, and reconsideration of commitment. The U-MICS was used in a study with 1,952 Dutch and non-Dutch adolescents ages 10 to 19, a stronger commitment to one's identity was positively associated with emotional stability and a positive self-concept and negatively associated with depressive and generalized anxiety symptoms (Crocetti et al., 2008). However, these theories may not explain the full process of identity development as it pertains to particular identities such as ethnic identity. Distinct forms of identity such as ethnic identity are associated with positive youth adjustment and achievement motivation (Mroczkowski & Sánchez, 2015; Pop et. al, 2015). The following section discusses ethnic identity, ethnic identity beliefs, and student outcomes.

Ethnic Identity

In addition to developing social, political, religious, and professional identities, youth from minority cultures in particular are faced with integrating racial or ethnic identity beliefs, which also contributes to the formation of a personal sense of self (Ellis et al., 2015; Hudley & Irving, 2012; Hughes et al., 2015). For individuals from diverse cultural backgrounds, there is another layer to identity development that encompasses cultural and ethnic group membership and contributes to how an individual thinks about themselves and the world. Ethnic identity can be understood as a salient aspect of one's self-concept. Ethnic identity refers to the extent to which one connects and establishes a sense of belonging to a specific ethnic group. Adopting an ethnic identity means that an individual has integrated thoughts, feelings, beliefs, values, and practices related to an ethnic group into the way he/she sees and thinks about one's self and the world.

Differences between racial and ethnic identity. In more recent literature, ethnic identity and racial identity are often used interchangeably, although there is not consensus in the field (Cokley, 2007). According to a review of issues related to research with ethnic minority populations (Schwartz et al., 2015), researchers have made clear distinctions between racial identity and ethnic identity as it relates to understanding these constructs theoretically and measuring them empirically (Helms & Cook 1999; Cokely, 2007; Worrell & Gardener-Kitt, 2006; Phinney, 1996). However, there are a large number of researchers who consider racial and ethnic identity as inseparable and many researchers that have been swayed to continue to examine racial and ethnic identity together as one metaconstruct (Miller-Cotto & Byrnes, 2016; Schwartz et al., 2015; Yip, Seaton, & Sellers, 2010; Umaña-Taylor et al., 2014).

For example, the Ethnic and Racial Identity in the 21st Century Study Group suggests using the term ethnic and racial identity (ERI) because youth from minority backgrounds do not separate their race from their ethnicity in describing their beliefs and experiences about race and ethnicity (Umaña-Taylor et al., 2014). In the current study, ethnic identity was discussed in combination with racial identity and the term ERI will be used to discuss both racial and ethnic identity beliefs and experiences based on recent consensus in the literature regarding both terms (Miller-Cotto & Byrnes, 2016; Rivas-Drake et al., 2014; Umaña-Taylor et al., 2015). Although the term ERI was used, it is important to note that dimensions of ethnic identity (affirmation and belonging) according to Phinney's (1980) model for understanding ethnic identity (three different stages with different sets of beliefs and attitudes) was the main theoretical framework for understanding ethnic identity beliefs among early adolescents.

Ethnic identity development. Phinney's (1989) ethnic identity development model is widely credited for providing an understanding of how ethnic identity beliefs and attitudes develop among individuals from diverse backgrounds (Cross & Cross 2008; Moshman, 2005). Phinney's (1989) model was informed by Marcia's theory and is well established in the literature. Phinney (1989) proposes that adolescents, beginning as young as 6th grade pass through up to three stages when forming an ethnic identity (Roberts, Phinney, Masse, Chen, Roberts, & Romero, 1999). The first stage is called disclosed or foreclosure. Adolescents in this stage have not explored their ethnic identity, but take interest in exploring their ethnic identity after being triggered by an event. The second stage is referred to as moratorium and consists of an exploratory phase in which adolescents seek out contextual information about their ethnic identity. The third stage encompasses an achieved ethnic identity. Reaching achievement means

that an individual has established and committed to an ethnic identity and it is integrated into their personal identity.

In addition to Phinney's stage model, French, Seidman, Allen, and Aber (2006) proposed that a growth model might be more suitable in examining ethnic identity development. French and colleagues (2006) describe ethnic identity development as a continuous process and used a growth approach to examine ethnic identity development longitudinally. In a study investigating two relevant time periods in adolescence where ethnic identity is salient, French et al. (2006) examined group esteem and exploration among 420 adolescents over a three-year period (early adolescents $N = 258$ [girls $n = 154$, boys $n = 104$]; middle adolescents $N = 162$ [girls $n = 115$, boys $n = 47$]) using items from the Multigroup Ethnic Identity Measure (MEIM). The early adolescent sample was ethnically diverse (African American $n = 142$, Latino $n = 75$, European America $n = 81$). The majority of the participants (70%) began the study in 6th grade and were classified as early adolescents and there was a mean age of 11 among the participants. French et al. (2006) also reports that the schools in which the three groups attended were predominately homogeneous in favor of their own racial/ethnic group. When participants transitioned to high school their schools became more diverse.

Findings revealed significant differences between early adolescents and middle adolescent participants on the group esteem items. Specifically among early and middle adolescents, European adolescents reported higher group esteem compared to the African American and Latino participants. Among middle adolescent participants, African American adolescents reported significantly lower group esteem compared to Latino participants. Both group esteem and exploration also significantly changed over the course of three years among

middle adolescents. Also African American and Latino group esteem increased more over time compared to European adolescents among middle adolescents.

In sum, French and colleagues (2006) documented that during the transitions from elementary to middle school and middle school to high school, ethnic identity is salient and is sensitive to change. The current study examined the experiences of 6th grade students at the end of the year because these youths have recently endured a transition from elementary school and previous literature indicate that feelings about one's ethnic group increases as youth get older and transition through different grades levels.

Measuring ethnic identity. Initial empirical support for Phinney's model was found in a study conducted with 10th grade students from four ethnic groups (Asian American, African American, Hispanic, and White) in Los Angeles ($N = 91$). Findings indicate that regardless of ethnic group, participants confronted their respective ethnic group membership by aligning with one of the three stages of ethnic identity development (Phinney, 1989). These findings provided the impetus for structuring a measure of ethnic identity that can be used to understand individuals from all ethnic groups.

The Multigroup Ethnic Identity Measure (MEIM) is the most widely cited and used measure of ethnic identity beliefs and was developed by Phinney in 1992 (Hudley & Graham, 2012). The MEIM is a 14-item measure containing three subscales: affirmation and belonging, ethnic identity achievement, and ethnic behaviors. The affirmation and belonging (5-items) subscale refers to an individual's sense of group membership and attitudes about his/her ethnic group. Ethnic identity achievement (7-items) refers to the extent to which an individual has confidently committed to an ethnic identity. Lastly, ethnic behaviors (2-items) refer to behaviors relevant to group membership.

Roberts et al. (1999) conducted a study with sixth, seventh, and eighth grade students from diverse ethnic groups to examine the structure and construct validity of the MEIM (N = 5,423). Findings suggest that ethnic identity is a relevant and valid construct that emerges during early adolescence, and can be measured according to the structure of the three stages proposed by Phinney (1989). In addition, results indicate that ethnic identity can be measured reliably and that ethnic identity can be differentiated among students from various ethnic groups (Robert et al., 1999).

Ethnic identity and school outcomes. The associations between ethnic identity, psychosocial functioning, academic outcomes, and health related outcomes are well documented in the literature (Cokeley et al., 2011; Guzman, Santiago-Rivera, & Hasse, 2005; Rivas-Drake et al., 2014; Worrell, 2007; Yasui, Dorham, & Dishion, 2004). For example, adolescents with a strong, positive, and achieved ethnic identity are more likely to have better academic outcomes such as higher GPA compared to adolescents with a weaker connection to an ethnic group or individual who has a negative perception of their ethnic identity (Altschul, Oyserman, & Bybee, 2006; Byrd & Chavous, 2009; Chang & Le, 2010; Sandoval, Gutkin, & Naumann, 1997). Empirical studies have also documented that students with higher levels of ethnic identification employ higher self-efficacy toward school related tasks, experience fewer mental health problems, and engage in more positive coping strategies compared to adolescents with a low sense of ethnic identification (Chavous et al., 2003; Oyeserman, Harrison, & Bybee, 2001; Umana-Taylor & Updegraff, 2007; Zaff, Blount, Phi- lips, & Cohen, 2002).

Perreira, Fuligni, and Potochnick (2010) reported that among first generation Latino immigrant students in Los Angeles, California (CA) and North Carolina (NC), more positive educational values were associated with higher levels of ethnic belonging compared to non-

immigrant Latino students who endorse lower levels of ethnic belonging ($N = 459$; Mean age = 15 for NC sample; Mean age 14 for CA sample). Also, a positive ethnic identity has been shown to buffer the negative effects of racial discrimination for youth from minority backgrounds who are more likely to experience racial discrimination in school when compared to white youth (Tynes, Umana-Taylor, Rose, Lin, & Anderson, 2012).

Despite some evidence that having a strong sense of ethnic identity is associated with positive youth adjustment and achievement, researchers have also documented studies where ethnic identity was not significantly associated to achievement outcomes among early adolescents or report there was a negative association among the variables (Gushue & Whitson, 2006; Rivas- Drake et al., 2014; Worrell, 2007). As a result, researchers have debated whether ethnic identity actually has an impact on increasing or decreasing academic outcomes, and it has been suggested that ethic identity is a risk factor to academic success and a barrier to academic achievement among youth from minority backgrounds (Fordham & Ogbu, 1986; Steel, 1997). Others claim that having a stronger sense of ethnic identity is a protective factor that facilitates academic success and predicts higher academic achievement among ethnic minority youth when compared to students with a weaker sense of ethnic identity (Whaley & Noel, 2012). The following sections review theoretical perspectives that dominate discourse regarding the relationship between ethnic identity and academic engagement.

Cultural Ecological Theory (CET). Ogbu's (1986) cultural ecological theory (CET) is the most common conceptualization of ethnic identity as a risk factor. CET argues that the members of minority groups develop an oppositional identity, and the way a cultural group has been incorporated in a society determines their behaviors. In CET, it is suggested that groups of people who were involuntarily incorporated into a society through slavery or colonization

develop an oppositional identity toward education in response to a history of discrimination and oppression related experiences (Hudley & Graham, 2005). This oppositional identity is a personal identity formed in response to the barriers that prohibited these groups from accessing critical resources such as education.

For example, African Americans are historically an involuntary group assimilated into society. According to a CET perspective, for African Americans, education is seen as something that is not for them and educational values do not pertain to their culture because historically only White people had access to education. This oppositional identity is expressed by adopting values and behaviors that contradict the dominant group's values and behaviors in order to preserve their cultural identity and create a distinction among themselves and the dominant group (Fordham & Ogbu, 1986; Graham, Taylor, & Hudley, 1998; Hudley & Graham, 2005). If academic achievement, academic motivation, and behavioral engagement reflect values embraced by the dominant group in society, then individuals who have adopted an oppositional identity would not express positive attitudes or behaviors related to these constructs in a effort to reject the values of the dominant group. This is problematic because according to CET, African American youth who have a higher sense of racial identity are at risk for underachievement (Graham et al., 1998). CET has been used to explain underachievement and academic motivation among African American and Mexican students as well as the achievement gap among African American and Latino students compared to White students (Wilkinson, 2010).

Early examinations of CET and oppositional identity found that black students perceive working hard in school as "acting white" and inappropriate to black culture by their peers (Fordham & Ogbu, 1986). Thus, black students may prefer not to "act white" and instead underachieve because it would reflect a strong racial identity. In essence these youth's

perceptions reflect the notion that a true member of the black cultural group does not engage in positive school behaviors that would allow them to become successful academically. As a result of these unsettling perceptions, black students may engage in behaviors that reflect disengagement and endorse peers who are disengaged in school.

Graham, Taylor, and Hudley (1998) conducted a seminal peer nomination study that explored gender differences in achievement values among African America youth ($N = 304$) in sixth, seventh, and eighth grades using a peer nomination procedure. Participants in the study were asked to nominate the type of student they respected, admired, and wanted to be like based on a set of student characteristics (e.g., works hard, gets good grades, goofs off, follows schools rules, doesn't follow school rules). Graham et al. (1998) demonstrated that African American boys "admired, respected, and wanted to be like" (Graham et al., 1998, p. 609) and nominated lower achieving African American males at significantly higher frequencies (25%) than females (> 5%) who nominated lower achieving females. African American boys also nominated high achievement African American males at lower (16%) frequencies than girls (48%) who reported nominations for high achieving girls. These findings undergird Ogbu's oppositional identity theory and suggest significant gender differences regarding the relationship between achievement attitudes and achievement status among African American youth.

Specifically, boys valued disengagement from school and low school achievement and girls valued high academic achievement (Graham et al., 1998). The main take away is that embracing cultural values has the potential to put ethnic minority youth at an increased risk for academic disengagement (Graham et al., 1998). These findings align with research indicating that African American males are the most at risk for dropping out and being retained or suspended from school (Losen & Gillespie, 2012; Warren, Hoffman, & Andrew, 2014).

Strengths of this study included the use of peer nomination procedures because it provided a new way of assessing values and beliefs about school among youth as apposed to commonly used self-report questionnaires. Some limitations of the study were that the participants were primarily from lower social economic statuses; sampling students from a more diverse range of social economic statuses may have provided additional information regarding African American youth's school attitudes. Further, students' personal beliefs and values were not assessed; rather, their perceptions of peers was measured. Examining only perceptions of peers limits consideration of variability in individual differences with regard to student's personal beliefs, values, and levels of engagement. In addition, teacher ratings of achievement (very low to very high; on a 9-point scale) were subjective which could create bias in rating students' achievement levels. Actual test scores or grades from school records could have been better indicators of achievement status.

Despite some empirical support, CET does not leave room for the assumption that youth who are from involuntary minority cultures can have positive attitudes toward education and academic engagement. CET assumes that the overall relationship between ethnic identity and educational beliefs is negative. The current study used social identity and racial- ethnic self-schemas frameworks in order to better understand the associations among ethnic identity, academic efficacy, achievement goals, and school belonging among youth from different ethnically diverse backgrounds, rather than CET.

Theoretical Frameworks for Current Study

Social identity theory and racial-ethnic self-schemas. The current study examined the relationship between ethnic identity and educational beliefs within the context of social identity theory and the racial-ethnic self-schemas (RES) theoretical framework. Social identity refers to

the extent to which an individual is aware of belonging to a specific social group and feels a sense of connectedness to a social group (Ashmore, Deaux, & McLaughlin-Volpe 2004; Tajfel & Turner, 1986). A social identity is constructed by incorporating attitudes, values, and beliefs from an individual's social group membership into the individual's self-concept. Social identity theory posits that when an individual has a positive emotional connection to their identity and values belonging to a social group, then that individual is more likely to have higher self-esteem compared to individuals that do not feel as though they belong to a specific social group (Hogg & Abrams, 1990; Hughes, Kiecolt, Keith, & Demo, 2015; Tajfel & Turner, 1979).

According to social identity theory, "positive in-group feelings are linked to a more positive sense of self and consequently better psychosocial outcomes, such as schooling" (Santos & Collins 2015, p. 447). Social identity theory has been utilized in studies that investigate the relationship between ethnic identity, achievement, and psychological well being among youth from culturally diverse backgrounds (Hughes, Witherspoon, Rivas-Drake, & West-Bey, 2009; Toomey & Umana Taylor, 2012).

The present study also drew from a racial-ethnic self-schema theory (RES), which is a framework used to understand how ERI operates on academic outcomes (Altschul, Oyserman, & Bybee, 2006; Oyserman, Kemmelmeier, Fryberg, Brosh, & Hart-Johnson, 2003). Oyserman and colleagues (2003) propose that an individual that has developed "a coherent cognitive structure integrating thoughts, feelings, and beliefs" (p. 335) about their racial or ethnic group membership as part of their self-concept has developed a RES. According to Oyserman et al. (2003), an individual's RES status explains the extent to which REI is a salient factor in an individual's self-concept. There are two RES statuses: schematic and aschematic. A RES schematic individual has developed an awareness of their ERI and operates according to beliefs and values

that align with their ethnic or racial group membership. A RES aschematic individual has not developed a schema that defines them in a way that is related to their racial or ethnic background. Therefore, an individual who is considered aschematic does not think about particular values held by different racial or ethnic groups nor do they incorporate these values as a part of their self-concept. In addition, an individual with an aschematic RES can identify with a specific racial or ethnic group, but does not adopt the values consistent with that race or ethnic group membership.

Racial ethnic self-schemas (RES) is a theoretical framework that considers context and differences among ethnic and racial groups, and research indicates RES explains variation in the relationship between ethnic identity and academic achievement (Miller-Cotto & Byrnes, 2016). Youth from ethnic minority backgrounds who are considered RES schematic may adopt the beliefs and values (schemas) associated with their group membership and behave according to the schemas. For example, if academic success is a belief or value held by a certain ethnic or racial group that the youth belongs to, then the youth will associate academic success with their ERI and make decisions that align with being academically successful (Miller-Cotto & Byrnes, 2016).

In contrast to RES, beliefs about one's ethnic racial identity (ERI) with relation to educational beliefs are still yet to be consistently determined. However, ERI has been linked to self-evaluation of academic competence, which suggests ERI may be associated with achievement motivation constructs (Oyserman et al., 2003). The following section will discuss academic efficacy and achievement goal orientation which are two well documented motivational constructs that are associated with engagement and academic achievement during

early adolescence (Conley, Duncan, & Domina 2012; Proctor, Daley, Louick, Leider, & Gardner, 2014)

Academic Efficacy

Academic efficacy is an individual's belief that they are capable of performing tasks within an academic context (Midgley et al., 1998; Wentzel & Wigfield, 2009; Wigfield, Eccles, Fredricks, Simpkins, Roeser, & Schiefele, 2015). Academic self-efficacy is a kinds of self-efficacy that is positively associated with motivation to engage and persist in academic tasks (Wigfield & Wagner, 2005). This section discusses factors that influence the development of self-efficacy, academic outcomes associated with academic self-efficacy, and gaps in the literature regarding factors that predict self-efficacy.

Bandura (1986) proposed four different sources of information that influence the development of an individual's self-efficacy. The first source is known as performance attainments, which refers to the degree of success an individual has in a particular domain. The second is known as vicarious experiences, which refers to judging one's efficacy based off of how others perform. The third encompasses verbal persuasion and social influences. Verbal persuasions are the statements from others that pertain to an individual's efficacy. Social influences refer to the encouragement and feedback from parents, teachers, and peers that pertain to and individual's efficacy. Lastly, emotional and physiological states influence an individual's efficacy. According to Bandura (1997), the emotional and physiological states individuals feel when performing a certain task (e.g., anxiety, stress, fatigue) is indicative of one's efficacy on that task. Performance attainments have been documented as being the most powerful source of information about an individual's self-efficacy and the strongest predictor of an individual's efficacy in a given domain (Bandura, 1997; Usher & Pajares, 2008). With regard to the other

sources that influence self-efficacy, Usher and Pajares (2008) report inconsistences in that the sources may influence self-efficacy differently for boys and girls as well as youth from different racial and ethnic groups (Anderson & Betz, 2001; Klassen, 2004; Usher & Pajares, 2006). Usher and Pajares (2008) also report that the empirical base for studies that explore the extent to which sources of self-efficacy vary due to racial or ethnic background is limited.

Empirical research has documented the importance of self-efficacy and its association with academic outcomes. For example, Proctor and colleagues (2014) conducted a study to determine the role of motivational constructs such as self-efficacy, intrinsic motivation, and extrinsic motivation in predicting reading comprehension. The sample consisted of 76 middle school students with a range disabilities including intellectual disability (38%) and speech/language impairment (29%) in sixth through eighth grades. Fifty-one percent of the sample was identified as English language learners. In addition, the majority of the participants were from diverse backgrounds (59% Latino, 22% White, 13% Black, 13%, 3% Asian, and >2% Native American and mixed race).

The Motivation for Reading Questionnaire was used to assess students' self-efficacy as well as intrinsic and extrinsic motivation in reading. Outcome measures included student performance on the Scholastic Reading Inventory, which is a computer program used to supplement the reading curriculum. Findings suggest that self-efficacy significantly predicted reading comprehension performance whereas intrinsic and extrinsic motivation did not. These findings should be interpreted with caution because one of the limitations was a small sample size. In addition, data were collected at one time point and causal influences cannot be determined.

Similar results were found from Mucherah and Yoder (2008)'s examination of the extent to which reading motivation predicted performance on standardized testing in reading among sixth and eighth grade students (N = 388; 70% White, 20% Black, 3% Asian, and 1% Hispanic). Findings indicate that students were more likely to perform better on statewide reading tests if they valued reading and had a higher sense of self-efficacy in reading. Findings were consistent with prior literature, which suggests self-efficacy in reading is a salient predictor of reading achievement. A couple limitations were that data were only collected at one time point and causals interferences cannot be determined. Further, the majority of the sample consisted of White students, and it is unknown whether the findings generalize to youth from minority backgrounds.

Together, the studies described above provide evidence of the importance of self-efficacy at predicting reading achievement among early adolescents. However, less is known about the influence of self-efficacy on adjustment among youth from minority backgrounds. Given the salience of self-efficacy in predicting positive outcomes, additional empirical studies exploring factors that influence academic self-efficacy are warranted. The current study fills this gap by investigating ethnic identity as important factor that influences academic self-efficacy among early adolescents from different minority backgrounds.

Achievement Goal Orientations

Similar to academic self-efficacy, achievement goal orientation plays an important role in academic success among early adolescents and is commonly studied in educational research (Linnenbrick & Pintrich, 2002; Pintrich, 2000;Wigfield et al., 2015). Achievement goal orientations are the justifications that explain how students approach academic related tasks and why students engage in academic related tasks (Dweck & Elliot, 1983). Over the past 30 years,

researchers have examined student's achievement goals, which were first categorized as a dichotomy, including mastery goal and performance-goal orientations (Ames & Archer, 1987; Dweck, 1986; Nicholls, 1984).

Mastery goal orientations are defined as goals that focus on developing competence in a task and learning new skills. If an individual is mastery oriented, their main motivation to engage in a task is to learn and improve skills. Mastery goals have also been referred to as task goals and learning goals in the literature (Pintrich, 2000).

Performance goal orientations are defined as goals that focus on demonstrating competence in a task and have been referred to as ego goals in the literature (Pintrich, 2000). An individual who is performance oriented is motivated to engage in a specific task for the purpose of displaying ability that can impress others. Performance oriented individuals also engage for the purpose of avoiding looking less capable compared to others (Ames, 1992; Nicholls, 1984) Elliot and Church (1997) introduced a distinction among performance goal orientations: performance-approach and performance-avoidance, thus creating three types of orientations: mastery, performance-approach, and performance-avoidance. Performance-approach goals focus on demonstrating competence in a way where one outperforms others, whereas the focus of performance-avoidance goals is to demonstrate competence in a way where one is not perceived as incompetent (Damian, Stoeber, Negru, & Baban, 2014; Midgley, Kaplan, & Middleton, 2001).

Many studies suggest positive achievement outcomes for students who adopt a mastery goal orientation, and negative outcomes for students that adopt a performance- avoidance goal orientation (Maehr & Zusho, 2009; Moller & Elliot, 2006; Wigfield & Cambria, 2010). Findings for performance-approach goal orientation have been mixed (Liem, Lau, & Nie, 2008). Conley, Duncan, and Domina (2012) examined which types of achievement goals (master, performance-

approach, and performance-avoidance) predicted math achievement in a longitudinal study with seventh (N = 1185) and eighth grade students (N = 1046). The majority of participants were from ethnic diverse backgrounds (73% Hispanic, 20% Vietnamese).

The Patterns of Adaptive Learning survey (PALS) was used to measure mastery, performance-approach, and performance-avoidance goals. Math achievement was measured by using the California State Tests (CSTs), which is a high stakes standardized exam taken at the end of the year from grades 2 through 11. Standardized math scores from 2004 were used as a baseline to compare to standardized math scores in 2006. Achievement goal data was collected the end of the 2004-2005 and 2005-2006 school years.

Conley and colleagues (2012) reported that math achievement was significantly positively correlated with mastery goals, and significantly negatively correlated with performance-avoidance goals. Performance-approach goals did not significantly correlate with achievement, nor did these goals predict math achievement. Among the three achievement goal orientations, mastery goals were the only significant, positive predictor of math achievement. Findings suggest that maintaining higher levels of mastery goals predicted the greatest gains on the standardized math assessment for this sample of early adolescents.

Dekker et al. (2016) also investigated which types of achievement goals predicted (mastery, performance-approach, performance-avoidance) academic achievement (GPA) among 735 Dutch adolescents in grades 7 to 12. The authors were interested in exploring potential metacognitive self-regulation effects on the different achievement goals. Data were analyzed by grouping participants by age (group one was 14 years and younger; group two was 14 years and older; mean age = 13). Participants responded to vignettes that assessed different goal orientations. Significant findings from the study suggest that higher grades in math were found

among the students with mastery and performance- approach goal orientations than students who endorsed performance-avoidance goals.

Dekker and colleagues (2016) also found significant age differences between the younger and older adolescent groups. Among the early adolescent group (ages 10 to 14) a higher percentage endorsed mastery goal orientation (50% versus 36%) and a lower percentage endorsed performance-avoidance goal orientation (16% versus 20%) compared to the older group (ages 14 to 19). These findings provide evidence aligning with prior research indicating that mastery goal orientations often decline as students transition from middle to high school and performance approach goals tend to increase (Paulick, Watermann, & Nuckles, 2013). It should be noted that Paulick et al. (2013) used a cross-lagged design to detect differences in achievement goals over time, which is a limitation to the study as causation cannot be determined.

Although Dekker et al. (2016) provide evidence of the significant role of mastery and performance goals on achievement outcomes, their findings also support prior research that report inconsistent academic outcomes for students who adopt performance- approach goal orientations (Damian, Stoeber, Negru, & Baban, 2014; Maehr & Zusho, 2009). For example, Dekker et al. (2016) reported that performance-approach goals did not significantly differ from mastery goals among the sample and were positively associated with achievement which contradicts previous literature that reports performance-approach goals as not having a significant influence on achievement (Conley et al.,, 2012), although prior research has been mixed regarding outcomes associated with performance-approach goals.

Despite the salience of achievement goals in predicting academic success, the extent to which achievement goals are associated with achievement motivation among students from

ethnic minority groups is relatively understudied (Graham, 1994; Pintrich & Schunk, 1996). Many studies that examine achievement goal orientations have sampled primarily white middle class participants (Midgley, 2002; Shannon, Salisbury-Glennon, & Shores, 2012). Sampling diverse populations of students would allow for a clearer understanding of effects achievement goals have among different groups of students.

Ogbu (1986) argues that youth from minority backgrounds such as Hispanic or African American have different achievement goals than White youth. Shannon, Salisbury-Glennon, and Shores (2012) examined mean-level differences achievement goal orientations by ethnic group in a diverse sample of fourth and fifth grade students from Miami-Dade County (N = 396; 41% Hispanic, 28% African American, 9% White, and 9% Biracial). Students completed the following subscales from the Patterns of Adaptive Learning Survey (PALS; Midgley, Maehr, Hicks, Roeser, Urdan, Anderman, Kaplan, Arunkumar, & Middleton, 1997): mastery goal orientation, performance-approach goal orientation, and performance-avoidance goal orientation. Findings revealed significant ethnic group differences on task goal orientation. Specifically, Hispanic students reported task goal orientations at significantly higher levels compared to African American students, documenting between group differences in the association between achievement goal theory and achievement motivation among youth from minority backgrounds. Furthermore, Midgely (2002) reported African American students were significantly more likely to report mastery goals than White students across all eight waves of the Patterns of Adaptive Learning Survey, which is a longitudinal study that followed students from fifth grade to ninth grade (Midgely, 2002).

Although racial and ethnic group differences regarding achievement goals have been documented in the literature, it is less clear as to why these group differences exist. Graham

(1994) argues that African American youth's perceptions of their selves and their personal judgments differ compared to White youth's perceptions of themselves. For example, Graham (1994) reported that perceived control among Black youth contributed to school achievement and that perceptions of locus of control regarding school achievement were different for both White and Black adolescents. White students were more likely to have an internal locus of control compared to Black students, suggesting differences in perceptions of power over school outcomes based on a review of studies by Graham (1994). Research suggests that perceptions of the self with regard to school outcomes differ for youth from ethnic minority backgrounds (Graham, 1994). Ethnic identity, similar to locus of control, involves self-perceptions of oneself that influence school adjustment. Therefore, it is plausible that ethnic identity also may vary among different groups of students as it relates to achievement goal orientations.

Motivation researchers call for further examination of achievement goal orientations and beliefs among youth from diverse populations because such contributions may lend insight to motivation across different cultures and backgrounds (Ford, Jones, & Alexander, 2015; Wigfield et al., 2015). Further investigation of achievement goals among youth from diverse cultural backgrounds is warranted because these goals have been documented as essential to academic success. Furthermore, assuming that achievement goal orientations may differ across cultural groups is a theoretically sound assumption because according to social identity theory different groups have different sets of beliefs and values based on group membership. The current study aimed to fill this gap and examine ethnic identity and its influence on achievement goal orientation among youth from diverse ethnic backgrounds.

Ethnic Identity, Self-Efficacy, and Achievement Goals

The current study examined the associations between ethnic identity beliefs, academic self-efficacy, and achievement goal orientations among middle school students. This study aimed to fill a gap, as the majority of the literature has studied these variables among high school students and youth from ethnic minority backgrounds have been relatively understudied.

Among studies that have investigated the association between ethnic identity and educational beliefs, trends of positive associations have been documented. For example, Fuligni, Witkow, and Garcia (2005) conducted a study with 589 ninth grade students from different cultural backgrounds (Mexican, Chinese, and European) to examine the association between ethnic identity, academic attitudes, and achievement. Ethnic identity was measured using the centrality and private regard subscales from the Multidimensional Inventory of Black Identity. Academic attitudes were defined as educational utility, value of academic success, intrinsic value of school, utility value of school, school self-concept related to ability in school, and school identification. Achievement was assessed using official school grades from fall and spring semesters in ninth grade. Positive significant correlations were found between racial centrality and all academic attitudes except school self-concept. These findings indicate that students who endorsed their ethnic identity as a central part of their identity endorsed stronger and positive attitudes toward the value and usefulness of education, had a greater interest in school, and felt strongly about being connected to their school. These findings provide evidence of the relationship between ethnic identity and educational beliefs (e.g., intrinsic value, utility of education, and school belonging). Although the study did not find support regarding the predictive nature of ethnic identity to academic attitudes, there is evidence of ethnic identity being associated with later academic self-efficacy among African American students

E**thnic identity and self-efficacy**. Oyserman, Harrison, and Bybee (2001) conducted a seminal study investigating the extent to which a positive racial/ethnic identity was associated with academic efficacy among a sample of 91 African American eighth grade students. The authors examined the extent to which racial identity and academic efficacy in the fall was predictive of racial identity and academic efficacy in the spring using a cross-lagged panel design. Potential gender differences in the association between racial identity and academic efficacy in the fall and spring were also examined. The sample was taken from a middle school in Detroit where the majority of the students lived in poverty (92% free and/or reduced lunch). Racial identity was measured using a Racial Identity Scale and three components of racial identity were assessed: positive in-group identification, awareness of negative out-group perceptions, and viewing academic achievement as a part of one's racial identity. Positive in-group identification refers to the sense of connectedness an individual feels to their respective racial group. Awareness of negative out-group perceptions refers to an individual's awareness of racism. Having awareness of negative out-group perceptions means that one recognizes that others may view them in a negative light and perceive them only as a member of a group that is viewed negatively in society. Viewing academic achievement as a part of one's racial identity refers to the extent to which an individual views academic achievement as a cultural value that is embedded into their respective racial or ethnic group's culture. Self-efficacy was assessed using The School Efficacy Scale. Achievement was measured using self-reported grades.

Findings revealed that racial identity significantly predicted academic efficacy, and that this differed by gender. In the fall, boys who were more aware of racism reported higher academic efficacy compared to girls. Girls in the sample who were more aware of racism and reported lower ratings of academic efficacy. In the spring, significant declines in academic

efficacy mean scores were detected between both boy and girls from fall to spring. For girls, awareness of negative out- group perceptions of racial identity in the fall significantly influenced efficacy in the spring. For boys, no significant effects were found among the variables from fall to spring. For boys, this suggests that the higher academic efficacy reports based on awareness of racism that were initially detected may be lost over time.

Lastly, participants who viewed academic achievement as a part of their racial identity reported higher levels of academic efficacy in the fall and spring. These findings suggest that ethnic identity endorsement can have positive and negative implications for educational beliefs related to academic competence. A positive implication is that ethnic identity is associated with increased academic efficacy. A negative implication is that students may feel stigmatized if their racial group is viewed negatively in society.

Chavous et al. (2003) investigated the extent to which participants' beliefs about their self, their race, and society impacted their academic achievement and educational beliefs. Although participants began the larger longitudinal study in their ninth grade year, the data used in this specific study is a sample of 606 African American youth when they were in the twelfth grade (mean age = 17) and included a follow-up interview two years later ($N = 437$). The sample was purposefully selected in that 8th grade students with a GPA or 3.0 or lower who were invited to participate in the study in 9th grade. Three aspects of racial identity were assessed: private regard, public regard, and centrality. Private regard refers to one's feelings (positive or negative) about their respective group membership. Public regard refers to one's feelings about how others view (positive or negative) their racial group. Centrality refers to the extent to which one feels a part of and connected to their racial identity. Educational beliefs were defined by assessing four different school attitudes (i.e., attachment, relevance, efficacy, and importance) and achievement

was measured using self-reported school GPA. Chavous et al. (2003) found that high centrality was positively associated with school relevance and academic efficacy. For these African American youth, a strong connection to one's racial identity was significantly related to positive school attitudes and beliefs (i.e., utility of school tasks and competency beliefs).

Ethnic identity and achievement goals. The literature examining the relationship between ethnic identity and achievement goals among early adolescents is relatively understudied. One possible reason for this is researchers often examine race/ethnicity solely as a demographic variable, focusing on mean-level group differences, and not as a multidimensional construct that encompasses a set of beliefs and values (Sha, 2010). For example, Middleton and Midgely (1997) used race as a predictor of achievement goals in a study conducted with an African American and European American sample of 703 sixth grade students. They found that African American girls reported higher levels of mastery goal orientation when compared to African American boys and European girls. Although these finding document mean-level differences among racial groups, additional research is needed to examine factors that may contribute to these differences such as ethnic identity. Understanding personal beliefs and values related to an individual ethnic or racial group may provide more information as to why differences among racial groups are being detected as it related to achievement goals.

In the past decade, evidence that ethnic belonging is significantly associated with task goal and ego goal orientations among adolescents has been documented. For example, Kouli and Papaioannou (2009) conducted a study with 1,305 middle and high school students in Greece to determine the extent to which ethnic/cultural identity salience is associated with achievement goals and motivational climate in physical education classes. Ethnic/cultural salience was assessed using a questionnaire that measured four factors of ethnic/cultural salience:

assimilation, belonging, fringe, and lack of interaction. Assimilation refers to the extent to which the participants identify with Greek culture and values. Belonging refers to the extent to which the participants feel a sense of belonging to Greek culture and how important the culture is to one's self. Fringe refers to the negative feeling that one might feel by being associated with a certain ethnic/cultural group. Lack of interaction refers to the extent to which one interacts with members from other ethnic groups. Achievement goals were defined as including task (mastery) goal orientation and ego (performance) goal orientation. Motivational climate was defined as students' perception of teacher initiated strategies, including: a learning-oriented climate (i.e., teacher attention to all students who need to improve their skills) and a performance-oriented climate (i.e., teacher attention to students who are preforming well).

Findings revealed that ethnic belonging and assimilation were significantly positively correlated with task orientation goals and perceived learning-oriented climate. Specifically, participants who identified strongly with their ethnic or cultural group felt motivated to engage in physical education class when the teacher created a climate that students viewed as focused on improving the skills of all students. Despite this study, however, there is limited research that investigates the relationship between ethnic identity and achievement goals as defined by mastery, performance-approach, and performance-avoidance goal orientation (Witkow & Fuligni, 2007); this is a gap that this study addressed.

School Belonging

School belonging refers to the extent to which students feel embedded and connected to their respective school environments (Anderman, 2003; Fuligni, Witkow, & Garcia, 2012). In the literature there is a series of related terms referring to school belonging that are often used interchangeably, including relatedness, identification, acceptance, and connectedness (Booker,

2006; Osterman, 2000). School belonging is associated with a variety of outcomes, including academic motivational beliefs, attitudes, and achievement (Osterman, 2000; Taylor, 1999).

In a four-year longitudinal study, Gillen-O'Neel and Fuligni (2013) investigated the extent to which school belonging declines over the course of high school and if there were mean-level gender and ethnic differences ($N = 572$; 49% males; ages 13-19). Youth from Latin American ($N = 210$), Asian American ($N = 246$), and European backgrounds ($N = 116$) were sampled from three high schools. Respondents who participated in the study for 2 of the 4 years were included in the current study. Results indicated that for female participants, school belonging significantly declined over the course of high school (grades 9-12) whereas for boys, school belonging remained stable. Further, students who felt more connected to school reported higher levels of perceived academic value. Differences across ethnic groups were not detected.

Previous studies indicate that middle school students who report higher levels of school belonging also tend to be successful academically and socially (Anderman, 2002; Walton & Cohen, 2007). In addition, school belonging is associated with increased school engagement and academic achievement among early adolescents (Finn, 1989; Ozer, 2008; Voekl & Finn, 1997), making it an important variable to consider in this study.

School Belonging as a Moderator

School is a social context that greatly influences adolescents' attitudes, beliefs, and academic outcomes, and is a place where students have the opportunity to feel a sense of belonging and share norms, goals, and values (Battistich, Solomon, Watson, & Schaps, 1997). According to Battistich (1997) and Baumeister and Leary (1995), students have the basic psychological need for belonging and the extent to which this need is met can have implications for success inside and outside of school. For example, Battistich (1997) claims that the level of

engagement or disengagement in school is largely dependent on the degree to which a basic need like belonging is fulfilled.

Youth from ethnic minority backgrounds often have different experiences in schools compared to Caucasian youth. An individual from an ethnic minority background has a set of personal cultural norms and values that often differ from their school's cultural norms and values. These differences can make adjusting to school more difficult for ethnic minority individuals compared to non-ethnic minority individuals (Steele, 1997). For example, ethnic minority youth may experience language barriers, cultural conflicts regarding their ethnic identities, and need to modify their behavior to fit in at school (Trickett & Birman, 2005). Ethnic minority youth are also more likely to experience discrimination in schools (Fordham & Ogbu, 1986; Steele, 1997). Given this, schools can be a place where ethnic minority youth have positive or negative experiences related to school belonging (Faircloth & Hamm; 2005; Osterman, 2000; Steele, 1997). Prior literature suggests that school belonging is positively associated with academic motivation and engagement, and negatively associated with high school dropout for youth from racial/ethnic minority backgrounds (Brian et al., 2012; Goodenow, 1993; Graham, 1994; Osterman, 2000; Wang & Eccles, 2012a).

Several studies have examined moderation effects of school belonging among early adolescents and youth from minority backgrounds. For example, Kia-Keating and Ellis (2007) examined the relationship between exposure to adversities and mental health with 76 Somali refugee adolescents (ages 12 to 19). Thirty-eight percent of the sample were early adolescents in the fifth-eighth grades and 53.2% of the participants were older adolescents. School belonging was included in the model as a moderator that was anticipated to serve as a protective factor for the aforementioned association. The War Trauma Screening Scale (WTSS) was used to measure

personal experiences related to violent and traumatic events. Mental health was assessed using the UCLA PTSD Index for DSM-IV (PTSD-I), Depression Self- Rating Scale (DSRS), and the Multidimensional Scales of Perceived Self Efficacy (MSPSE). School belonging was measured using the Psychological Sense of School Membership (PSSM) scale. Findings revealed that higher levels of school belonging significantly predicted lower depression symptoms and higher self-efficacy but school belonging did not significantly moderate associations between stress and mental health outcomes. It should be noted that the sample size was small so it may be plausible that moderation effects may be detected in a larger sample. Also, Kia-Keating and Ellis (2007) examined Somalian refugees; it is unclear whether their findings generalize to other populations. This study explored school belonging as moderating the relationship between ethnic identity and educational beliefs among a larger, ethnically diverse sample of early adolescents.

In another study, Civitci (2015) examined school belonging at the college level as moderating the relationship between perceived stress and life satisfaction among 477 undergraduate students in Turkey. Findings indicated a significant change in R-squared for the interaction between perceived stress and college belonging suggesting that college belonging changed the nature of the relationship between perceived stress and life satisfaction. Specifically, a decrease in life satisfaction was significantly greater for students with lower (vs. higher) levels of college belonging. These finding suggests that students college belonging ratings acted as a buffer in the relationship between stress and life satisfaction whereas students with higher belonging were significantly more satisfied with life and endorsed lower perceived levels of stress. A limitation to this study is that the data were collected among college students in Turkey. Therefore findings may not generalize to the experiences of students in the U.S. or other higher education institutions. Also, college belonging was measured using one very broad question, “Do

you feel like you belong at college?"; additional items pertaining to personal connections with people at school or positive feeling about being at that particular college could have provided more information on dimensions of school belonging.

Finally, Huynh and Gillen-O'Neel (2016) documented school belonging as moderating the relationship between ethnic discrimination and sleep (sleep quality and hours of sleep) among a sample of Latino ($N = 247$) and Asian ($N = 113$) American adolescents (Mean age 17; 43% male). The study was informed by resiliency theory, which asserts that positive factors (i.e., school belonging) can offset the negative effects of risks (i.e., discrimination) on adjustment (i.e., sleep). The findings revealed that levels of belonging significantly changed the relationship between discrimination and sleep. Significant differences in the strength of the relationship between discrimination and sleep were detected, and the relationship between discrimination and sleep was significantly weaker for youth with higher levels of belonging. These findings converge with prior literature that documents school belonging as a protective factor buffering against negative effects of violence exposure on psychological functioning (Ozer, 2005). A limitation of this study is that only Latino and Asian American youth are included in the analysis. Including participants from other racial/ethnic groups could provide insight into the experiences of minority youths who also experience discrimination in schools (i.e., African American).

Prior research has been mixed, as many studies have shown a positive relationship between ethnic identity and educational beliefs, yet others have documented negative or non-significant relationships. Also, few studies have investigated variables that may moderate the relationship between ethnic identity and motivational beliefs. Moderating effects of race and gender have been found in the relationship between ethnic identity and educational beliefs

(Oysterman et al., 2001) among youth from minority backgrounds. However, less is known about individual protective factors such as school belonging that may provide insight into minority youth experiences in school as it relates to ethnic identity and educational beliefs. Examining protective factors that pertain to educational beliefs among youth from minority backgrounds is needed because these youth are more likely to feel disconnected to school, which puts them at risk for school dropout (Child Trends, 2014).

Prior literature has documented school belonging as a protective factor shown to buffer against the negative effects of perceived stress, discrimination, and violence exposure among youth from minority backgrounds (Duggins et al., 2016; Huynh & Gillen-O'Neel, 2016; Kia-Keating et al., 2007). Given this, school belonging may buffer against the adverse effects of negative perceptions of ethnic identity or having a weaker connection to ethnic identity as it relates to educational beliefs for minority youth.

The current study examined school belonging as moderating associations among ethnic identity and educational beliefs (i.e., academic efficacy, mastery goals, performance-approach goals, and performance-avoidance goals) among early adolescents. The study was guided by resilience theory. Resilience theory posits individuals use positive internal and external resources to help cope, overcome, and avoid future risk through a process called resilience. Resilience theory focuses on aspects of an individual life (i.e., personal characteristics, environment, and situations) that predict negative and positive outcomes (Masten, Cutuli, Herbers, & Reed, 2009; Notelmeyer, 2014). Predictors of negative outcomes are referred to as risk factors whereas predictors of positive outcomes are defined as protective factors. Resiliency theory also focuses on promoting resilience, which is a dynamic process allowing for an individual's to maintain skills needed to adapt positively in the face of adversity (Masten et al., 2009). It should be noted

that resiliency and resilience are used interchangeably but some authors advocate for distinguishing between the two (; Lidsitt & Demick, 2012; Masten, 1999). The current study was guided by understanding resilience as a process rather than a personal trait.

In this study, school belonging was hypothesized to act as a protective factor that may buffer against the negative effects associated with having low levels of ethnic identity. Thus, students who endorse low ethnic identity but feel connected to school may be less sensitive to the adverse effects associated with endorsing low levels of ethnic identity. In addition, there are issues in the literature regarding mean-level differences in ethnic identity and mixed findings of the association between ethnic identity and school adjustment. Thus, consideration of promotive factors that may affect the relationship between ethnic identity and motivational beliefs is warranted. The current study anticipated the following moderation effects: 1.) The relationship between ethnic identity and motivational beliefs will be significantly stronger among participants who endorse lower levels of school belonging compared to participants who report higher levels of school belonging. 2.) Participants who endorse higher levels of school belonging but have lower ethnic identity will have higher motivational beliefs compared to participants who endorse lower levels of school belonging.

Conclusion

The current study investigated the association between ethnic identity and motivational beliefs (i.e., academic efficacy, achievement goals, and school belonging) and explored school belonging as moderating these associations among an ethnically diverse, urban sample of middle school students. This study contributes to the literature by addressing several gaps in the literature, as discussed below.

First, relatively little is known about the influence of ethnic identity on school adjustment during adolescence, and existing research has found mixed results. For instance, students who report strong (vs. weak) or higher (vs. lower) levels of ethnic identity report higher levels of academic achievement, competence, and better mental health (Rivas-Drake et al., 2014). However, research also indicates higher levels of ethnic identity are associated with disengagement from school or that there is a non-significant relationship between ethnic identity and motivational beliefs (Graham, 1994; Rivas-Drake et al., 2014). These mixed findings warrant continued investigation regarding the influence of ethnic identity on motivational beliefs among early adolescents.

Second, few studies have investigated moderators of the relationship between ethnic identity and motivational beliefs. Prior research has documented race and gender as primary moderators of the relationship between ethnic identity and academic efficacy and achievement goals (Oyserman et al., 2001; Rivas-Drake et al., 2014; Wigfield et al., 2015). Current literature supports school belonging as a protective factor that may help youth from ethnic minority backgrounds stay engaged in school (Notelmeyer, 2014). Thus, it is important to examine whether school belonging can attenuate the relationship between ethnic identities with motivational beliefs.

Third, certain populations have been relatively understudied and there is much to learn regarding the associations among ethnic identity, school adjustment, and school belonging for today's youth. Specifically, research has primarily examined ethnic identity and beliefs among older adolescents in high school (Rivas-Drake et al., 2014), although motivational beliefs have extensively been examined among early adolescents in middle school (Gummadam, Pitman, & Ioffe, 2016). Further, youth from ethnic minority backgrounds are relatively understudied in the

motivational literature. The current study contributes to this gap in the literature by documenting the relationship between ethnic identity and educational beliefs among an ethnically diverse sample of early adolescents in middle school.

In an effort to fill the aforementioned gaps in the literature, the current study examined the following research questions:

1.) What are the associations of ethnic identity with academic efficacy and academic achievement goals (mastery, performance-approach, and performance-avoidance)?

RQ1 Hypothesis 1: There will be positive associations of ethnic identity with academic efficacy, mastery and performance-approach achievement goal orientations.

RQ1 Hypothesis 2: There will be negative associations of ethnic identity with performance- avoidance achievement goal orientations.

2.) To what extent does school belonging moderate the association of ethnic identity with academic efficacy and academic achievement goals (mastery, performance-approach, and performance-avoidance)?

RQ2 Hypothesis 1: School belonging is expected to moderate the associations of ethnic identity with academic efficacy, mastery and performance- approach achievement goal orientations through interaction effects. The associations among variables are expected to be weaker among participants who report higher levels of school belonging.

3.) To what extent does the association of ethnic identity with academic efficacy and achievement goals (mastery, performance-approach, and performance-avoidance) differ by demographic groups (gender and race/ethnicity; White, African American, Hispanic, Asian, Multiracial)?

RQ3 Hypothesis 1: The association of ethnic identity with academic efficacy and achievement goals (mastery, performance-approach, and performance-avoidance) is expected to differ by gender and race/ethnicity. The association is expected to be stronger among ethnic minority students compared to non-ethnic minority students and stronger among female participants.

The current study contributes to research in this field by providing information regarding the association between ethnic identity and motivational beliefs among a relatively understudied population. Findings from research question 1 and research question 3 provides insight on youth's academic efficacy and achievement goals in school. Research question 2 results provide insight regarding the extent to which school belonging promotes positive motivational beliefs.

Chapter 3: Method

This study involves a secondary analysis of data taken from the longitudinal Adolescent Motivation and Development Study, which explored motivational and achievement variables across the transition from elementary to middle school. The Principal Investigator (PI), Dr. Kiefer, from the Educational Psychology Program at the University of South Florida, collected data at three time points (spring 2009, fall 2009, and spring 2010). The present study analyzes data from a single time point, the wave of data collected during the spring of 2010. This study first examined how ethnic identity predicts academic efficacy and achievement goals in early adolescents. Then moderator effects were tested to examine school belonging as a protective factor this relationship. This chapter describes the participants, measures, procedure, and setting within the current study, as well as summarizes the data analytic procedures utilized.

Participants

School demographic features. The participants in this study were sixth grade students from three different middle schools**.** Since the study was longitudinal following students from 5th grade to the end of 6th grade, the PI selected schools that had a feeder pattern with the same population of students zoned for a given middle school. The feeder pattern consisted of three elementary schools that led one of three middle schools. School population demographic information can be found in Table 1.

Table 1

Student Population Demographics for Middle Schools (2008-2009)

Variable	School A	School B	School C
Sex			
Male	54%	51%	49%
Female	46%	49%	51%
Race			
Caucasian	60%	40%	69%
Hispanic	21%	42%	16%
African American	10%	7%	6%
Multiracial/Asian	9%	10%	9%
Free and reduced lunch	30%	52%	13%

Student demographic features. There was a wide range of variability in terms of the ethnic composition of students in the middle schools. There was an average of 45% Caucasian students, 28% Latino students, 10% African American students, 5% Asian, and 10% of students from other Multiracial backgrounds who attended the schools that participated in the study. The Latino population was the ethnic group with the greatest variability among the middle schools. Schools A and School C were similar with about 18% and 12%, respectively, while School B had about 46% Latino students.

Measures

Demographic information. Demographic information was measured asking participants to indicate their gender and ethnic group on a demographic card (see Appendix A). The specific options the participants could use to characterize themselves were Asian American or Pacific Islander, Black or African American, Hispanic or Latino/a, White or European American and Multiracial. There was also space provided where participants could indicate any ethnic group aside from the options. Participants who self-reported their racial or ethnic group in this way are characterized as "other" and grouped with multiracial participants in the current study.

Ethnic identity. Ethnic identity was measured using 5 items from the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992; see Appendix B). This measure is available for use for free online (http://www.calstatela.edu/academic/psych/ftp/meim.doc).The original scale contain consist of 14 items that explore 3 different domains of ethnic identity: (1) affirmation and belonging, (2) ethnic identity achievement, and (3) ethnic behaviors. The 5 items chosen for the study are from the affirmation and belonging domain. These items were chosen because they assess pride, belonging, and positive feelings about one's ethnic identity. In addition, the current study is interested in understanding early adolescents experience with choosing an ethnic identity in which they can feel good about. All items used a 4-point likert scale ranging from 1 (*strongly disagree)* to 5*(strongly agree*). The scale included items such as "I have a strong attachment towards my own ethnic group" and "I feel good about my cultural or ethnic background." In prior research with seventh and eighth grade students and youth ages 12 to 14, the 14-item MEIM including (but not limited to) the 5 items from the affirmation and belonging subscale had an internal consistency of .83 and .84 respectively (Shin, Daly, & Vera, 2007; Roberts et al., 1999). Support for validity comes from its use with assessing ethnic identity among high school students from more than twenty different ethnic groups (Roberts et al., 1999).

Academic efficacy. Academic efficacy was measured using the using 4 items (α=.83; from spring 2010 data collection of existing dataset) from the Academic Efficacy subscale taken from the Patterns of Adaptive Learning Survey (PALS; Midgley et al., 1998; see Appendix C). This measure is available for use free online (http://www.umich.edu/~pals/PALS%202000_V13Word97.pdf). All items used a 5 point likert scale ranging from 1 (*not at all true of me)* to 5 *(very true of me*). The academic efficacy subscale includes items such as "Even if my schoolwork is hard, I can learn it" and "I'm certain I can

master the skills taught in school this year." This scale and all additional measures described below are included in the Appendix of this document. In prior research with high school and fifth grade students, the academic efficacy scale had internal consistencies of .80 and .78 respectively (Jones & Ford, 2014; Midgley et al., 2000). Support for validity comes from research that has used this scale to measure academic efficacy with elementary and middle school students (Midgley et al., 1998; Patrick, Ryan & Kaplan, 2007).

Achievement goals. Personal achievement goals were measured using 14 items from the My Goals at School subscale of the Patterns of Adaptive Learning Survey (Midgley, 1998; see Appendix D). This measure is available for use free online (http://www.umich.edu/~pals/PALS%202000_V13Word97.pdf). This measure had three components including mastery goal orientation, performance-approach goal orientation, and performance avoidance-approach orientation and academic efficacy. All items used a 5-point likert scale ranging from 1 (*not at all true of me)* to 5 *(very true of me*). The mastery goal orientation component contains items 5 items (α=.82; from spring 2010 data collection of existing dataset)) and includes items such as "like schoolwork that I'll learn from, even if I make a lot of mistakes" and "like schoolwork best when it really makes me think." The performance approach goal orientation component contains items 5 items (α=.82) and includes items such as "Doing better than other students in my class is important to me" and "I would feel really good if I were the only one who could answer the teacher's questions in my classes." The performance-avoidance goal orientation component contains items 4 items (α=.67) and includes items such as "An important reason I do my schoolwork is so that I won't embarrass myself" and "An important reason I do my schoolwork is so I don't look dumb." The present study analyzed the three scales separately considering how prior studies have assessed these three types of

achievement goals (Jiang et al., 2014, Luo et al., 2014) and studies that have assessed achievement goals using the PALS scales (Conley, 2012; Liem et al., 2008). In prior research that used the PALS scales with 7th grade students (N = 1,870) the internal consistency reliabilities were reported with cronbach alphas of .86 for mastery goals, .82 for performance approach goals, and .78 for performance avoidance goals (Conley, 2012). In prior research that used these three scales with 9th grade students the internal consistency reliabilities were reported with cronbach alphas of .89 for mastery, .89 for performance approach, and .67 for performance avoidance (Liem et al., 2008). In prior research these measures have been evidenced as valid assessments of achievement goals among high school students (Liem et al., 2008), fourth grade students (Partick, Alderman, Ryan, Edelin, and Midgley, 2001), and in longitudinal research that examine achievement goals among fifth grade students' related to their transition into middle school (Anderman & Midgley, 1997).

School belonging. School belonging was measured using 5 items taken from the My School Identity scale revised by Fuligni, Witkow and Garcia (2005; see Appendix E). All items used a 5-point likert scale ranging from 1 (*not at all true)* to 5*(very true*). The scale included items such as "I feel a sense that I personally belong at my school" and "I feel like a valued member of my school." Prior research with ninth grade students (N = 783) from Mexican, Chinese, and European ethnic backgrounds, this measure had an internal consistency reliability of .86; similar reliabilities of .85, .84, .90 were reported for the three ethnic groups (Mexican, Chinese, and European, respectively; Fuligni, Witkow & Garcia 2005). This revised version has been reported in the literature as a valid measure of school identification among ninth grade adolescents based on the framework provided by Tyler and Degoey (1995) who examines community identity constructs such as identification, pride, respect among ethnic populations. A

limitation to using this measure is that support for reliability and validity among early adolescents (i.e., 6th grade students) is yet to be determined.

Procedure

The current study utilized archival data. The following section describes the data collection process used in the creation of that dataset. Data were collected from students at the end of their sixth grade year from three middle schools.

Participant recruitment. Participants were recruited from three middle schools. Sixth grade students who were involved in the study as fifth graders were invited to participate in the spring of 2010. Students in general educations with medium to high English language proficiency were eligible to participate. Parental consent was required for students to participate in the study. Parental consent letters (see Appendix F) were sent home through the school. Students who returned parental consent forms (either Y or N) had their names entered into a raffle at each school; all participating students received a small incentive upon completing the survey at each time point (pen/highlighter). The sample size for the time point of interest in the current study's analysis is 436 sixth grade students, all of whom provided assent for participation (see Appendix G). There was a 57% response rate for the current sample.

Student data collection. The PI and graduate students involved in data collection activities were approved members of the research team (per USF IRB). The PI trained student research assistants how to collect data. Graduate students who administered surveys were paired with students who had less experience to ensure consistency across administration.

Surveys were administered at school in the fall and spring of the sixth grade approximately six months apart. It took approximately 45 minutes for students to complete the battery of measures. Surveys were administered in a classroom or the media center depending on

the preference of the school and room availability. Before administering the survey the research team provided an overview of how to complete the survey, as well as described the purpose of the research. Participants were told the survey would provide information about their motivation and peer relationships. Participants were informed that they could leave or discontinue responding to items at any point during completion of the survey. Survey administrators provided students with example survey items to familiarize the students with how to complete each item. Survey items were read aloud to students by the research team, which answered questions students had in terms of completing the survey. After the survey was completed, an incentive (i.e., mini pen highlighter) was offered to participants. Researchers went to schools on additional days in order to provide students who were absent on the day the survey was administered an opportunity to participate.

Data integrity. Following data collection, student surveys were de-identified and scanned into a database using a computer program scanning software called Remark. A graduate student reviewed each survey before it was scanned to check for errors in marking survey items. If a student marked more than one answer and two of the answers were on opposite ends of the likert scale, that question was considered invalid and considered as missing data. However if two answers were marked with one space in between the answers the response closest to the middle was selected as a response. Data were checked by frequency and other analysis on IBM SPSS Version 20 to ensure accuracy of data entry.

Missing data. In the current study, only data from one time point was analyzed. An average score was created for each scale of interest. A mean score was calculated as long as there was no more than one item missing on a given scale. The amount of missing data was

reported by the researcher in Chapter 4 to acknowledge how missing data might affect the sample size and power of the study and any bias based on how missing data was handled.

Overview of Analysis Plan

Descriptive analyses. All descriptive analyses were conducted using the IBM Statistical Package for the Social Sciences (SPSS). Descriptive analyses were conducted for the current study in order to determine mean, standard deviation, and normality (skewness and kurtosis) for each variable, and correlations among the variables of interest (i.e., gender, race, ethnic identity, academic efficacy, achievement goal, and school belonging). Cronbach's alpha were calculated to determine reliability of measures, and permit examination of the extent to which the reliability estimates in the current sample are consistent with previous research. Descriptive statistics and Cronbach's alpha were calculated for each subgroup (Caucasian, African American, Hispanic, Asian, multiracial) that was be examined. Descriptive statistics are displayed in Tables 2 and 3 in Chapter 3.

Correlation analyses.

Research Questions 1, 2, and 3:

To determine the relationships between ethnic identity, academic efficacy and achievement goals, correlation coefficients were calculated. Correlation coefficients range from -1 to +1, and provide information about the strength and direction of the relationship between two variables. An alpha level of .05 was used to determine statistical significance.

Regression analyses.

Research Question 1: To what extent do ethnic identity beliefs predict academic efficacy?

Research Question 2: To what extent do ethnic identity beliefs predict achievement goals (Mastery, performance-approach, and performance-avoidance)?

To determine if ethnic identity is predictive of self-efficacy, mastery goals, performance-approach goals, and performance- avoidance goals, separate regression analyses were conducted for each outcome variable (i.e., self-efficacy, mastery goals, performance- approach goals, and performance- avoidance goals). In each regression analysis, ethnic identity was entered as the predictor variable. Beta weights, also termed standardized regression coefficients, shows the predicted change in the dependent variable given a one-unit standard deviation change in the independent variable. The size of beta weights reflects the relative importance of the predictor. An alpha level of .05 was used to determine statistical significance of beta weights. The regression equations are listed below:

Regression equation for Research Question 1

Self-efficacy = Ethnic Identity

Regression equation for Research Question 2

Mastery Goals = Ethnic Identity

Performance Approach Goals = Ethnic Identity

Performance Avoidance Goals = Ethnic Identity

Research Question 3: To what extent are relationships of ethnic identity associated with motivational beliefs and achievement goals similar for different demographic groups, specifically gender and race?

To determine if ethnic identity is predictive of motivational beliefs and achievement goal outcomes, separate regression analyses were conducted for each outcome variable. In each regression analysis, ethnic identity was entered as the predictor variable. Beta weights, also termed standardized regression coefficients, shows the predicted change in the dependent variable given a one-unit standard deviation change in the independent variable. The size of beta

weights reflects the relative importance of the predictor. An alpha level of .05 was used to determine statistical significance of beta weights.

To determine if ethnic identity predicts academic efficacy and achievement goal similarly for both boys and girls, and across race groups (African American, Hispanic, Asian, Multiracial) in the sample, additional regression analyses were conducted using academic efficacy and achievement goals as the criterion variables. In each regression analysis, the predictor variables were ethnic identity, one dummy coded variable for gender in which boys were the reference group, two dummy coded variables for schools, three variables dummy coded for race groups (African American, Hispanic, Asian, Multiracial), and interactions between the dummy coded gender variable and ethnic identity, and the four interactions between each of the four dummy coded race variables (African American, Hispanic, Asian, Multiracial) and ethnic identity. As suggested by Aiken and West (1991), predictor variables were centered by subtracting the group mean from each individual's score on that particular variable to address potential multicollinearity between the predictors, and the interaction terms. An alpha level of .05 was used to identify statistically significant interaction terms. In the event that a significant interaction term was found, follow-up procedures were planned to be conducted to determine the exact nature of the relationship. Specifically, significant interactions would be examined by calculating and then plotting separate regression lines of ethnic identity on academic efficacy and achievement goal outcomes for boys and girls (if indicated) and different race groups (if indicated). The regression equations are listed below:

Regression equations for Research Question 3

Self-Efficacy = Ethnic Identity, Female, African American, Hispanic, Asian, Multiracial, Two Dummy School Codes, Gender x Ethnic Identity, African American x Ethnic

Identity, Hispanic x Ethnic Identity, Asian x Ethnic Identity, Multiracial x Ethnic Identity, Two Dummy School Codes x Ethnic Identity

Mastery Goals = Ethnic Identity, Female, African American, Hispanic, Asian, Multiracial, Two Dummy School Codes, Gender x Ethnic Identity, African American x Ethnic Identity, Hispanic x Ethnic Identity, Asian x Ethnic Identity, Multiracial x Ethnic Identity, Two Dummy School Codes x Ethnic Identity

Performance Approach Goals = Ethnic Identity, Female, African American, Hispanic, Asian, Multiracial, Two Dummy School Codes, Gender x Ethnic Identity, African American x Ethnic Identity, Hispanic x Ethnic Identity, Asian x Ethnic Identity, Multiracial x Ethnic Identity, Two Dummy School Codes x Ethnic Identity

Performance Avoidance Goals = Ethnic Identity, Female, African American, Hispanic, Asian, Multiracial, Two Dummy School Codes, Gender x Ethnic Identity, African American x Ethnic Identity, Hispanic x Ethnic Identity, Asian x Ethnic Identity, Multiracial x Ethnic Identity, Two Dummy School Codes x Ethnic Identity

Moderator tests.

Research Question 4: Does school belonging moderate the relationship between ethnic identity beliefs and academic efficacy?

To determine if school belonging functioned as a moderator in the relationship between ethnic identity and motivational beliefs in students, an additional regression analysis that includes interaction terms was conducted. To test for moderation, a regression analysis was conducted using academic efficacy as the dependent variable and ethnic identity, school

belonging, and the interaction of ethnic identity and school belonging as the predictors. As above, predictor variables were centered and an alpha level of .05 was used to identify statistically significant beta weights. Below are the regression equations, including potential moderators, which have parentheses around them:

Regression equations for Research Question 4

Self- efficacy = Ethnic Identity, School Belonging, Four Dummy Race Codes (African American, Hispanic, Asian, Multiracial), One Dummy Gender Code (Female), Two Dummy School Codes, Ethnic Identity x Female, Ethnic Identity x Four Dummy Race Codes, (Ethnic Identity x School Belonging)

Research question 5: Does school belonging moderate the relationship between ethnic identity and achievement goals?

To determine if school belonging functioned as a moderator in the relationship between ethnic identity and achievement goals in students, additional regression analyses that included interaction terms was conducted. To test for moderation, a regression analysis was conducted using achievement goals as the dependent variable and ethnic identity, school belonging, and the interaction of ethnic identity and school belonging as the predictors. As above, predictor variables were centered and an alpha level of .05 was used to identify statistically significant beta weights. Below are the prospective regression equations, including potential moderators, which have parentheses around them.

Regression equations for Research Question 5

Mastery Goals = Ethnic Identity, School Belonging, Four Dummy Race Codes (African American, Hispanic, Asian, Multiracial), One Dummy Gender Code (Female),

Two Dummy School Codes, Ethnic Identity x Female, Ethnic Identity x Four Dummy Race Codes, (Ethnic Identity x School Belonging)

Performance Approach Goals = Ethnic Identity, School Belonging, Four Dummy Race Codes (African American, Hispanic, Asian, Multiracial), One Dummy Gender Code (Female), Two Dummy School Codes, Ethnic Identity x Female, Ethnic Identity x Four Dummy Race Codes, (Ethnic Identity x School Belonging)

Performance Avoidance Goals = Ethnic Identity, School Belonging, Four Dummy Race Codes (African American, Hispanic, Asian, Multiracial), One Dummy Gender Code (Female), Two Dummy School Codes, Ethnic Identity x Female, Ethnic Identity x Four Dummy Race Codes, (Ethnic Identity x School Belonging)

In the event that a significant interaction term was obtained, follow-up procedures planned to be conducted to determine the exact nature of the relationship. Specifically, significant interactions would be determined by calculating a simple regression line of value (≥ one standard deviation above the mean, at the mean, and ≤ one standard deviation below the mean). The results for the value would be plotted for the indicated achievement goal outcome or academic efficacy outcome and the slopes for the values would be compared.

Chapter 4: Results

This chapter presents results of statistical analyses conducted to answer the five research questions within this study. Data screening procedures were carried out first, followed by preliminary analyses. Next, correlations among variables were calculated to examine the relations between ethnic identity, academic self-efficacy, mastery goals, performance-approach goals, and performance-avoidance goals. Results from separate regression analyses using ethnic identity as the predictor are presented for each outcome variable (i.e., self-efficacy, task value, mastery goals, performance-approach goals, and performance-avoidance goals). Also results evaluating group level differences (male, female, African American, White, Hispanic, Asian, Multiracial) with regard to the relationship between ethnic identity, academic efficacy, and achievement goals are discussed. Last, regression analyses were conducted to determine whether school belonging serves as a moderator between ethnic identity and both academic efficacy and achievement goals (mastery, performance-approach, and performance-avoidance). *Note*: all numbers yielded from analyses (conducted in SPSS) reported in this chapter reflect values that have been truncated after two decimals, instead of values rounded to the second decimal.

Accuracy of Data Entry

Data from student surveys were first screened manually prior to being scanned in the Remark database, and manual checks were conducted on every 10th survey scanned by research assistants. Then data were transferred into SPSS, where it was screened for response errors from participants and data entry errors. If a participant missed one item on a scale, a mean score was created and entered into the data. Participants whose responses were 3 standard deviations above

or below the mean on any of the scales would be considered outliers. The current study did not detect any outliers in the sample based on this criteria. Of the 436 students who participated in the spring of 6th grade, 430 had responses from academic efficacy, 428 from the mastery scale, 427 for performance-approach, 425 for performance-avoidance, 416 for ethnic identity (from the MEIM) and 419 from the school belonging subscales which were analyzed. Refer to Chapter 3 for more information about data screening and how missing data were handled.

Preliminary Analyses

Preliminary analyses were conducted to determine: (a) Cronbach alphas for scale composite scores, (b) descriptive statistics (i.e., means, standard deviations, and normality) for each variable, and c) correlations among the variables of interest (i.e., ethnic identity, academic efficacy, achievement goals, and school belonging). Results from these analyses will be discussed more in depth later in this section.

Measure reliability. Internal consistencies were determined for all measures used in current study, including: ethnic identity as assessed by the Multigroup Ethnic Identity Measure (MEIM), academic self-efficacy, mastery goals, performance-approach goals, performance-avoidance, and school belonging. The alpha values were considered satisfactory for all 5 scales. The alpha values ranged from .80 (performance-avoidance) to .89 (academic efficacy and mastery goals). Descriptive Statistics and Item-Total correlation for all scales can be found in Appendix H through K.

Descriptive analyses. Descriptive statistics for demographic variables and variables of interest in the current study (ethnic identity, academic self-efficacy, mastery goals, performance-approach goals, performance-avoidance, and school belonging) were conducted, with results summarized in Tables 2 and 3. Approximately half of the participants in the sample were male.

In addition, the majority of the participants in the sample were Caucasian 50.2% and 49.8% were considered ethnic minorities. Skewness and kurtosis values were calculated to assess normality of the variables. All key variables were approximately normally distributed (skew and kurtosis between -2 and +2).

Table 2

Descriptive Statistics for Demographic Variables

Variables	N	%
Gender		
Boys	222	50.9
Girls	214	49.1
Race		
African American	44	10.1
Caucasian	219	50.2
Hispanic	105	24.1
Asian	25	5.7
Multiracial and Other	43	9.9

Table 3

Descriptive Statistics for Key Variables

Variables	N	Mean (SD)	Min	Max	Skewness	Kurtosis
Ethnic Identity	416	4.07 (.96)	1	5	-1.2	1.3
Academic- Efficacy	430	3.96 (.86)	1	5	-.88	.64
Mastery Goals	428	3.08 (1.1)	1	5	-.13	-.71
Performance- Approach Goals	427	2.50 (1.1)	1	5	.49	-.85
Performance- Avoidance Goals	425	2.04 (1.0)	1	5	.87	-.15
School Belonging	419	3.44 (1.0)	1	5	-.31	-.66

Correlational analyses. Pearson product moment correlations were conducted among all key variables in the study (see Table 4). Ethnic identity had statistically significant but relatively weak correlations with outcome variables. Ethnic identity was positively correlated with academic efficacy ($r = .28$, $p < .01$), mastery goals ($r = .27$, $p < .01$), performance-approach

goals (r = .13, p < .01), and school belonging (r = .26, p < .01). Ethnic identity was not significantly correlated with performance-avoidance goals. The strongest correlations were moderate and detected between performance-approach goals and performance-avoidance goals (r = .57, p < .01) and between academic efficacy and mastery goals (r = .54, p < .01).

Table 4

Correlations between Predictor and Outcome Variables

Variables	1	2	3	4	5	6
1. Ethnic Identity	1					
2. Academic Efficacy	.28**	1				
3. Mastery Goals	.27**	.54**	1			
4. Performance-Approach Goals	.13**	.15**	.26**	1		
5. Performance-Avoidance Goals	.00	.00	.07	.57**	1	
6. School Belonging	.26**	.26**	29**	.07	.01	1

Note. ** p < .01. N = 436.

Regression Analyses

Assumptions. Next, linear regressions were conducted for all research questions. Tests to check for any violations in the assumptions of linear relationships were conducted. Normality, homoscadacisty, and linear relationship were determined using residual analyses of charts and scatterplots; none of these assumptions were violated. Multicollinearity was also not present among the variables as evidence by visual analysis of scatter plots.

Research question 1. A linear regression was conducted to determine to what extent ethnic identity predicted academic efficacy. The results of the regression model were statistically significant R^2 = .08, F(1, 408) = 35.36, p < .001(see Table 5) and the null hypothesis could be rejected. There was a statistically significant positive relationship between students' ethnic identity beliefs and academic efficacy (β = .28, t = 16.36, p < .01). Participants with high ethnic

identity scores (higher scores indicate stronger connection to ethnic identity) reported having high academic efficacy.

Research question 2. Linear regressions were conducted to determine how well ethnic identity predicted the three achievement goal outcome variables (mastery, performance-approach, performance-avoidance goals) separately.

Mastery goals. The results from the regression model were statistically significant for mastery goals $R^2 = .07$, $F(1, 406) = 32.10$, $p < .05$ indicating a relationship between ethnic identity beliefs and mastery goals. The slope indicated a significant positive relationship between students' ethnic identity beliefs and mastery goals ($\beta = .27$, $t = 7.99$, $p < .01$).

Performance-approach goals. The results from the regression model were also statistically significant for performance-approach goals, $R^2 = .01$, $F(1, 406) = 6.98$, $p < .01$ indicating a positive relationship between ethnic identity beliefs and performance- approach goals ($\beta = .13$, $t = 2.64$ $p < .01$).

Performance-avoidance goals. The results from the regression model were not statistically significant for performance-avoidance goals, $R^2 = .00$, $F(1, 404) = .00$, $p = .95$.

Table 5

Unstandardized and Standardized Regression Coefficients for Predicting Academic Efficacy and Achievement Goals from Ethnic Identity

Outcome Variable	Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Academic Efficacy	Ethnic Identity	.25	.04	.28	.00*	.08
Mastery Goals	Ethnic Identity	.31	.05	.27	.00*	.07
Performance-Approach Goals	Ethnic Identity	.16	.06	.13	.00*	.01
Performance-Avoidance Goals	Ethnic Identity	-.003	.05	-.003	.95	0

Note. * $p < .01$.

Research question 3. Two types of linear regression models were conducted to determine whether ethnic identity predicts academic efficacy and achievement goals similarly for both boys and girls, and across race groups (African American, Hispanic, Asian, Multiracial). The first set of regression models were conducted to test main effects. The second set of regressions were conducted to test interactions effects. In each of these regression analyses, the predictor variables were all entered at the same time and in the same step. Each regression included several predictor variables including ethnic identity, one combined variable dummy coded as gender to represent male and female participants and two dummy coded variables to represent the three middle schools in the sample (School A, School B, and School C). School C was chosen as the reference group. Four variables were also dummy coded for the five race groups (African American, Hispanic, Asian, Multiracial) in the sample and entered as predictors. White students in the sample were considered the reference group so these students were not entered as predictors. The interactions between the dummy coded gender variable and ethnic identity, the four interactions between each of the four dummy coded race variables (African American, Hispanic, Asian, Multiracial) and ethnic identity, and the two interactions between the dummy coded school variables and ethnic identity were also entered as predictors.

Academic efficacy. The results of the base model testing the main effects were statistically significant, $R^2 = .11$, $F(1, 401) = 6.48$, $p < .001$) (see Table 6). The slope indicated a significant negative relationship between students at School B and academic efficacy ($\beta = -.11$, $t = -2.14$, $p < .05$). The results of the regression model testing interaction effects were also statistically significant for academic efficacy, $R^2 = .12$, $F(1, 394) = 3.60$, $p < .001$) (see Table 7). Both models indicated a significant positive relationship between students' ethnic identity beliefs

and academic efficacy (e.g., $\beta = .31$, $t = 3.46$, $p < .01$). Significant interactions between gender and racial/ethnic group were not found.

Table 6

Predicting Academic Efficacy Using Multiple Predictors Only

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic Identity (EI)	.27	.04	.30	.00**	.11
Gender	-.02	.08	-.01	.77	
School A	.11	.10	.05	.25	
School B	-.22	.10	-.11	.03*	
African American	.04	.13	.01	.75	
Hispanic	-.05	.11	-.02	.59	
Asian	.33	.17	.09	.05	
Multiracial	.10	.14	.03	.47	

Note. * $p < .05$. ** $p < .01$. EI = Ethnic Identity

Table 7

Predicting Academic Efficacy Using Multiple Predictors and Interaction Terms

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic Identity (EI)	.28	.08	.31	.00*	.12
Gender	-.09	.36	-.05	.80	
Gender x EI	.01	.08	.03	.86	
School A	-.04	.43	-.02	.91	
School A x EI	.04	.15	.08	.70	
School B	-.04	.55	-.02	.94	
School B x EI	-.04	.13	-.09	.85	
African American	.73	.67	.26	.27	
African American x EI	-.16	.16	-.25	.30	
Hispanic	.06	.59	.03	.91	
Hispanic x EI	-.03	.13	-.06	.82	
Asian	1	.76	.27	.18	
Asian x EI	-.15	.17	-.19	.37	
Multiracial	-.07	.48	-.02	.87	
Multiracial x EI	.05	.12	.07	.67	

Note. * $p < .01$. EI = Ethnic Identity

Mastery goals. The results of the base model testing the main effects were statistically significant, $R^2 = .10$, $F(1, 409) = 5.89$, $p < .001$ (see Table 8). The slopes indicated a significant

positive relationship between School A students and mastery goals compared to students who attended School C (beta = .14, $t = 2.83$, $p < .05$). A statistically significant positive relationship was also found between African American students and mastery goals compared to White students in the sample (beta = .13, $t = 2.62$, $p < .05$). A statistically significant positive relationship between students' ethnic identity and mastery goals (beta = .26, $t = 5.51$, $p < .001$)

The results of the regression model testing interaction effects were also statistically significant for mastery goals $R^2 = .11$, $F(1, 392) = 3.23$, $p < .001$ (see Table 9). The slope indicated a significant positive relationship between students' ethnic identity beliefs and mastery goals (beta = .30, $t = 3.28$, $p < .01$). Significant interactions among gender and racial/ethnic group were not found.

Table 8

Predicting Mastery Goals Using Multiple Predictors Only

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic Identity (EI)	.30	.05	.26	.00*	.10
Gender	-.07	.10	-.03	.45	
School A	.38	.13	.14	.00*	
School B	.19	.13	.07	.15	
African American	.47	.18	.13	.00*	
Hispanic	-.05	.14	-.09	.72	
Asian	.23	.22	.05	.30	
Multiracial	.06	.18	.01	.74	

Note. * $p < .01$. EI = Ethnic Identity

Table 9

Predicting Mastery Goals Using Multiple Predictors and Predictor Interaction Terms

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic Identity (EI)	.34	.10	.30	.00*	.11
Gender	.25	.46	.11	.58	
Gender x EI	-.08	.11	-.16	.44	
School A	.57	.56	.21	.30	
School A x EI	-.05	.13	-.08	.70	
School B	.65	.69	.25	.34	
School B x EI	-.11	.16	-.19	.49	
African American	.60	.87	.16	.49	
African American x EI	-.03	.20	-.03	.88	
Hispanic	-.69	.74	-.26	.35	
Hispanic x EI	.15	.17	.26	.37	
Asian	-.20	.98	-.04	.83	
Asian x EI	.10	.22	.10	.63	
Multiracial	-.04	.63	-.01	.94	
Multiracial x EI	.02	.16	.02	.86	

Note. * $p < .01$. EI = Ethnic Identity

Performance-approach goals. The results of the base model testing the main effects were statistically significant $R^2 = .05$, $F(1, 409) = 2.84$, $p < .01$ (see Table 10). The slopes indicated a statistically significant positive relationship between African American students and performance-approach goals ($\beta = .10$, $t = 1.97$, $p < .05$) compared to White students in the sample. Analysis of the slopes also indicated a significant relationship between School A's students and performance-approach ($\beta = .12$, $t = 2.33$, $p < .05$) compared to students who attend School C. A significant positive relationship was also found between ethnic identity and performance-approach goals ($\beta = .13$, $t = 2.61$, $p < .05$).

The results of the regression model testing interaction effects were also statistically significant for performance-approach goals $R^2 = .06$, $F(1, 392) = 1.95$, $p < .05$ (see Table 11). The slopes indicated that no predictors reached significance. Significant interactions among

genders and racial/ethnic group were also not found indicating no significant differences between these groups in relation to performance-approach goals.

Table 10

Predicting Performance-Approach Goals Using Multiple Predictors Only

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic Identity (EI)	.16	.06	.13	.00**	.05
Gender	-.21	.11	-.09	.06	
School A	.35	.15	.12	.02*	
School B	.21	.15	.07	.16	
African American	.39	.20	.10	.04*	
Hispanic	-.13	.15	-.04	.38	
Asian	.47	.25	.09	.06	
Multiracial	.08	.21	.02	.69	

Note. * $p < .05$. ** $p < .01$. EI = Ethnic Identity

Table 11

Predicting Performance-Approach Goals Using Multiple Predictors and Predictor Interaction Term

Predictor variable	B	SE	Standardized Beta	*p*	R^2
Ethnic Identity	.14	.11	.12	.20	.06
Gender	.41	.51	.17	.41	
Gender x EI	-.15	.12	-.27	.21	
School A	-.78	.62	-.27	.20	
School A x EI	.28	.15	.41	.05	
School B	-.51	.77	-.18	.50	
School B x EI	.17	.18	.41	.05	
African American	-.04	.97	-.01	.97	
African American x EI	.10	.23	.11	.64	
Hispanic	.56	.82	.19	.49	
Hispanic x EI	-.16	.19	-.26	.38	
Asian	-.28	1	-.05	.79	
Asian x EI	.18	.25	.16	.46	
Multiracial	.13	.70	.03	.84	
Multiracial x EI	-.00	.17	-.00	.97	

Note. EI = Ethnic Identity

Performance-avoidance goals. The results of the regression model predicting performance-avoidance goals from predictors indicate that the model did not reach statistical significance, $R^2 = .01$, $F(1, 390) = .51$, $p = .93$. Significant interactions among genders and racial/ethnic group were also not found indicating no differences between these groups in relation to (null) associations between ethnic identity and performance-avoidance goals.

Research questions 4 and 5. Two types of linear regressions were conducted and a series of critical F statistics were calculated to determine whether school belonging moderated the relationship of ethnic identity with academic efficacy and achievement goals. The first sets of regression models were conducted to test main effects. The second sets of regressions were conducted to test interactions effects. In each of these regression analyses, the predictor variables were all entered at the same time and in the same step. Each regression included several predictor variables including school belonging, ethnic identity, one dummy-coded variable representing female participants and two dummy-coded variables to represent the three middle schools in the sample (School A, School B, and School C). Four variables were also dummy coded for the five race groups (African American, Hispanic, Asian, Multiracial) in the sample and entered as predictors. The interaction between the dummy coded gender variable and ethnic identity, the four interactions between each of the four dummy coded race variables (African American, Hispanic, Asian, Multiracial) and ethnic identity, and the two interactions between the dummy coded school variables and ethnic identity were also entered as predictors. The interaction between school belonging and ethnic identity was also entered as a predictor.

Academic efficacy. The results of the base model testing the main effects were statistically significant, $R^2 = .15$, $F(1, 409) = 8.43$, $p < .001$) (see Table 12). The slopes indicated a significant positive relationship between ethnic identity, school belonging, and academic

efficacy goals. School B had lower academic efficacy compared to students who attended School C. Students with greater school belonging reported greater academic efficacy. The results of the regression model testing interaction effects were also statistically significant for academic efficacy $R^2 = .16$, $F(1, 409) = 4.44$, $p < .001$) (see Table 13). The slopes indicated that no predictors reached significance.

Table 12

Predicting Academic Efficacy Using Multiple Predictors Only (Including School Belonging)

Outcome Variable	Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Academic Efficacy	Ethnic Identity (EI)	.22	.04	.24	.00*	.15
	Gender	-.04	.08	-.02	.58	
	School A	.07	.10	.03	.44	
	School B	-.23	.10	-.11	.02*	
	African American	.11	.13	.03	.41	
	Hispanic	-.04	.10	-.02	.70	
	Asian	.34	.17	.09	.04	
	Multiracial	.10	.14	.03	.45	
	School Belonging	.17	.04	.20	.00*	

Note. * $p < .05$. ** $p < .01$. EI = Ethnic Identity

Table 13

Predicting Academic Efficacy Using Multiple Predictors and Interaction Terms (Including School Belonging)

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic Identity	.13	.14	.14	.36	.16
Gender	-.20	.36	-.11	.56	
Gender x EI	.03	.08	.09	.65	
School A	.01	.42	.00	.98	
School A x EI	.01	.10	.03	.87	
School B	.04	.54	.02	.94	
School B x EI	-.06	.12	-.13	.62	
African American	.62	.66	.22	.34	
African American x EI	-.12	.15	-.18	.44	
Hispanic	.09	.58	.04	.87	
Hispanic x EI	-.03	.13	-.06	.82	
Asian	.93	.74	.25	.21	
Asian x EI	-.13	.17	-.16	.42	
Multiracial	-.22	.48	-.07	.64	
Multiracial x EI	.09	.12	.12	.45	
School Belonging	.07	.16	.08	.65	
School Belonging x EI	.02	.03	.17	.52	

Note. EI = Ethnic Identity

Mastery goals. The results of the base model testing the main effects were statistically significant $R^2 = .15$, $F(1, 409) = 8.22$, $p < .001$) (see Table 14). The results indicated that high ethnic identity and school belonging predicted greater mastery goals and African American students had greater mastery goals than Caucasian students. The results of the regression model testing interaction effects were also statistically significant for mastery goals, $R^2 = .17$, $F(1, 409) = 4.6$, $p < .001$) (see Table 15).

Table 14

Predicting Mastery Goals Using Multiple Predictors Only (Including School Belonging)

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic Identity (EI)	.23	.05	.20	.00*	.15
Gender	-.09	.10	-.04	.38	
School A	.32	.13	.06	.25	
School B	.15	.13	.06	.25	
African American	.52	.17	.14	.00*	
Hispanic	-.02	.13	-.01	.83	
Asian	.24	.22	.05	.27	
Multiracial	.07	.18	.01	.70	
School Belonging	.25	.05	.20	.00*	

Note. * $p < .01$. EI = Ethnic Identity

Table 15

Predicting Mastery Goals Using Multiple Predictors and Interaction Terms (Including School Belonging)

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic identity	-.03	.18	-.03	.84	.17
Gender	.18	.45	.08	.68	
Gender x EI	-.06	.10	-.13	.53	
School A	.71	.54	.26	.19	
School A x EI	-.10	.13	-.15	.44	
School B	.75	.67	.29	.26	
School B x EI	-.14	.16	-.25	.35	
African American	.48	.85	.13	.57	
African American x EI	.01	.20	.01	.93	
Hispanic	-.73	.72	-.27	.31	
Hispanic x EI	.17	.16	.29	.30	
Asian	-.28	.95	-.06	.76	
Asian x EI	.12	.22	.12	.55	
Multiracial	-.17	.62	-.04	.77	
Multiracial x EI	.06	.15	.07	.66	
School Belonging	-.11	.20	-.10	.59	
School Belonging x EI	.09	.04	.49	.06	

Note. EI = Ethnic Identity

Performance-approach goals. The results of the base model testing the main effects were statistically significant (see Table 16). The results indicated significant differences in ethnic

identity among African American students compared to White students with relation to performance-approach goals $R^2 = .05$, $F(1, 409) = 6.23$, $p < .001$). The results of the regression model testing interaction effects were also statistically significant for performance-approach goals, $R^2 = .07$, $F(1, 407) = 1.74$, $p < .001$) (see Table 17) but yielded no significant interaction terms.

Table 16

Predicting Performance-Approach Goals Using Multiple Predictors Only (Including School Belonging

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic Identity (EI)	.15	.06	.12	.01*	.05
Gender	-.22	.11	-.09	.05	
School A	.34	.15	.08	.15	
School B	.22	.15	.08	.15	
African American	.43	.20	.11	.03*	
Hispanic	-.14	.16	-.04	.38	
Asian	.47	.25	.09	.06	
Multiracial	.08	.21	.02	.67	
School Belonging	.04	.05	.03	.49	

Note. * $p < .05$. EI = Ethnic Identity

Table 17

Predicting Performance-Approach Goals Using Multiple Predictors and Interaction Terms (Including School Belonging)

Predictor Variable	B	SE	Standardized Beta	*p*	R^2
Ethnic identity	.10	.20	.08	.61	.07
Gender	.40	.52	.16	.43	
Gender x EI	-.15	.12	-.26	.22	
School A	-.77	.62	-.26	.21	
School A x EI	.28	.15	.40	.06	
School B	-.50	.77	-.18	.51	
School B x EI	.17	.18	.27	.33	
African American	-.06	.97	-.01	.94	
African American x EI	.12	.23	.13	.59	
Hispanic	.56	.82	.19	.49	
Hispanic x EI	-.16	.19	-.26	.38	
Asian	-.28	1.0	-.05	.79	
Asian x EI	.18	.25	.16	.46	
Multiracial	.11	.71	.02	.87	
Multiracial x EI	.00	.18	.00	.99	
School Belonging	-.00	.23	-.00	.98	
School Belonging x EI	.01	.05	.04	.86	

Note. EI = Ethnic Identity

Performance-avoidance goals. The results of the regression model testing interaction effects predicting performance-avoidance goals from predictors indicate that the model did not reach statistical significance, $R^2 = .02$, $F(1, 388) = .58$, $p = .89$.

Moderation tests. An overall test of moderation was determined by interpreting the difference in R^2 values among the regression models in which the interaction term school belonging x ethnic identity was entered and then omitted from the model. A critical F statistic was calculated to determine significance of overall moderation effect in the model for all dependent variables. Critical values of F were found using an F calculator online at alpha level of .05. For all dependent variables critical values of F indicated no significant effect or difference in what would usually be observed in the population when the interaction term (school belonging x

ethnic identity) was included and removed from the model; specifically: academic efficacy $F(6, 390) = .46$, $p = .83$; mastery goals; $F(6, 391) = 1.41$, $p = .20$: performance-approach goals $F(6, 390) = 1.25$, $p = .83$. There was not a significant relationship with performance-avoidance goals therefore additional tests were not run for this variable. Table 18 below shows the observed and critical F values for the dependent variables.

Table 18

Observed and Critical F values for the Dependent Variables

Variables	Observed *F*	Critical *F*
Academic Efficacy	.46	1.9
Mastery Goals	1.41	2.1
Performance-Approach Goals	1.25	2.1

Summary

This study examined the relationships between ethnic identity, academic efficacy, and achievement goals (mastery, performance-approach, performance-avoidance) among early adolescents in the sixth grade. The current study had three aims: 1.) to examine the associations of ethnic identity with academic efficacy and academic achievement goals (mastery, performance-approach, and performance-avoidance), 2.) to examine the extent to which the association of ethnic identity with academic efficacy and achievement goals (mastery, performance-approach, and performance-avoidance) differ by demographic groups (gender and race/ethnicity; White, African American, Hispanic, Asian, Multiracial), and 3.) to examine the extent to which school belonging moderates the association of ethnic identity with academic efficacy and academic achievement goals (mastery, performance-approach, and performance-avoidance).

The current study found statistically significant positive associations between ethnic identity and academic efficacy. This finding suggests students in the sample who endorsed higher ethnic identity scores also had higher academic efficacy. The current study also found statistically significant relationships between ethnic identity and both mastery and performance-approach goals but not for performance-avoidance. This finding indicates that students in the sample who endorsed higher ethnic identity adopted more mastery and performance-approach goal orientations compared to students who endorsed weaker ethnic identity beliefs. The current study did not find statistically significant gender or racial group differences among the associations between the variables of interests nor did the study detect any moderation effects attributable to school belonging.

Chapter 5: Discussion

The purpose of this study was to explore the relationships between ethnic identity, academic efficacy, achievement goals, and school belonging among early adolescents. Data were analyzed from participants representing several different ethnic backgrounds, who reported on their ethnic identity as well as academic beliefs in the spring of the sixth grade. This chapter discusses findings, limitations, implications of the current study, and areas for future research.

Previous literature has documented inconsistent findings regarding the extent to which ethnic identity contributes to better outcomes for students. Researchers previously argued that ethnic identity had mixed associations with psychosocial outcomes and beliefs about achievement motivation (Fordham & Ogbu, 1986; Graham, Taylor, & Hudley, 1998). However, recent research suggests a positive trend in the associations of ethnic identity with psychosocial and academic adjustment among adolescents but findings remain inconsistent (Rivas-Drake et al., 2014). In an effort to contribute to this line of research, the current study had three aims: 1) to examine the associations and relationships between ethnic identity and several motivational constructs; 2) to examine racial/ethnic group differences in relation to ethnic identity and outcome variables (mastery goals, performance- approach goals, performance- avoidance goals); and 3) to examine whether school belonging was a moderator between ethnic identity and the aforementioned outcome variables.

Relationships between Ethnic Identity, Academic Efficacy, and Achievement Goals

Ethnic identity and academic efficacy. It was hypothesized that ethnic identity would have a positive relationship with academic efficacy. As expected, within the current sample a

statistically significant positive relationship was detected between ethnic identity and academic efficacy. This finding indicates participants who reported higher ethnic identity scores also reported higher levels of competency for academic tasks compared to students who reported lower levels of ethnic identity.

This finding is consistent with the hypotheses for the current study and aligns with the literature investigating the relationship between ethnic identity and academic efficacy among adolescents (Booth, Abercrombie, & Frey, 2017; Chavous et al., 2003; Oyeserman, Harrison, & Bybee, 2001). Booth, Abercrombie, and Frey (2017) used items from the MEIM to predict academic efficacy among a sample of 482 middle and high school students and reported a significant positive relationship between ethnic identity and academic efficacy. Their sample was similar to the current study in that middle school students were included. However, their study represented a portion of middle school participants in the eighth grade whereas the current study investigated a sample of 6th grade students. The current study extends knowledge regarding this finding because it supports the argument that among early adolescents academic efficacy might be influenced by individual characteristics related to one's perception of their cultural environment.

This finding is also consistent with social identity theory, which posits that individuals who identify strongly in a particular social group adopt beliefs and values of the group (Ashmore, Deaux, & McLaughlin-Volpe 2004; Tajfel & Turner, 1986). In the current sample it may be plausible that beliefs and values associated with ethnic identity may have been aligned with perceiving high academic efficacy.

Ethnic identity and achievement goals. It was hypothesized that ethnic identity would have a positive relationship with mastery and performance-approach goals. In the current sample,

statistically significant positive relationships between ethnic identity and achievement goals (mastery and performance-approach goals) was also found, as expected (Kouli & Papaioannou, 2009). Sixth graders who reported higher ethnic identity scores also reported higher levels of mastery and performance-approach goals compared to students who reported lower levels of ethnic identity. Similar to Kouli and Papaioannou (2009), the current study also examined middle school students but differs and extends this work by sampling 6th grade students in the United States. Kouli and Papaioannou's (2009) sample was drawn from middle and high school students (8th through 12th) in Greece.

It was hypothesized that there would be a negative association between ethnic identity and performance-avoidance goals. It was surprising that there was not a statistically significant association between ethnic identity and performance-avoidance goals. Drawing from ecological theory it was expected that a students' perception of their cultural identity might also be linked to performance-avoidance goals because the cultural environment influences individuals' behavior choices and motivation (Bronfenbrenner, 1979). Although previous research has documented that students' perceptions of their academic identity influences performance-avoidance goals (Komarraju & Dial), this was not the case for the current sample. A reason for this finding could be that the current study operationalized ethnic identity as a set of beliefs and values and whereas prior studies that examined ethnic identity as a predictor of performance-avoidance goals defined ethnic identity as a category connected to an ethnic/race group (Sha, 2010; Zusho, Pintrich, & Cortina 2005). Differences in the way ethnic identity is conceptualized and operationalized in the literature may contribute to less being known about the association between ethnic identity and performance avoidance goals.

Group Differences

The current study also investigated potential gender and ethnic/racial group (African American, Asian, Hispanic, Multiracial) differences in the relationships between ethnic identity, academic efficacy, and achievement goals (mastery, performance-approach, and performance-avoidance). The current study used White students as the reference group.

Academic efficacy. It was hypothesized that ethnic identity levels would be stronger among ethnic minorities compared not non-ethnic minorities. It was also hypothesized that girls would have stronger ethnic identity compared to boys in the sample. It was surprising that the current study did not indicate significant gender or racial/ethnic differences in the relationship between ethnic identity and academic efficacy as hypothesized. These results contrast reported differences detected between boys and girls (Oyserman, Harrison, & Bybee, 2001) and among racial/ethnic groups (Midgely, 2002) regarding the relationship between ethnic identity and academic efficacy and achievement goals. A reason for the discrepant results could be that the current study assessed ethnic identity among a younger, diverse population of students whereas Oyserman and colleauges (2001) used a sample of only African American students in the eighth grade. Oyserman and colleauges (2001) also measured ethnic identity using a Racial-ethnic Identity scale created by Oyserman, Gant, and Ager (1995) focused only on feelings related to belonging to a Black racial group. Another reason for the discrepancy could be that the current study defined ethnic identity as a set of beliefs and values relation whereas Midgely (2002) defined ethnic identity as different race categories.

There was however a significant difference in academic efficacy between students who attended School B compared to students who attended School C. Specifically, students who attended School B reported significantly lower academic efficacy ratings compared to students at

School C. This finding supports previous literature suggesting student perceptions of their school context and school characteristics are salient factors contributing to student motivation and engagement and can differ from school to school (Wang & Holcombe, 2010). For example, Seo et al. (2007) found that a characteristic such as school location affected motivation, and students in rural areas showed lower academic motivation compared to students who attended schools that are in non-rural areas. Different from Seo et al. (2007) the current study shows differences in academic efficacy between two schools in a large metropolitan school district. Differences in school features such as the predominant SES level or the percentage of students considered the majority racial group of the participating schools could be a possible reason for this finding. School B has a smaller White population of students (40%) and more students qualifying for free or reduced-priced lunch (52%) compared to School C, where White students are the majority (69%) and few students are from families of low SES (13%). It could be possible that negative effects on academic efficacy can be detected in middle schools with more students of low SES, regardless of diversity in student racial groups.

Achievement goals. It was hypothesized that there would be group differences in the relationship between ethnic identity and achievement goals. Similar to academic efficacy, the current study did not find support for significant group differences in the regression models testing interaction effects with regard to the relationship between ethnic identity and achievement goals (mastery, performance- approach, and performance-avoidance) across ethnic/race groups, which was not expected. Previous literature has documented mean-level differences in mastery goals between male and female 6th grade students such that females reported higher levels compared to boys (Midgely, 1997). Also, Zusho, Pintrich, and Cortina (2005) reported that Asian students endorsed significantly higher performance avoidance goals compared to the white

students in their sample of 203 college students. A reason for the discrepant results could be that the current study had a significantly small and younger Asian sample, which may have attributed to the current study's unique findings. Less in known about differences among ethnic minority youth with regard to performance approach goals.

However, it should be noted that a significant relationship between being African American and mastery goals was found in the regression model testing main effects. This finding suggests that African American students reported higher mastery scores compared to White students in the sample. Prior literature has also found that African American students had higher mastery goals than White students (Midgely, 2002).

In addition, a significant relationship between African American students and performance-approach goals were detected as a result of the regression equation containing the main effects. The direction of the significant association suggests that African American students reported higher performance approach orientations compared to White students in the sample. This finding supported expectations because minority students reported higher levels of ethnic identity with relation to achievement goals compared to non-minority students indicating differences in ethnic identity among these two groups (Booth, Curran, Frey, Gerard, Collet, & Bartimole, 2014). There was also a significant relationship between students who attended School A and performance–approach goals. Specifically, students at School A endorsed higher performance-approach goals compared to students who attended School C. Recent studies suggest that classrooms structures and practices may contribute to differences in the way students perceive achievement goals (Turner, Gray, Anderman, Dawson, & Anderman, 2013). It may be possible that educators at School A may promote performance-approach goal orientation practices. There is limited research investigating school factors that contributes to endorsement

of performance-approach goals. This finding extends the literature by distinguishing a difference between middle schools with regard to student endorsement of performance-approach goals.

School Belonging as a Moderator

Academic Efficacy. It was hypothesized that if school belonging is high, then endorsement of academic efficacy would also be high regardless of ethnic identity. However, in the current sample school belonging did not moderate the relationship between ethnic identity and academic efficacy. Specifically, school belonging did not account for a statistically significant amount of variance among students who reported higher or lower ethnic identity with relation to academic efficacy endorsement. This finding was unexpected because previous research has documented the role of school belonging in protecting youth from the adverse effects of risk factors associates with poor outcomes (Huynh & Gillen-O'Neel, 2016). One potential reason for the discrepant finding is that the aforementioned research examined the relationship between stressors and mental/physical health factors, which differed from the outcomes examined in the current study.

Mastery goals. It was hypothesized that if feelings of school belonging are strong then endorsement of mastery would be high if students reported high and low ethnic identity. Regardless of stronger or weaker ethnic identity, students with higher school belonging did not report higher mastery goals. Students in the current sample with low ethnic identity endorsed low mastery goals even if they felt strongly connected to school. This finding contradicts current evidence that suggested school belonging is a promotive factor of higher GPA among youth who live in high risk living situations compared to youth living in situations with less risk (Hopson & Lee, 2011; O'Malley, Voight, Renshaw, & Eklund, 2015).

Performance-approach goals. Regardless of endorsing a stronger or weaker ethnic identity, students in the current sample with higher school belonging reported high performance-approach goals as expected. Students in the current sample with low ethnic identity endorsed low performance-approach goals even if they felt strongly connected to school. This finding contradicts Loukas and Robinson (2004) who reported that among boys (10-14 years old) who put only minimal effort into school, those who had higher (vs. lower) perceptions of school belonging reported less depressive symptoms.

Performance-avoidance goals. A hypothesis regarding the association between ethnic identity, school belonging, and performance-avoidance goals was not formulated as there is limited research investigating ethnic identity beliefs as a predictor of performance avoidance goals. More research in this area would provide more information regarding factors that reduce performance-avoidance goals. Taken in isolation, findings from this study suggest there is not a significant relationship between ethnic identity and performance-avoidance goals among student who endorse higher or lower ethnic identity and feel strongly connected to school. There may not be a significant relationship between these constructs because having a higher ethnic identity boosts an individual's self-confidence, which may overshadow any feelings incompetence that may be associated with academic performance.

Contributions

The findings from the current study contribute to the literature in several ways. This study found that ethnic identity is significantly positively related to academic efficacy and achievement goals among a relatively understudied diverse population of students. Academic efficacy and achievement goals are rarely studied as outcome variables as the majority of research in this area uses these variables to predict academic achievement outcomes (i.e.,

math/reading performance, GPA) that then examine them as important outcomes in and of themselves. This gap in the literature is addressed in in this study. The current study also provides evidence that individuals' perceptions about their ethnic/racial group are associated with higher feelings of academic efficacy, regardless of their ethnicity. This information can be useful for future motivation researchers interested in identifying predictors of academic efficacy and achievement goals as it relates to positive youth adjustment and development. The current study's findings support and provide relevance for emerging literature calling for researchers to explore individual factors that affect achievement goals (Huff, Stripling, Boyer, & Stephens, 2016; Vansteenkiste, Lens, Elliot, Soenens, & Mouratidis, 2014) as opposed to solely focusing efforts that explain the effects achievement goals have on student outcomes (Schunk, 2012)

Overall, the current study contributes to a limited body of literature exploring the associations between ethnic identity and variables related to academic motivation. Findings from the current study provide information regarding the relationship between ethnic identity, academic efficacy, achievement goals (mastery, performance- approach, performance-avoidance), and school belonging among early adolescents from different ethnic minority backgrounds. The results from the current study provide evidence consistent with the current trend of ethnic identity's positive associations with youth development and schooling, which contradicts literature suggesting otherwise. Further, the current study suggests that the significant, positive influence of ethnic identity on student academic efficacy, mastery goals, and performance-approach goals hold true across levels of school belongingness. This lack of moderation suggests educators interested in fostering factors that predict positive academic beliefs may want to focus on cultivating all students' ethnic identity rather than, for instance, focusing on school connectedness with the hope that high levels might serve to protect students

with low ethnic identity from experiencing suboptimal school adjustment. Nevertheless, school belonging had a positive main effect on academic efficacy and motivational goals.

Implications for School Psychologists

Findings from the current study have implications for educational professionals who work with youth from diverse cultural and ethnic backgrounds. The current study supported hypotheses regarding the relationship between ethnic identity, academic efficacy, and achievement goals (mastery, performance- approach). Educators can support students who embrace their ethnic identities and encourage other students to be proud of their cultural norms and values as it is associated with students' sense of competence in academic tasks. This study reveals that students' perception of their ethnic identity is associated with their endorsement of achievement goals. This information could be helpful when working with youth who have mastery and performance-approach goal orientations. Ethnic identity is a salient part of youth development that affects multiple aspects of one's life, including school adjustment. School psychologists can use this information to inform teachers of the benefits of promoting ethnic identity to enhance school adjustment, as well as encourage school staff to provide opportunities for students to feel connected at school. The findings from the current study may also be helpful for researchers interested in identifying specific factors that effect motivation among early adolescents.

Practitioners seeking guidance in how to promote ethnic identity may want to consider the relevant programs and practices. For instance, Project Butterfly is a school-based intervention designed to increase self-esteem and teach African American cultural values to middle school age African American girls. The curriculum uses culturally responsive activities and exercises focused primarily on increasing self-awareness and cultural awareness. Educators can support

students in exploring and affirming their ethnic identity by assigning reading material that includes characters from different cultural backgrounds (Hill, Mance, Anderson, & Smith, 2012). This can help student and teachers learn more about different cultural traditions, languages, and beliefs. In addition, practitioners should be mindful of images shared with students that promote negative racial stereotypes as these images may make ethnic minority youth feel embarrassed or ashamed of their culture. Educators can also take an active interest in students' cultural identity by assigning projects and assignments that allow students the opportunity to share information about their culture and heritage. This may be helpful in facilitating positive discussion and racial/ethnic group difference in a safe and comfortable environment.

Limitations

There were several limitations to the current study that affect the generalizability of the findings. First, data analyses in this study were limited to examination of cross-sectional data which prohibits the interpretation of causation. The number of ethnic minority students in each ethnic/racial group also may have served as a limitation for the current study because the sample sizes among some racial/ethnic groups was quite small. This was addressed in analyses by considering that the total sample size was large enough to run valid statistical tests. Also early adolescents tended to report lower levels of ethnic identity compared to high school and college students (Sha, 2010), which may have contributed to findings. The current study also did not assess ethnic identity using the full measure. This may have limited the current study from gaining more understanding of different dimensions of youth ethnic identity. There were also some key variables that were missing from the model, which may have further explained the findings. For example gathering information about individual students' socioeconomic status, family background, and features of the school may have added more depth to the study.

Summary and Future Directions

The current study examined the association between ethnic identity and achievement motivation variables (academic efficacy, mastery goals, performance-approach goals, performance-avoidance goals) among early adolescents in the 6th grade. This study was a cross-sectional secondary analysis of data from the longitudinal Adolescent Motivation and Development Study, which explored motivational and achievement variables across the transition from elementary to middle school. This study had three main aims.

First, this study explored the extent to which ethnic identity beliefs were associated with academic efficacy and achievement goals (mastery, performance-approach, performance-avoidance). This study found statistically significant, positive relationships between ethnic identity and the dependent variables with the exception of performance-avoidance. These findings extend previous literature documenting these positive associations between ethnic identity and motivational beliefs among a relatively understudied population of students.

Second, the current study examined the extent to which there were group differences in the association between academic efficacy and achievement goals (mastery, performance-approach, performance-avoidance). In the current sample group differences were not detected for any of the dependent variables. The way ethnic identity was operationalized (beliefs about ethnic identity vs. a race group category) and limited research with diverse populations may have attributed to this result. More research with larger ethnically diverse samples of early adolescents is needed to draw concrete conclusions regarding group differences with relation to links between ethnic identity and motivational beliefs such as academic efficacy and achievement goals.

The third major aim of the current study was to explore school belonging as a protective factor for youth who reported lower ethnic identity. In the current sample school belonging did not make a statistically significant difference in the variance of any of the dependent variables when added to the regression model. These findings suggest that school belonging is not a significant moderator in the relationship between ethnic identity and outcome variables of interests (academic efficacy, mastery goals, performance-approach goals, performance-avoidance goals). These findings were not expected because previous literature supports the consideration of an individual's perception of their school context when investigating youth school experiences. Future research should investigate how school context shapes students perceptions in school.

Possible reasons for these findings could be the way school belonging was measured. School belonging was assessed using a questionnaire that had been used with high school students and young adults and not early adolescents (Tyler & Dejoey, 1995). Given the salience of school factors on student outcomes, additional research on student attitudes regarding school belonging and other school protective factors (positive peer groups, student-teacher mentor relationships, and participation in extracurricular activities) is needed.

Future research should continue to investigate the relationships between ethnic identity and educational beliefs among early adolescents. There is a lack of consistency in the empirical literature that supports the relationship between ethnic identity and motivational constructs like academic efficacy and achievement goals. The development and analysis of academic motivation models on populations other than white middle class students is needed to learn more about motivational constructs among diverse populations (Zusho & Claton, 2011; Zusho & Pintrich, 2003). In addition, achievement goals are relatively understudied among youth from ethnic

minority backgrounds and less is known about the reasons why these individuals adopt certain achievement goals in school. The current study attempts to fill this gap by analyzing effects on mastery, performance- approach, and performance goals among a diverse sample of sixth grade students but more research with larger samples is warranted.

Ethnic identity and school variables should also be studied longitudinally as there is evidence that indicates ethnic identity and motivation are sensitive to change as students transition to high school. Future research should also continue to examine the association between ethnic identity and academic and psychosocial outcomes throughout the middle and high school years.

References

Adelabu, D. H. (2008). Future time perspective, hope, and ethnic identity among African American adolescents. *Urban Education*, *43*(3), 347-360.

Aiken, L. S., & West, S. G. (1991). Multiple Regression: Testing and interpreting interactions. Newbury Park: Sage.

Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*, 261–271.

Altschul, I., Oyserman, D., & Bybee, D. (2006). Racial□ethnic identity in mid□adolescence: Content and change as predictors of academic achievement. *Child Development*, *77*(5), 1155-1169.

Anderman, L. H. (2003). Academic and social perceptions as predictors of change in middle school students' sense of school belonging. *The Journal of Experimental Education*, *72*(1), 5-22.

Anderman, E. M., & Midgley, C. (1997). Changes in achievement goal orientations, perceived academic competence, and grades across the transition to middle-level schools. *Contemporary Educational Psychology*, *22*(3), 269-298.

Arroyo, C. G., & Zigler, E. (1995). Racial identity, academic achievement, and the psychological well-being of economically disadvantaged adolescents. *Journal of Personality and Social Psychology*, *69*(5), 903.

Aronson, J. (2002). Stereotype threat: Contending and coping with unnerving expectations. *Improving academic achievement: Impact of Psychological Factors on Education*, 279-301.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173.

Blake, J. J., Smith, L. V., & Knight, A. D. (2016). Theoretical frameworks of ethnic minority youth achievement. In S. L. Graves, J. J. Blake, S. L. Graves, J. J. Blake (Eds.), *Psychoeducational assessment and intervention for ethnic minority children: Evidence-based approaches* (pp. 23-39). Washington, DC, US: American Psychological Association. doi:10.1037/14855-003

Belin, C. J. (2012). Ethnic identity, self-esteem, self-efficacy, and satisfaction with life as determinants of sex differences in achievement among Black adolescents. *Dissertation Abstracts International Section A*, *72*, 2863.

Booker, K. C. (2006). School belonging and the African American adolescent: What do we know and where should we go?. *The High School Journal*, *89*(4), 1-7.

Booth, M. Z., Abercrombie, S., & Frey, C. J. (2017). Contradictions of Adolescent Self-Construal: Examining the Interaction of Ethnic Identity, Self-Efficacy and Academic Achievement. *Mid-Western Educational Researcher*, *29*(1).

Booth, M. Z., Curran, E. M., Frey, C. J., Gerard, J. M., Collet, B., & Bartimole, J. (2014). Ethnic Identity, Gender, and Adolescent Attitude toward School: Adaptive Perspectives in Diverse Settings. *Mid-Western Educational Researcher*, *26*(2), 3-27

Bronfenbrenner, U. (1979). Contexts of child rearing: problems and prospects. *American Psychologist*, *34,* 844-850

Butler-Barnes, S. T., Williams, T. T., & Chavous, T. M. (2012). Racial pride and religiosity among African American boys: Implications for academic motivation and achievement. *Journal of Youth and Adolescence*, *41*(4), 486-498.

Chavous, T. M., Bernat, D. H., Schmeelk□Cone, K., Caldwell, C. H., Kohn□Wood, L., & Zimmerman, M. A. (2003). Racial identity and academic attainment among African American adolescents. *Child development*, *74*(4), 1076-1090.

Child Trends. (2014). Child Trends' calculations of U.S. Census Bureau, school enrollment-social and economic characteristics of students: Detailed tables. http://www.census.gov/hhes/school/ data/cps/index.html.

Civitci, A. (2015). Perceived stress and life satisfaction in college students: Belonging and extracurricular participation as moderators. *Procedia-Social and Behavioral Sciences*, *205*, 271-281.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 385-396.

Cokley, K. (2007). Critical issues in the measurement of ethnic and racial identity: A referendum on the state of the field. *Journal of Counseling Psychology*, 54, 224–234. doi:10.1037/0022-0167.54.3.224

Conley, A. M. (2012). Patterns of motivation beliefs: Combining achievement goals and expectancy-value perspectives. *Journal of Educational Psychology*, 104, 32–47. doi:10.1037/a0026042

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*(2), 264.

Crocetti, E., Rubini, M., & Meeus, W. (2008). Capturing the dynamics of identity formation in various ethnic groups: Development and validation of a three-dimensional model. *Journal of Adolescence*, *31*(2), 207-222.

Deci, E., & Ryan, R. M. (2000). What is the self in self-directed learning? Findings from recent motivational research. In G. Staka (Ed.), *Conceptions of self-directed learning: Theoretical and Conceptual Considerations*. Munster: Waxmann

Delgado, M. Y., Ettekal, A. V., Simpkins, S. D., & Schaefer, D. R. (2016). How do my friends matter? Examining Latino adolescents' friendships, school belonging, and academic achievement. *Journal of Youth and Adolescence*, *45*(6), 1110-1125.

Dekker, S., Krabbendam, L., Lee, N., Boschloo, A., de Groot, R., & Jolles, J. (2016). Dominant Goal Orientations Predict Differences in Academic Achievement during Adolescence through Metacognitive Self-Regulation. *Journal of Educational and Developmental Psychology*, *6*(1), 47.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*(2), 256.

Eccles, J.S. 2005. Subjective task value and the Eccles et al. model of achievement-related choices. In A. J. Elliot & C.S. Dweck (Eds.), *Handbook of Competence and Motivation* (pp. 105-121). New York: Guilford Press

Eccles, J. S., Wigfield, A., & Schiefele, U. (1998). Motivation to succeed. In W. Damon (Series Ed.) and N. Eisenberg (Vol. Ed.), *Handbook of Child Psychology* (5th ed., Vol. III, pp. 1017–1095). New York: Wiley.

Ellis, J. M., Rowley, L. L., Nellum, C. J., & Smith, C. D. (2015). From Alienation to Efficacy An Examination of Racial Identity and Racial Academic Stereotypes Among Black Male Adolescents. *Urban Education*, 0042085915602538.

Erikson, E.H. (1968) Youth, Identity and Crisis. Norton, New York.

Faircloth, B. S., & Hamm, J. V. (2005). Sense of belonging among high school students representing 4 ethnic groups. *Journal of Youth and Adolescence*, *34*(4), 293-309.

Faircloth, B. S., & Hamm, J. V. (2011). The dynamic reality of adolescent peer networks and sense of belonging. *Merrill-Palmer Quarterly*, *57*(1), 48-72.

Ford Jr, J. M., Jones, M. H., & Alexander, J. M. (2015). After-School Interests, Achievement Goal Orientation, and Peers in a Predominantly African American School. *The Journal of Negro Education*, *84*(4), 547-563.

Fordham, S. (1988). Racelessness as a factor in Black students' school success: Pragmatic strategy or pyrrhic victory?. *Harvard Educational Review*, *58*(1), 54-85.

Fordham, S., & Ogbu, J. U. (1986). Black students' school success: Coping with the "burden of 'acting white'". *The Urban Review*, *18*(3), 176-206.

Frable, D. E. (1997). Gender, racial, ethnic, sexual, and class identities. *Annual Review of Psychology*, *48*(1), 139-162.

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.

Galliher, R. V., Jones, M. D., & Dahl, A. (2011). Concurrent and longitudinal effects of ethnic identity and experiences of discrimination on psychosocial adjustment of Navajo adolescents. *Developmental Psychology*, *47*(2), 509.

Gillen-O'Neel, C. & Fuligni, A. (2013). A longitudinal study of school belonging and academic motivation across high school. *Child Development*, *84*(2), 678-692

Goodenow, C., & Grady, K. E. (1993). The relationship of school belonging and friends' values to academic motivation among urban adolescent students. *The Journal of Experimental Education*, *62*(1), 60-71.

Graham, S., Taylor, A. Z., & Hudley, C. (1998). Exploring achievement values among ethnic minority early adolescents. *Journal of Educational Psychology*, *90*(4), 606-620.

Grant, H., & Dweck, C. S. (2003). Clarifying achievement goals and their impact. *Journal of personality and social psychology*, *85*(3), 541-553.

Grotevant, H. D. (1987). Toward a process model of identity formation. *Journal of Adolescent Research*, *2*(3), 203-222.

Gummadam, P., Pittman, L. D., & Ioffe, M. (2016). School belonging, ethnic identity, and psychological adjustment among ethnic minority college students. *The Journal of Experimental Education*, *84*(2), 289-306.

Guzman, M. R. (2002). The relationships among ethnic identity, other group orientation, and fatalism in understanding attitudes toward education, school, and achievement among youth of Mexican descent. *Dissertation Abstracts International*, *62*(12-B), 6023. (UMI No. 3035504)

Guzmán, M. R., Santiago-Rivera, A. L., & Hasse, R. F. (2005). Understanding academic attitudes and achievement in mexican-origin youths: ethnic identity, other-group orientation, and fatalism. *Cultural Diversity and Ethnic Minority Psychology*, *11*(1), 3.

Harper, B. E., & Tuckman, B. W. (2006). Racial identity beliefs and academic achievement: does being black hold students back?. *Social Psychology of Education*, *9*(4), 381-403.

Hill, J. L., Mance, G. A., Anderson, R. E., & Smith, E. P. (2012). The role of ethnic identity in interventions to promote positive adolescent development. *Glob J Community Psychol Pract*, *2*(3), 1-12.

Hogg, M. A., & Abrams, D. (1990). Social motivation, self-esteem and social identity. *Social identity theory: Constructive and Critical Advances*, *28*, 47.

Hopson, L. M., & Lee, E. (2011). Mitigating the effect of family poverty on academic and behavioral outcomes: The role of school climate in middle and high school. Children and Youth Services Review, 33(11), 2221–2229. http://dx.doi.org/10.1016/j.childyouth.2011.07.006.

Hudley, C., & Irving, M. (2012). Ethnic and racial identity in childhood and adolescence. In K. R. Harris, S. Graham, T. Urdan, & S. Graham (Eds.), APA educational psychology handbook: Vol. 2. Individual differences and cultural and contextual factors (pp. 267–292). Washington, DC: American Psychological Association.

Huff, S. M., Stripling, C. T., Boyer, C., & Stephens, C. A. (2016). Investigating Factors that Influence Achievement Goal Orientation and Educational Practices in Undergraduate Agricultural Sciences and Natural Resource Students. *NACTA Journal*, *60*(4), 423.

Hughes, M., Kiecolt, K. J., Keith, V. M., & Demo, D. H. (2015). Racial identity and well-being among African Americans. *Social Psychology Quarterly*, 0190272514554043.

Huynh, V. W., & Gillen-O'Neel, C. (2016). Discrimination and sleep: The protective role of school belonging. *Youth & Society*, *48*(5), 649-672.

Ivory, L. I. (2003). Ethnic identity, college academic self-efficacy, and academic performance of African American and Puerto Rican college students under the aegis of a higher education opportunity program. *Dissertation Abstracts International*, *63*(6-B), 3459.

Jaramillo, J., Mello, Z. R., & Worrell, F. C. (2015). Ethnic identity, stereotype threat, and perceived discrimination among Native American adolescents. *Journal of Research on Adolescence*.

Jiang, Y., Song, J., Lee, M., & Bong, M. (2014). Self-efficacy and achievement goals as motivational links between perceived contexts and achievement. *Educational Psychology*, *34*(1), 92-117.

Jones, M. H., & Ford, J. M. (2014). Social achievement goals, efficacious beliefs, and math performance in a predominately African American high school. *Journal of Black Psychology*, *40*(3), 239-262.

Juvonen, J. (2006). Sense of belonging, social bonds, and school functioning. *Handbook of Educational Psychology*, *2*, 655-674.

Kaplan, A., & Maehr, M. L. (1999). Achievement goals and student well-being. *Contemporary Educational Psychology*, *24*(4), 330-358.

Keys, T. D., Conley, A. M., Duncan, G. J., & Domina, T. (2012). The role of goal orientations for adolescent mathematics achievement. *Contemporary Educational Psychology*, *37*(1), 47-54.

Kia-Keating, M., & Ellis, B. H. (2007). Belonging and connection to school in resettlement: Young refugees, school belonging, and psychosocial adjustment. *Clinical Child Psychology and Psychiatry*, *12*(1), 29-43.

Klassen, R. M. (2004). Optimism and realism: a review of self□efficacy from a cross□cultural perspective. *International Journal of Psychology*, *39*(3), 205-230.

Klimstra, T. (2013). Adolescent personality development and identity formation. *Child Development Perspectives*, *7*(2), 80-84.

Komarraju, M., & Dial, C. (2014). Academic identity, self-efficacy, and self-esteem predict self-determined motivation and goals. *Learning And Individual Differences*, *32*1-8. doi:10.1016/j.lindif.2014.02.004

Kouli, O., & Papaioannou, A. G. (2009). Ethnic/cultural identity salience, achievement goals and motivational climate in multicultural physical education classes. *Psychology of Sport and Exercise*, *10*(1), 45-51.

Liem, A. D., Lau, S., & Nie, Y. (2008). The role of self-efficacy, task value, and achievement goals in predicting learning strategies, task disengagement, peer relationship, and achievement outcome. *Contemporary Educational Psychology*, *33*(4), 486-512.

Losen, D. J., Gillespie, J., & University of California, L. (2012). Opportunities suspended: The disparate impact of disciplinary exclusion from school. Civil Rights Project / Proyecto Derechos Civiles. Retrieved from: http://escholarship.org/uc/item/3g36n0c3

Loukas, A., & Robinson, S. (2004). Examining the moderating role of perceived school climate in early adolescent adjustment. *Journal of Research on adolescence*, *14*(2), 209-233.

Luo, W., Hogan, D., Tan, L. S., Kaur, B., Ng, P. T., & Chan, M. (2014). Self□construal and students' math self□concept, anxiety and achievement: An examination of achievement goals as mediators. *Asian Journal of Social Psychology*, *17*(3), 184-195.

Maehr, M. L., & Zusho, A. (2009). Achievement goal theory: The past, present, and future. In K. R. Wentzel & A. Wigfield (Eds.), *Handbook of Motivation in School* (pp. 77–104). New York: Taylor Francis

Marchant, G. J., Paulson, S., & Rothlisberg, B. A. (2001). Relations of middle school students' perceptions of family and school context with academic achievement. *Psychology in the Schools, 38,* 505-519.

Marcia, J. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of Adolescent Psychology* (pp. 159–187). New York, NY: Wiley.

Martin, R. A., Kazarian, S. S., & Breiter, H. J. (1995). Perceived stress, life events, dysfunctional attitudes, and depression in adolescent psychiatric inpatients. *Journal of Psychopathology & Behavioral Assessment, 17*(1), 81 – 95.

Matthews, J. S., Banerjee, M., & Lauermann, F. (2014). Academic identity formation and motivation among ethnic minority adolescents: The role of the "self" between internal and external perceptions of identity. *Child Development*, *85*(6), 2355-2373.

Meeus, W., van de Schoot, R., Keijsers, L., & Branje, S. (2012). Identity statuses as developmental trajectories: A five-wave longitudinal study in early-to-middle and middle-to-late adolescents. *Journal of Youth and Adolescence*, *41*(8), 1008-1021.

Mickelson, R. A. (1990). The attitude-achievement paradox among Black adolescents. *Sociology of Education*, 44-61.

Midgley, C., Kaplan, A., Middleton, M., Maehr, M. L., Urdan, T., Anderman, L. H., et al. (1998). The development and validation of scales assessing students' achievement goal orientations. *Contemporary Educational Psychology, 23,* 113–131.

Midgley, C., Kaplan, A., & Middleton, M. (2001). Performance-approach goals: Good for what, for whom, under what circumstances, and at what cost?. *Journal of Educational Psychology*, *93*(1), 77.

Midgley, C., Maehr, M. L., Hruda, L. Z., Anderman, E., Anderman, L., Green, M., & Urdan, T. (2000). Manual for the patterns of adaptive learning survey. Ann Arbor: University of Michigan.

Midgley, C. (2002). Goals, goal structures, and patterns of adaptive learning. Mahwah, NJ: Lawrence Erlbaum.

Mucherah, W., & Yoder, A. (2008). Motivation for reading and middle school students' performance on standardized testing in reading. *Reading Psychology*, *29*(3), 214-235.

National Center for Education Statistics (2014). *The Condition of Education 2014*. Retrieved from https://nces.ed.gov/pubs2014/2014083.pdf

Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, *91*(3), 328.

Noltemeyer, A. (2014). Best practices in fostering student resilience. *Best Practices in School Psychology*, 225-238.

O'Malley, M., Voight, A., Renshaw, T. L., & Eklund, K. (2015). School climate, family structure, and academic achievement: A study of moderation effects. *School Psychology Quarterly*, *30*(1), 142.

Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research*, *70*(3), 323-367.

Oyserman, D., Bybee, D., & Terry, K. (2006). Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology*, *91*(1), 188.

Oyserman, D., Gant, L., & Ager, J. (1995). A socially contextualized model of African-American identity: Possible selves and school persistence. Journal of Personality and Social Psychology, 69, 1216–1232.

Oyserman, D., Harrison, K., & Bybee, D. (2001). Can racial identity be promotive of academic efficacy? *International Journal of Behavioral Development, 25*(4), 379–385. doi:10.1080/0165 0250042000401.

Patrick, H., Anderman, L. H., Ryan, A. M., Edelin, K. C., & Midgley, C. (2001). Teachers' communication of goal orientations in four fifth-grade classrooms. *The Elementary School Journal*, 35-58.

Patrick, H., & Mantzicopoulos, P. (2015). Young Children's Motivation for Learning Science. In *Research in Early Childhood Science Education* (pp. 7-34). Springer Netherlands.

Patrick, H., Ryan, A. M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology*, *99*(1), 83.

Paulick, I., Watermann, R., & Nückles, M. (2013). Achievement goals and school achievement: The transition to different school tracks in secondary school. *Contemporary Educational Psychology*, *38*(1), 75-86.

Perreira, K. M., Fuligni, A., & Potochnick, S. (2010). Fitting in: The roles of social acceptance and discrimination in shaping the academic motivations of Latino youth in the US Southeast. *Journal of Social Issues*, *66*(1), 131-153.

Pew Research Center (2014). *Statistical Portrait of Hispanics in the United States.* Retrieved from http://www.pewhispanic.org/2016/04/19/statistical-portrait-of-hispanics-in-the-united-states-key-charts/

Phinney, J. S. (1996). When we talk about American ethnic groups, what do we mean?. *American Psychologist*, *51*(9), 918.

Phinney, J. S., & Chavira, V. (1992). Ethnic identity and self-esteem: An exploratory longitudinal study. *Journal of Adolescence*, *15*(3), 271-281.

Piña□Watson, B., López, B., Ojeda, L., & Rodriguez, K. M. (2015). Cultural and cognitive predictors of academic motivation among Mexican American adolescents: Caution against discounting the impact of cultural processes. *Journal of Multicultural Counseling and Development*, *43*(2), 109-121.

Pintrich, P. R. (2000a). An achievement goal theory perspective on issues in motivation terminology, theory, and research. *Contemporary Educational Psychology, 25,* 92–104. doi:10.1006/ceps.1999.1017

Pintrich, P. R. (2000b). Multiple goals, multiple pathways: The role of goal orientations in learning and achievement. *Journal of Educational Psychology, 92,* 544–555. doi:10.1037/0022-0663.92.3.544

Pintrich, P. R., & Schunk, D. H. (2002). Motivation in education: Theory. *Research, and Applications, Second Edition, Merrill Prentice Hall, Columbus, Ohio*.

Proctor, C. P., Daley, S., Louick, R., Leider, C. M., & Gardner, G. L. (2014). How motivation and engagement predict reading comprehension among native English-speaking and English-learning middle school students with disabilities in a remedial reading curriculum. *Learning and Individual Differences*, *36*, 76-83.

Pop, E. I., Negru-Subtirica, O., Crocetti, E., Opre, A., & Meeus, W. (2016). On the interplay between academic achievement and educational identity: A longitudinal study. *Journal of Adolescence*, *47*, 135-144.

Reardon, S. F., Robinson-Cimpian, J. P., & Weathers, E. S. (2014). Patterns and trends in racial/ethnic and socioeconomic academic achievement gaps. In H. A. Ladd & M. E. Goertz (Eds.), *Handbook of Research in Education and Finance Policy*. United Kingdom: Lawrence Erlbaum. ‘

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. *The Journal of Early Adolescence, 19*(3), 301–322. doi:10.1177/ 0272431699019003001.

Schmeelk-Cone, K. H., & Zimmerman, M. A. (2003). A longitudinal analysis of stress in African American youth: Predictors and outcomes of stress trajectories. *Journal of Youth and Adolescence, 32*(6), 419 – 430.

Shannon, D., Salisbury-Glennon, J., & Shores, M. (2012). Examining the Relationships among Classroom Goal Structure, Achievement Goal Orientation, Motivation and Self-Regulated Learning for Ethnically Diverse Learners. *Journal of Research in Education*, *22*(2), 136-168.

Shermack, C. R. (1996). Rotter’s social learning theory: Prediction of school achievement in Mexican-Americans. *Dissertation Abstracts International*, *57*(3-B), 2141. (UMI No.

9523028)

Shin, R., Daly, B., & Vera, E. (2007). The relationships of peer norms, ethnic identity, and peer support to school engagement in urban youth. *Professional School Counseling*, *10*(4), 379-388.

Schunk, D.H. 2012. Learning theories: An educational perspective. 6th ed. Boston, MA: Pearson.

Smith, C. M. O., Smith, E. P., Levine, D. W., Dumas, J., & Prinz, R. J. (2009). The relationship of racial-ethnic identity to self-concept, achievement, and behavior in African American children: A longitudinal perspective. Cultural Diversity & Ethnic Minority Psychology, 15, 181– 193.

Smith, T. B., & Sylva, L. (211). Ethnic identity and personal well-being of people of color: A metaanalysis. *Journal of Counseling Psychology, 58*, 42-46

Steinberg, L., Dornbusch, S. M., & Brown, B. B. (1992). Ethnic differences in adolescent achievement: An ecological perspective. *American Psychologist*, *47*(6), 723.

Suldo, S. M., Shaunessy, E., & Hardesty, R. (2008). Relationships among stress, coping, and mental health in high-achieving high school students. *Psychology in the Schools, 45*(4), 273-290.

Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In S. Worchel & W. G. Austin (Eds.), *The Social Psychology of Intergroup Relations, an Integrative Theory of Intergroup Conflict*, psychology of intergroup relations. Brookes Cole: Monterey, CA.

Taylor, E. (1999). Do African American adolescents discourage academic excellence? An investigation of the relation between peer support and academic achievement. Dissertation Abstracts International Section A: Humanities and Social Sciences, 60, 1453-1550.

Trickett, E. J., & Birman, D. (2005). Acculturation, school context, and school outcomes: Adaptation of refugee adolescents from the former Soviet Union. *Psychology in the Schools*, *42*(1), 27-38.

Turner, J. C., Gray, D. L., Anderman, L. H., Dawson, H. S., & Anderman, E. M. (2013). Getting to know my teacher: Does the relation between perceived mastery goal structures and perceived teacher support change across the school year?. *Contemporary Educational Psychology*, *38*(4), 316-327.

Tyler, T. R., & Degoey, P. (1995). Collective restraint in social dilemmas: Procedural justice and social identification effects on support for authorities. *Journal of Personality and Social Psychology*, *69*(3), 482.

Umaña□Taylor, A. J., Quintana, S. M., Lee, R. M., Cross, W. E., Rivas□Drake, D., Schwartz, S. J., ... & Seaton, E. (2014). Ethnic and racial identity during adolescence and into young adulthood: An integrated conceptualization. *Child Development*, *85*(1), 21-39.

Ungar, M. (2012). *The Social Ecology of Resilience: A Handbook of Theory and Practice*. New York: Springer.

Usher, E. L., & Pajares, F. (2006). Sources of academic and self-regulatory efficacy beliefs of entering middle school students. *Contemporary Educational Psychology*, *31*(2), 125-141.

Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research, 78*(4), 751–796.

Vansteenkiste, M., Lens, W., Elliot, A. J., Soenens, B., & Mouratidis, A. (2014). Moving the achievement goal approach one step forward: Toward a systematic examination of the autonomous and controlled reasons underlying achievement goals. *Educational Psychologist*, *49*(3), 153-174.

Van Tubergen, F., & Van Gaans, M. (2016). Is There an Oppositional Culture Among Immigrant Adolescents in the Netherlands?. *Youth & Society*, *48*(2), 202. doi:10.1177/0044118X13486901

Wang, M. T., & Eccles, J. S. (2012). Adolescent behavioral, emotional, and cognitive engagement trajectories in school and their differential relations to educational success. *Journal of Research on Adolescence*, *22*(1), 31-39.

Wang, M. T., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. American Educational Research Journal, 47(3), 633-662.

Warren, J. R., Hoffman, E., & Andrew, M. (2014). Patterns and trends in grade retention rates in the United States, 1995–2010. *Educational Researcher*, *43*(9), 433-443.

Weber, S., Appel, M., & Kronberger, N. (2015). Stereotype threat and the cognitive performance of adolescent immigrants: The role of cultural identity strength. *Contemporary Educational Psychology*, *42*, 71-81.

Wentzel, K., Wigfield, A., & Miele, D. (Eds.). (2009). *Handbook of Motivation at School*. New York Routledge.

White, L. H., & Worrell, F. C. (2012). Intersections of Race, Identity, and Academic Achievement. *Human Development*, *55*(2), 97-104.

Wigfield, A., Eccles, J. S., Fredricks, J. A., Simpkins, S., Roeser, R. W., & Schiefele, U. (2015). Development of achievement motivation and engagement. *Handbook of Child Psychology and Developmental Science*, 3(16), 1–44.

Wigfield, A., Eccles, J. S., Yoon, K. S., Harold, R. D., Arbreton, A. J., Freedman-Doan, C., & Blumenfeld, P. C. (1997). Change in children's competence beliefs and subjective task

values across the elementary school years: A 3-year study. *Journal of educational psychology*, *89*(3), 451.

Wigfield, A., & Wagner, A. L. (2005). Competence, motivation, and identity development during adolescence. *Handbook of Competence and Motivation*, 222-239.

Wilkinson, L. (2010). Inconsistent Latino self-identification in adolescence and academic performance. *Race and Social Problems*, *2*(3-4), 179-194.

Witkow, M. R., & Fuligni, A. J. (2007). Achievement goals and daily school experiences among adolescents with Asian, Latino, and European American backgrounds. *Journal of Educational Psychology*, *99*(3), 584.

Worrell, F. C. (2007). Ethnic identity, academic achievement, and global self-concept in four groups of academically talented adolescents. *Gifted Child Quarterly*, *51*(1), 23-38.

Worrell, F. C. (2014). Theories school psychologists should know: Culture and academic achievement. *Psychology in the Schools*, *51*(4), 332-347.

Yasui, M., Dorham, C. L., & Dishion, T. J. (2004). Ethnic identity and psychological adjustment: A validity analysis for European and African American adolescents. *Journal of Adolescent Research, 19*, 807-825.

Yip, T., Seaton, E. K., & Sellers, R. M. (2006). African American racial identity across the lifespan: Identity status, identity content, and depressive symptoms. *Child Development, 77*, 1504–1517. doi:10.1111/j. 1467-8624.2006.00950.x

Zusho, A., & Clayton, K. (2011). Culturalizing achievement goal theory and research. *Educational Psychologist*, *46* (4), 239-260.

Zusho, A., Pintrich, P. R., & Cortina, K. S. (2005). Motives, goals, and adaptive patterns of performance in Asian American and Anglo American students. *Learning and Individual*

differences, *15*(2), 141-158.

Zusho, A., & Pintrich, P. R. (2003). A process-oriented approach to culture: Theoretical and methodological issues in the study of culture and motivation. *Teaching, learning, and motivation in a multicultural context*, 33-65.

Appendix A: Demographics Form

Student Demographics

Gender:

- Boy
- Girl

Race (choose one):

- Asian American or Pacific Islander
- Black or African American
- Hispanic or Latino/a
- White or European American
- Multi-Racial
- Other: _____

Stop!!! Do not continue until told to do so.

Appendix B: Multigroup Ethnic Identity Measure (MEIM) (Phinney, 1992)

Items not included due to copyright restrictions

Appendix C: Motivational Beliefs Scale (PALS, Midgley et al., 2000)

5 Point Likert Scale (*1 = not at all true of me, 3 = somewhat true of me, 5 = very true of me*)

Academic Efficacy

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I'm certain I can master the skills taught in school this year.	**1**	**2**	**3**	**4**
2. I can do even the hardest schoolwork if I try.	**1**	**2**	**3**	**4**
3. Even if my schoolwork is hard, I can learn it.	**1**	**2**	**3**	**4**
4. I'm certain I can figure out even the most difficult schoolwork.	**1**	**2**	**3**	**4**

Appendix D: Personal Achievement Goals (PALS; Midgley et al., 2000)

5 Point Likert Scale (*1 = not at all true of me, 3 = somewhat true of me, 5 = very true of me*)

Mastery Goal Orientation

	Not at all true of me		Somewhat true of me		Very True of me
1. I like schoolwork that I'll learn from, even if I make a lot of mistakes.	**1**	**2**	**3**	**4**	**5**
2. I like schoolwork best when it really makes me think.	**1**	**2**	**3**	**4**	**5**
3. An important reason I do my schoolwork is because I want to improve my skills.	**1**	**2**	**3**	**4**	**5**
4. An important reason I do my schoolwork is because I'm interested in it.	**1**	**2**	**3**	**4**	**5**
5. An important reason I do my schoolwork is because I like to learn new things.	**1**	**2**	**3**	**4**	**5**

Performance- Approach Goal Orientation

	Not at all true of me		Somewhat true of me		Very True of me
1. I would feel really good if I were the only one who could answer the teacher's questions in my classes.	**1**	**2**	**3**	**4**	**5**
2. I would feel successful if I did better than most of the other students in my classes.	**1**	**2**	**3**	**4**	**5**
3. An important reason I do my schoolwork is because I'd like to show my teacher that I'm smarter than the other students in my class.	**1**	**2**	**3**	**4**	**5**
4. Doing better than other students in my class is important to me.	**1**	**2**	**3**	**4**	**5**
5. An important reason I do my schoolwork is because I want to do better than other students in my class.	**1**	**2**	**3**	**4**	**5**

Appendix D: (Continued)

Performance- Avoidance Goal Orientation

	Not at all true of me		Somewhat true of me		Very True of me
1. An important reason I do my school-work is so that I won't embarrass myself	**1**	**2**	**3**	**4**	**5**
2. An important reason I do my schoolwork is so the teacher doesn't think I know less than others.	**1**	**2**	**3**	**4**	**5**
3. An important reason I do my schoolwork is so I don't look dumb.	**1**	**2**	**3**	**4**	**5**
4. One reason I might not participate in class is to avoid looking dumb.	**1**	**2**	**3**	**4**	**5**

Appendix E: Identification with School (Revised by Fuligni, Witkow & Garcia, 2005)

5 Point Likert Scale (*1 = not at all true, 3 = somewhat true, 5 = very true)*

	Not at all true of me		Somewhat true of me		Very True of me
1. I feel close to people at my school	**1**	**2**	**3**	**4**	**5**
2. I am happy to be at my school	**1**	**2**	**3**	**4**	**5**
3. My school is important to the way I think of myself as a person	**1**	**2**	**3**	**4**	**5**
4. I feel a sense that I personally belong at my school	**1**	**2**	**3**	**4**	**5**
5. I feel like a valued member of my school	**1**	**2**	**3**	**4**	**5**

Appendix F: Example of Middle School Parental Consent Forms

Dear Parent or Caregiver:

This letter provides information about a research study that will be conducted at A Middle School by Sarah Kiefer, a professor from the University of South Florida. My goal in conducting the study is to examine how students' motivation changes over time, and how it relates to students' social and academic adjustment in school. The purpose of the study is to gain a better understanding of motivation during early adolescence in order to help all students function well socially, be engaged in school, and perform up to their academic potential.

Who I Am: I am Sarah Kiefer, Ph.D., a professor in the College of Education at the University of South Florida (USF). I am planning the study in cooperation with the principal and administrators of A Middle School to ensure the study provides information that will be helpful to the schools.

- ✓ Why I am Requesting Your Child's Participation: This study is being conducted as part of a project entitled, "The Adolescent Motivation and Development Study." Your child is being asked to participate because he or she is a student at A Middle School.

- ✓ Why Your Child Should Participate: We need to learn more about what motivates students what leads to school success during the teenage years! The information that I collect from students may help increase our overall knowledge of what motivates students in school and how teachers and schools can support students' success in school. In addition, information from the study will be shared with the teachers and administrators at A Middle School in order to increase their knowledge of what motivates students to be successful academically and socially in school. Information from this study will provide a foundation from which to improve the schooling experiences of students at A Middle School. Please note neither you nor your child will be paid for your child's participation in the study. However, all students who participate in the study will be given a small gift and those students who return completed parental consent forms will be entered into a drawing for a gift certificate.

- ✓ What Participation Requires: If your child is given permission to participate in the study, he or she will be asked to complete several paper-and-pencil questionnaires. These surveys will ask about your child's thoughts, behaviors, and attitudes towards school. Completion is expected to take your child about 40 minutes. I will personally administer the questionnaires at A Middle School along with a trained team of researchers from USF during regular school hours. Questionnaires will be administered in classrooms to students who have parent permission to participate. Participation will occur during one class period in the Fall and Spring semesters in sixth grade at A Middle School. In total, participation will take about 80 minutes of your child's time. In addition, students' school records will be reviewed for indications of academic achievement (GPA and FCAT) and if on reduced lunch status.

Appendix F: (Continued)

- ✓ Please Note: Your decision to allow your child to participate in this research study must be completely voluntary. You are free to allow your child to participate in this research study or to withdraw him or her at any time. If you choose not to participate, or if you withdraw at any point during the study, this will in no way affect your relationship with A Middle School, USF, or any other party.

- ✓ Confidentiality of Your Child's Responses: There is minimal risk to your child for participating in this research. I will be present during administration of the questionnaires, along with a team of trained researchers, in order to provide assistance to your child if he or she has any questions or concerns. Additionally, school guidance counselors will be available to students in the unlikely event that your child becomes emotionally distressed while completing the measures. Your child's privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, and the USF Institutional Review Board may inspect the records from this research project, but your child's individual responses will not be shared with school system personnel or anyone other than us and our research assistants. Your child's completed questionnaires will be assigned a code number to protect the confidentiality of his or her responses. Only I will have access to the locked file cabinet stored at USF that will contain: 1) all records linking code numbers to participants' names, and 2) all information gathered from school records. Please note that although your child's specific responses on the questionnaires will not be shared with school staff, if your child indicates that he or she intends to harm him or herself, I will contact district mental health counselors to ensure your child's safety.

- ✓ What I'll Do With Your Child's Responses: I plan to use the information from this study to inform educators and psychologists about students' motivation in school, as well as to construct a plan for improving students' motivation and success in school during adolescence. The results of this study may be published. However, the data obtained from your child will be combined with data from other people in the publication. The published results will not include your child's name or any other information that would in any way personally identify your child.

- ✓ Questions? If you have any questions about this research study, please contact Dr. Sarah Kiefer at (813) 974-0155. If you have questions about your child's rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at (813) 974-9343.

- ✓ Want Your Child to Participate? To permit your child to participate in this study, complete the attached consent form and have your child turn it in to his or her first period teacher.

Sincerely,

Sarah Kiefer, Ph.D.
Assistant Professor of Educational Psychology
Department of Psychological and Social Foundations

Appendix F: (Continued)

Consent for Child to Take Part in this Research Study

I freely give my permission to let my child take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

_____
Printed name of child

_____	_____	_____
Signature of parent of child taking part in the study	Printed name of parent	Date

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

_____	_____	_____
Signature of person obtaining consent	Printed name of person obtaining consent	Date

Appendix G: Administrator Handbook

Student Verbal Assent Script

Introduction

Hello my name is _____. I am a student/teacher at the University of South Florida. Right now, I'm trying to learn about students' motivation and success in school. I would like to ask you to help me by being in a study, but before I do, I want to explain what will happen if you decide to help me. *(While one person discusses informed consent, the other person can write the survey example on the board and pass out the teacher survey and student surveys.)*

Informed Consent

I will ask you to fill out a survey. Filling out this survey is voluntary. If at any point you want to stop or skip a question that is ok. For survey questions, there are no right or wrong answers; we just want your opinions. By being in the study, you will help me understand students' motivation and success in school.

- Your survey is confidential. This means that your parents, teacher, and classmates will not know what you have written on your survey. When I tell other people about the study, I will not use your name, and no one will be able to tell who I'm talking about.

- Your mom/dad says it's okay for you to be in the study. But if you don't want to be in the study, you don't have to be. What you decide won't make any difference with your grades or about how people think about you. No one will be upset if you don't want to be in the study. If you want to be in the study now but change your mind later, that's okay. You can stop at any time. If there is anything you don't understand you should tell me so I can explain it to you.

- You can ask me questions about the study. If you have a question later that you don't think of now, you can call me (*or Dr. Kiefer*) or ask your parents or teacher to call or email me (*or Dr. Kiefer*).

Do you have any questions for me about the survey?

Would you like to be in the study and fill out the survey?

NOTE TO RESEARCHER: The student should answer "Yes" or "No." Only a definite "Yes" may be taken as assent to participate. Look for students saying yes, nodding of heads, thumbs up.

Appendix H: Descriptive Statistics and item-Total Correlation for Ethnic Identity

Item	M	SD	Corrected Item- Total Correlation
1. I have a clear sense of my ethnic background.	**4.15**	**1.10**	**.74**
2. I have a strong attachment towards my ethnic group.	**3.83**	**1.27**	**.72**
3.I understand pretty well what my ethnic group membership means to me.	**3.97**	**1.18**	**.79**
4. I have a lot of pride in my ethnic group.	**4.22**	**1.04**	**.74**
5. I feel good about my cultural or ethnic background.	**4.32**	**.98**	**.74**

Cronbach alpha = .86.

Appendix I: Descriptive Statistics and item-Total Correlation for Academic Efficacy

Item	M	SD	Corrected Item- Total Correlation
1. I'm certain I can master the skills taught in school this year.	**4.10**	**.90**	**.73**
2. I can do even the hardest schoolwork if I try.	**3.99**	**1.03**	**.76**
3. Even if my schoolwork is hard, I can learn it.	**4.03**	**.94**	**.77**
4. I'm certain I can figure out even the most difficult schoolwork.	**3.73**	**1.08**	**.77**

Cronbach alpha = .89.

Appendix J: Descriptive Statistics and item-Total Correlation for Achievement Goals

Mastery Goals			
Item	**M**	**SD**	**Corrected Item- Total Correlation**
1. I like schoolwork that I'll learn from, even if I make a lot of mistakes.	**3.08**	**1.29**	**.73**
2. I like schoolwork best when it really makes me think.	**2.62**	**1.38**	**.68**
3. An important reason I do my schoolwork is because I want to improve my skills.	**3.71**	**1.32**	**.68**
4. An important reason I do my schoolwork is because I'm interested in it.	**2.82**	**1.36**	**.76**
5. An important reason I do my schoolwork is because I like to learn new things.	**3.20**	**1.30**	**.81**
Cronbach alpha = .89.			

Performance-Approach Goals			
Item	**M**	**SD**	**Corrected Item-Total Correlation**
1. I would feel really good if I were the only one who could answer the teacher's questions in my classes.	**2.69**	**1.56**	**.63**
2. I would feel successful if I did better than most of the other students in my classes.	**2.94**	**1.50**	**.68**
3. An important reason I do my schoolwork is because I'd like to show my teacher that I'm smarter than the other students in my class.	**2.15**	**1.36**	**.76**
4. Doing better than other students in my class is important to me.	**2.46**	**1.42**	**.72**
5. An important reason I do my schoolwork is because I want to do better than other students in my class.	**2.29**	**1.41**	**.79**
Cronbach alpha = .88.			

Appendix J: Continued

Performance-Avoidance Goals			
Item	**M**	**SD**	**Corrected Item- Total Correlation**
1. An important reason I do my schoolwork is so that I won't embarrass myself.	**1.97**	**1.32**	**.69**
2. An important reason I do my schoolwork is so the teacher doesn't think I know less than others.	**2.28**	**1.41**	**.62**
3. An important reason I do my schoolwork is so I don't look dumb.	**2.17**	**1.36**	**.67**
4. One reason I might not participate in class is to avoid looking dumb.	**1.74**	**1.18**	**.50**

Cronbach alpha = .80.

Appendix K: Descriptive Statistics and item-Total Correlation for School Belonging

Item	M	SD	Corrected Item- Total Correlation
1. I feel close to people at my school	**3.69**	**1.23**	**.53**
2. I am happy to be at my school	**3.53**	**1.31**	**.69**
3. My school is important to the way I think of myself as a person	**3.24**	**1.31**	**.67**
4. I feel a sense that I personally belong at my school	**3.37**	**1.36**	**.76**
5. I feel like a valued member of my school.	**3.38**	**1.34**	**.71**

Cronbach alpha = .86.

Appendix L: IRB Approval Letter

USF
UNIVERSITY OF SOUTH FLORIDA

DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-5618

March 26, 2010

Sarah Kiefer, PhD
Psychological and Social Foundations
EDU 105

RE: **Expedited Approval** for Continuing Review
IRB#: 107783 I
Title: *The Adolescent Motivation and Development Study*
Study Approval Period: March 26, 2010 to March 26, 2011

Dear Dr. Kiefer:

On March 26, 2010, Institutional Review Board (IRB) reviewed and **APPROVED** the above protocol **for the period indicated above.** It was the determination of the IRB that your study qualified for expedited review based on the federal expedited category number 7.

Study is no longer recruiting and remains open for data analysis.

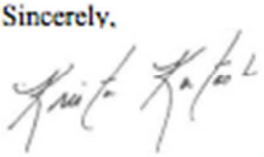
Please note, if applicable, **only use the IRB-Approved and stamped consent forms for participants to sign.** The enclosed informed consent/assent documents are valid during the period indicated by the official, IRB-Approval stamp located on page one of the form. Make copies from the enclosed original.

Please reference the above IRB protocol number in all correspondence regarding this protocol with the IRB or the Division of Research Integrity and Compliance. In addition, you can find the Institutional Review Board (IRB) Quick Reference Guide providing guidelines and resources to assist you in meeting your responsibilities in the conduction of human participant research on our website. Please read this guide carefully. It is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB.

Appendix L: (Continued)

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-2036.

Sincerely,



Krista Kutash, Ph.D., Chairperson
USF Institutional Review Board

Cc: V. B. Menzel, CCRP, USF IRB Professional Staff