

A MODEL OF HOPELESSNESS, BELONGINGNESS, ENGAGEMENT, AND ACADEMIC
ACHIEVEMENT

by

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ABSTRACT

A path model of hopelessness, belongingness, engagement, and academic achievement was created using variables from Mobile Youth Survey (MYS) data and school records. A sample of 490 African-American students, 49% female and 51% males, were used in data analysis. Sub-samples of 203 stable and 287 transitioning students were used in answering the third research question. Three research questions were addressed (1a) what is the relationship among hopelessness, belongingness, and engagement? (1b) Do hopelessness and belongingness in one year predict hopelessness and belongingness in the subsequent year? (2a) How do hopelessness, belongingness, and engagement affect achievement? (2b) How does achievement affect later hopelessness, belongingness, and achievement? (2c) Does Engagement mediate the relationship between hopelessness and achievement, and between belongingness and achievement? (3) How does the path model of hopelessness, belongingness, engagement, and achievement affect stable versus transitioning students? Analysis was conducted using Structural Equation Modeling (SEM) software. Results indicated that hopelessness negatively affected engagement, as measured by absences. Hopelessness and belongingness directly affected achievement, as measured by reading and math *SAT-10* scores, and absences partially mediated the effect of hopelessness on achievement. For the total sample, hopelessness in 2006 predicted hopelessness in 2007, and belongingness in 2006 predicted belongingness in 2007 and hopelessness in 2007. In testing the model with stable students and transitioning students, group differences existed with respect to the significant effect of absences on achievement for

transitioning students, the significant relationship between reading achievement and hopelessness for stable students, and the significant cross-effect from hopelessness in 2006 to belongingness in 2007 for transitioning students. A discussion of the results and implications for educational practice and future research follows the findings.

DEDICATION

This dissertation is dedicated to everyone who helped me during the process of planning, organizing, and writing. In particular, this is dedicated to my academic advisor and committee chair, committee members, professors, fellow students, family, and friends who helped to make this dissertation possible.

LIST OF ABBREVIATIONS AND SYMBOLS

a	Cronbach's index of internal consistency
β	Standardized path coefficient
<i>Box's M</i>	Test statistic of homogeneity of covariance matrices
<i>CFI</i>	Comparative fit index
df	Degrees of freedom
Δ	Delta: difference in values
η_p^2	Partial eta-squared
F	Fisher's F ratio: A ratio of two variances
M	Mean
N	Population size
n	Sample size
p	P-value: Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
r	Pearson product-moment correlation
<i>RMSEA</i>	Root mean squared error of approximation
<i>SD</i>	Standard deviation
t	Computed value of t test
<i>TLI</i>	Tucker Lewis Index or the non-normed fit index
<i>Wilk's Λ</i>	Wilk's Lambda: test statistic of group means equality
χ^2	Chi-square value

<	Less than
>	Greater than
=	Equal to

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CHAPTER 1

INTRODUCTION

Background

A goal of educators should be to create a community in which students experience belongingness (Osterman, 2000), and are supported by the social fabric of the school, in order to become psychologically invested and engaged in meaningful, productive work. As Dewey stated,

“A primary responsibility of educators is that they not only be aware of the general principle of the shaping of actual experience by environing conditions, but that they also recognize in the concrete what surroundings are conducive to having experiences that lead to growth. Above all, they should know how to utilize the surroundings, physical and social, that exist so as to extract from them all that they have to contribute to building up experiences that are worthwhile” (2007, p.15).

This study, using Mobile Youth Survey (MYS) data, examines the intersection of the school’s social fabric, students’ perceptions concerning their own inherent needs and developing cognitive states, students’ observable behaviors, and their academic achievement levels.

The MYS was initiated with several purposes in mind. Among these purposes was to “study how contextual factors (e.g., family, school, neighborhood) affect” the cause of adolescent risk behaviors “as well as the behaviors themselves” (Bolland, 2007, p.1). This study focused on the school factors that affect students and how they perform in an academic setting. Specifically, these factors include the extent to which adolescents feel that they belong in school

and are supported by their teachers, friends, and significant others, and how these feelings interact with their feelings of hopelessness and their levels of engagement in an academic setting. Belongingness is especially important for academic adjustment during early adolescence (Goodenow, 1993). Goodenow notes that the “influence of belonging on motivation might be heightened by several developmental changes occurring at this time”, including relationships with teachers and peers (1993). Furthermore, this study looked at how these aforementioned interactions ultimately affected the academic achievement levels of students. In examining these relationships, the hope was that there would be a clearer and more thorough understanding of the interactions of these variables, and how appropriate and useful interventions might be designed to alleviate the risk factors to which these individuals are exposed on a daily basis, in order to facilitate their academic achievement levels.

A large focus of this study was on student perceptions of belongingness and their corresponding engagement-related behaviors. This is in contrast to perceptions of alienation and withdrawn behaviors. Student withdrawal and lack of integration within the school community are problems experienced by many students (Newmann, 1981; Finn, 1989; Newmann, 1992), and this largely affects what Newmann stated as the “most immediate and persisting issue for students and teachers”, which is engagement (1992, p.2). Newmann also mentioned that it is “socially and psychologically valuable for people to work with and relate to one another as integrated, active participants, rather than in a withdrawn, passive manner” (1981, p.549). In contrast to withdrawn students, engaged students are “psychologically invested” in learning (Newmann, 1992).

This study also looked at hopelessness as a key variable, which impacts engagement and achievement levels. Bolland, McCallum, Lian, Bailey, and Rowan argued that hopelessness is

not inevitable, even within inner-city youth feeling uncertain about their future (2001). They also argued that hopelessness is not structural in nature, meaning that interventions could prove to be effective in changing hopelessness levels (Bolland et al, 2001; Bolland, Lian, & Formichella, 2005). This could be done through interventions targeting the social factors that play a role in developing hope in youth, rather than having to change conditions of economic disparity (2005). This last point is important since the chief goal of this study is to understand the cognitive, social, and affective factors, which produce motivation within students, thereby creating invaluable opportunities for feasible intervention strategies that will promote engaged populations of students, capable of achieving.

Finally, this study examined differences in how these factors affect stable students and transitioning students. Stable students were students who did not move from one school to another school within the time of the study. Transitioning students were students who did move one or more times within the time frame of this study.

Statement of the Problem

Much of the research literature supports the notion that hopelessness and belongingness have clear connections with health and academic outcomes. Among the academic outcomes, which are negatively associated with hopelessness and positively associated with belongingness is academic engagement. So, there are clear connections between the variables in this current study; however, there is little research concerning the interactions of all of these variables and their implications for academic achievement. The following section gives a brief overview of the literature, and in doing so describes the areas in which this research is lacking.

Among patients with depression, hopelessness is related to suicidal thoughts (Beck, Brown, & Steer, 1989; Marciano & Kazdin, 1994; Daniel & Goldston, 2012). Hopelessness is

also related to low self-esteem (Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983; Kazdin, Rodgers, & Colbus, 1986). Academically, hopelessness negatively affects academic performance (Au, Watkins, Hattie, and Alexander, 2009; Buric & Soric, 2012). On the other hand, hope is related to increased academic performance, including academic achievement, as defined by higher grades, test scores, and graduation rates (Snyder et al., 1991; Snyder et al., 2002; Alexander & Onwuegbuzie 2007; Lopez, Rose, Robinson, Marques, & Pais-Ribeiro, 2009; Day, Hanson, Maltby, Proctor & Wood, 2010). It is also positively related to academic engagement (Van Ryzin, Gravely, Roseth, 2009; Van Ryzin, 2011).

Regarding belongingness and health outcomes, it acts as a protective mechanism against suicidal thoughts, violence, and substance abuse (Resnick et al., 1997; Daniel & Goldston, 2012). A lack of belongingness is related to lower self-regulation, reduction in prosocial behavior, lower intelligent thought, and an increase in aggressive behavior (Baumeister, DeWall, Ciarocco, and Twenge, 2005; Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007; Twenge, Baumeister, Tice, & Stucke, 2001). A lack of belongingness also has important implications for behavior outside and inside school, since it is related to an increase in delinquent behaviors (Hirschi, 1969; Battistich and Hom, 1997; Burnett Walz, 1994; McNeely & Falci 2004; Finn & Frone, 2004).

Regarding academic outcomes, belongingness is related to positive academic adjustment, engagement, self-efficacy, and achievement as measured by grades and GPA, and graduation rates (Anderman, 2002; Hill & Werner, 2006; Pittman & Richmond, 2007; Van Ryzin, 2009; Goodenow & Grady, 1993; Furrer & Skinner, 2003; LeCroy & Krysik, 2008; Carolan & Chesky, 2012; Nasir, Jones, & McLaughlin, 2011; Anderman 2002; Anderman, 2003; Johnson, Crosnoe, & Elder, 2001).

Some of the literature has shown how perceptions of belongingness are related to higher levels of hope or an absence of hopelessness in students (Pharrus, Resnick, & Blum, 1997; Bolland, Lian, & Formichella, 2005). Additionally, belongingness helps to promote the growth of hope and fosters academic engagement (Van Ryzin, Gravely, & Roseth, 2009; Van Ryzin, 2011).

Considering the aforementioned research, there is little existing research regarding the interactions of these variables together. Of the existing research focusing on these variables, Van Ryzin (2011) studied students' perceptions of belongingness, hope, and engagement, and showed how the school environment shapes perceptions of belongingness, thereby promoting the growth of engagement and hope over time. Van Ryzin, Gravely, and Roseth (2009) also showed how engagement acts as a mediator between perceptions of belongingness and hope. This has helped to explain some of the interactions between the aforementioned variables, although this research focused on hope, instead of hopelessness. Studying hopelessness is not necessarily the same thing as studying the opposite of hope.

Furthermore, significant differences exist with regard to the studied populations. Van Ryzin studied mainly middle-class, rural populations of students, majorities of which were Caucasian. The target population of the current study was chiefly urban, low SES, majorities of which were African-American. This is a key difference in defining the problem proposed within this study.

Finally, regarding measurement issues, Van Ryzin, Gravely, and Roseth (2009) and Van Ryzin (2011) used a subscale of the Classroom Life Instrument (Johnson, Johnson, Buckman, & Richards, 1985) to assess perceptions of belongingness. These subscales assessed perceived teacher and peer support in the classroom. The current study used a subscale of the

Psychological Sense of School Membership survey (PSSM) (Goodenow, 1993). The PSSM assesses perceived belongingness through teacher and peer support questions, but also assesses how much students perceive that they are accepted and valued members of the school. Therefore, this study used a scale that more thoroughly captures students' feelings of belongingness as defined by this study.

Purpose of the Study

This study looked at hopelessness, belongingness, engagement, and achievement and examined the relationships shared by these variables in order to understand their systemic interactions. It also examined the relationship of this system of variables with academic achievement. Specifically, this study focused on how belongingness provides the necessary social context in which students' levels of engagement can thrive, and focused on how hopelessness affects students' levels of engagement. In doing so, its intended purpose was to support the idea of belongingness as a protective factor against hopelessness and academic behavior risk factors. Furthermore, it was intended to support the notion that students who belong are less hopeful and more engaged students. This study also examined the implications of these relationships for academic achievement. Finally, the role of these interactions in supporting stable students' and transitioning students' engagement and achievement levels was a main point of interest.

Research Questions

Considering the scope of the research literature and the focus of the purpose, this study is proposing the following research questions:

Research Question 1a: What is the relationship among hopelessness, belongingness, and engagement?

Research Question 1b: Do hopelessness and belongingness in one year predict hopelessness and belongingness in the subsequent year?

Research Question 2a: How do hopelessness, belongingness, and engagement affect achievement?

Research Question 2b: How does achievement affect later hopelessness, belongingness, and achievement?

Research Question 2c: Does Engagement mediate the relationship between hopelessness and achievement, and belongingness and achievement?

Research Question 3: How does the path model of hopelessness, belongingness, engagement, and achievement affect stable versus transitioning students?

Overview of Methodology

This study utilized Mobile Youth Survey (MYS) data, as a secondary data source, in order to examine the relationships among hopelessness, belongingness, engagement, and academic achievement. The MYS is a longitudinal study involving annual data collection within impoverished neighborhoods in Mobile, Alabama. A majority of the participants are African-American (Bolland, 2007).

Participants. Initially, participants were actively and passively recruited, through house calls and flyers, from 13 neighborhoods to participate in the MYS. In subsequent years, new cohorts were actively and passively recruited, and previous participants were actively recruited to participate again. Participants were initially paid \$10 after completion of the survey, increasing to \$15 in 2005 (2007).

Study sample. The study was comprised of two consecutive waves of data from the MYS and school attendance and achievement records. The participants ($N = 490$) ranged in age

from 8 – 14 years during the administration of the survey during the first wave of collection. This sample includes 49% females and 51% males, with 100% being African American. In examining the third research question, samples of 203 stable students and 287 transitioning students were used to test stability differences in the model.

Instrumentation. The MYS was initially composed of 294 questions “about risk behaviors and attitudes associated with violence, substance use, and sex; family structure and function; feelings about self, neighborhood, and peers; and experiences in school” (2007, p.6). In 2005, the number of questions increased to incorporate other measures, including connectedness to school and friends.

Six items, adapted from the Hopelessness Scale for Children (Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983), were used to assess hopelessness. Eight items, taken from the Psychological Sense of School Membership survey (Goodenow, 1993), were used to assess belongingness. Attendance records and number of hours spent doing homework were used to assess academic engagement. Reading and math subtest percentile rank scores from the tenth edition of the Stanford Achievement Test (SAT-10) were used to assess academic achievement.

Analysis. This study used structural equation modeling because it allowed for the creation of models to illustrate the relationships among the constructs of hopelessness, belongingness, engagement, and achievement. Initial descriptive analysis was run using PASW Statistics 18 (SPSS Inc., 2009) to find means, standard deviations, and Pearson correlation coefficients. LISREL 8.8 for Windows (Joreskog & Sorbum, 2006), structural equation modeling software was used to test the conformity of the proposed models to the MYS data and school records. Confirmatory factor analysis was conducted to show that the measured variables indicate the constructs of hopelessness and belongingness. This established the validity of these

constructs. The hopelessness scale and positively worded belongingness scale were used in path analysis. Modification was necessary during this process, in order to achieve a better fit, within the confines of the underlying theory.

Significance

This study was important because it examined how hopelessness, belongingness, and engagement form a system that affects the achievement of an African-American youth population, living in impoverished neighborhoods. By looking at belongingness, it might allow us to understand the social factors that affect hopelessness and academic engagement. Furthermore, it might affirm the malleability of hopelessness, even in the contexts that have established uncertainty in the lives of these students. By doing so, it could shed some light on key factors affecting academic achievement.

Also, this study might allow us to think differently about how school systems look at engagement and academic achievement, by suggesting alternative forms of motivation for our students. This might be facilitated through interventions and professional development designed around a set of principles, which this investigation might play a part in developing. Lastly, by focusing on differences between stable students and transitioning students, it might provide insight regarding the easing of the critical adjustment period for students in a state of transition.

Role of the Researcher and Basic Assumptions

The researcher of this particular study gathered, managed, and analyzed a secondary subset of data, taken from a primary data set (MYS). The researcher was not the primary researcher in the original data collection process. Therefore, he was not involved in the planning or collecting process of the MYS. The researcher followed several basic assumptions:

1. MYS participants responded to survey items truthfully and to the best of their ability.
2. MYS participants committed to the study under their own volition and free from duress.
3. Testing procedures were standardized to reduce measurement error.

Definitions of Key Terminology

Academic Achievement is defined as successful completion of traditional tests of knowledge.

Belongingness is defined as a sense that one is an accepted, included, and valued member of the classroom and school, and that one's individuality and autonomy is respected. Individuals experiencing belongingness believe that teachers and peers are encouraging members of the classroom community (Goodenow, 1993).

Engagement is defined as carrying out the actions, necessary to complete the academic tasks assigned to students.

Efficacy Expectancy is the belief about one's competency in a certain area or in completion of a task.

MYS is the Mobile Youth Survey

Hopelessness is defined as negative expectations toward the future (Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983).

Hope is defined as having positive expectations toward the future. Additionally, it involves having positive expectations, anchored by future goals, and possessing perceived will and perceived ways for reaching these goals, even when faced with obstacles (Snyder et al., 1991).

Observed Variable is defined as a variable that is directly observed.

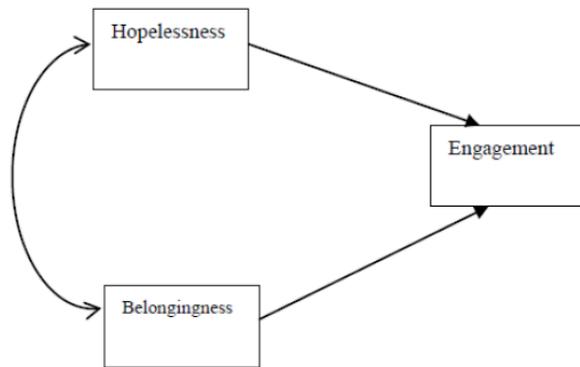
Path Analysis is defined as a form of analysis used to test a theoretical model of observed variables against a set of data.

Structural Equation Modeling (SEM) is a statistical technique for testing causal relations between multiple latent variables.

CHAPTER 2

LITERATURE REVIEW

The following literature review is comprised of four major constructs: Hopelessness, Belongingness, Engagement, and Achievement. Many studies have focused on the relationship between hopelessness and academic achievement, belongingness and academic achievement, and engagement and academic achievement. Several studies have focused on the relationship between one and more of these variables, but little literature exists concerning the relationship of all of these variables with one another, and how they interact as a system to affect stable and transitioning students. This literature review first focuses on research pertaining to the critical adjustment period that accompanies transitioning to a new school. Then this review defines the main concepts found within this study, and discusses the research literature pertaining to these concepts and their implications, outside and within the school context. There is not a separate section that covers achievement, since the achievement literature is discussed within the other main sections. Therefore, the main sections in this review help to form the basis of the initial hypothesized model of hopelessness, belongingness, and engagement (See Figure 2.1), to which achievement will be added in subsequent research questions. Next, this review will cover research concerning age, gender, ethnicity/racial differences, and developmental trends regarding the variables. Finally, this review will closely examine and discuss the relationships that exist among these variables, and describe the system formed from interactions of these constructs.



Model 2a

Figure 2.1. Hypothesized Model of Hopelessness, Belongingness, and Engagement.

Research on Transition Periods in School

The models proposed in this study are examined in the contexts of stable school environments and unstable (transitioning) school environments. This study defines an unstable student as one who is transitioning to a new school. This instability can be due to several reasons, the most common being graduating to a new school or moving to a different neighborhood. Another reason for moving to a new school could result from falsely reporting a new address on a school enrollment form. Regardless of the reason, a student moving to a new school is considered to be transitioning for the purposes of this study.

The transition period may pose psychological challenges for students and negatively affect their academic performance (Newman, Lohman, Newman, Myers, & Smith, 2000). During transition periods, high performing students have reported greater challenges than have poorly performing students (2000). Additionally, students have included social support and belongingness as reasons for the easing of these transition periods (2000). Other negative outcomes resulting from maladjustment during a transition period in school include declining GPA (Blyth, Simmons, Carlton-Ford, 1983; Barone, 1991), self-esteem (Blyth, Simmons, Carlton-Ford, 1983), and attendance (Barone, 1991; Felner, Primavera, & Cauce, 1981).

With these negative outcomes in mind, buffers might exist that would lessen the negative effects that occur during this period of instability. For example, belongingness and social support factors can help with psychological adjustment of students during the transition to middle school (Newman, Lohman, Newman, Myers, & Smith, 2000; Anderman, 1999). The notion of easing the psychological burden during transition periods in school is important, since this study is looking at how the variables of belongingness and hopelessness might interact with student engagement during periods of stability vs. periods of transition.

Hopelessness and Hope

Farran, Herth, and Popovich (1995) discussed the relationship between hopelessness and hope. They said that to learn about and understand hope, one must also learn about and understand hopelessness, and the other way around. They also added that hopelessness, as well as hope, have affective, cognitive, and behavioral components (1995). It is necessary to discuss the different definitions of hopelessness to provide an understanding of its various meanings. It is also necessary to discuss hope, in order to have a more thorough understanding of the realm of the hopelessness and hope literature. Additionally, hopelessness and hope are not necessarily on the same continuum, and the absence of one construct does not necessarily indicate the presence of the other construct (Ip, 2007). It is also possible for hope and hopelessness to co-exist in certain individuals as highlighted in a study of the dying process (Sullivan, 2003). Additionally, while hope is basically a cognitive process with associated affective states, hopelessness involves mainly a negative affective state (Snyder, Wroblewski, Parenteau, & Berg, 2004). Furthermore, hopelessness within Snyder's framework of hope is simply a byproduct of hope, indicating a deficiency in any three principle components of hope theory. Considering these conceptual differences, a discussion of positive hope and its relationship with the different variables concerned in this study will accompany a discussion of hopelessness.

Hopelessness definitions. Hopelessness, or negative expectations toward the future, developed out of clinical psychology depression literature (Kazdin, Rodgers, & Colbus, 1986; Au, Watkins, Hattie, & Alexander, 2009). It is different from helplessness in that there is more of a focus on negative outcomes rather than just a focus on the inability to change a situation (2009). Beck, Weissman, Lester, and Trexler (1974) described hopelessness as negative expectancies concerning one's future life. He also argued that hopelessness is a "core characteristic of depression" and is an important link between depression and suicide, and developed a hopelessness scale that gauges a person's negative expectancies about the future. Daniel and Goldston (2012) support the assertion that hopelessness is significantly related to depression and suicide. Abramson, Matalsky, and Alloy (1989) developed a hopelessness theory of depression and proposed that those who explain negative experiences in stable terms develop hopelessness. Engel (1968) described individuals that give up as being hopeless and helpless. In this definition, being helpless is attributed to lack of help from other people, while being hopeless is attributed to failure of the self (1968).

Hope definitions. Averill, Catlin, and Chon (1990) state three important historical points regarding hope. Hope has been an important idea in western culture, hope is often considered a basic emotion, and the concept of hope is culturally relative (1990). Where Kazdin, French, Unis, Esveldt-Dawson, and Sherick (1983) focused on negative expectancies; hope theory focuses on positive expectancies (Snyder et al., 1991). According to Snyder et al., hope theory is a set of positive expectancies in goal pursuit, determined by the cognitive set of agency thinking and pathways thinking (1991). Agency thinking is the perception that one has the will and the drive to provide sustenance in reaching their goals. It is an individual's cognitive determination to reach his or her goals. Engaging in Agency thinking alone, however, is not

sufficient to have hope (1991). Individuals also need to engage in pathways thinking. Pathways type thinking involves the perception that one can come up with ways to reach one's goals. Hopeful individuals perceive that they are capable of formulating multiple ways to attain their goals, and are not discouraged if something gets in their way. This means that when students are faced with problems, they see these as challenges rather than obstacles, and are able to think of ways around these problems (Lopez, Rose, Robinson, Marques, & Pais-Ribeiro, 2009).

Lopez, Snyder, and Pedrotti note that there is also an emotional component to hope theory (2003). When faced with obstacles during goal pursuit, people perceive these barriers as stressful events. Positive emotions are the result of successful goal pursuit, while negative emotions result from a lack goal attainment due to barriers or other reasons (2003). Lastly, Obayuwana and Carter (1982) presented a less seminal definition of hope, which is defined as “the state of mind resulting from the positive outcome of ego strength, religion, perceived human family support, education, and economic assets—a concept we choose to call the ‘hope pentagram’” (p.232). This last definition is important to this study, since it affirms the idea that hope is a social process, and that support from others, i.e. a specific aspect of belongingness, might contribute to the development of hope.

Constructs similar to hope. Hope is different than self-efficacy and optimism with respect to competence and control beliefs (Robinson & Snipes, 2009). Hope is different from self-efficacy theory (Bandura, 1977), in that self-efficacy theory mainly focuses on efficacy expectations as the chief reason for certain behaviors, while hope theory embraces both efficacy expectations and outcome expectations as explanation for goal-directed behavior. In this sense, efficacy expectations are defined as those perceptions about one's competence with regard to a

specific task. Therefore, behavior results because of one's perceptions about their ability to carry out the task.

On the other hand, hope includes outcome expectations in explaining behavior. In this sense, outcome expectations are defined as those perceptions about the resulting outcome of a certain behavior. Therefore, behavior results because of one's perceptions about the likelihood that an outcome will be favorable. Hope theory suggests that individuals perceive varying levels of senses of control over these outcomes; hence varying levels of hope exist due to the level of perceived control in combination with the level of perceived competence. Additionally, hope theory focuses on the perceptions that certain outcomes will happen, while self-efficacy focuses on the perceptions that one has the ability to make an outcome happen (Robinson & Snipes, 2009). Hope theory is more definite with respect to the perception that an outcome will transpire.

Optimism involves one's perception that good things will happen (Scheier & Carver, 1985). Also, optimists experience optimistic perceptions in a general sense, rather than in any particular behavioral domain (Scheier & Carver, 1985). In this sense, outcome expectancy involves the perception that a certain outcome will happen, and this perception is significant in producing the associated behavior. However, where optimism relies mainly on outcome expectancies to explain why behavior happens, hope relies on reciprocal interaction between outcome expectations and efficacy beliefs (Snyder et al., 1991; Scheier & Carver, 1985). Hopeful people believe that positive things will happen to them in the future, and think this way because they perceive themselves as having the will, or competence and agency, as well as the ways, or control and means, of reaching their future goals.

Another explanation for these differences is that optimism reflects the belief that failure and defeat are due to other factors than one's self, and that one still holds a positive outlook when faced with these obstacles (Seligman, 2011). Hope, on the other hand, reflects the same type of positive outlook, but with the added agency, or efficacy expectations. Magaletta and Oliver's research supports the notion that hope is similar, but different to optimism and self-efficacy (1999). Additionally, even though these constructs reflect different orientations with respect to competence and control beliefs, Robinson and Snipes point out that they form an interactive system in explaining motivation (2009).

Summary of hopelessness and hope definitions. In summary, both hopelessness and hope involve future expectations and are cognitive, social, and emotional in nature. Hopelessness is comprised of negative expectancies toward the future and is a chief feature of depression. People experiencing depression do not expect good things to happen to them. Hope is comprised of positive expectations toward the future, and involves goal-directed behavior facilitated through agency and pathways cognitive functioning. People experiencing hope are able to work towards their goals by having the drive to follow paths, for which one plans, in order to overcome obstacles that arise during this goal pursuit.

This study defines hopelessness as negative expectations toward the future. Individuals experiencing hopelessness see negative events in their future and are likely to care very little about things that factor into their future, since they do not expect good things to happen. When faced with obstacles, individuals experiencing hopelessness are not able to see ways of overcoming these roadblocks. Individuals experiencing hope see positive events in their future and are likely to care about things affecting their future, since they expect good things to happen

to them. Individuals experiencing hope see obstacles as challenges, and are able to see ways around these roadblocks.

Hopelessness and hope research. This section includes a discussion of the development of hopelessness and hope and research pertaining to implications for different outcomes related to health and school.

Development of Hopelessness and Hope. Although there is not much research, which pinpoints the exact causes of hopelessness, it was suggested that “children who succumb to the challenging or threatening circumstances they face” experience hopelessness (Bolland, 2003, p.146). Bolland also suggested that hopelessness is a developmental construct since it was negatively related to age (2005). These “threatening circumstances” they face might include elements of violence and poverty (Bolland, 2003; 2005). Additionally, the manner in which one appraises negative life events may be responsible for the development of hopelessness (Abramson, Metalsky, & Allow, 1978). Other researchers argue that hopelessness develops out of poverty and other related structural factors (Duncan & Brooks-Gunn, 2000).

Chioqueta and Stiles (2007) examined the effect of psychological buffers, including life-satisfaction, self-esteem, perception of family cohesion, and perception of social support, on the development of hopelessness and found that life-satisfaction and self-esteem predict lower levels of hopelessness. Bolland (2005) also examined the effect of psychological buffers on the development of hopelessness and found that previous levels of hopelessness in addition to “changes in mother figure, witnessing violence, traumatic stress, and worry, led to increases in hopelessness over time (p.302).

With respect to interventions, designed to alleviate hopelessness in youth, Bolland (2003) offers some useful insight. He suggests that “cognitive development and therapeutic

interventions” might prove useful if hopelessness is a product of cognitive dispositions regarding one’s challenges in life (p.156). However, if hopelessness is a product of the structure of the environment, then it would require profound structural changes in order to alleviate or decrease hopelessness in individuals.

The development of hope doesn’t necessarily result from the development of less hopelessness. Also, little research exists regarding the development of hope. Researchers suggest that the challenges one faces during youth may lead to a decline in hope (Heaven & Ciarrochi, 2008), and this decline is more prominent in girls and those individuals with low levels of hope. They also argue that the contradictory messages that girls receive regarding their roles in life might be responsible for a greater decline in hope during early adolescent for girls than for boys (2008). In the context of HIV counseling therapy, peer counselors who shared stories of overcoming challenges were able to promote hope within their patients (Harris & Larsen, 2007). Also, patients who had perceived empowerment over their lives had more hope than those individuals who did not have this same sense of empowerment (2007). Additionally, research has shown that secure and supportive relationships help to foster greater hope in individuals (Snyder, 1994; Shorey, Snyder, Xiangdong, Yang, & Lewin, 2003).

Clinical health outcomes. Hopelessness is positively related to depression, and negatively related to self-esteem and social behavior (Kazdin, Rodgers, & Colbus, 1986). It is related to an increased risk in suicidal thought and behavior (Daniel & Goldston, 2012) and “mediates the relation between suicidal ideation and depression” (Beck, Brown, & Steer, 1989, p.309). In administering the Hopelessness Scale for Children, Kazdin, French, Unis, Esveldt-Dawson, and Sherick found that children, ages 8-13 years, who had high levels of hopelessness were more severely depressed and had lower self-esteem than those children scoring lower on

the scale (1983). In a study of inpatient children, ages 6-13, Marciano and Kazdin found that suicidal children had higher levels of hopelessness than nonsuicidal children (1994). Engel (1968) argued that people experiencing hopelessness do not have the ability to cope with life's difficulties and come to a realization that their failures are their own fault; therefore they are more likely to give up than hopeful individuals. Hopelessness also has important implications for physical health, as Schmale and Iker (1971) found that hopelessness significantly predicted rates of cervical cancer, in a study of women who were biologically predisposed to the disease.

Academic Outcomes. With regard to academic outcomes, Au, Watkins, Hattie, and Alexander (2009) stressed the importance of the effect of hopelessness in academic settings, and developed a model of hopelessness in relation to learning and achievement. Students who experience high levels of hopelessness during testing situations put forth little academic effort, which then negatively affects their academic performance (Buric & Soric, 2012). Additionally, hopelessness mediates the relationship between student utilized volitional strategies, such as stress reduction strategies and self-encouragement, and their academic achievement (2012). With regard to engagement in the classroom, hopelessness is mediated by classroom goal structures (Sideridis, 2005). Specifically, mastery goal orientations help to reduce the effects of hopelessness on academic outcomes in the classroom (2005).

Hopeful students are able to set effective goals, develop multiple ways to reach those goals, and have the motivation to reach the goals (Lopez, Rose, Robinson, Marques, & Pais-Ribeiro, 2009). Furthermore, hopeful students are enabled to take control of their own learning and to flourish academically. Hopeful thinking uniquely predicts academic achievement, as measured by grades and GPA, when controlling for intelligence (Snyder et al., 1991; Day, Hanson, Maltby, Proctor & Wood, 2010). Hope is a coping mechanism for academic anxiety

(Alexander & Onwuegbuzie 2007), and a predictor of graduation likelihood (Snyder et al., 2002). Farran, Herth, & Popovich argued that hopelessness impairs thinking and that individuals experiencing hopelessness have difficulty concretizing their plans and realizing alternative methods of resolving issues (1995). Concerning bullying and those factors that undermine peer and school support, Siyahhan, Aricak, and Cayirdag-Acar (2012) found higher levels of hopelessness among students that were bullied than those who were not bullied and higher levels of hopelessness for students that did not talk about their victimization to teachers and parents.

Research using structural equation modeling suggests that hope mediates the relationship between child-reported parent-child connectedness and adolescents' prosocial behavior, school engagement, and internalizing behavior (Padilla-Walker, Hardy, & Christensen, 2011). There is not much research, however, on adolescent predictors of hope (2011). Also, using structural equation modeling, researchers found that hope partially mediates the relationship between attachment and mental health (Shorey, Snyder, Yang, & Lewin, 2003). Hope is related to positive relationships between individuals, and these relationships, through hope, have a positive effect on mental health outcomes.

In a 3-year longitudinal study using the Trait Hope Scale (Snyder et al., 1991), researchers found that hope uniquely predicts objective academic achievement, as measured by student grades, controlling for intelligence, personality, and previous academic achievement (Day, Hanson, Maltby, Proctor & Wood, 2010). This highlights hope as a unique construct that is related to positive academic outcomes, even after controlling for intelligence. This supports the notion that students of all intellectual abilities are capable of achieving in school through an increase in hope.

Hope is also a coping strategy for academic anxiety (Alexander & Onwuegbuzie 2007). Students with high levels of hope are less likely to procrastinate on academic related behaviors due to the ability to cope with school-related anxiety, and the ability to overcome a fear of failure at school (2007). Procrastination and anxiety at school is a problem for many students, and raising the hope level of students is one way to address this problem. Additionally, hope predicts overall grade-point averages and likelihood of graduation (Snyder et al., 2002). This is critical for student success and an important step for students to take on the path of becoming flourishing individuals.

Hopelessness/hope, and belongingness. Several studies support the idea that hopelessness or hope is significantly related to belongingness. Pharris, Resnick, and Blum (1997) found that positive feelings about school and connectedness were related to an absence of hopelessness in females. Van Ryzin (2011) examined the relationship of relatedness, one component of self-determination, and its relationship with hope. Relatedness, within the self-determination literature, is interchangeable with belongingness. It is belongingness, according to Van Ryzin (2011), which forms the basis of the supportive relationship between the patient and therapist within the hope therapy context. Belongingness, in this sense, is the mechanism by which patients, or students, are given the necessary guidance and will in order to work around obstacles along the path of goal pursuit. He found that the school environment supported students' needs (i.e. belongingness), which then contributed to higher levels of hope over time (2011). In a similar study, Van Ryzin, Gravely, and Roseth (2009) found that if students needs (i.e. belongingness) are met, then they are more engaged, and this leads to higher hope.

Hopelessness/hope, and engagement. Van Ryzin (2011) also looked at engagement in examining hope and belongingness variables. He found that perceptions of autonomy, peer

support, and teacher support affect engagement, which then affects hope. Furthermore, Van Ryzin, Gravely, and Roseth stressed that engagement mediates the relationship between teacher support and hope (2009). Teacher support is not interchangeable with belongingness, but can be considered an integral part of belongingness, since support is necessary for individuals to feel that they are a part of the classroom.

Gender, Age, and Racial Differences of Hope and Hopelessness. This section is a discussion of the gender, age, and racial differences with regard to hope and hopelessness research.

Gender differences. In the examination of hope scores, it appears that there is no difference between men and women hope scale scores (Snyder et al, 1991; Snyder, 1995; Snyder et al, 1996; Snyder et al., 1997). In studying a population of African-American youth in low-income urban neighborhoods, males experienced more severe levels of hopelessness than females (Bolland, 2003). These higher levels of hopelessness may affect males more so than females (2003).

Age differences. With regard to hopeful thinking in children, “the foundation of agency- and pathways-thinking toward goals is set in the first 2 to 3 years” (Snyder et al., 1997). Hope should be stable once children reach adolescent ages (1997). In examining the continuity of depression and suicidal intent in children 8-13 years of age, Kazdin, French, Unis, Esveldt-Dawson, and Sherick (1983) looked at the relationship among hopelessness, depression, and suicidal intent. Their findings support the notion that hopelessness accounts for the suicidal thinking in depressed patients as much in children as it does in adults. Therefore, the relationship among these three variables holds true across a wide range of ages.

Race/Ethnicity differences. Concerning racial differences of hopeful thinking, it was suggested that, “persons of color may have lower hope” (Snyder, 1995). In studying this hypothesis, no statistically significant differences were found between African-American, Caucasian, and Hispanic hope scores, in validation of the Children’s Hope Scale (Snyder et al., 1997). In looking at hopelessness, Durant et al. (2006) studied the effects of hopelessness on a nearly lethal suicide attempt for African-Americans and Caucasians. Hopelessness was strongly related to attempts for each race, but was stronger for African-Americans. Anda et al. (1993) found that depression and hopelessness were more common among women and African-Americans than males and African-Americans. In studying a population with a majority of African-American adolescents, Bolland, Lian, and Formichella (2005) reported that perceptions of disruptive factors in one’s life resulted in increases in hopelessness, while perceptions of connectedness factors resulted in decreases in hopelessness.

Chang and Banks (2007) studied a sample of college students, consisting of European Americans, African Americans, Latinos, and Asian Americans in order to examine racial differences in hope scores. According to Chang and Banks (2007), “We know very little about hope across diverse racial/ethnic minority groups” (p.95), and most of the studies have used European Americans up to this point (2007). They proposed that hope doesn’t have to function differently across groups in order for levels of hope to be different. They found that hope levels were not significantly different between Asian Americans and European Americans. However, with respect to agency thinking and pathways thinking, they found that African Americans reported greater pathways thinking than European Americans and Latinos reported greater levels of both types of thinking than European Americans. They found that hope functioned in the same manner for all groups tested. That is, hopeful thinking had positive correlations with

problem solving and life satisfaction, and had negative correlations with impulsivity/carelessness style and negative affect (2007).

Synthesis of hopelessness and hope research. This section synthesizes the literature concerning hopelessness and hope, and presents the implications for this study. Concerning the most significant clinical health outcomes, much of the literature highlights the relationship between individuals experiencing hopelessness and depression. In studies of depressed individuals, significant correlations were found between suicidal thoughts and hopelessness. Those individuals experiencing hope, or lower levels of hopelessness were not experiencing the same high rates of depression or suicidal thoughts. This reveals an important point regarding hopelessness, or hope, and the mental well being of humans, in that hope might help people psychologically cope with troubles in their lives. Some literature also highlights the importance of hope in helping people deal with physical ailments such as cancer.

With respect to gender differences in hope scores, no significant difference was found between women and men. Regarding age differences in hope and hopelessness, children begin forming the basis for hopelessness/hope at an early age and by adolescence, become stable. Hopelessness/hope functions for children in similar ways as it does for adults. Finally, concerning racial/ethnic differences, some research did not find significant differences among different racial/ethnic groups of individuals, and hope was found to function similarly for all groups. However, some research found greater pathways thinking in African Americans and greater pathways and agency thinking in Latinos than in European Americans.

Concerning academic outcomes, hopeful individuals are more likely to be thriving in school than individuals experiencing hopelessness. The literature highlights important connections between high levels of hope and achievement, as measured by grades and GPA.

This finding held true, even when controlling for intelligence levels. Hopeful individuals are able to set goals and deal with academic anxiety more effectively than hopeless individuals. Also, hope partially mediates parent-child connectedness, prosocial behaviors, and engagement. This last point has important implications for this study, since hope, as defined by this study, is seen as a possible link between the relational factor of belongingness and the different types of positive behaviors that students exhibit at school. It is theorized that hope enables students to engage in the types of behaviors that enable them to thrive and succeed in school, and it is the relations with the central figures of the school context, which these students experience, that give them the needed psychological support in order to boost their levels of hope. Therefore, in this study, hope is one of the integral parts of the motivational system that allows students to flourish in school.

Belongingness

Belongingness, or a sense of belonging, is a construct that goes by several different names. While some of these terms are used interchangeably with belongingness within the literature, other terms are only closely related. Some of the associated names in the literature include attachment, social support, connectedness, and relatedness. The purpose of this section will be to define belongingness, as it exists within the literature, while comparing and distinguishing it from other similar and related terms.

Belongingness definitions. Belongingness is rooted in humanist psychology. Abraham Maslow (1954) argued that there is a fundamental human need to belong that can only be met once the more basic level physiological human needs have been met. Baumeister and Leary (1995), in evaluating this fundamental human need, proposed “human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and

significant interpersonal relationships” (p.497). They argued that these relationships must be positive and stable with a mutual concern for the welfare of those involved. Furthermore, this need to belong is innate and universal, and from an evolutionary perspective, has “both survival and reproductive benefits”, and deprivation in this need has negative physiological and psychological effects (1995). Kohut (1984) also proposed that belongingness is a fundamental need, required to avoid feelings of alienation (as cited by Lee & Robbins, 1995). Lee and Robbins (1995), using Kohut’s (1984) definition as a foundation, propose that belongingness is composed of affiliation, companionship, and connectedness; examples of this definition include, respectively, relationships with family members and other people to whom one is close, participation in group activities, and connections to a larger social context than just family.

Attachment definitions. Belongingness is sometimes discussed in terms of “attachment”, although Lee and Robbins (1995) are careful to distinguish between belongingness and attachment by pointing out that attachment is only concerned with the “direct bonds between infant and caregiver,” and that this relationship carries over into adolescence and adulthood (p.234).

Attachment theory (Bowlby, 1977; Ainsworth, 1978) states that humans have an innate tendency to form bonds with caregivers, as a function of survival, and these bonds serve as stress regulators. Ainsworth’s (1978), “The Strange Situation” experiments, in which varying degrees of attachment to caregivers was examined, highlighted this fundamental need of belonging and its effects on the types of future relationships that form between humans and their levels of physical and psychological health.

Booth, Farrell, & Varano (2008) talk about attachment in terms of social control theory. Social control theory (Hirschi, 1969; Booth, Farrell, & Varano, 2008) has been used to explain

adolescent delinquency and criminal behavior, partly as a function of the levels of attachment that individuals experience. This theory includes attachment, commitment, involvement, and belief (Hirschi, 1969) as the critical components of social bonds, and these social bonds explain the types of behaviors that individuals display. From this perspective, attachment is defined as the “closeness between children and their parents or other important individuals in their lives” (Booth, Farrell, & Verano, 2008, p.425). In this sense, attachment acts as a necessary enforcing agent in the adoption of prosocial norms and behaviors (2008).

Social support definitions. “Social support reflects an interaction between the self and the social environment” (Lee & Robbins, 1995, p.234). In this respect, it is like belongingness. However, Lee and Robbins (1995) argue that belongingness is different from perceived social support in that “social support focuses on the lack of an appropriate social environment, while belongingness focuses on deficiencies within the self” (p.234). So, the two constructs intersect at the interface of the external environment and the self. Perceived support from others feeds into perceptions of the self, and the self’s accompanying needs for affiliation and connections, thereby promoting the development of perceptions of belongingness. Furthermore, social support is considered a classroom context variable, whereas belongingness is an individual need variable (Fredricks, Blumenfeld, & Paris, 2004). It is the individual need variable that acts as a potential mediator between classroom context and outcomes, such as engagement (2004). Newcomb (1990) points out that social support is only one dimension of social connectedness, supporting the notion of connectedness as a multidimensional construct. A discussion of connectedness follows this section.

Connectedness definitions. Belongingness has also been discussed in terms of connectedness. Buchholz and Catton (1999) argued that humans have a fundamental need to be

connected with others. Resnick et al. (1997) defined connectedness as the relationships that individuals have with people inside and outside of their families and to other social institutions such as school. Townsend and McWhirter (2005) state that connectedness “might best be understood as relatedness” and that its definition has “shifted” according to different researchers, but it has different dimensions, and is related to different variables, including belongingness (p.193). They highlight a parsimonious definition offered by Hagerty, Lynch-Sauer, Patusky, Bouwsema, and Collier (1992, p.293), “who described the state of connectedness as occurring ‘when a person is actively involved with another person, object, group, or environment, and that involvement promotes a sense of comfort, well-being, and anxiety-reduction’” (p. 193). Lee and Robbins (1995) asserted that connectedness “begins to emerge during adolescence and extends into adulthood”. Feeling connected to others is necessary to avoid feelings of isolation, and “examples include the ability to identify with marriage partners, parenthood, and other social roles in life” (1995, p.233).

Self-Determination definitions. Another construct related to belongingness is self-determination theory. According to self-determination theory (Deci & Ryan, 1985), humans have three basic innate psychological needs – a need for competence, a need for relatedness, and a need for autonomy. Relatedness is the variable, which is most closely associated with belongingness. Connell (1990) described relatedness as a self-process involving caring for oneself, and feeling that significant others, such as parents, friends, and teachers are accepting and caring.

Belongingness and school. This section will examine the ways in which belongingness is defined in the context of school. It includes a discussion of the various related terms and how they are defined with respect to school belongingness.

School identification and membership definitions. School belonging is sometimes referred to as school connectedness, or school membership (Pittman & Richmond, 2007). School belonging, however, is more than just identifying with one's school, but involves fitting in and belonging with others (2007). This notion is aligned with Finn's model of school identification. Finn (1989) discussed belongingness in the context of identification with school. Those students who identify with school have an "internalized conception of belongingness" and "value success in school-relevant goals" (p.123). Finn recognized belongingness as having a sense that one is a part of the school environment and that school is important to them (1989). Finn proposed the participation-identification model, which explained why students drop out of school. According to this model, active participation in school activities, including extracurricular activities, is necessary in order to experience a sense of belonging. This sense of belonging, when experienced with a sense of value in school, enables students to identify with school, thereby creating an environment less suitable for disengaged students who drop out of school. Whelage's (1989) and Goodenow & Grady's (1993) definitions of belongingness are aligned with Finn's notion of belongingness. They discuss belongingness in terms of school membership, which involves students' perceptions that teachers are there for them and that they count in school. A more thorough definition states that belongingness involves the feelings that one is an accepted member of the school or classroom, is "valued, included, and encouraged by others (teachers and peers) in the academic classroom setting, and of feeling oneself to be an important part of the life and activity of the class" (Goodenow, 1993, p.25). Goodenow adds that it is more than just simple perceived warmth from the classroom teacher. "It also involves support and personal respect for autonomy and for the student as an individual" (1993, p.25). In this sense, Goodenow's definition of belongingness is well aligned with relatedness, in the

context of self-determination theory (1993). Voelkl (1996) also looked at school identification with school and its relationship to belonging. In measuring students' identification with school, Voelkl (1996) defines belongingness as "feelings that one is a significant member of the school community, is accepted and respected in school, has a sense of inclusion in school, and includes school as part of one's self-definition.

Sense of community definitions. In *The Hope Survey*, EdVisions (2010) defines belongingness as a measure of the depth and quality of the interpersonal relationships in an individual's life. Much like Voelkl's (1996) definition, these interpersonal relationships are sometimes referred to as a sense of community. Osterman (2000) refers to a sense of belongingness in school, or a sense of relatedness, as a sense of community. Within this community, students "feel that the group is important to them and that they are important to the group" (p.324). Students in this type of community, according to Osterman, also feel a sense of connection with one another, and feel that they are supported (2000). The notion of teacher and peer support as a conceptualization of belongingness is also supported by other research (Van Ryzin, Gravely, Roseth, 2009; Wentzel, 1997; 1998).

School attachment and connectedness definitions. Belongingness is often included in measurements of student attachment and connectedness (Libby, 2004; Moody & Bearman, 1998; Brown & Evans, 2002). McNeely and Falci (2004) define belongingness in terms of connectedness by defining school connectedness as a broad construct that includes safety, support, belonging, and engagement. Attachment has been defined as an affective construct that represents how much students "feel they are 'embedded' in and a part of their school communities" (Johnson, Crosnoe, & Elder, 2001; Spencer & Markstrom-Adams, 1990). It is not the same as valuing school. Johnson, Crosnoe, and Elder distinguish between these two ideas,

stating that valuing school indicates that students think that school is important and will benefit them in some way (2001). Belongingness encompasses “personal investment in meeting the expectations of others, caring what others think, and positive reciprocal teacher and student relations” (Libby, 2004). Also, it is an emotional feeling of affection toward and enjoyment of school (Hill & Werner, 2006). Additionally, Mouton, Hawkins, McPherson, and Copley (1996) consider school attachment to be a sense of belonging at school, a network of peers, and value for learning. Guttman and Midgley (2000) define school belonging in similar terms, being the extent to which students feel personally accepted, respected, included, and supported at school.

Summary of belongingness definitions. As outlined in the preceding section, belongingness, originating from an innate need to belong, has been defined and discussed using a host of terms, including attachment, connectedness, relatedness, social support, school identification, and school membership.

Outside of the school context, the innate need to belong creates within individuals a strong desire to form bonds through the lifespan. In terms of attachment, individuals experience a need to form strong bonds with caregivers from a very early age. A sense of connectedness is understood to be belongingness with regard to the relationships and connections individuals make with one another. Being connected enables individuals to avoid isolation. Social support is part of belongingness, but only offers part of the definition. There also has to be mutual support, respect for autonomy and a sense of acceptance and being valued on the part of the supported individual. Belongingness is essentially the same thing as relatedness as defined by self-determination theory. In this definition, relatedness, or belongingness involves mutual caring relationships between individuals.

Within the context of school, belongingness is defined in much the same way that it is outside of the school context, but elements of the classroom and school, such as teachers and peers, enter the equation. Belongingness is an integral construct within the idea of school identification. It takes both belongingness, which is fitting in and belonging with others in the school, and valuing the things which one does at school, in order to identify with school. The participation-identification model proposes that students must participate in school activities, or engage in school activities, and identify with school to succeed and reduce the risk of dropping out. The term, school community, has been used to define the type of environment that exists when students feel that they are a part of the classroom and school, and that they belong. Additionally, school connectedness and attachment have been used in various extents to describe belongingness in the school setting. Some researchers have defined connectedness as being a complex idea including things like belonging, engagement, and support. Attachment has been defined as encompassing how much students feel like they are a part of school, and how much they belong in school and value school activities.

For the purpose of this study, belongingness is defined as a sense that one is an accepted, included, and valued member of the classroom and school, and that one's individuality and autonomy is respected. Individuals experiencing belongingness believe that teachers and peers are encouraging members of the classroom community. This definition is most closely aligned with Goodenow's definition (1993). This definition is crucial in helping to describe the social, cognitive, and affective processes at work within the model being proposed by this study. It is crucial because perceptions that one is accepted and valued within the school community, and others are encouraging supportive members of this community, help to drive the process of hope and engagement which leads to greater achievement. This driving mechanism exists out of the

fulfillment of the individual's needs through social relationships and the interplay between the accompanying social, cognitive, and affective processes.

Belongingness research. This section highlights the research concerning the development of belongingness, and the implications of belongingness and its related terms, including connectedness, attachment, and social support.

Development of Belongingness. Belongingness is often considered an innate human need (Maslow, 1954; Baumeister & Leary, 1995). Individuals seek out social bonds and try to avoid losing those bonds that are already in place (1995). Therefore, people are naturally predisposed to form relationships that fulfill this inherent need to belong. This being the case, research has suggested that the types of social attachments people form can work to boost perceived belongingness. Osterman argued that the sense of belonging is contextual, and in an educational sense, this means that students' psychological needs have to be met in specific classrooms (2010). Furthermore, the classroom teacher has the biggest impact on students' psychological sense of belonging in the classroom (2010).

Clinical health outcomes. Connectedness serves as a protective mechanism for individuals, against numerous health risks, including suicidal thoughts, violence and substance abuse (Resnick et al, 1997; Daniel & Goldston, 2012). If one is not connected, then it can be said that they are in isolation. Jordan argued that isolation serves as a major source of suffering in individuals (2000). Isolation, in this sense, is distinguished from being alone. Being alone does not necessarily mean that a person is not connected to other people. Someone can be connected to other individuals and be alone. Isolation means that a person is cut off and disconnected from other individuals. And, this sense of isolation leads to a sense of

immobilization, self-blaming, and shame, which then leads to feelings of unworthiness and a loss of self-efficacy (2000).

In several series of experiments using undergraduate psychology students, researchers have found that anticipation of social exclusion later in life is related to several negative variables, including impairment of self-regulation (Baumeister, DeWall, Ciarocco, and Twenge, 2005), self-defeating behavior (Twenge, Catanese and Baumeister, 2002), a reduction in prosocial behavior (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007), an increase in aggressive behavior (Twenge, Baumeister, Tice, & Stucke, 2001), and a reduction in intelligent thought (2001).

Delinquent behavior. Belongingness has been a main focus of Hirschi's social control theory (1969), and has many implications for the field of criminology that can be expanded to include other related fields. Social control theory maintains that the types of social bonds in which people experience are largely responsible for our motivation to act. Hirschi (1969) argues that individuals who lack these social bonds, including attachment, are more likely to engage in delinquent acts.

Delinquent school behavior. Battistich and Hom (1997) also noted the importance of social bonds in deterring delinquent behavior, in studying the importance of supportive school communities. They found that school communities, defined by caring and supportive interpersonal relationships, were related to lower rates of student drug use and delinquency (1997). In similar findings, Burnett and Walz (1994) noted that a lack of sense of belonging is related to gang-related problems. McNeely & Falci (2004) explored the importance of school connectedness, by showing how these supportive and caring relationships promote academic motivation. They found that different dimensions of connectedness are positively related to

different health-risk behaviors. One dimension, perceiving fair treatment by teachers, results in less likelihood that students will engage in cigarette smoking, getting drunk, marijuana use, suicidal ideation or attempt, first sexual intercourse, and weapon-related violence. Another dimension, feeling that one is a part of school, social belonging, does not protect students from these behaviors to the same degree. This last finding is based largely on the difference between types of connectedness that students experience. Those who experience conventional connectedness, connected to those who promote prosocial behaviors, are less likely to engage in delinquent behaviors than those experiencing unconventional connectedness, connected to those who are not engaged in prosocial behaviors (2004). Regarding school identification and delinquent school behaviors, low achieving students are more likely to cheat if they do not identify with school (Finn & Frone, 2004). Students also perceive schools with smaller enrollment to be more supportive of them (Finn & Voelkl, 1993).

Academic outcomes. The basic need for belonging in one's school setting is "related to positive academic, psychological, and behavioral outcomes during adolescence" (Anderman, 2002). School attachment is "consistently associated with positive social, emotional, and academic adjustment" (Hill & Werner, 2006). Echoing this finding is Pittman's and Richmond's (2007) study which highlighted the relationship between school belonging and better academic adjustment. Belongingness is positively related to well being, engagement, and motivation (Van Ryzin, 2009; Goodenow & Grady, 1993; Furrer & Skinner, 2003). Belongingness has been found to positively impact academic outcomes, including self-efficacy and success expectations (Furrer & Skinner, 2003), and significantly predicts student achievement (LeCroy & Krysik, 2008; Carolan & Chesky, 2012), grades and graduation rates (Nasir, Jones, & McLaughlin, 2011), and GPA (Anderman 2002; Anderman, 2003). Those who feel that they belong in school

will engage in higher rates of participation, therefore achieving at higher rates. Higher achievement also affects rates of engagement (Johnson, Crosnoe, & Elder, 2001).

Several studies contributed to a better understanding of the relationship between school belonging and school goals. In a study of 660 middle school students, a sense of school belonging was related to a greater adoption of task goals, in which students are more focused on understanding the subject matter and working on academic tasks for the sake of learning. In studying the transition of 444 students from 5th grade to 6th grade, Anderman (1999) found that a sense of school belonging predicted positive affect in students following this transitional period. In a study of 167 6th grade students, Wentzel found that a positive report of teacher support was related to student interest and the pursuit of socially responsible goals at school (1998).

Belongingness and hopelessness/hope. This section highlights the key connections between belongingness and hopelessness or hope, which helps to frame the theory for this study. In a key study showing this connection, positive feelings about school and connectedness were related to an absence of hopelessness in females (Pharris, Resnick, & Blum, 1997). Since connectedness involves many of the same perceptions as belongingness, it is important to note that Bolland, Lian, and Formichella (2005) found that neighborhood connectedness (as measured by sense of community, warmth toward mother, and religiosity) was related to a decrease in hopelessness over time. Additionally, in discussing the relationship of belongingness to hopelessness, or hope, is Van Ryzin's work, which examined the ways in which self-determination theory is similar to hope theory:

“Hope therapy involves the development of a solid, supportive relationship between the patient and therapist (i.e., a feeling of belongingness), followed by a rigorous program of goal-setting that involves the patient selecting personally relevant goals and managing

their own goal attainment process (i.e., the provision of autonomy) while working with the therapist to locate the necessary resources and finding ways around any roadblocks” (2011, p.1570).

In the context of school, the “patient-therapist” relationship could very well be the “student-teacher” relationship, which helps to facilitate the hope process. As discussed earlier, perceptions of belongingness promoted the growth of hope over time (Van Ryzin, Gravely, & Roseth, 2009; Van Ryzin, 2011).

Belongingness and engagement. A sense of belonging is significantly related to student engagement in completing difficult academic work (Goodenow, 1992), and those with higher levels of belonging are more likely to be motivated and engaged in school than those students with low levels of belonging (Goodenow, 1993; Goodenow & Grady, 1993; Osterman, 2000; Fredricks, Blumenfeld, & Paris, 2004). One study showed that school belonging mediates the relationship between perceptions of positive teacher-student relationships and positive school affect, which highlights the importance of belongingness in promoting emotionally engaged students (Roeser, Midgely, & Urdan, 1996). Furrer & Skinner’s (2003) study also supports the idea that perceptions of relatedness have a significant impact on the emotional engagement of students. Connell and Wellborn’s (1991) work highlights the unique effect of perceived relatedness on academic engagement. They found that perceived relatedness predicted engagement in the classroom, but did not significantly predict achievement outcomes, as measured by grades and test scores (1991). This reiterates the importance of engagement in models of student achievement. The main point to highlight here, as indicated in the title by Klem and Connell (2004) is that “relationships matter”. This holds true in numerous studies, regardless of the “relationship” terminology that is used. A sense of relatedness (Connell &

Wellborn, 1991; Ryan, Stiller, & Lynch, 1994; Furrer & Skinner 2003), attachment (Johnson, Crosnoe, & Elder, 2001), positive sense of school membership (Newmann, 1992), and teacher support (Klem & Connell, 2004; 2009) are significantly correlated with higher academic engagement, performance, and achievement in school.

There is a connection between peer-related belongingness, or peer support, and levels of positive school adjustment (Van Ryzin, Gravely, & Roseth, 2009). More specifically, there is a reciprocal effect between engagement and teacher behavior, with the accompanying perceptions of autonomy and belongingness (Skinner & Belmont, 1993; Van Ryzin, Gravely, & Roseth, 2009), which stresses the importance of student-teacher relationships in promoting engagement in the classroom. That is, initial levels of engagement, displayed by students in the classroom, affects teacher-supportive behavior (and accompanying perceptions of belongingness), which affects later levels of student engagement. Students displaying low levels of engagement, or behavioral disengagement, will stimulate corresponding teacher behavior that will likely undermine the student's behavior. On the other hand students with positive classroom behavior will stimulate supportive teacher behavior that will further promote positive behaviors on the part of the students, and increase perceptions of student autonomy and belongingness.

Gender, Age, and Racial Differences in Belongingness. This section explores the gender, age, and racial differences with respect to belongingness literature.

Gender differences. Goodenow (1993) suggested that the “interpersonal dimensions” of school might affect the motivation and engagement of girls more than boys (p.26), and this effect is especially true in terms of relationship with teachers. Goodenow and Grady's (1993) research supports this notion. Generally speaking, women tend to view themselves as more connected (Townsend & McWhirter, 2005) than men, and report higher levels of identification with school

(Voelkl, 1997). This could be due to the idea that women value connectedness more than men do (Townsend & McWhirter, 2005; Lee, Keough, & Sexton, 2002; Lee & Robbins, 2000). Furthermore, women with high levels of connectedness were more willing to seek out relationships with other group members (Lee & Robbins, 2000). In Skinner and Furrer's (2003) study, girls experienced higher levels of relatedness than boys, but perceived relatedness with teachers was a more significant predictor of engagement for boys than for girls.

Age differences. Most of the belongingness research concerning academic outcomes has involved adolescent students. Some research suggests that belongingness levels are not significantly different for different grade levels (Goodenow, 1993). Other research suggests that levels of relatedness increase from fifth to sixth grade (Furrer & Skinner, 2003). Additionally, some research suggests that belongingness levels have less of an effect on motivational outcomes for older students (1993). This could be due to students becoming less "susceptible to social and situational influences" as they get older (1993, p.38). Other research shows that older students, in the sixth grade, experience higher correlations of relatedness and engagement levels (Furrer & Skinner, 2003).

Race/Ethnicity differences. With regard to racial differences in belongingness, Johnson, Crosnoe, and Elder (2001) sought to answer the question of differences in levels of attachment among Caucasian, African-American, and Hispanic-American students. They found greater levels of attachment to school for Hispanic-Americans than for African-Americans or Caucasians. They also discovered that greater levels of attachment exist for students who attend school with higher proportions of their own race (2001). Goodenow and Grady (1993) conducted a survey study in junior highs with high Hispanic and African-American populations. They found higher levels of perceived belonging are related to higher levels of motivation and

academic engagement, and that this effect is higher for Hispanics than for African-Americans. Voelkl's study (1997) indicated that levels of identification with school were higher for African-American students than for Caucasian students.

Synthesis of belongingness research. This section synthesizes the belongingness literature and presents the implications for this study. Concerning clinical health outcomes, individuals who belong, or experience connections with other people, are protected from being excluded or isolated. This is important for mental well being, including protection against suicidal thoughts. There are also important implications for behavior, including violent acts and risky health-related behavior. Being isolated, or the opposite of belonging, is related to lower self-regulation, aggressive behaviors, declining levels of prosocial behavior, self-defeating behavior, and lower intelligent thought. Much of the literature highlights a connection between a lack of belongingness and delinquent behaviors. The same can be said for behaviors that occur within the school setting, which now turns the discussion to the classroom and school environment.

Within the context of school, several studies have shown that teacher-student relationships, which facilitate a sense of belonging in students, curb risky and unhealthy student behaviors. These behaviors include use of tobacco, alcohol, and drugs, cheating and involvement in delinquent gangs. On the other hand, research shows that experiencing belongingness is significantly related to positive and prosocial school behaviors.

Some of the positive outcomes of belongingness include better academic adjustment, student well being, engagement in the classroom, motivation, self-efficacy, achievement (as measured by grades, GPA, and test scores), and graduation rates. Furthermore, a sense of

belongingness was shown to be related to a higher adoption rate of task goals and socially responsible goals at school.

Concerning gender differences, research suggests that females tend to perceive higher levels of belongingness than do males, but does not necessarily show a greater effect on academic outcomes for females than for males. Research concerning age differences varies, as some shows older students with higher levels of belongingness, while other research found no differences in levels. Furthermore, some research found greater belongingness effects on engagement for older students, while other research found greater effects for younger students. Regarding race, belongingness has a more significant impact on engagement for Hispanic students than it does for African-American students.

Some research suggests that belongingness is related to an absence of hopelessness in individuals. Other research suggests that belongingness might be indicative of the type of relationships that are necessary in order for individuals to experience hope, and that these relationships facilitate the hope process by providing individuals, or students, with the necessary support and mindset for succeeding in goal attainment. Additionally, research is very conclusive in highlighting the profound effect that belongingness has on student engagement levels.

Considering the aforementioned research, belongingness has important implications for this study. It is theorized that perceived belongingness, by which students consider themselves to be a valued member of school in which they are supported by teachers and classmates, contributes to positive academic engagement behavior. Furthermore, belongingness contributes to perceptions of autonomy and competence within students, which supports agency beliefs and bolsters hope levels. Essentially, perceptions of belongingness are part of a motivational system that drives student performance and achievement.

Engagement

Engagement definitions. Engagement in academic work, sometimes called student engagement or academic engagement, is “the student’s psychological investment in and effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote” (Newmann, 1992, p.12). Students do not necessarily have to be engaged in order to complete academic work, according to this definition. Students may very well accomplish academic tasks without being engaged, working toward mastery of the subject matter, and psychologically invested (1992). Johnson, Crosnoe, and Elder (2001) note that engagement “represents students’ participation”, and “examples include, coming to class, paying attention, avoiding disrupting behaviors, extracurricular activities” (2001, p.320).

Engagement is a multidimensional construct composed of behavioral, emotional, and cognitive components within the realm of academics (Reschly, Huebner, Appleton, & Antaramian, 2008; Fredricks, Blumenfeld, & Paris, 2004; Skinner & Belmont, 1993). It exists when a student experiences positive emotions towards academic endeavors, and is immersed in his or her schoolwork in both a cognitive and behavioral sense. Behavioral engagement refers to the participation and actions of students within a school context (Fredricks, Blumenfeld, & Paris, 2004). For example, this includes attending or not attending school, and doing or not doing schoolwork. Emotional Engagement refers to an individual’s emotional reactions within the context of school (2004). This involves both negative and positive reactions to school, peers, teachers, and schoolwork. Cognitive engagement refers to an individual’s willingness to engage in school related activities and “investment” in school (p. 60, 2004). For example, cognitive engagement might involve student’s use of learning strategies to study for tests, or staying mentally focused in class.

Skinner, Furrer, Marchand, and Kindermann (2008) contrast engagement from disaffection along the dimensions of behavior and emotion. Indicators of behavioral engagement include “action initiation, effort/exertion, attempts/persistence, intensity, attention/concentration, absorption and involvement”(p.766). These are counter to indicators of behavioral disaffection passivity, giving up, withdrawal, inattentive, distracted, mentally disengaged, and unprepared” (p.766). Emotional engagement indicators are “enthusiasm, interest, enjoyment, satisfaction, pride, vitality, and zest” (p.766). These terms contrast with the emotional disaffection terms of “boredom, disinterest, frustration/anger, sadness, worry, anxiety, shame, and self-blame” (p.766).

Summary of engagement definitions. Engagement is a multi-dimensional construct, comprised of behavioral, cognitive, and emotional facets. It involves being psychological invested in one’s academic work, during the course of learning or mastering the skills and knowledge which make up this work. Some researchers contrast engagement from disaffection in explaining student’s actions in school. Disaffection usually involves withdrawn behaviors on the passive end of the spectrum, and includes disrupting class on the active end of the spectrum.

For the purpose of this study, engagement is defined in a behavioral sense. Engagement is defined as carrying out the actions, necessary to complete the academic tasks assigned to students. This definition is important because it captures the type of behavior that is central to the success of students in school. This holds true for behaviors in both the positive sense, which contribute to success, as well as in a negative sense, which hinder success. Furthermore, it is a prerequisite, for many students, in determining their levels of academic achievement.

Engagement research. Engagement is a significant and central construct in the motivational system that drives student learning and success (Skinner, Kindermann, Connell, &

Wellborn, 2009). It acts as a significant mediator between various contextual factors within the school and classroom, the internal beliefs of the students, and learning and achievement outcomes (2009).

Academic outcomes. Student engagement is positively related to academic achievement, such as earning good grades and graduating (Finn, Pannozzo, & Voekl, 1995; Smerdon, 1999; Ogbu, 2003; Fedricks, Blumenfeld, & Paris, 2004; Bandura, Barbaranelli, Caprara, & Pastorelli, 2006). Also, students, who are positively engaged, are not academically disengaged. This has implications for classroom management, since disengagement, and especially active disengagement, creates problems for both teachers and students in the school setting. Actively disengaged students are likely to not be learning at their fullest potential, and are probably disrupting the learning environment for those students who are engaged. Engagement is also an important component of resilience in school, and is largely responsible for this resilience, even after controlling for other psychological variables, such as self-esteem (Finn & Rock, 1997).

In Finn's (1989) participation-identification model, participation, or engaging in school activities, which results in successful outcomes, is likely to feed into positive emotions and beliefs about school, which then feeds back into positive engagement behaviors. This highlights the powerful effect that engagement has in helping students identify with school. In this model, engagement has both behavioral and emotional components, with the participation reflecting behaviors, and identification reflecting the emotional component. Voekl's work supports this theory of engagement feeding into identification with school (1997). Skinner & Belmont (1993) highlighted the reciprocal effects of engagement and teacher behavior. In studying initial levels of engagement, they found that teachers would respond accordingly, and in a reinforcing manner to whether students showed positive engagement or disaffection. This teacher behavior, in turn,

affected the subsequent levels of engagement in students, creating a positive or negative cycle. Their work supports the notion that teacher behavior has great implications for student engagement, and that student engagement has the potential to significantly affect teacher behavior.

Student engagement is associated with self-efficacy (Bandura, Barabarenelli, Caprar, & Pastorelli, 1996). Self-efficacy, in an academic sense, is the belief that one will be successful in performing academic work. Students who carry this belief are more likely to engage in their work. Engagement also has clear implications for achievement in school and dropout rates (Fredricks, Blumenfeld, & Paris, 2004; Glanville & Wildhagen, 2006). Students who are inattentive and withdrawn scored significantly lower on achievement tests than those students who were actively disengaged, or disruptive (Finn, Pannozzo, & Voekl, 1995). Scores were significantly lower for all types of engaged students, than for those who were actively engaged (1995). Van Ryzin (2011) showed how engagement mediates student's perceptions of the school environment and student achievement and hope. This shows how engagement is a central construct in students' complex motivational systems.

Engagement Antecedents. Many factors of classroom context affect engagement including, autonomy support, classroom structure, academic task characteristics, teacher/peer support, and family support (Fredricks, Blumenfeld, & Paris, 2004; Marks, 2000; Connell, Spencer, & Aber, 1994). Several studies point out the features of the school structure that affect levels of engagement. Lee's and Smith's (1993; 1995) work highlights the effectiveness of smaller school size in promoting more equitable engagement and achievement levels in students. Finn and Voelkl (1993) discuss antecedents of student engagement along the separate dimensions of school structure and regulatory environment. In their analysis they found that

smaller schools account for higher levels of engagement for at-risk students, while the nature of school rules did not have a significant impact on engagement levels.

Engagement and hopelessness/hope. As noted earlier, under hope, Van Ryzin (2011) looked at engagement in examining hope and belongingness variables. He found that perceptions of autonomy, peer-support, and teacher-support affect engagement, which then affects hope. Furthermore, Van Ryzin, Gravely, and Roseth stressed that engagement mediates the relationship between teacher support and hope (2009).

Engagement and belongingness. As noted earlier, under belongingness, research shows a strong connection between engagement and belongingness (Connell & Wellborn, 1991; Newmann, 1992; Goodenow, 1992; Goodenow, 1993; Goodenow & Grady, 1993; Ryan, Stiller, & Lynch, 1994; Osterman, 2000; Furrer & Skinner, 2003; Fredricks, Blumenfeld, & Paris, 2004). The connection between belongingness and emotional engagement is highlighted in several studies as well (Roeser, Midgely, & Urdan, 1996; Furrer & Skinner, 2003). Additionally, one study showed that engagement significantly predicted a sense of identification with school (Voelkl, 1997). As mentioned earlier, belongingness is one component of identification with school, along with valuing school.

Gender, Age, and Racial Differences in Engagement. This section discusses gender, age, and racial differences in engagement.

Gender differences. With respect to the connection between relatedness and engagement, Furrer and Skinner reported a more significant relationship between teacher relatedness and engagement for boys than for girls (2003). One study conducted in historically black colleges found no difference between female and male levels of engagement (Harper, Carini, Bridges, & Hayek, 2004). Another study conducted at the middle-school level found only small to moderate

gender effects with respect to engagement levels (Lee, 1996). In a study spanning elementary, middle school, and high school grades, females had higher levels of engagement across all grades (Marks, 2000).

Age differences. Several studies suggest that engagement levels decline over the course of the school year (Fredricks, Blumenfeld, & Paris, 2004; Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2007; Skinner, Furrer, Marchand, & Kindermann, 2008). Other research suggests that engagement levels decline in higher-grade levels (Marks, 2000). Looking at relatedness and engagement, the effects of relatedness on engagement were stronger for 6th graders than for 5th graders (Furrer & Skinner, 2003).

Race/Ethnicity differences. Some research suggests that African-Americans are more likely to be engaged, at a minimum level, than Caucasian, Asian-American, and Hispanic students (Ainsworth-Darnell & Downey, 1998; Johnson, Crosnoe, & Elder, 2001). This research does not confirm whether African-Americans have higher levels of overall engagement, but it does suggest that African-American students are less likely to be disengaged in the classroom. These findings offer an opposite view of previous research, which asserted that African-Americans do not put forth the same amount of effort in school as Caucasians do since they do not see the same types of opportunities and academic outcomes as Caucasians do (Fordham & Ogbu, 1986). Researchers have also reported a paradox between engagement levels and achievement levels, as measured by GPA (Shernoff & Schmidt, 2007). Even though African-Americans have reported higher levels of engagement, intrinsic motivation, and affect, they still have lower levels of GPA compared to Caucasian students (2007). As indicated earlier, one study indicated that participation in school was a significant predictor of identification with

school (Voelkl, 1997), and these levels of identification were found to be higher for African-American students than for white students.

Synthesis of engagement research. This section synthesizes engagement research and discusses the implications of the research for this study. Engagement in the school setting has clear connections to higher achievement levels, as measured by grades, test scores, and graduation rates. Research shows that engagement has the potential to affect positive school outcomes, which affect student's positive emotions and beliefs about school. These positive emotions and beliefs then feed back into higher levels of engagement, thereby creating a positive self-regulating feedback loop. There are various things that affect levels of engagement in students, including school size, teacher and family support, autonomy support, and other school contextual factors. Research suggests that engagement mediates the relationship between teacher support and hope. Also, much of the literature highlights the connection between belongingness and engagement. Concerning gender differences, some research shows non-significant differences in female and male levels of engagement, while other research shows that females reported higher levels of engagement. Concerning general age differences, engagement levels tend to decline across the school year and as students move to higher grades. As far as race is concerned, much of the literature reports higher levels of engagement for African-Americans than for other racial/ethnic minority students or Caucasian students, even though some research identifies a paradox in which African-Americans are more engaged, but achieve at lower levels than Caucasians.

The engagement literature has important implications for this study since there are clear connections with other important constructs being examined in this study. Most notably is the clear connection to students' sense of belongingness. Students who experience belongingness

are more likely to be academically engaged in school than those students who do not experience belongingness. Some of the research suggests that engagement has connections to hope, as a mediator between teacher support and hope. One thing this study hopes to accomplish is a better understanding of how engagement interacts with belongingness and hopelessness to produce academic outcomes. While some of the research indicates a connection between these variables, a comprehensive theory has not been proposed. Additionally, engagement has clear connections to achievement, as indicated by grades and graduation rates. Since achievement is a variable that drives important educational and policy-making decisions, as well as an important variable in this study, it is important to look at how engagement within this model affects achievement.

Relationship among Variables

The purpose of this section is to discuss the relationship among hopelessness, belongingness, and engagement in order to show how each of these variables interacts with one another and achievement. Each of the aforementioned variables has significant connections with one another, and these relationships are embedded within the literature. This section will bring these connections to light, while discussing the theoretical implications of these connections.

Belongingness and hopelessness. Farran, Herth, and Popovich (2005) describe hopelessness as a relational process, which highlights the social aspect of hope and hopelessness. They suggest, “a variety of relational patterns might contribute toward the existence or development of more relationally oriented hopelessness” (1995, p.35). This is an important point, since one of the major aims of this research project is to show how belongingness, a relational variable, might produce varying levels of hopelessness, depending on the levels of belongingness experienced by individual students. Van Ryzin (2011) strongly supports this idea of hope as a relationally facilitated variable, in which classroom context (i.e. teacher and peer

support) provides the basis for which students' needs (i.e. belongingness) are met, providing a foundation on which hope is built. This foundation on which hope is built, includes support for students' goal attainment behaviors, and helps to create a "positive feedback loop" in which students attain progressive sets of goals (2011, p.1570). Other studies support the connection between belongingness-related variables and hope (Pharris, Resnick, & Blum, 1997; Bolland, Lian, and Formichella, 2005). As mentioned earlier, however, studying hope is not necessarily the same thing as studying the opposite of hopelessness.

Belongingness and engagement. Several studies, as discussed earlier, highlighted the significant connection shared by belongingness and engagement (Connell & Wellborn, 1991; Newmann, 1992; Goodenow, 1992; Goodenow, 1993; Goodenow & Grady, 1993; Ryan, Stiller, & Lynch, 1994; Roeser, Midgely, & Urdan, 1996; Osterman, 2000; Furrer & Skinner, 2003; Fredricks, Blumenfeld, & Paris, 2004). Voelkl's (1997) study showed that engagement is related to a positive sense of school identification, which involves perceptions of belongingness with perceptions of valuing school. These aforementioned studies, with Skinner and Belmont's (1993) and Van Ryzin, Gravely, and Roseth's (2009) work, indicate a reciprocal effect between belongingness and engagement. This effect is facilitated through teacher and peer support.

Hopelessness and engagement. Van Ryzin's (2011) and Van Ryzin, Gravely, and Roseth's (1996) studies also give important insights regarding the connection between hopelessness and engagement. Perceptions of autonomy, peer support, and teacher support affect levels of students' engagement, which affect levels of students' hope (Van Ryzin, 2011). Also, engagement mediates the relationship between teacher support and hope (Van Ryzin, Gravely, & Roseth, 1996). Although, teacher support does not necessarily equate perceptions of belongingness, depending on the researcher using the term, it does play a key role in the

promotion of a positive sense of belongingness in students. The first research question is now presented, in 2 parts, to accompany the conceptual framework discussed previously.

Research Question 1a: What is the relationship among hopelessness, belongingness, and engagement?

Research Question 1b: Do hopelessness and belongingness in one year predict hopelessness and belongingness in the subsequent year?

Connection to achievement. All of the aforementioned variables are related to academic achievement. Research indicates that hope, belongingness, and engagement are all, individually, related to higher grades, grade point averages, and higher graduation rates. Some research suggests that engagement could be a possible link between hope or belongingness and academic achievement. This makes sense, because if students are not putting forth the cognitive, emotional, and behavioral effort in school, then it is likely that they will not achieve at the same levels as if they were putting forth this type of effort. Research also discusses a reciprocal effect between achievement and engagement (Johnson, Crosnoe, & Elder, 2001). That is, students who experience success are more likely to be engaged in schoolwork, and those who are engaged, are more likely to experience success. This highlights the importance of helping students to experience success in school, in order to set in motion a positive feedback loop of achievement. This idea is aligned with Finn's (1989) participation-identification model. Hope, belongingness, and engagement are three variables that can possibly facilitate this process. In light of this research, the second research question is presented in 3 parts:

Research Question 2a: How do hopelessness, belongingness, and engagement affect achievement?

Research Question 2b: How does achievement affect later hopelessness, belongingness, and achievement?

Research Question 2c: Does Engagement mediate the relationship between hopelessness and achievement, and belongingness and achievement?

Stable versus transitioning students. Research underscores the need for protective factors in easing the transition to a new school. These protective factors help to guard against declining grades and attendance levels. Therefore the following research question will address this issue:

Research Question 3: How does the path model of hopelessness, belongingness, engagement, and achievement affect stable versus transitioning students?

Summary and Proposed Theoretical Model

Skinner, Kindermann, Connell, and Wellborn (2009) argue that there are numerous external and internal factors that comprise a motivational system, which “gives rise to the quality of a student’s academic beliefs, values, commitments, and actions in school” (p. 6). This paper proposes that a system of motivation arises from the interaction among the variables of belongingness, hopelessness, and engagement, and that this system is largely responsible for the academic outcome of achievement.

According to Maslow (1954), this model makes sense. An individual’s basic psychological needs have been fulfilled if one is experiencing a sense of belongingness, since it is a prerequisite for those basic level needs to be met in order for higher level needs to be engaged. Also, perceptions of belongingness must be engaged for individuals to be able to achieve, since achievement occupies a higher level within the hierarchy. It also follows that experiencing hope would require those basic needs to be met, so that one is free to think toward

the future, without worrying about one's present struggles. Therefore, within the context of school, individuals must experience a resolve among the present studies' variables, in order to experience academic achievement.

The purpose of this study is to explore the way in which these variables form a system, and the previous literature review's purpose is to lay a foundation for which this system can be explained. Considering the previously discussed connections, it is hypothesized that both hopelessness and belongingness will have significant relationships with one another and with engagement behaviors. Also, hope and belongingness will have significant relationships with achievement, as measured by test scores, and this will be mediated by engagement.

Additionally, some of the literature suggests that perceived lack of belongingness will contribute to the promotion of hopelessness. Finally, the model will be used to compare students in a state of stability versus students in a state of transition. Therefore, this study proposes the following theoretical models, following the research questions and hypotheses:

Research Question 1a: What is the relationship among hopelessness, belongingness, and engagement? (See *Figure 2.2*)

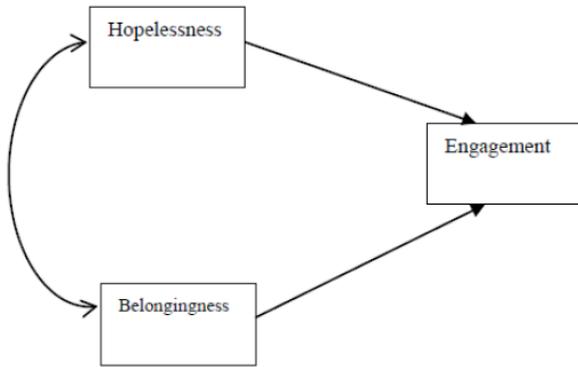
H1: Belongingness is negatively and significantly related to hopelessness.

H2: Belongingness is positively and significantly related to engagement, as measured by hours doing homework.

H3: Belongingness is negatively and significantly related to engagement, as measured by absences.

H4: Hopelessness is negatively and significantly related to engagement, as measured by hours doing homework.

H5: Hopelessness is positively and significantly related to engagement, as measured by absences.



Model 2a

Figure 2.2. Hypothesized Model of Hopelessness, Belongingness, and Engagement.

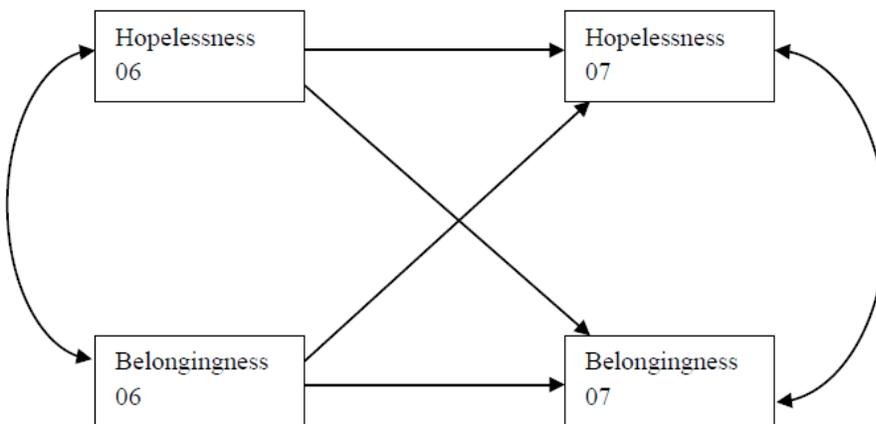
Research Question 1b: Do hopelessness and belongingness in one year predict hopelessness and belongingness in the subsequent year? (See Figure 2.3)

H6: Hopelessness at time one significantly predicts hopelessness at time two.

H7: Hopelessness at time one significantly predicts belongingness at time two.

H8: Belongingness at time one significantly predicts belongingness at time two.

H9: Belongingness at time one significantly predicts hopelessness at time two.



Model 2b

Figure 2.3. Hypothesized Cross-lagged Panel Model of Hopelessness and Belongingness.

Research Question 2a: How do hopelessness, belongingness, and engagement affect achievement? (See *Figure 2.4*)

H10: Engagement, as measured by homework, is positively and significantly related to achievement, as measured by reading and math scores.

H11: Engagement, as measured by absences, is negatively and significantly related to achievement, as measured by reading and math scores.

H12: Hopelessness is negatively and significantly related to later achievement.

H13: Belongingness is positively and significantly related to later achievement.

Research Question 2b: How does achievement affect later hopelessness, belongingness, and achievement?

H14: Achievement is negatively and significantly related to later hopelessness.

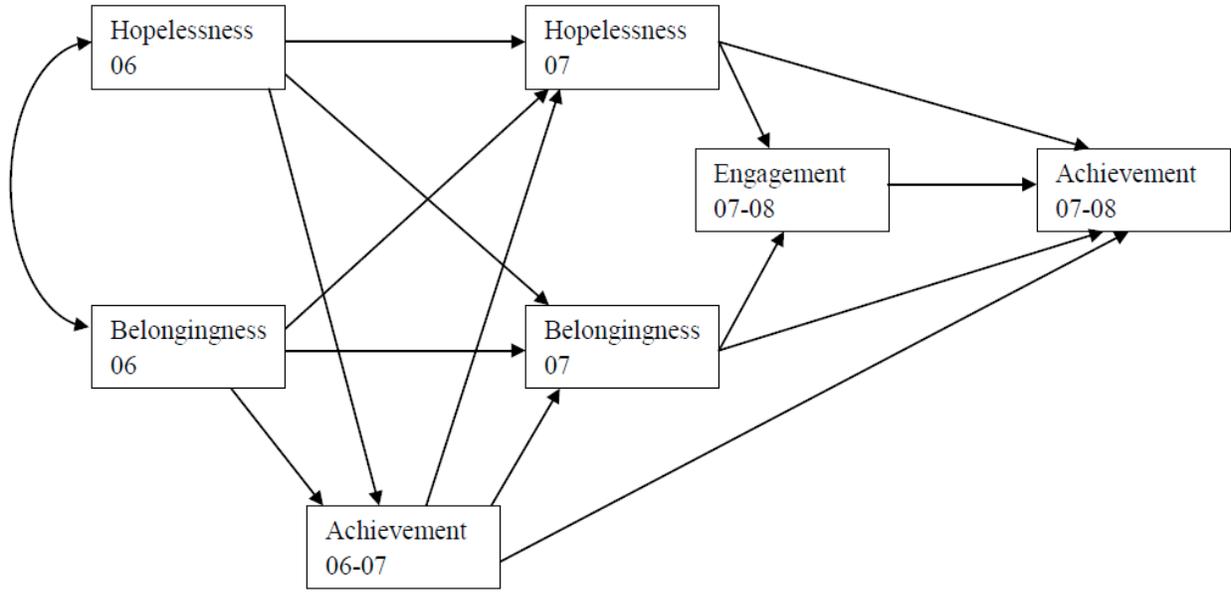
H15: Achievement is positively and significantly related to later belongingness.

H16: Achievement is positively and significantly related to later achievement.

Research Question 2c: Does Engagement mediate the relationship between hopelessness and achievement, and belongingness and achievement?

H17: Engagement mediates the relationship between hopelessness and achievement.

H18: Engagement mediates the relationship between belongingness and achievement.



Model 2c

Figure 2.4. Hypothesized Model of Hopelessness, Belongingness, Engagement, and Achievement.

Research Question 3: How does the path model (Model 2c) of hopelessness, belongingness, engagement, and achievement affect stable versus transitioning students?
(See Figure 2.4)

H19: The path model of hopelessness, belongingness, engagement, and achievement is significantly different for stable students than for transitioning students.

CHAPTER 3

METHOD

This study utilizes Mobile Youth Survey (MYS) data in order to examine the relationship between hopelessness, belongingness, engagement, and academic achievement. This study examines secondary data; therefore, this section gives an overview of the original survey, followed by specific details of the current study.

MYS procedures

A discussion of the original survey background, collection methods, and target population will precede specific details of the current study.

Survey background. “The MYS is a community-based, multiple cohort longitudinal study with annual data collection, focusing on 9-19 year old adolescents who live in extremely impoverished neighborhoods in the Mobile, Alabama metropolitan statistical area” (Bolland, 2007, p.1). Originally, there were several main purposes of the MYS. These purposes were to study the causes of risk behaviors for adolescents living in poverty, to study the context in which these causes and risk behaviors occur, and to establish a community laboratory for such studies and corresponding interventions (2007).

Location and target population. The MYS was conducted in Mobile, Alabama and Prichard, Alabama, which is a city within the larger metropolitan Mobile area. “The targeted neighborhoods are overwhelmingly African American (95%), and over 98% of MYS participants are African Americans” (2007, p.1). Residential segregation remained high in this area during

survey administration. Adolescents were sampled from 13 different neighborhoods, including five in Prichard and eight in Mobile (See Table 3.1). These neighborhoods had the lowest median household income during this time. Furthermore, it was estimated that 25% of participants moved each year, and 5.12% of participants move to non-targeted neighborhoods (Bolland, 2007), which illustrates one of the difficulties with surveying the MYS population.

Table 3.1. *Description of MYS Target Neighborhoods.*

	Census Tracts (Block Groups)	Population	African- American population	Poverty rate (individuals)	Extreme poverty rate (individuals)	Median household income
Non-Public Housing						
Plateau (M) ^a	12	2,511	88.8%	56.7%	28.3%	\$13,810
Harlem (P) ^a	39.02 (1)	1,203	85.6%	47.1%	11.2%	\$18,426
Martin Luther King (M)	4.01 (2, 3, 4) 5(1)	2,827	97.2%	49.5%	30.6%	\$12,157
Snug Harbor (P)	43 (1)	535	100.0%	65.2%	24.2%	\$11,597
Alabama Village (P)	47 (1) 48 (1,2)	2,565	84.5%	70.7%	39.0%	\$10,793
Toulminville (M)	6 (2,3)	2,326	97.2%	56.7%	30.3%	\$11,236
Trinity Gardens (M) ^b	39.01 (1, 2, 3)	2,479	97.9%	31.5%	12.2%	\$18,374
Public Housing						
Orange Grove (M)	4.01 (1,2) 4.02 (1,2)	3,517	98.7%	76.3%	59.2%	\$6,696
Josephine Allen Homes (M)	12	2,511	88.8%	56.7%	28.3%	\$13,810
Roger Williams Homes (M)	6 (2, 3)	2,326	97.2%	56.7%	30.3%	\$11,236
Oaklawn Homes (M)	13.02 (2)	1,816	98.2%	44.2%	22.9%	\$14,648
R.V. Taylor Plaza (M)	15.01 (2, 4) 15.02 (1)	3,139	95.6%	64.6%	36.9%	\$9,963
Gulf Village (P)	48 (1)	943	94.7%	81.4%	44.1%	\$8,783
Bessemer Apartments (P)	40 (4)	1,487	98.0%	57.7%	30.3%	\$11,950
^a M = Mobile; P = Prichard						
^b Trinity Gardens was added as a new target neighborhood in 2001						

Source: Bolland, J. (2007). *Mobile Youth Survey Overview.*

Survey and data collection procedures. Collection of MYS data began in 1998. Initially, 10-18 year old adolescent participants were actively and passively recruited, through house calls and flyers respectively, to participate in the MYS. During recruitment, recruiters obtained parental consent from participants and gave invitations to the community center, in

which the survey was administered. MYS flyers contained a phone number, which allowed participants to inquire for more information, in which they were given the opportunity to take the survey with parental consent. In subsequent years, new cohorts were actively and passively recruited, and previous participants were actively recruited to participate again. Participants were initially paid \$10 after completion of the survey, increasing to \$15 in 2005 (Bolland, 2007).

Questions. The MYS was initially composed of 294 questions “about risk behaviors and attitudes associated with violence, substance use, and sex; family structure and function; feelings about self, neighborhood, and peers; and experiences in school” (2007, p.6). In 2005, the number of questions increased to incorporate other measures, including connectedness to school and friends. This study incorporates several items and complete scales found within the entire range of MYS questions.

Study Sample

This study analyzed two consecutive waves of MYS data. It utilized the 2006 MYS questionnaire data, 2007 MYS questionnaire data, 2006-2007 school-year achievement records, and 2007-2008 school-year achievement and attendance records. In examining the first two research questions, the study used a sample of 490 students, for which school attendance records are matched to MYS data. The participants ranged in age from 8 – 14 years during the administration of the survey during the first wave of collection. This sample includes 51% males and 49% females, with 100% being African American students. In examining the third research question, a sample of 203 stable students and 287 transitioning students was used to test stability differences in the model.

This range of years was chosen because the researcher had access to a clean set of data with the variables of interest for these two particular years. Sample size was determined because

of the nature of the research questions. In examining all research questions, it was necessary to link MYS responses with attendance records as a measure of engagement. To do so, student identification numbers from MYS questionnaires, administered during the summers of 2006 and 2007, were matched with student identification numbers from subsequent school year data (2007-2008). Additionally, the *Stanford Achievement Test, edition 10* (SAT-10) was administered to students in grades 3-8. Because of this grade range, this study had a limited age range and number of participants for use in examining the research questions, considering the full age range and scope of the MYS. Participants included anyone who participated in the 9th and 10th waves of the MYS who had a school number and was also eligible to take the SAT. Students who didn't live in MYS neighborhoods were also included in the study's sample if they met the preceding criteria.

Instruments

This section discusses the measures that allow the conceptualized variables to become operational. Among the measured variables are hopelessness, belongingness, engagement, and academic achievement. Single scales included within the MYS measure hopelessness and belongingness. Engagement is measured by one MYS item and attendance records gathered from school records. Finally, SAT-10 reading and math scores from school records measure achievement.

Hopelessness. Hopelessness is measured through six items in each respective year, MYS Q188-Q193, SPSS variables m84_9-m89_9 (in 2006) and m84_10-m89_10 (in 2007), and is adapted from the Hopelessness Scale for Children (Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983). Five of the items are from the Kazdin, French, Unis, Esveldt-Dawson, and Sherick (1983) scale, while the MYS team added one of the items. The Hopelessness Scale for

Children (1983) consists of 17 items, which assess children's negative expectancies, and is scored in a "true" or "false" format with scores ranging from 0-17. Kazdin's scale is based on Beck's Hopelessness Scale, which consists of 20 items (Beck, Weissman, Lester, & Trexler, 1974). This is a dichotomous scale, which includes statements that ask respondents to agree or disagree with respect to their perceptions of the items. Scores range from 0-6, with higher scores indicating more hopelessness. Items include, "All I see ahead of me are bad things, not good things"; "There's no use in really trying to get something I want because I probably won't get it"; "I might as well give up because I can't make things better for myself"; "I don't have good luck now and there's no reason to think I will when I get older"; "I never get what I want, so it's dumb to want anything"; and "I don't expect to live a very long life". The Cronbach alpha coefficient level is .71 (Bolland, 2003) with a test-retest reliability of .62 (2003), compared to the level of the original scale, which ranges from .69 to .75 with a test-retest reliability of .52 (Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983).

Belongingness. Belongingness was measured through one MYS scale, adapted from the Psychological Sense of School Membership Scale (PSSMS) (Goodenow, 1993), and consists of eight items in each respective year, MYS Q126-Q133, SPSS variables z126_9-z133_9 (in 2006) and z126_10-z133_10 (in 2007). The original scale (1993) consists of 18 items and is scored on a 5-point Likert scale format. In responding, participants agree, disagree, or mark "I wasn't in school last year." Scores range from 0-8, with higher scores indicating more belongingness. Items include, "I feel as if I don't belong at my school"; "Most students at my school like me the way I am"; "It is hard for people like me to be accepted at my school"; "There's at least one teacher in my school I can talk to if I have a problem"; "Most teachers at my school are interested in my"; "People at my school notice when I'm good at something";

“Teachers at my school are not interested in people like me”; and “The teachers at my school respect me”. This scale has a cronbach alpha coefficient of .69 (1993). Test-retest reliability information is not available for this scale.

Engagement. Engagement was measured through one MYS item and school attendance records. These items were chosen to represent engagement because they measure students’ participation in school activities. The single MYS item measures students’ perceptions of their behavioral participation in an academic task; while attendance records are an objective and direct measurement of how often students are not in school. If students are not in school, then they are not physically engaging in academic tasks within the school setting. Attendance records were scored on a continuous scale according to number of absences, starting at zero. Time spent doing homework will be measured through one item, MYS Q91, SPSS variable m68_12. This item asks, “How many hours each week do you spend doing homework (school assignments to be done outside school hours)?” This item was taken from the Routine Activities scale (Osgood, Wilson, O’Malley, Bachman, & Johnston, 1996), which came from the Monitoring the Future Questionnaire (1996), and contains 3 items to which participants respond on a 5-point Likert format scale. Responses for this item include “None; I’m not in school”; “None; I don’t study outside school hours”; “1 to 5 hours each week”; “6 to 10 hours each week”; and “More than 10 hours each week”. The Cronbach alpha for this scale is .62, and the test-retest reliability is between .18 and .51 (1996).

Achievement. Achievement was measured through reading and math subtest percentile rank scores of the SAT-10, ranging from 0 – 100. This is a nationally administered norm-referenced standardized achievement test administered to students in grades 3-8. These

test scores were pulled from Mobile County School records and matched with corresponding MYS identification numbers.

Analysis

Prior to conducting path analysis, initial descriptive analysis was run using PASW Statistics 18 (SPSS Inc., 2009) to find means, standard deviations, and Pearson correlation coefficients, and to create the covariance matrices, which were used in creating the programs that generated the LISREL 8.8 for Windows (Joreskog & Sorbun, 2006) output and path diagrams. After running the initial descriptive analysis, LISREL 8.8 for Windows (2006) was used to conduct confirmatory factor analysis in order to indicate the validity of the study's variables as measured by the single scale MYS items. After confirming the measurement model, MYS scale scores were used in the subsequent path analysis to address the research questions. A confirmatory approach was used in testing the models. In some cases, in which the models failed to fit the data, it was necessary to modify the models to achieve a better fit. In this instance, analysis involved model generating, in order to revise the theoretical models (Hoyle, 2011).

The following goodness-of-fit indices are standard and were used in testing conformity of the models: The chi-square value (χ^2), the comparative fit index (*CFI*), the non-normed fit index or Tucker Lewis Index (*TLI*), and the root mean squared error of approximation (*RMSEA*) (Van Ryzin, 2011). The following values are indicative of good fit: *CFI* > .95, *TLI* \geq .95, χ^2 : *df* < 2 or 3, and *RMSEA* < .06 to .08 (Schreiber, Nora, Stage, Barlow, & King, 2006). All of the aforementioned indices allow the researcher to determine how well the model fits the observed data, with *CFI*, *TLI*, and *RMSEA* being preferred for one-time analysis (2006). The chi-square test is a preferred index for use in model trimming to achieve a more parsimonious model

(2006). “In general, if the vast majority of indices indicate a good fit, then there is probably a good fit” (2006, p.327).

Ethical Considerations

The primary researcher of this project was not involved in the recruitment of study participants or collection of data concerning the MYS. Therefore, the researcher assumed full ethical responsibility in the possession, maintenance, and analysis of the MYS data set, as a secondary data source. Also, the primary researcher acknowledged that IRB secondary data analysis procedures were completely followed.

Limitations and delimitations

Considering the nature of this study, there were several limitations, which resulted. First, this study used self-report measures to gather perceptions regarding the studied variables. This could account for a degree of measurement error. Secondly, generalizability was an issue owing to the specific population in which the data is grounded. The target population was composed entirely of African American adolescents in extremely impoverished urban neighborhoods. Extending findings to other populations could prove difficult.

A significant delimitation involved a limited study sample resulting from the incorporation of the aforementioned academic engagement measures. Since this study used school records (attendance), the number of participants was considerably less than the total available number of participants for any given year.

Summary

The analytic procedures that were implemented in examining the MYS data set were intended to capture the full scope of the proposed research questions. A structural equation-modeling framework for path analysis was employed for its capability in examining the

relationship among the study's directly observed constructs, thereby confirming the underlying theory established in Chapter 2. The primary researcher used ethically appropriate methods in analyzing the MYS data set as a secondary data source. Results are presented in Chapter 4, followed by the discussion and conclusion in Chapter 5.

CHAPTER 4

RESULTS

This study examined the relationships among hopelessness, belongingness, engagement, and achievement for students ($N = 490$) in the Mobile Metropolitan area. This chapter reports the results from all aspects of analysis, beginning with confirmatory factor analysis. Each research question is addressed in order, and the process is described by which the path model of hopelessness, belongingness, engagement, and achievement is created. It also examined group differences with respect to stable students ($n = 203$) and transitioning students ($n = 287$). Stable students were students who did not change schools within or between school years.

Transitioning students changed schools either within or between school years.

Initial analysis. LISREL 8.8 for Windows (Joreskog & Sorbum, 2006) structural equation modeling (SEM) software was used to conduct confirmatory factor analysis and path analysis. Using this form of analysis allowed the theoretical models, generated from the literature in Chapter 2, to be tested against the data to determine how well these models fit the data. LISREL 8.8 for Windows (2006) also easily generates graphical representations of the path models, which allows for easier interpretation of these models. Correlations and sample descriptive data for this study's variables were analyzed using PASW Statistics 18 (SPSS Inc., 2009), and are found in Table 4.1. Covariance matrices were generated for the total sample, total sample of individual items indicating hopelessness and belongingness, and the stable and transitioning groups. The covariance matrices were used in conducting confirmatory factor analysis for the total model and for path analysis in answering all of the research questions.

The descriptive data in Table 4.1 was used for initial examination of the direction and magnitude of relationships between variables. This step helped to confirm initial expectations with regards to the stated hypotheses. As expected, hopelessness and belongingness are negatively and significantly related in 2006 and 2007, although these are weak to moderate correlations. Also as expected, hopelessness in 2006 is positively and significantly related to hopelessness in 2007, and belongingness in 2006 is positively and significantly related to belongingness in 2007. Hopelessness in 2006 is not significantly related to belongingness in 2007; however, a weak significant correlation exists between belongingness in 2006 and hopelessness in 2007.

In examining the engagement measures of absences and hours doing homework (absences from 2007-2008 school records data; homework from 2007 MYS data), it is apparent that absences and hopelessness in 2007 have a significant and positive weak relationship, but homework and hopelessness do not. Absences are not significantly related to belongingness in 2007, but homework has a significant and positive, weak relationship with belongingness in 2007. Furthermore, these 2 measures of engagement are not significantly correlated with one another. Absences and hours doing homework are negatively correlated, however, which is expected, since these measures represent opposite types of engagement.

In looking at the achievement measures of reading and math in 2006 and 2007, significant and weak relationships exist with respect to hopelessness and belongingness in 2006 and 2007. As expected, this relationship is negative with respect to hopelessness and positive with respect to belongingness. Lastly, absences have a significant and negative, weak relationship with achievement, while homework is not significantly related to achievement.

Table 4.1

Correlations and sample descriptive data for key variables

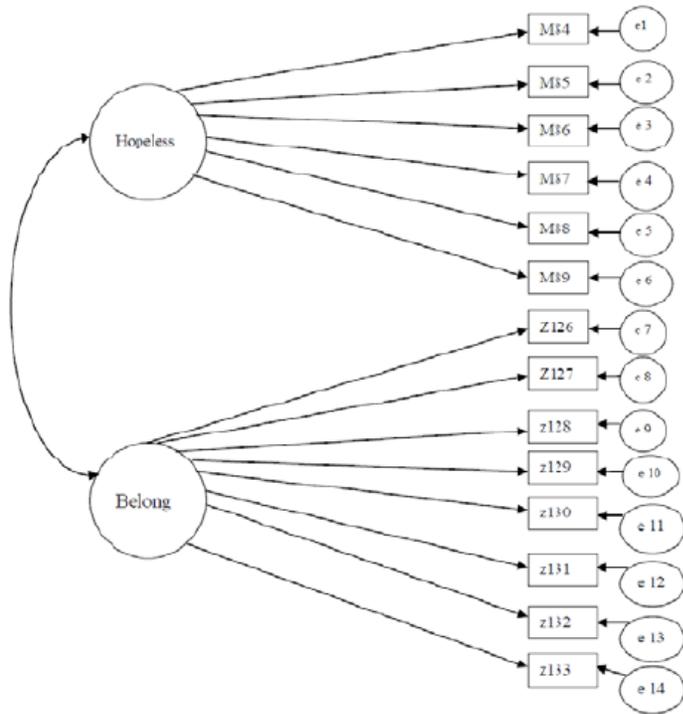
	1	2	3	4	5	6	7	8	9	10
1. Hopelessness 06	-									
2. Hopelessness 07	.246**	-								
3. Belongingness 06	-.166**	-.143**	-							
4. Belongingness 07	.012	-.198**	.271**	-						
5. Reading 06-07	-.179**	-.167**	.113*	.155**	-					
6. Math 06-07	-.151**	-.127**	.168**	.153**	.599**	-				
7. Reading 07-08	-.209**	-.181**	.127**	.116**	.497**	.447**	-			
8. Math 07-08	-.172**	-.115*	.143**	.164**	.482**	.666**	.602**	-		
9. Homework 07	.022	.004	.106*	.112*	-.007	.042	.018	.037	-	
10. Absences 07-08	.097*	.124**	-.100*	-.055	-.176**	-.188**	-.169**	-.237**	-.083	-
<i>N</i>	490	490	490	490	490	490	490	490	490	490
<i>M</i>	1.62	1.27	3.98	3.96	37.71	43.60	34.40	39.05	2.86	22.87
<i>SD</i>	1.799	1.782	1.195	1.249	23.605	25.621	22.582	23.465	.895	18.757

**Correlation is significant at the 0.01 level. (2-tailed).

*Correlation is significant at the 0.05 level. (2-tailed).

Confirmatory factor analysis of hopelessness and belongingness

Confirmatory factor analysis was used to test the validity of the study's variables. The constructs of hopelessness and belongingness were validated through multiple, item-level indicators. Hopelessness had 6 indicators, being the individual hopelessness scale items, m84 – m89. Belongingness had eight indicators, being the individual school belongingness scale items, z126 – z133. A measurement model was constructed using the 2007 MYS scale items from hopelessness and belongingness (See Model 4a).



Model 4a

Figure 4.1. Measurement Model of Hopelessness and Belongingness.

The fit indices for the original measurement model demonstrated a good fit, $\chi^2(76) = 271.42, p < .05; \chi^2/df = 3.57; CFI = .92; TLI = .90; RMSEA = .075$. Each item indicated a significant fit with respect to the model, however, items z126 ($\beta = .14, p < .05$), z128 ($\beta = .22, p < .01$), and z132 ($\beta = .25, p < .001$) had lower factor loadings than the other 5 items. Since these 3 items were negatively worded, they were dropped from the measurement model. The 5 remaining positively worded items had the highest item-total correlation of belongingness. The CFA model was run again, and the model fit improved, $\chi^2(43) = 92.18, p < .05; \chi^2/df = 2.14; CFI = .96; TLI = .97; RMSEA = .049$, which indicated a significant decrease in chi-square, $(271.42 - 92.18 = 179.24, df = 76 - 43 = 33, p < .05)$, from the original measurement model. Only the 5 positively worded items were used in the subsequent path analysis.

Additionally, the constructs of hopelessness and belongingness had a significant negative covariance ($\beta = -.22, p < .001$), which was important for verifying the negative relationship between these two factors. Given the measurement model's fit, the hopelessness and positively worded item belongingness scales were used as observed variables to conduct path analysis in answering the research questions. The results of the research questions are discussed in the following sections.

Research Question 1a. What is the relationship among hopelessness, belongingness, and engagement?

It was hypothesized that hopelessness would significantly and positively affect absences, and significantly and negatively affect hours doing homework. It was also hypothesized that belongingness would significantly and negatively affect absences, and significantly and positively affect hours doing homework. Furthermore, it was hypothesized that belongingness would be significantly and negatively related to hopelessness. Using 2007 MYS variables, results indicated that hopelessness significantly and positively affected absences, but did not have a significant effect on hours doing homework. Results also indicated that belongingness significantly and positively affected homework, but did not significantly affect absences. There was also a significant negative covariance between hopelessness and belongingness (See Models 4b and 4c). The 2006 MYS variables were also used in the testing of this model and results indicated similar relationships between hopelessness, belongingness, and engagement.

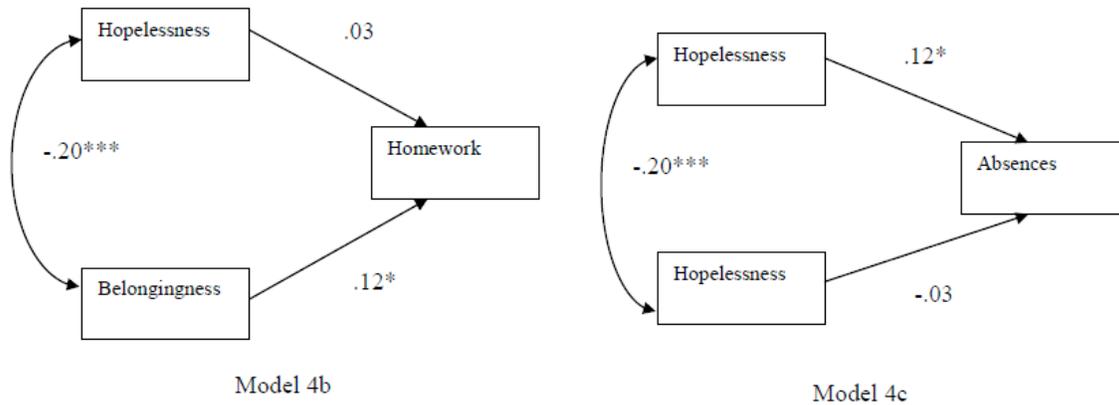


Figure 4.2. Models of Hopelessness, Belongingness, and Engagement. $*p < .05$; $**p < .01$; $***p < .001$

Research Question 1b. Do hopelessness and belongingness in one year predict hopelessness and belongingness in the subsequent year?

According to Hoyle (2011), cross-lagged analysis can be utilized to answer 2 key questions: (1) “Is there any relation between the two variables beyond the covariance of their stable components? (2) If so, is there evidence favoring one direction over the other?” (p.96). It was hypothesized that significant cross effects would exist between hopelessness in 2006 and belongingness in 2007 and between belongingness in 2006 and hopelessness in 2007. It was also hypothesized that hopelessness in 2006 would significantly affect hopelessness in 2007 and belongingness in 2006 would significantly affect belongingness in 2007. Results indicate that there was a significant cross effect between belongingness in 2006 and hopelessness in 2007 (See Model 4d). This effect was negative, which met expectations. This finding supports the hypothesis that belongingness affects hopelessness in the subsequent year. It also indicates that there is evidence supporting this direction over hopelessness to belongingness. Furthermore, these two variables are related over time, beyond the covariance of their stable components. The effect from hopelessness in 2006 to belongingness in 2007 was not significant, however it was positive, which was not expected. Also, hopelessness in 2006 had a significant effect on

hopelessness in 2007, and belongingness in 2006 had a significant effect on belongingness in 2007, which shows the stability of these constructs over time.

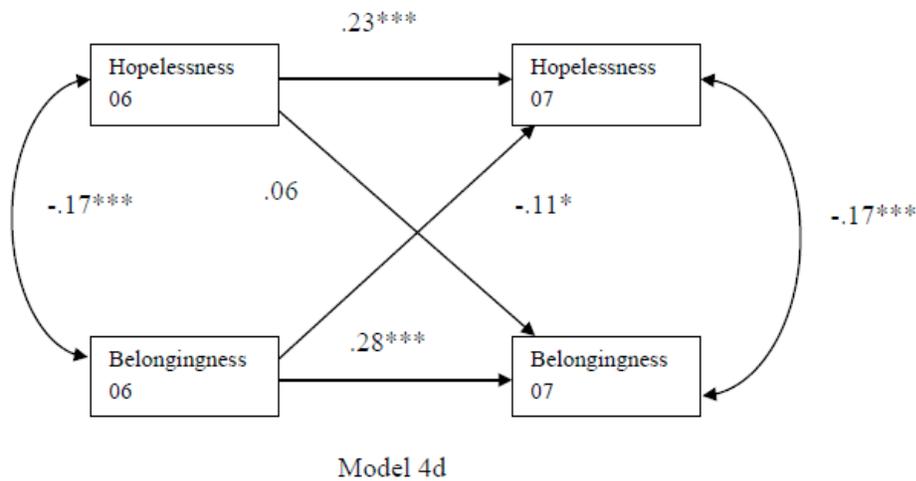


Figure 4.3. Cross-lagged Panel Model of Hopelessness and Belongingness. * $p < .05$; ** $p < .01$; *** $p < .001$

Research Question 2a: How do hopelessness, belongingness, and engagement affect achievement?

It was hypothesized that absences would significantly and negatively affect reading and math scores, while hours doing homework would significantly and positively affect reading and math scores. Results indicate that absences significantly and negatively affected reading scores and math scores, while homework did not significantly affect reading or math scores (See Model 4e). Homework was dropped from the model since it did not contribute to achievement scores, and achievement is an integral part of the model. Absences, from this point forward, were used as the sole observed measure of engagement, for the purposes of fitting the final model and addressing research question 3.

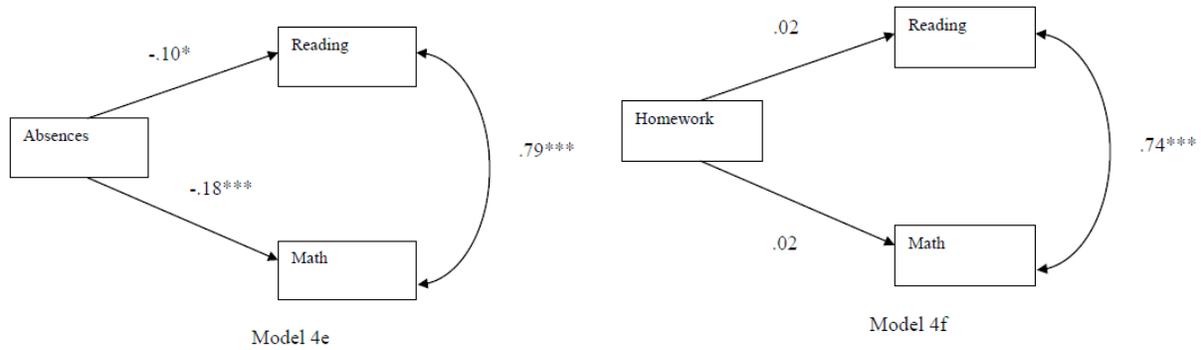


Figure 4.4. Direct Effects of Engagement on Achievement. * $p < .05$; ** $p < .01$; *** $p < .001$

It was also hypothesized that hopelessness would directly affect achievement in a negative manner, and that belongingness would affect achievement in a positive manner. So, direct effects of hopelessness and belongingness on achievement were tested using both waves of data. Hopelessness and belongingness in 2007 had significant effects on achievement in 2007-2008 (See models 4g and 4h in Figure 4.5), but hopelessness in 2006 only had a significant effect on reading in 2006-2007 (model 4i in Figure 4.5). Belongingness in 2006 had a significant effect on math 2006-2007 (model 4j in Figure 4.5). These results support the hypothesis that perceptions of hopelessness and belongingness affect later achievement. Additionally, hopelessness seems to have a stronger relationship with reading achievement than with math, and belongingness has a stronger relationship with math achievement than for reading achievement.

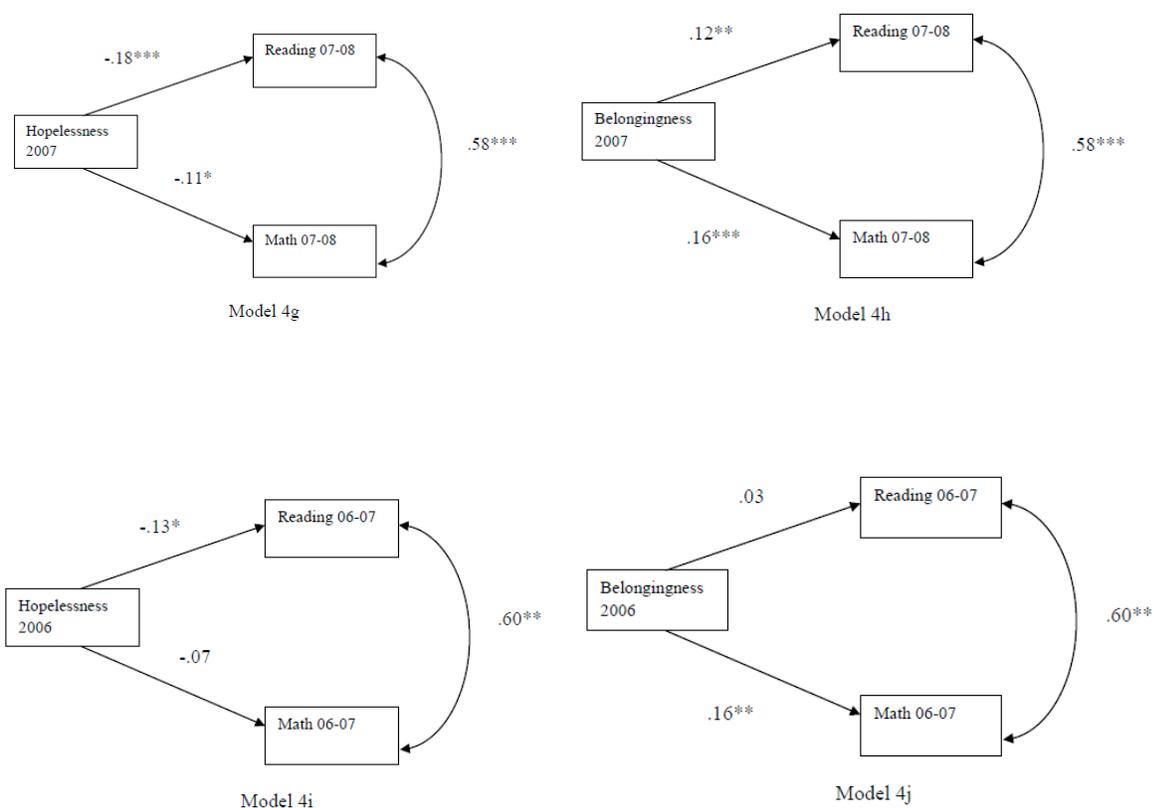


Figure 4.5. Direct Effects of Hopelessness and Belongingness on Achievement. * $p < .05$; ** $p < .01$; *** $p < .001$

Research Question 2b: How do achievement affect later hopelessness, belongingness, and achievement?

It was predicted that achievement would affect later hopelessness and belongingness scores. Results indicate reading in 2006-2007 significantly affects hopelessness scores in 2007, but achievement in 2006-2007 did not significantly affect belongingness in 2007 (See models 4k and 4l in Figure 4.6). These results partially support the hypothesis. It was also predicted that achievement in 2006-2007 would affect achievement in 2007-2008. This hypothesis was supported by the results, indicating that reading in 2006 significantly predicted reading in 2007 ($\beta = .42, p < .001$), and math in 2006 significantly predicted math in 2007 ($\beta = .60, p < .001$).

These findings highlight the stability of achievement over time, meaning those that achieve at high levels in one year are more likely to achieve at high levels the next year. Also, students who achieve at low levels in one year are likely to achieve at low levels the next year.

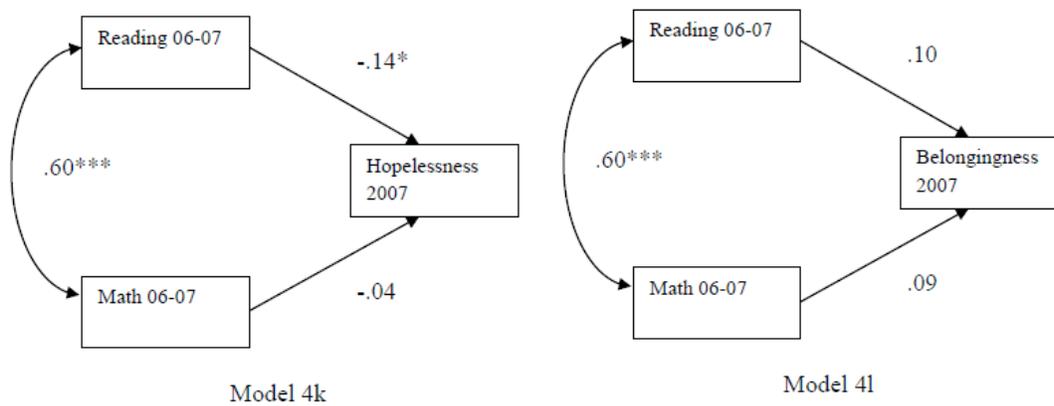


Figure 4.6. Direct Effects of Achievement on Hopelessness and Belongingness. * $p < .05$; ** $p < .01$; *** $p < .001$

Research Question 2c: Does Engagement mediate the relationship between hopelessness and achievement, and belongingness and achievement?

It was hypothesized that engagement serves as a mediator between hopelessness and achievement, and serves as a mediator between belongingness and achievement. A mediator is a variable that accounts for the relation between the predictor variable and dependent variable (Baron & Kenny, 1986). In this case, mediation would exist if the significant path between hopelessness and reading or math ceased to exist when controlling for the indirect path through absences (1986). Mediation would also exist if the significant path between belongingness and reading or math ceased to exist when controlling for the indirect path through absences. While results did not indicate the presence of complete mediation, results did support the presence of

partial mediation between hopelessness and reading and between hopelessness and math, with absences acting as the mediator (See models 4m and 4n in Figure 4.7). This was the case, considering the previous direct effects as illustrated in Models 4g and 4h (Figure 4.5), and considering this direct effect decreased in the presence of the mediator variable, while remaining significant. No mediation effect was present between belongingness and reading, or between belongingness and math (See Models 4o and 4p in Figure 4.8), which does not support the mediation hypothesis, with absences acting as a mediator between belongingness and achievement.

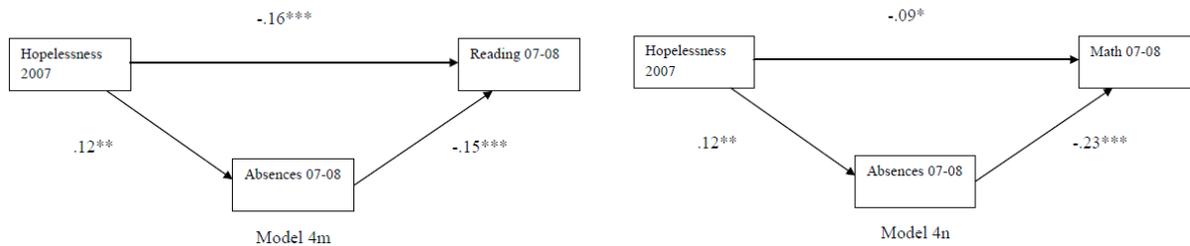


Figure 4.7. Mediation Models with Hopelessness and Achievement. * $p < .05$; ** $p < .01$; *** $p < .001$

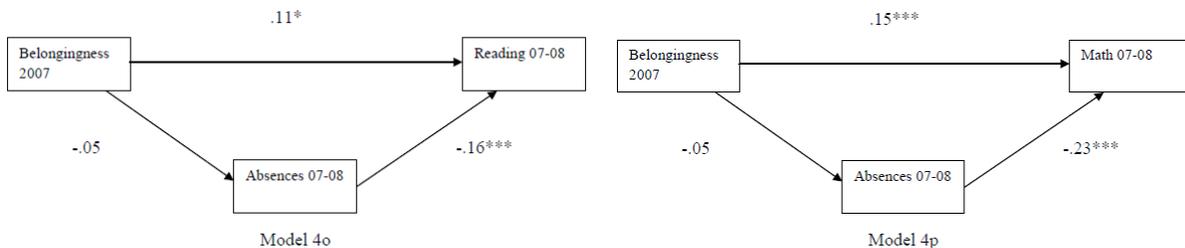
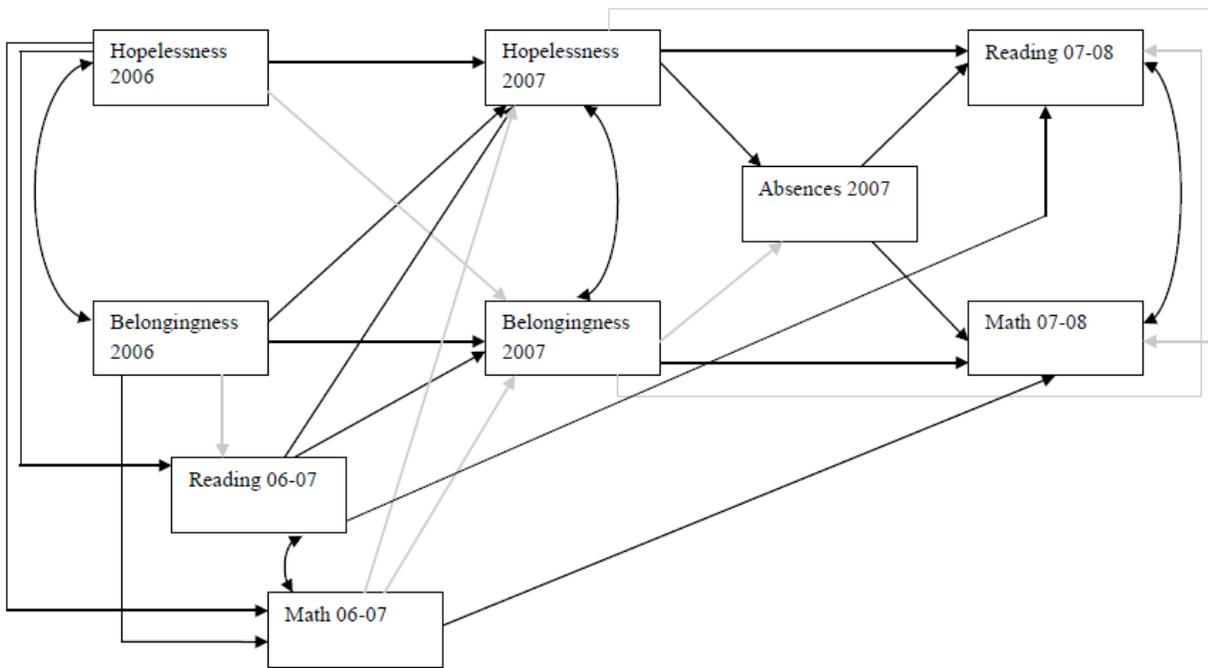


Figure 4.8. Mediation Models with Belongingness and Achievement. * $p < .05$; ** $p < .01$; *** $p < .001$

Model fitting. After tests for mediation were completed, the individual pieces of the full-hypothesized model had been tested, and it was necessary to run the full-hypothesized model to examine how well the model fit the data. Initial analyses resulted in a poor fit to the data, χ^2

(10) = 63.25, $p < .05$; $\chi^2/df = 6.325$; $CFI = .96$; $TLI = .85$; $RMSEA = 0.104$ (See Model 4q in Figure 4.9). Standardized path coefficients are highlighted in Table 4.2. A power analysis, using a method suggested by MacCallum, Brown, and Sugawara (1996), and calculated using Preacher's and Coffman's (1996) web utility, indicated a power of .60 for a close-fit hypothesis. Additionally, the covariance between hopelessness 06 and belongingness 06 ($\beta = -.17, p < .001$), hopelessness 07 and belongingness 07 ($\beta = -.16, p < .001$), reading 06-07 and math 06-07 ($\beta = .56, p < .001$), and reading 07-08 and math 07-08 ($\beta = .30, p < .001$), were all significant.



Model 4q

Figure 4.9. Initial Path Model of Hopelessness, Belongingness, Engagement, and Achievement. Note. Paths that are not significant at $p < .05$ are gray.

Table 4.2
Standardized Path Coefficients of Initial Model (N = 490)

Model path	β
Hopelessness 06 → Reading 06-07	-.17***
Belongingness 06 → Reading 06-07	.09
Hopelessness 06 → Math 06-07	-.13**
Belongingness 06 → Math 06-07	.15***
Hopelessness 06 → Hopelessness 07-08	.21***
Belongingness 06 → Belongingness 07-08	.26***
Reading 06-07 → Belongingness 07	.11*
Math 06-07 → Belongingness 07	.06
Belongingness 06 → Hopelessness 07	-.09*
Hopelessness 06 → Belongingness 07	.08
Reading 06-07 → Hopelessness 07	-.11*
Math 06-07 → Hopelessness 07	-.01
Hopelessness 07 → Absences 07-08	.12*
Belongingness 07 → Absences 07-08	-.03
Absences 07-08 → Reading 07-08	-.09*
Absences 07-08 → Math 07-08	-.13***
Hopelessness 07 → Reading 07-08	-.10*
Belongingness 07 → Reading 07-08	.03
Hopelessness 2007 → Math 07-08	-.02
Belongingness 2007 → Math 07-08	.07*
Reading 06-07 → Reading 07-08	.42***
Math 06-07 → Math 07-08	.60***

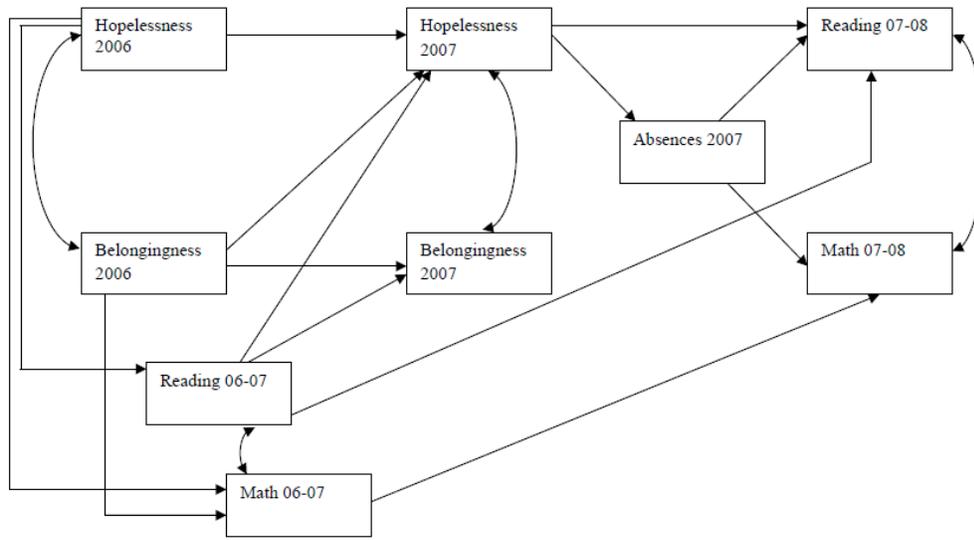
* $p < .05$; ** $p < .01$; *** $p < .001$

The next step was to test the initial path model against alternative models to achieve a better fit to the data. The following paths, math 06-07 → hopelessness 2007, hopelessness 2007 → math 07-08, belongingness 2007 → absences 07-08, math 06-07 → belongingness 2007, hopelessness 2006 → belongingness 2007, belongingness 2006 → reading 06-07, belongingness 2007 → reading 07-08, and belongingness 2007 → math 07-08, which were not significant at $p < .05$, were deleted one at a time until the results indicated an adequate fit to the model, $\chi^2(18) = 76.40, p < .05; \chi^2/df = 4.244; CFI = .95; TLI = .91; RMSEA = 0.08$. The fitted model resulted in $\Delta \chi^2 = (76.40 - 63.25 = 13.15, df = 18-10 = 8, p < .05)$, which indicated a non-significant difference between the final fitted model and the initial model. However, the final fitted model with the deleted paths indicated an adequate fit to the data and remains consistent with the literature, while the original fitted model indicated a poor fit. Therefore, it made sense to keep Model 4r with the deleted paths as the final fitted model (See Figure 4.10). Standardized path coefficients follow Model 4r in Table 4.3. Additionally, the covariance between hopelessness 06 and belongingness 06 ($\beta = -.17, p < .001$), hopelessness 07 and belongingness 07 ($\beta = -.16, p < .001$), reading 06-07 and math 06-07 ($\beta = .56, p < .001$), and reading 07-08 and math 07-08 ($\beta = .30, p < .001$), were all significant. A power analysis was conducted on the path model, and Preacher's and Coffman's (2006) web utility indicated a power of .81 for a test of close fit (MacCallum, Brown, & Sugawara, 1996).

Model 4r highlights several relationships among the study's variables. It shows how previous perceptions of hopelessness and belongingness affect later achievement, with hopelessness having a stronger relationship with achievement than belongingness. Also, hopelessness affects later reading achievement more than math achievement. Model 4r also highlights how achievement affects later perceptions of hopelessness and belongingness. This

holds true for reading achievement, but not for math achievement. In addition, previous perceptions of hopelessness and belongingness feed into later perceptions of hopelessness and belongingness, respectively, which shows the stability of these constructs over time. Also, previous belongingness significantly predicts later hopelessness, which highlights the need for supportive relationships that help students feel that they belong in school. Model 4r also illustrates the importance of attending school with regards to achievement scores. Students who show up to school are more likely to achieve than students who do not attend. Furthermore, attendance might explain some of the relationship between perceived hopelessness and reading achievement, meaning that hopeless students do not show up, and this causes them to achieve less. Model 4r shows how achievement is stable over time, meaning those who achieve in one year are more likely to achieve in the next year than students who achieve less.

Finally, hopelessness and belongingness are negatively correlated with one another in 2006 and 2007, respectively. There is not enough evidence to suggest that one type of perception causes the other type of perception, although the cross-effect from belongingness 06 → hopelessness 07 might support the notion that belongingness feeds into hopelessness, rather than hopelessness feeding into belongingness. The fact that this effect occurs over time, rather than at a single point in time, contributes to this idea.



Model 4r

Figure 4.10. Fitted Path Model of Hopelessness, Belongingness, Engagement, and Achievement.

Table 4.3
Standardized Path Coefficients of Fitted Model (N = 490)

Model path	β
Hopelessness 06 → Reading 06-07	-.18***
Hopelessness 06 → Math 06-07	-.14**
Belongingness 06 → Math 06-07	.10**
Hopelessness 06 → Hopelessness 07-08	.22***
Belongingness 06 → Belongingness 07-08	.26***
Reading 06-07 → Belongingness 07	.13**
Belongingness 06 → Hopelessness 07	-.09*
Reading 06-07 → Hopelessness 07	-.12**
Hopelessness 07 → Absences 07-08	.12**
Absences 07-08 → Reading 07-08	-.09*
Absences 07-08 → Math 07-08	-.14**
Hopelessness 07 → Reading 07-08	-.09*
Reading 06-07 → Reading 07-08	.42***
Math 06-07 → Math 07-08	.61***

* $p < .05$; ** $p < .01$; *** $p < .00$

Research Question 3. How does the path model of hopelessness, belongingness, engagement, and achievement affect stable versus transitioning students?

Multi-group analysis. It was hypothesized that the model will be statistically different for stable students than for transitioning students. Initial analysis involved the examination of correlations of both groups of students. This initial analysis is followed by the testing of the hypothesized path model using data from both groups of students.

Table 4.4 shows correlations and descriptive data for the stability group, while Table 4.5 displays correlations and descriptive data for the transitioning group. In comparing correlations from the stability and transitioning groups, hopelessness is significantly related to later hopelessness and belongingness is related to later belongingness and hopelessness. Hopelessness and belongingness are significantly related to later achievement for both groups, except hopelessness in 2007 is not significantly related to achievement in 07-08 for the transitioning group of students. Also, achievement is significantly related to later hopelessness and belongingness for both groups of students. Several key differences are evident in the correlations. The first is that perceived belongingness is significantly related to homework in only the transitioning groups of students, although that is the only significant relation that homework shares with any of the variables for both groups. Additionally, number of absences only has one significant relationship with any variable (homework 2007) for the stable group of students, while it has significant relationships with previous achievement, later achievement, and homework for the transitioning group of students.

Table 4.4

Correlations and sample descriptive data for key variables (stable group)

	1	2	3	4	5	6	7	8	9	10
1. Hopelessness 06	-									
2. Hopelessness 07	.254**	-								
3. Belongingness 06	-.174*	-.171*	-							
4. Belongingness 07	-.060	-.155*	.263**	-						
5. Reading 06-07	-.215**	-.238**	.100	.178*	-					
6. Math 06-07	-.143*	-.136	.169*	.197**	.599**	-				
7. Reading 07-08	-.235**	-.350**	.152*	.134	.480**	.501**	-			
8. Math 07-08	-.190**	-.161*	.192**	.202**	.470**	.724**	.553**	-		
9. Homework 07	.046	.053	.113	.022	-.073	-.024	-.037	.026	-	
10. Absences 07-08	.001	.154*	-.111	-.095	-.105	-.137	-.092	-.106	.009	-
<i>N</i>	203	203	203	203	203	203	203	203	203	203
<i>M</i>	1.59	1.11	3.95	4.01	37.68	41.75	33.86	38.00	2.80	21.08
<i>SD</i>	1.797	1.744	1.196	1.280	23.603	24.566	21.845	23.161	.846	17.804

**.Correlation is significant at the 0.01 level. (2-tailed).

*.Correlation is significant at the 0.05 level. (2-tailed).

Table 4.5

Correlations and sample descriptive data for key variables (transitioning group)

	1	2	3	4	5	6	7	8	9	10
1. Hopelessness 06	-									
2. Hopelessness 07	.240**	-								
3. Belongingness 06	-.161**	-.127*	-							
4. Belongingness 07	.066	-.226**	.278**	-						
5. Reading 06-07	-.154**	-.120*	.123*	.139*	-					
6. Math 06-07	-.158**	-.129*	.166**	.126*	.601**	-				
7. Reading 07-08	-.193**	-.074	.110	.106	.508**	.412**	-			
8. Math 07-08	-.161**	-.089	.108	.139*	.491**	.628**	.634**	-		
9. Homework 07	.005	-.034	.099	.176**	.035	.076	.050	.040	-	
10. Absences 07-08	.158**	.097	-.096	-.024	-.224**	-.229**	-.220**	-.326**	-.147*	-
<i>N</i>	287	287	287	287	287	287	287	287	287	287
<i>M</i>	1.65	1.38	4.00	3.93	37.74	44.90	34.79	39.79	2.91	24.13
<i>SD</i>	1.803	1.804	1.197	1.227	23.647	26.307	23.118	23.689	.927	19.333

**.Correlation is significant at the 0.01 level. (2-tailed).

*.Correlation is significant at the 0.05 level. (2-tailed).

A MANOVA was conducted using PASW Statistics 18 (SPSS Inc., 2009) to test for significant differences in means among all of the study's variables between the stability and transitioning groups. *Box's M* (63.615) was not significant, $p (.235) > \alpha (.05)$, indicating that there are no significant differences between the covariance matrices. *Wilk's Λ* = .975, $F(10, 479) = 1.216$, $p (.278) > \alpha (.05)$, multivariate $\eta_p^2 = .025$, was not significant, indicating that there are no significant differences between the transitioning group and stable group with respect to the means of the dependent variables. Furthermore, only 2.5% of the variance of the dependent variables can be attributed to the stability-grouping factor. These findings indicate that the transitioning group and the stability group both function similarly with respect to the study's variables, which does not support the hypothesis for research question 3.

The first step in creating the model for research question 3 was to use the hypothesized path model from research question 2 (Model 4q) to test each group of students separately (Lomax, 1983; Hancock & Mueller, 2012), to see if the model is justifiable for each group of students, respectively. The second step involved running both groups together in a multi-sample analysis to see if the model is justifiable for both groups simultaneously. Finally, analysis examined whether these differences were significantly different between both groups of students.

Individual analysis of groups. The first step in individual analysis was to run the full-hypothesized model using the data from both groups of students. For this purpose, new covariance matrices were created for the stability group and the transitioning group (See Appendix). After running the full model for both groups of students, the model paths were compared between groups (See Table 4.6). Most of the paths were similar for both groups of students; however, there were several key differences regarding the model's paths. First, there was a significant effect from hopelessness in 2006 to belongingness in 2007 in the transitioning

group that was not present in the stable group. This significant effect was also absent from the full sample. Another big difference was reading in 06-07 significantly predicted later hopelessness in the stable group, but not in the transitioning group. The effect was much lower for the transitioning group. An even bigger difference in effects was the significant effect that absences had on achievement for transitioning students. This effect was almost non-existent for stable students. Finally, hopelessness in 2007 significantly affected reading in 07-08 for stable students, but not for transitioning students.

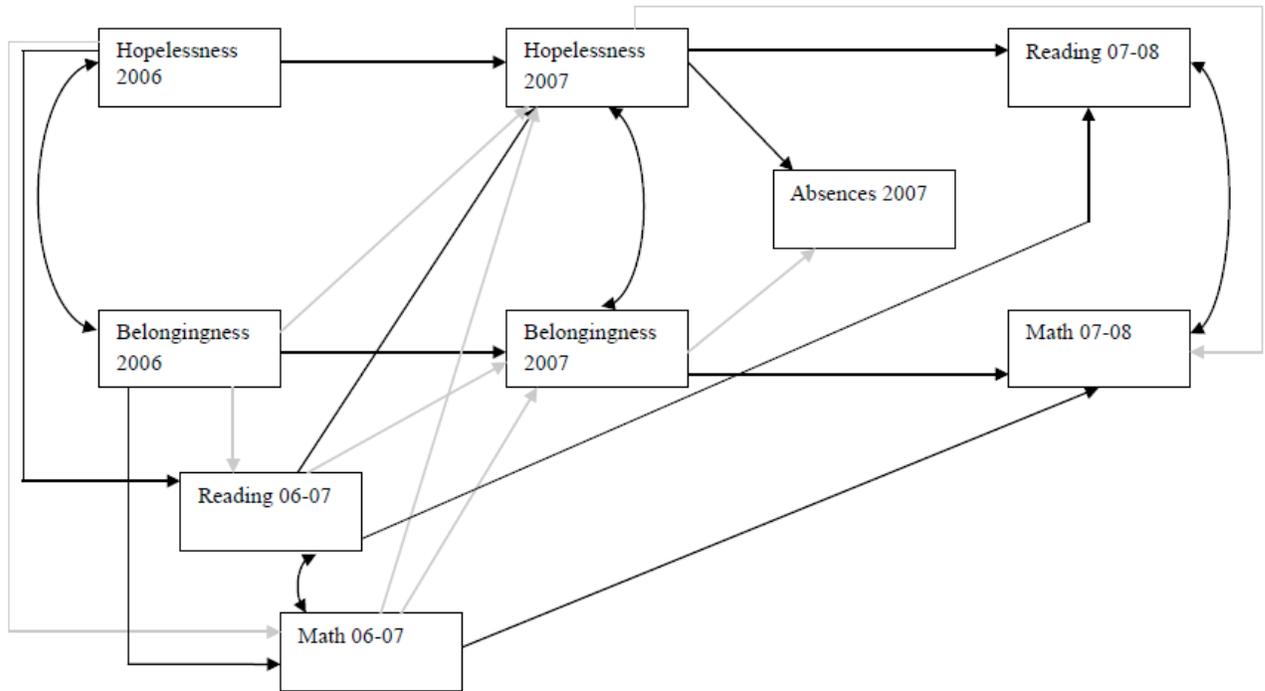
Regarding significant covariance for the stability group, the covariance between hopelessness 06 and belongingness 06 ($\beta = -.17, p < .05$), reading 06-07 and math 06-07 ($\beta = .60, p < .001$), and reading 07-08 and math 07-08 ($\beta = .40, p < .001$), were all significant. The covariance between hopelessness 07 and belongingness 07 ($\beta = -.15$) was not significant, although it was not much lower than the significant negative covariance between these variables in the previous year. For the transitioning group, the covariance between hopelessness 06 and belongingness 06 ($\beta = -.16, p < .05$), hopelessness 07 and belongingness 07 ($\beta = -.23, p < .001$), reading 06-07 and math 06-07 ($\beta = .60, p < .001$), and reading 07-08 and math 07-08 ($\beta = .53, p < .001$), were all significant.

Table 4.6
Group Comparisons with Standardized Coefficients

Model path	Stable students	Transitioning students
Hopelessness 06 → Reading 06-07	-.20**	-.14*
Belongingness 06 → Reading 06-07	.06	.10
Hopelessness 06 → Math 06-07	-.12	-.14*
Belongingness 06 → Math 06-07	.15*	.14*
Hopelessness 06 → Hopelessness 07-08	.19**	.21***
Belongingness 06 → Belongingness 07-08	.24***	.28***
Reading 06-07 → Belongingness 07	.10	.10
Math 06-07 → Belongingness 07	.10	-.04
Belongingness 06 → Hopelessness 07	-.12	-.08
Hopelessness 06 → Belongingness 07	.02	.13**
Reading 06-07 → Hopelessness 07	-.20*	-.04
Math 06-07 → Hopelessness 07	.03	-.06
Hopelessness 07 → Absences 07-08	.14*	.10
Belongingness 07 → Absences 07-08	-.07	.00
Absences 07-08 → Reading 07-08	-.01	-.13*
Absences 07-08 → Math 07-08	.00	.22***
Hopelessness 07 → Reading 07-08	-.25***	.00
Belongingness 07 → Reading 07-08	.02	.05
Hopelessness 2007 → Math 07-08	-.07	.01
Belongingness 2007 → Math 07-08	.07	.08
Reading 06-07 → Reading 07-08	.40***	.42***
Math 06-07 → Math 07-08	.67***	.54***

* $p < .05$; ** $p < .01$; *** $p < .001$

The initial path analysis with the stable group data indicated poor fit using the full-hypothesized model as a starting point, $\chi^2(10) = 30.22, p < .05; \chi^2/df = 3.022; CFI = .96; TLI = .85; RMSEA = 0.101$. The same process that was used for the total sample ($N = 490$) was used to fit the stable group model. The model paths, absences 07-08 \rightarrow reading 07-08, absences 07-08 \rightarrow math 07-08, hopelessness 06 \rightarrow belongingness 07, and belongingness 07 \rightarrow reading 07-08, which were not significant at $p < .05$, were deleted from the model, sequentially, until an acceptable fit was found. The model with the deleted paths had adequate fit, $\chi^2(14) = 30.57, p < .05; \chi^2/df = 2.18; CFI = .97; TLI = .91; RMSEA = 0.077$, and resulted in $\Delta\chi^2 = .35, \Delta df = 4$, which did not indicate a significant difference in chi-square, although it did provide a better fit to the data. Model 4s (in Figure 4.11) represents the fitted path model for the stable group of students. Standardized path coefficients are in Table 4.7. The covariance between hopelessness 06 and belongingness 06 ($\beta = -.17, p < .05$), reading 06-07 and math 06-07 ($\beta = .56, p < .001$), and reading 07-08 and math 07-08 ($\beta = .18, p < .001$), were all significant. The covariance between hopelessness 07 and belongingness 07 ($\beta = -.08$) was not significant.



Model 4s

Figure 4.11. Fitted Path Model for Stable Students. Note. Paths that are not significant at $p < .05$ are gray.

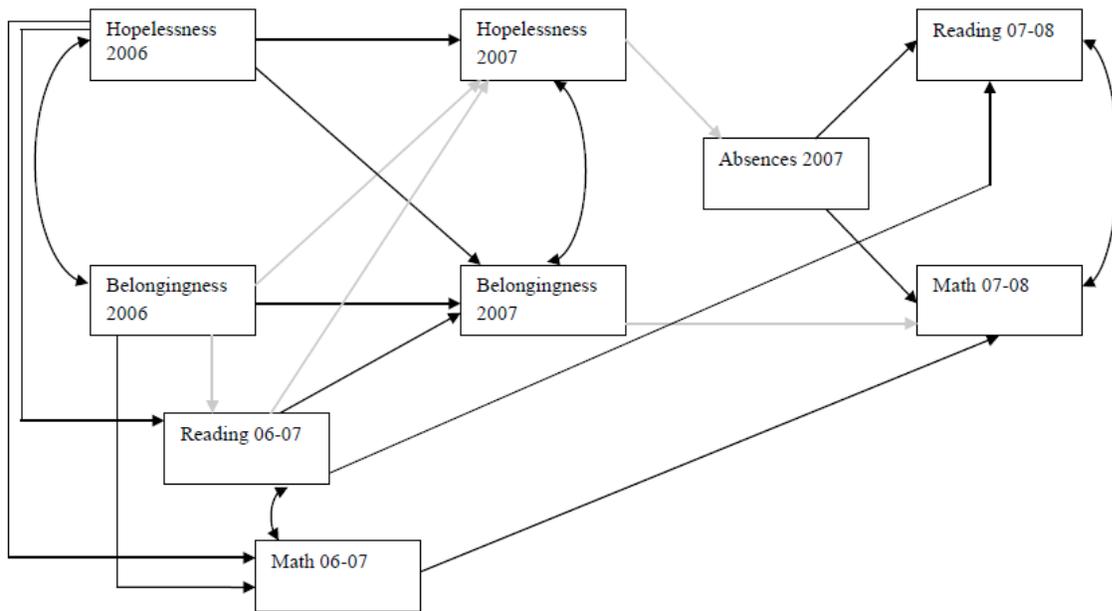
Table 4.7
Standardized Path Coefficients for Fitted Stability Model (n = 203)

Model path	β
Hopelessness 06 → Reading 06-07	-.20**
Belongingness 06 → Reading 06-07	.06
Hopelessness 06 → Math 06-07	-.12
Belongingness 06 → Math 06-07	.15*
Hopelessness 06 → Hopelessness 07-08	.19**
Belongingness 06 → Belongingness 07-08	.24***
Reading 06-07 → Belongingness 07	.09
Math 06-07 → Belongingness 07	.10
Belongingness 06 → Hopelessness 07	-.12
Reading 06-07 → Hopelessness 07	-.20*
Math 06-07 → Hopelessness 07	-.03
Hopelessness 07 → Absences 07-08	.14*
Belongingness 07 → Absences 07-08	-.07
Hopelessness 07 → Reading 07-08	-.26***
Hopelessness 07 → Math 07-08	-.07
Belongingness 07 → Math 07-08	.06
Reading 06-07 → Reading 07-08	.40***
Math 06-07 → Math 07-08	.67***

* $p < .05$; ** $p < .01$; *** $p < .001$

Initial analysis with the transitioning group resulted in a poor fit, $\chi^2(10) = 42.23, p < .05$; $\chi^2/df = 4.22$; $CFI = .95$; $TLI = .83$; $RMSEA = .107$. The same process used for fitting the stable group was used to fit the path model for the transitioning group. The following non-significant paths, $p < .05$, belongingness 07 → absences 07-08, hopelessness 07 → reading 07-08, hopelessness 07 → math 07-08, math 06-07 → hopelessness 07, math 06-07 →

belongingness 07, and belongingness 07 \rightarrow reading 07-08 were sequentially deleted from the model until an acceptable fit was found. The final model indicated an adequate fit to the data, $\chi^2(16) = 43.83, p < .05; \chi^2/df = 2.74; CFI = .96; TLI = .91; RMSEA = .078$, and resulted in $\Delta \chi^2 = 1.6, \Delta df = 6$, which did not indicate a significant difference in chi-square, although it did provide a better fit to the data. The fitted model for transitioning students is presented as Model 4t (in Figure 4.12), and the standardized coefficients are in Table 4.8. For transitioning group, the covariance between hopelessness 06 and belongingness 06 ($\beta = -.16, p < .05$), hopelessness 07 and belongingness 07 ($\beta = -.23, p < .001$), reading 06-07 and math 06-07 ($\beta = .60, p < .001$), and reading 07-08 and math 07-08 ($\beta = .53, p < .001$), were all significant.



Model 4t

Figure 4.12. Fitted Path Model for Transitioning Students. Note. Paths that are not significant at $p < .05$ are gray

Table 4.8
Standardized Path Coefficients for Fitted Transitioning Model (n = 287)

Model path	β
Hopelessness 06 → Reading 06-07	-.14*
Belongingness 06 → Reading 06-07	.10
Hopelessness 06 → Math 06-07	-.14*
Belongingness 06 → Math 06-07	.14*
Hopelessness 06 → Hopelessness 07-08	.22***
Belongingness 06 → Belongingness 07-08	.28***
Reading 06-07 → Belongingness 07	.12*
Belongingness 06 → Hopelessness 07	-.08
Hopelessness 06 → Belongingness 07	.13*
Reading 06-07 → Hopelessness 07	-.08
Hopelessness 07 → Absences 07-08	.10
Absences 07-08 → Reading 07-08	-.13*
Absences 07-08 → Math 07-08	-.22***
Belongingness 2007 → Math 07-08	.05
Reading 06-07 → Reading 07-08	.42***
Math 06-07 → Math 07-08	.55***

* $p < .05$; ** $p < .01$; *** $p < .001$

A power analysis for test of close fit was conducted for both groups in individual analysis, and indicated a power of .37 for the stability group and .54 for the transitioning group. This indicates why the following simultaneous analysis is important, since the power is much greater when using the full sample of $N = 490$.

Simultaneous analysis. This analysis involved inputting data from both groups at the same time in LISREL 8.8 for Windows (Joreskog & Sorbum, 2006), and running a single program with both groups' covariance matrices. To analyze both groups simultaneously, all parameters in the model were first constrained to be equal between the stable group and

transitioning group. This resulted in a good fitting model, $\chi^2(52) = 116.32, p < .05; \chi^2/df = 2.24; CFI = .95; TLI = .93 RMSEA = 0.071$, and non-significant chi-square value. This indicated that the theoretical model fit both groups of students well, at the same time. Next, analysis was run, allowing all parameters to be freely estimated. This resulted in a chi-square difference of $\Delta \chi^2 = 31.91, \Delta df = 25$, which was not significantly different from the constrained model. Another model was run with equal error variances, but allowing paths to be freely estimated. This resulted in a chi-square difference of $\Delta \chi^2 = 26.45, \Delta df = 22$, which was not significantly different from the constrained model. A third alternative model was run with equal path estimates, but allowing error variances to differ. This resulted in a chi-square difference of $\Delta \chi^2 = 4.49, \Delta df = 3$, which was not significantly different from the constrained model. This means that both groups of students fit the hypothesized model equally well with respect to the error variances and overall model paths. Next, analysis tested for significant differences in individual model paths.

As suggested by Hancock and Mueller (2012), each individual path in the model was allowed to differ, one at a time, each time reporting the difference in chi-square to test for significant differences between models. The model was found to have significant differences from the constrained model with respect to the path from hopelessness 2007 \rightarrow reading 07-08, $\Delta \chi^2 = (116.32 - 109.83 = 6.49, df = 52 - 51 = 1, p < .05)$, and from absences 07-08 \rightarrow math 07-08, $\Delta \chi^2 = (116.32 - 111.82 = 4.5, df = 52 - 51 = 1, p < .05)$. These findings are consistent with the path differences in Table 4.5, since these 2 paths differed largely between stable students and transitioning students. Using the results from Table 4.6 and the results from this section, it is clear that the significant effect from hopelessness 2007 \rightarrow reading 07-08 for stable students is significantly different than this path for transitioning students. It is also clear that the significant

effect from absences 07-08 → math 07-08 for transitioning students is significantly different than this same path for stable students.

Taking the preceding results from multi-sample analysis into account, the hypothesis for research question 3 is partially supported through the significant differences between the two significant paths in the model when tested using both groups of students. The hypothesis is not fully supported, owing to the fact that the total model parameters do not significantly differ between each group's respective covariance matrix structures.

Summary

A path model of hopelessness, belongingness, engagement, and achievement was created, by testing a theoretical model to see how well it fit the data for the total sample of students. This theoretical model was also examined for group differences using groups of stable students and transitioning students. In constructing the full theoretical model, individual pieces of the model were tested to first see how hopelessness and belongingness interacted with two forms of engagement, and secondly, to examine if any cross-directional effects existed across time, from 2006 to 2007. Hopelessness significantly affected absences, while belongingness did not. Belongingness significantly affect hours doing homework, while hopelessness did not. Additionally, previous belongingness significantly affected later hopelessness, but previous hopelessness did not significantly affect later belongingness. Additionally, the hopelessness and belongingness stability paths were significant between 2006 and 2007. Also, there was a significant negative covariance between hopelessness and belongingness in 2006 and 2007.

Tests for direct effects between hopelessness and achievement and belongingness and achievement were conducted for 2006 and 2007 data, and both variables significantly affected achievement. Also, analysis was conducted to see how achievement affected these variables at a

later time, and only reading achievement had a significant effect on later hopelessness.

Additionally, reading achievement significantly affects later reading achievement and math achievement significantly affects later math achievement.

Individual forms of engagement, absences and hours doing homework were tested to see how it affected achievement, and only absences had a significant effect on achievement.

Homework was dropped from subsequent analysis. Tests for mediation, from hopelessness and belongingness to achievement through engagement, as measured by absences, were conducted and absences was found to partially mediate the relationship between hopelessness and reading and between hopelessness and math. Absences did not mediate the relationship between belongingness and achievement.

Tests for group differences between stable students and transitioning students were conducted. Results highlighted that both groups were very similar with respect to the study's variables, and there were no significant differences between the transitioning group's and stability group's covariance matrices. With respect to the path model, no significant differences existed regarding the overall parameters; however, there were significant differences between groups concerning two model paths, namely the path from hopelessness 2007 to achievement 07-08 and the path from absences 07-08 to math 07-08.

CHAPTER 5

DISCUSSION AND CONCLUSION

This final chapter reviews the problem statement and methodology, and then discusses the findings from Chapter 4 and the implications drawn from these findings. There is a brief review of the research questions, which precede the findings. Following the discussion of results, this chapter discusses limitations and delimitations of the study before concluding with future research directions.

Problem Statement

One of the biggest problems facing students is the perceived lack of belonging in the classroom community, and these perceptions negatively affect engagement, which is one of the most important issues for students and educators (Newmann, 1981; Finn, 1989; Newmann, 1992). Previous research has shown relationships between belongingness and hopelessness with academic engagement and achievement (Anderman, 2002; Hill & Werner, 2006; Pittman's and Richmond, 2007; Van Ryzin, 2009; Goodenow & Grady, 1993; Furrer & Skinner, 2003; Furrer & Skinner, 2003; LeCroy & Krysik, 2008; Au, Watkins, Hattie, and Alexander, 2009; Buric & Soric, 2012; Carolan & Chesky, 2012; Nasir, Jones, & McLaughlin, 2011; Anderman, 2003; Johnson, Crosnoe, & Elder, 2001), but there is little research that examines all of these variables together. Some of the literature has shown how perceptions of belongingness are related to lower levels of hopelessness in students (Bolland, Lian, & Formichella, 2005). Additionally, research has demonstrated significant relationships between hope, belongingness, and

engagement, but not between hopelessness, belongingness, and engagement (Van Ryzin, Gravely, & Roseth, 2009; Van Ryzin, 2011).

This study also adds to the literature with respect to the populations being studied. This study focuses on mainly urban, low SES, African-American students, while previous similar studies focused on rural, middle-class, and predominantly Caucasian students. Finally, measurement differences exist among this study and previous similar studies.

Review of Methodology

This study utilized Mobile Youth Survey (MYS) data, as a secondary data source, in order to examine the relationship among hopelessness, belongingness, engagement, and academic achievement. The MYS is a longitudinal study involving annual data collection within impoverished urban neighborhoods in Mobile, Alabama. Participants were 490 African-American students, ages 10 – 14 years old, of which 51% were male and 49% were female. This study used two consecutive waves of MYS data (2006 and 2007) with school attendance and achievement records from the 2007-2008 school year. The MYS instruments included in the analysis were a six-item hopelessness scale, adapted from the Hopelessness Scale for Children (Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983), an eight-item belongingness scale (reduced to 5 positively worded items scale), adapted from the Psychological Sense of School Membership survey (Goodenow, 1993), and a single item regarding the number of hours of homework the individual completed in a week. School attendance records were used to measure number of absences in the school year, while SAT-10 reading and math subtest percentile ranks were used to measure achievement.

Summary of Analysis

This study used a structural equation-modeling framework for conducting path analysis using the variables of interest. Initial descriptive analysis was run using PASW Statistics 18 (SPSS Inc., 2009) to find demographic frequencies, means, standard deviations, Pearson correlation coefficients, and to construct the covariance matrices that were used in programming the path models. LISREL 8.8 for Windows (Joreskog & Sorbum, 2006), structural equation modeling software was used to test the conformity of MYS data to the proposed models. Confirmatory factor analysis was conducted to show that the measured variables demonstrated a good fit to the observed constructs of hopelessness and belongingness. This established validity of the scales, which were used in the main analyses. The path analysis was confirmatory in nature, since the goal was to fit the theoretical model, which was based on the research literature, to the sample data. The analyses was also exploratory in nature, meaning that model generation took place through modification of the theoretical models in order to achieve a better fit to the data, as indicated by select fit indices. The exploratory nature of the analysis remained within the scope of the literature.

Discussion

To review the scope of this study, this research sought to answer the following research questions: (1a) what is the relationship among hopelessness, belongingness, and engagement? (1b) Do hopelessness and belongingness in one year predict hopelessness and belongingness in the subsequent year? (2a) How do hopelessness, belongingness, and engagement affect achievement? (2b) How does achievement affect later hopelessness, belongingness, and achievement? (2c) Does Engagement mediate the relationship between hopelessness and achievement, and belongingness and achievement? (3) How does the path model of

hopelessness, belongingness, engagement, and achievement affect stable versus transitioning students?

The results from research questions 1 and 2 contributed to the development of the full model of belongingness, hopelessness, engagement, and achievement. Then, the full-hypothesized path model (Model 4q) was used to test for differences between stable students and transitioning students. In answering research question 1a, both hopelessness and belongingness were important for engagement, but for different forms of engagement. Students who perceive hopelessness attend school less than their less hopeless counterparts. This supports previous findings on hopelessness and engagement in school (Au, Watkins, Hattie, and Alexander, 2009; Buric & Soric, 2012). Students who perceive that they belong in school are more engaged with respect to hours doing homework than those students who feel that they do not belong in school. Spending time doing homework is a positive form of behavioral academic engagement, and this finding supports the previous research concerning belongingness and engagement in school. It is interesting, according to this study's findings, that students experiencing hopelessness attend school less, although those students with lower senses of belonging do not significantly attend school less. However, there was a negative relationship between belongingness and absences, which supports the literature regarding these variables (Connell & Wellborn, 1991; Goodenow, 1993; Goodenow & Grady, 1993; Osterman, 2000; Fredricks, Blumenfeld, & Paris, 2004). On the other hand, students experiencing belongingness complete more homework than those students experiencing less belongingness, but students experiencing hopelessness do not necessarily complete less homework than those students who experience less hopelessness. There was, however, a negative relationship between hopelessness and time spent doing

homework, which supports the literature on these variables, even though this relationship was not a significant one (Au, Watkins, Hattie, & Alexander, 2009; Buric & Soric, 2012).

Another important note regarding the first piece of the path model was the significant negative covariance between belongingness and hopelessness, which was expected from the review of literature (Pharris, Resnick, & Blum, 1997; Bolland, Lian, & Formichella, 2005). The aforementioned negative and significant covariance was replicated using both 2006 and 2007 MYS data, which shows how these two variables consistently produce the same type of relationship over time. Those students who feel that they do not belong experience more hopelessness than students who feel that they do belong, although it is unclear whether a sense of belonging in school creates less hopeless students, or whether experiencing hopelessness creates a feeling of not belonging in school. This is why research question 1b was important. It allowed the examination of directionality over time between these two variables.

In answering research question 1b, results indicated that belongingness in 2006 significantly predicted hopelessness in 2007, and significantly predicted belongingness in 2007. Therefore, the results support the notion that previous perceptions of belongingness affect later levels of hopelessness. Considering the temporal nature of this effect, there is evidence that hopelessness might be caused by perceptions of belongingness; although there is not enough evidence in the present study to fully support the notion of causality. Hopelessness in 2006 did not significantly predict belongingness in 2007, but did significantly predict hopelessness in 2007. Also, those students who are hopeless during one year are more likely to be hopeless in the following year. Additionally, students who perceive belongingness in one year are more likely to perceive belongingness in the following year. This being the case, the negative outcomes associated with hopelessness are likely to follow hopeless individuals, while the

positive outcomes associated with belongingness are also likely to follow the individuals who belong. These feelings of belongingness might help to keep students from becoming hopeless. This has important educational implications that will be discussed later.

The next piece of the path model involved the addition of achievement to the model. In answering research question 2a, results indicated that absences significantly and negatively affected reading and math scores; while time spent doing homework did not significantly affect reading and math scores. The fact that number of absences negatively affected reading and math scores supports previous research findings. It also makes sense, since students are more likely to learn and achieve if they actually show up to school. The lack of a significant relationship between time spent on homework and reading and math scores does not confirm previous research concerning behavioral engagement and achievement, e.g. (Cooper, 1989), although there was a positive relationship among these variables, which was expected according to the literature. Following this portion of analysis the decision was made to exclude the variable of time doing homework from any further analysis. This decision was made owing to the fact that time doing homework did not have a significant relationship with achievement. Achievement is a key component of the theoretical model, and is ultimately what educational stakeholders are seeking from this type of research. Since attendance did have a significant relationship with achievement, it made theoretical and practical sense to leave it in the model for subsequent analyses.

Analysis was also conducted to test for direct effects of hopelessness and belongingness on reading and math scores (in 2006 and 2007), direct effects of achievement on later perceptions of hopelessness and belongingness (research question 2b), and to test for mediation effects using absences as the mediator (research question 2c), since previous studies indicated

relationships between these variables and achievement (LeCroy & Krysik, 2008; Buric & Soric, 2012; Carolan & Chesky, 2012). Both hopelessness and belongingness had significant direct effects on achievement, which supports the literature, and highlights the need for focusing on these variables in attempts to promote achievement in schools. In testing for direct effects from achievement to hopelessness, reading scores were significantly related to later hopelessness. Neither reading scores nor math scores were significantly related to later perceptions of belongingness. This supports the idea that achievement feeds into feelings of hopelessness, and hopelessness feeds into achievement. There is not enough evidence in the current study, however, to suggest a causal model of these variables.

In addition to direct effects, partial mediation existed between hopelessness and achievement, which supported the literature. No mediation was found between belongingness and achievement. Theoretically, it makes sense that students who are hopeless achieve less, and this study provides evidence that absenteeism might be one potential medium, through which these perceptions of hopelessness travel. It also makes theoretical sense that students who belong achieve more, but it is not clear how these perceptions produce more achievement. More research is needed to understand why students who belong more achieve more than those who belong less.

By conducting the analyses that focused on the individual components of the model, it allowed the development of the full path model. This final model illustrates the continuity of hopelessness and belongingness over time, with hopelessness ultimately affecting how much students attend school. Also, students who belong, are less hopeless later in time. Although there is not a direct relationship between belongingness and attendance, the model reveals how belongingness might affect attendance through its significant and negative relationship with

hopelessness. Finally, the model illustrates direct relationships between hopelessness and achievement, belongingness and achievement, reading scores and later hopelessness, and absences and achievement. Hopelessness also indirectly affects achievement through absences.

The final hypothesized path model (Model 4q) was used to test for differences between stable students and transitioning students. The literature supports the notion that transitioning students experience negative academic problems at greater rates than stable students (Felner, Primavera, & Cauce, 1981; Blyth, Simmons, Carlton-Ford, 1983; Barone, Aguirre-Deandreis, & Trickett, 1991; Newman, Lohman, Newman, Myers, & Smith, 2000). Also, certain factors, including belongingness, may ease the adjustment period for transitioning students (Newman, Lohman, Newman, Myers, & Smith, 2000; Anderman, 1999). Initial analyses indicated that there were no significant differences between the stability group and transitioning group with respect to variable means and covariance matrices, suggesting that both groups of students experienced belongingness and hopelessness at the same rate, and engaged and achieved at similar levels. This does not support some of the previous literature on transitioning students, which suggests transitioning students experience greater academic hardships than stable students do.

Both groups were tested individually before being tested together to look for differences in model functioning. In comparing model paths between groups several key differences were evident. In looking at achievement, hopelessness and belongingness in 2006 affected later achievement scores for both groups of students. In 2007 only hopelessness significantly affected later achievement scores for stable students. It is unclear why stable students are more affected than transitioning students with regards to the effect from hopelessness to achievement. In looking at previous achievement affecting later hopelessness and belongingness, only previous

reading to later hopelessness was significant, and this was only significant for the stable group. Future research could more closely examine these differences.

Direct effects on achievement were not significant for the transitioning group. However, absences significantly affected achievement only for the transitioning group of students, and this effect was almost non-existent for stable students. Greater levels of absenteeism have a more profound effect on the achievement of transitioning students. It could be that stable students and transitioning students miss school for different reasons, and these reasons, whatever they may be, are integral to these students' achievement. Transitioning students might be exposed to certain risk factors, to which stable students are not exposed, and this could be an explanation for the significant relationship between absenteeism and achievement. Further studies could look at this key difference more closely.

Another difference was the significant cross-lagged effect from hopelessness in 2006 to belongingness in 2007, meaning that hopelessness was significantly related to lower belongingness in the subsequent year for transitioning students, but not for stable students. This could be due to stable students' greater access to support mechanisms at school that ease the negative effects of hopelessness. Transitioning students might not have the same support mechanisms; therefore, they are more susceptible to the negative effects associated with perceptions of hopelessness.

Implications

Many students are withdrawn and experience a lack of integration within the school community (Newmann, 1981; Finn, 1989; Newmann, 1992). This lack of integration may cause personal and academic problems for these students. The findings from this study focusing on the variable of belongingness have critical implications related to this idea of integration. Students

who perceive belongingness feel that they belong and are valued members of the classroom community. Students who perceive belongingness experience less hopelessness. These students also achieve more than students who do not “fit in.” Although this study did not find that belongingness directly affects attendance rates, it did find that hopeless students attend school less. Belongingness may factor into levels of hopelessness, therefore indirectly affecting levels of attendance.

This study found significant directional paths from belongingness to hopelessness for the total sample of students. So, belongingness was a significant factor for students with respect to affecting their levels of hopelessness. Given what the literature and this study suggests regarding hopelessness and academics, i.e. it is related to lower levels of engagement and achievement, belongingness becomes a key variable in the prevention of this type of negative process.

This could mean that key people in the educational process, i.e. teachers, administrators, and policy makers, might want to consider ways of promoting belongingness in schools. As mentioned in Chapter 1, one of the goals of education should be to consider the entire picture of how students achieve, including the social context in helping students succeed. This means moving beyond the traditional curriculum and instructional methods and focusing more on the relationships within, and community aspect of, the classroom. Building a sense of community takes time and effort, and involves making sure all students believe that they belong.

How this takes place is another question. Teacher education programs might need to consider devoting more time to this subject while training teachers. Perhaps teacher development workshops for current teachers could start focusing more on the community aspect of the classroom. Another possible avenue for boosting perceived belongingness in students might be partnerships between institutions of higher education and local school systems. Whatever the

means may be, it is apparent that if students are to meet achievement standards, then the key players of education need to focus on everything that affects students' achievement, and not just the curriculum standards.

The findings concerning hopelessness also have important implications for educators. This study demonstrated how students who perceive hopelessness, or negative expectations for the future, attend school less than students who perceive lower levels of hopelessness. It makes sense that an individual without anything, which to look forward, and without any aspirations might blow off school, since school is typically regarded as a place that prepares students for their future. This, coupled with the finding that high levels of hopelessness is related to lower achievement, indicates a need for finding ways to lower levels of hopelessness in students.

Research has suggested that hopelessness is not structural in nature, meaning that interventions could prove effective in changing hopelessness levels (Bolland et al, 2001; Bolland, Lian, & Formichella, 2005). Such interventions could be facilitated through programs designed to lower the hopelessness of students. Another way of doing this might be to work on raising the levels of hope in students. Given the research on hope and its positive health and academic outcomes, this type of intervention makes sense. One way of doing this is through the use of lessons designed to help students set the right kinds of goals, and help them to think of ways around obstacles that might come up in reaching these goals. In the example of this study, obstacles might include dealing with a new school environment and unfamiliar faces. The obstacles might also include not feeling like a part of the classroom community. These programs should also find ways to help students keep going when they feel like giving up. By using this type of interventional approach, students may begin to see positive expectations toward the

future, thereby having higher levels of hope (Snyder, 1991) and lower levels of hopelessness, which could affect their attendance rates and achievement in a positive sense.

Concerning the impact attendance has on achievement for transitioning students, it makes sense that we should find ways to help students during the critical adjustment periods in school. As discussed earlier, it isn't entirely clear what risk factors enable absences to be related to lower achievement, but it needs to be examined since it has such a large and significant impact on achievement.

In summary, and in light of the previous research and current study, if we want students to be engaged and achieve, we need to focus on helping them belong and to see positive things in their future. In doing so, we should move beyond the traditional topics presented in teacher preparation programs and focus on the entire social process of education. This move could be facilitated through the expansion of the scope of teacher education programs and educational interventions designed to affect these variables of interest.

Limitations and Delimitations

Considering the nature of this study, there are several limitations and delimitations, which resulted. The limitations are discussed first, followed by the delimitations. This study used self-report measures to gather perceptions regarding the variables. One potential issue generated by the nature of these measures is error. It is the case that one's perceptions may not translate to the survey response sheets exactly as these perceptions exist within that said person. It could also be the case that individuals accidentally marked a response that was unintended. With respect to data entry after survey collection, mistakes could have been made, although steps were taken to help ensure that this did not occur.

Power issues, especially regarding the individual analysis of the stable group and transitioning group present another limitation. Using MacCallum, Brown, and Sugarawa's (1996) method for analyzing power for a close-fit hypothesis, the individual group models had less than desirable power. While the overall model had sufficient power, given a larger overall sample size, the models for the individual groups could have greater power, therefore, increasing the likelihood that group differences would be found.

Generalizability is an issue due to the specific population from which the data was collected. The target population was composed entirely of African-American adolescents in extremely impoverished urban neighborhoods. Extending findings to other populations could prove difficult. For example, the cultural differences between this study's population and a rural, Caucasian population could interfere with the attempt to draw similar inferences from this second population in replicated studies.

Furthermore, the dynamic nature of the variables being studied might prove hard to completely capture through the type of analysis used in this study, although the analysis is a good starting point for adding to the literature on the subject. Interviews were not conducted with the participants, and this could be a way for generating a more thorough understanding of the variables in this study.

A final limitation discussed here is the reduction in sample size that resulted from the testing of group differences. While the total sample size was good ($N = 490$), the size of the stability group ($n = 203$) and transitioning group ($n = 287$) was considerably less. Considering the nature of the study, i.e. using variables collected for a group of students over the course of two years and connecting this data with school records, these sample sizes are understandable, although a larger sample could prove more powerful.

The last point also poses a significant delimitation of the study, which is the limited study sample resulting from the incorporation of the aforementioned academic engagement measures. Since this study uses school records (attendance), the number of participants decreases from the total available number of MYS participants for any given year. By focusing on a single year of data, the number of participants would have been considerably more, although this would have sacrificed the key components of the study. It would not have been possible to test for effects over time, nor would it have been possible to examine the functioning of the theoretical model with respect to the stability and transitioning groups of students.

Relating to the previous delimitation was the choice to group transitioning students by including those students who moved within and between school years. This choice was made because of the limited number of students who moved within school years, and it would have limited the type of analysis that could have been conducted. There may, in fact, be group differences with respect to students who move in the middle of the school year vs. those students who move because they graduate to middle school. The students who graduate to middle school are likely to have friends that follow them, whereas the other type of transitioning student might be enrolling in a new school without a core group of friends accompanying her or him.

A final delimitation was the choice to study two years of data. A reason for this was that studying more years, and using this study's variables, would have severely limited the sample of students to where the desired analysis would not have been possible. However, looking at more years could provide more insight with regard to developmental trajectories of this study's variables.

Future Research

One future research direction is to understand additional school, neighborhood, and social factors that are susceptible to the effects of belongingness and hopelessness. This might include other forms of achievement or engagement, not examined in this study. It could also include other forms of school success or well being experienced by students in similar populations. Another future research possibility is to study how hopelessness affects certain risk factors, which affect engagement. This study suggests that hopelessness negatively affects students' rates of attendance in school, but other factors might be mediating the relationship between hopelessness and number of absences. Also, are these factors school related, or do they result from neighborhood or familial issues?

Another possibility for future research could be the examination of the aforementioned belongingness and hope interventions, to study the effectiveness of such efforts in schools, neighborhoods, and local communities. In order to gain support for the continued use of these interventions, it would be necessary to show how they are effective in promoting belongingness and hope, and reducing hopelessness in students. It would also be helpful if the use of these programs resulted in greater achievement of students.

As mentioned in the limitations section, the dynamic nature of the variables might better be understood through the use of mixed-methods research in which the perceptions of students could be collected through additional means. This could give researchers a more thorough understanding of these students and how this study's variables affect their performance in school.

Related to the last point is the nature of the belongingness variable. As discussed in the literature review, belongingness originates in the self, but is supported through school factors. Future research might be able to examine participants' measures of belongingness in different

environments (i.e. school, neighborhood, home) to look for correlations between belongingness in different contexts. This might shed some light on the nature of belongingness with respect to how it differs across contexts and groups of participants.

Finally, by looking at more than two years of data, it might be possible to examine belongingness and hopelessness to further our understanding of how these variables develop over multiple years. And, by using school achievement records and additional measures of engagement, it might be possible to see how students at different ages and grade levels develop with respect to the model of hopelessness, belongingness, engagement, and academic achievement.

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APPENDIX

Covariance matrix for key variables (N=490)

	1	2	3	4	5	6	7	8	9	10
1. Hopelessness 06	3.236									
2. Hopelessness 07	.790	3.177								
3. Belongingness 06	-.357	-.305	1.429							
4. Belongingness 07	.027	-.440	.404	1.559						
5. Reading 06-07	-7.615	-7.045	3.200	4.578	557.186					
6. Math 06-07	-6.950	-5.790	5.132	4.885	362.061	656.445				
7. Reading 07-08	-8.499	-7.269	3.430	3.279	264.668	258.410	509.926			
8. Math 07-08	-7.262	-4.809	4.002	4.793	266.943	400.270	318.936	550.584		
9. Homework 07	.036	.006	.113	.125	-.150	.957	.368	.768	.801	
10. Absences 07-08	3.287	4.141	-2.234	-1.280	-78.115	-90.486	-71.647	-104.153	-1.400	351.819

Covariance matrix for stability group (N=203)

	1	2	3	4	5	6	7	8	9	10
1. Hopelessness 06	3.230									
2. Hopelessness 07	.795	3.042								
3. Belongingness 06	-.375	-.356	1.430							
4. Belongingness 07	-.138	-.345	.403	1.639						
5. Reading 06-07	-9.123	-9.793	2.810	5.382	557.088					
6. Math 06-07	-6.298	-5.838	4.949	6.208	347.229	603.474				
7. Reading 07-08	-9.208	-13.348	3.966	3.736	247.499	269.054	477.202			
8. Math 07-08	-7.890	-6.509	5.313	5.978	256.977	411.853	279.580	536.421		
9. Homework 07	.070	.079	.115	.024	-1.460	-.496	-.678	.506	.716	
10. Absences 07-08	.048	4.783	-2.355	-2.160	-44.013	-59.925	-35.770	-43.748	.136	316.998

Covariance matrix for transitioning group (N=287)

	1	2	3	4	5	6	7	8	9	10
1. Hopelessness 06	3.251									
2. Hopelessness 07	.782	3.255								
3. Belongingness 06	-.347	-.275	1.433							
4. Belongingness 07	.145	-.499	.409	1.505						
5. Reading 06-07	-6.578	-5.135	3.486	4.027	559.202					
6. Math 06-07	-7.512	-6.121	5.215	4.072	373.736	692.032				
7. Reading 07-08	-8.050	-3.104	3.045	2.999	277.700	250.574	534.460			
8. Math 07-08	-6.888	-3.820	3.054	4.031	274.878	391.151	347.155	561.187		
9. Homework 07	.009	-.057	.110	.200	.773	1.841	1.065	.873	.859	
10. Absences 07-08	5.513	3.369	-2.219	-.562	-102.538	-116.379	-98.420	-149.444	-2.631	373.780

Covariance matrix for hopelessness and belongingness items (N=490)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. m84	.174													
2. m85	.069	.180												
3. m86	.083	.062	.137											
4. m87	.074	.083	.083	.151										
5. m88	.076	.079	.082	.077	.156									
6. m89	.055	.042	.056	.066	.054	.117								
7. z127	-.020	-.017	-.017	-.018	-.014	-.014	.129							
8. z129	.012	.017	-.002	.012	-.003	-.002	.007	.219						
9. z130	-.016	-.009	-.018	-.013	-.022	-.018	.025	.035	.173					
10. z131	-.008	-.009	-.007	-.009	.000	-.004	.030	.032	.032	.092				
11. z133	-.006	.000	-.011	-.010	.000	-.005	.031	.045	.048	.032	.132			
12. z126	-.024	-.017	-.022	-.030	-.021	-.029	.003	-.018	.012	-.002	.008	.189		
13. z128	-.022	-.024	-.028	-.021	-.020	-.029	.024	-.013	.012	.012	.005	.053	.161	
14. z132	-.022	-.009	-.031	-.019	-.022	-.021	.000	.013	.022	.006	.015	.035	.038	.131