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Examining Mediation and Moderation Effects of Academic Motivation on the Relationship Between Disciplinary Events and Academic Performance in Secondary School

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EXAMINING MEDIATION AND MODERATION EFFECTS OF ACADEMIC
MOTIVATION ON THE RELATIONSHIP BETWEEN DISCIPLINARY EVENTS
AND ACADEMIC PERFORMANCE IN SECONDARY SCHOOL

A Dissertation Presented

by

CYNTHIA L. SHUTTLETON

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

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College of Education
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DEDICATION

To my parents, Helen and Steven. Thank you for fostering my love of learning and for your unwavering support. Completing my dissertation and doctorate are such huge accomplishments for me – of which I owe undoubtedly to both of you.

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ABSTRACT

EXAMINING MEDIATION AND MODERATION EFFECTS OF ACADEMIC MOTIVATION ON THE RELATIONSHIP BETWEEN DISCIPLINARY EVENTS AND ACADEMIC PERFORMANCE IN SECONDARY SCHOOL

MAY 2019

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Academic motivation is a key factor in students' academic and behavioral success in school. Previous research has demonstrated strong relationships between disciplinary events and academic performance, as well as between academic performance and academic motivation. However, there is limited understanding of the relationship between academic motivation and disciplinary events, or how academic motivation, academic performance, and disciplinary events are related. The purpose of this study was to examine student self-ratings of their academic motivation in grades 9-12 in a public high school, and to investigate the associations and interactive relationships between these three variables. Participants ($N=78$) completed the Academic Resilience Scale School (Cassidy, 2016) and school records were accessed for data on disciplinary events and academic performance. Using linear regression, the relationships between disciplinary events and academic performance, academic motivation and academic performance, and disciplinary events and academic motivation were analyzed. It was shown that disciplinary events were significantly associated with lower ratings of

academic motivation and lower academic performance. Higher academic motivation was significantly associated with higher academic performance. Additionally, academic motivation was found to be a significant partial mediator on the relationship between disciplinary events and academic performance. Students who had disciplinary events, but reported high academic motivation, were found to have higher academic performance than students who reported lower academic motivation. Limitations of the study, implications for the field, and future directions will also be discussed.

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CHAPTER I

INTRODUCTION, BACKGROUND, AND PURPOSE

Overview

Academic motivation has often been associated with higher academic performance in educational research (Høigaard, Kovač, Øverby, & Haugen, 2015).

Academic motivation has been defined as an individual's belief in their ability to achieve and their interest in achieving academically associated goals (Cham, West, Hughes, & Im, 2014). Numerous positive outcomes such as higher academic performance, attendance rates, graduation rates, perceptions of school climate, and reduced problem behaviors have been linked to high academic motivation (Anderson, Hamilton, & Hattie, 2004; Høigaard et al., 2015; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013).

Despite the research showing clear positive outcomes associated with academic motivation, there is considerably less research available to understand how academic motivation interacts with other key factors that influence adolescent school experiences such as disciplinary events (e.g. office referrals, detentions, and suspensions; McCrystal, Percy, & Higgins, 2007). Preliminary research has begun to examine factors that may provide insight into how academic motivation relates to disciplinary events and academic performance separately (Høigaard et al., 2015; McCrystal et al., 2007). Although past data continuously shows that academic motivation and academic performance are positively related while academic performance and disciplinary events are negatively related, there is currently no known research examining the interactive relationships between all three key variables.

The present study added to the limited existing literature on the interaction between academic motivation, academic performance, and disciplinary events. More specifically, the current project examined if academic motivation can serve as either a mediating or moderating variable influencing the relationship between a student's disciplinary events and their academic performance in high school.

Motivation

Theories of Motivation

Motivation is most often considered through a social-cognitive perspective. Social-cognitive theory (SCT) is conceptualized as the psychosocial factors that influence an individual's knowledge acquisition (Bandura, 1991). Specifically, that an individual's social interactions, experiences, and environmental influences contribute to how they acquire and apply knowledge in their everyday lives (Bandura, 1991). SCT seeks to explain motivation through global concepts that can be applied in a variety of settings and is often used within educational research (Bandura, Dweck, Eccles, & Wigfield, 2002).

When considering motivation within an academic context, SCT fits well in the examination of adolescent students' academic motivation. SCT allows for the examination of many of the factors that have been previously shown to contribute to an individual's academic motivation such as academic performance and school climate (Bandura et al., 2002; Høigaard et al., 2015; Suárez-Álvarez, Fernández-Alonso, & Muñiz, 2014), and others that have not yet been explored such as disciplinary events (McCrystal et al., 2007). The present study examined such factors simultaneously to allow for a more complete picture of the role academic motivation plays in adolescent students' success in school.

Self-determination theory (SDT) is another theoretical approach to motivation. SDT consists of six mini-theories which seek to explain an explicit set of motivationally based phenomenon such as intrinsic and extrinsic motivation in specific situations (Ryan & Deci, 2017). Unlike SCT, SDT is primarily concerned with explaining an individual's motivation in specific situations through motivational concepts such as intrinsic and extrinsic motivation, and psychological health and well-being (Ryan & Deci, 2017). Additionally, SDT specifies that all motivated behaviors are mediated by intention (Ryan & Deci, 1994). Intention speaks to how much a behavior is self-determined versus coerced or forced (Ryan & Deci, 1985). Within educational research, SDT is used to examine students' motivation in specific content areas such as mathematics (Garon-Carrier et al., 2016). While studies utilizing SDT do examine overall motivation for individuals, often the focus is on individuals' level of autonomy (how self-determined versus coerced a behavior is), versus the social and environmental factors emphasized within SCT (Liu, Wang, & Ryan, 2016).

When considering motivation in an academic context, the specificity of SDT does not lend itself well to examining the overall academic motivation of students. The specificity of SDT in examining motivation is restricted to specific contexts such as performance in a singular class and does not necessarily consider the social and environmental factors that may have broader effects outside of that specific context (e.g. disciplinary events; Garon-Carrier et al., 2016). SCT provides the examination of psychosocial factors that may affect a student's academic motivation such as contact with school disciplinary systems (e.g. office referrals, detentions, suspensions), teacher-student relationships, school attachment, and school climate. While these factors may

contribute to an individual's level of autonomy, SCT seeks to explain motivation beyond just individual levels of autonomy and in terms of an ecological framework, which incorporates the bidirectional relationship between psychosocial factors and individual's motivation (Bandura et al., 2002; Bronfenbrenner, 1979; Høigaard et al., 2015).

Another theoretical approach to motivation is resilience theory. Resilience is defined as “a phenomenon or process reflecting positive adaptation despite experiences of adversity or trauma,” (Luthar, 2003, p. 6). For an individual to be resilient, they must have exposure to a significant adversity or threat (e.g. family illness or death of a family member) and achieve positive adaptation despite that threat or trauma (Luthar, 2003). Additionally, resilience theory has incorporated self-esteem as an essential component to individuals' resiliency (Miller & Daniel, 2007). Within the self-esteem literature, it is often posited that self-efficacy and self-esteem are not entirely independent. Instead, it is often viewed that self-esteem is a ‘valuative imprint on general self-efficacy on identity’ (Tafarodi & Swann, 2001, p.655). Namely, that self-esteem provides a positive or negative value to experiences of success and failure, that ultimately influences an individual's sense of agency, or self-efficacy (Tafarodi & Swann, 2001).

While resilience theory has been used in the conceptualization of interventions for students vulnerable to adverse life events (e.g. financial instability in the home, family illness, etc.), often the focus is positive adaptation to adverse or traumatic life events that occur outside of the school, rather than focus on in-school experiences (Miller & Daniel, 2007). Additionally, resilience-based interventions are often focused on improving individuals' view of self-competence within society (as opposed to just the school environment) versus more targeted skills such as academic performance. However, both

resilience theory and SCT consider improved academic performance as an outcome of improved positive adaptive skills or greater motivation (Miller & Daniel, 2007).

Additionally, though resilience theory views self-esteem and self-efficacy as intertwined, SCT views them as entirely separate constructs (Bandura, 1991). Within SCT, self-efficacy is an individual's belief of their ability to perform a specific task or skill (Bandura, 1991), whereas resilience theory views self-efficacy as an individual's sense of agency or competency more broadly (Tafarodi & Swann, 2001). In examining academic motivation, global self-efficacy as outlined by resilience theory is too broad because global self-efficacy seeks to understand adaptive skills within an individual's entire environment, versus just the school context (Miller & Daniel, 2007; Tafarodi & Swann, 2001). Utilizing the domain or activity specific definition of self-efficacy from Bandura's SCT (1991) provides a clearer definition of how self-efficacy contributes to individuals' overall academic motivation. Within SCT, self-efficacy speaks to an individual's perception of their ability to perform a specific task well (Cham et al., 2014). Although resilience theory overlaps with SCT in its approach, SCT provides a more targeted theoretical framework that allows for in depth analysis of academic motivation within the school environment (Bandura et al., 2002). A further rationale for this study's overall alignment with SCT, along with additional descriptions of SDT and resilience theory are included in chapter two.

Academic Motivation and Social-Cognitive Theory

Academic motivation specifically refers to students' personal beliefs of their academic ability and interest in achieving academically associated goals (Cham et al., 2014). Academic motivation is comprised of three main sub-components. First is an

individual's perception of their academic ability (self-efficacy). Second is that individual's demonstration of their academic ability (competence). Finally, the last component of academic motivation, are the short- and long-term academic goals that individuals set for themselves and work towards attaining (goal orientation; Bandura, 1991; Cham et al., 2014). These components interact with one another to influence an individual's overall academic motivation.

Students with high academic motivation perceive themselves as academically strong students and can demonstrate their academic skills, as well as work toward academic goals even when they encounter challenges or setbacks (Cham et al., 2014). Academic motivation has been linked to higher academic performance (Høigaard et al., 2015; Suárez-Álvarez et al., 2014). These components of academic motivation can be influenced by additional factors such as students' connectedness to school and teacher-student relationships (Anderson et al., 2004; Peguero & Bracy, 2015; Skinner, Wellborn, & Connell, 1990).

Conceptual Model of Academic Motivation for the Current Study

Within Bandura's (1991) SCT, academic motivation can be conceptualized as including self-efficacy, competence, and goal orientation in a multidirectional relationship. Self-efficacy, competence, and goal orientation interact with one another to influence an individual's overall academic motivation. While these components contribute to an individual's overall academic motivation, they might not do so equally. As will be discussed in further detail, student disciplinary events can be conceptualized as a failed demonstration of competence. Each instance that a student is disciplined, they have not demonstrated appropriate school behavior competently (Daly, Nicholls,

Aggarwal, & Sander, 2014). Repeated instances of discipline in school may directly contradict a student's perception of themselves as a successful student in school (Daly et al., 2014). Repeated disciplinary events (e.g. office referrals, detentions, and suspensions) indicate to a student that they are not competent in performing expected or appropriate in-school behaviors (Daly et al., 2014). Failed demonstrations of competence will in turn, affect an individual's self-efficacy, or their belief that they are a competent student in regard to their in-school behavior and will affect their likelihood to set short- and long-term academic or school-focused goals (Peguero & Bracy, 2015). Using multilevel analysis of data from the Educational Longitudinal Study of 2002 with 11,800 students, Peguero and Bracy (2015) examined the effects of school climate, order, and justice on student dropout rates. Of the variables examined, it was found that justice; defined as school discipline practices, was one of the strongest factors related to the likelihood of student dropout. Those most at-risk for dropout had the highest rates of discipline, demonstrating a lack of competence in demonstration of appropriate in-school behavior.

While each component of academic motivation may not necessarily contribute equally to an individual's academic motivation, they are essential components to understanding this broader construct. Similar to the broader social and environmental factors that may influence an individual's overall academic motivation, the components of self-efficacy, goal orientation, and competence do not exist in isolation. With this interconnectedness, the components of self-efficacy, goal orientation, and competence are affected by one another. For example, in Peguero and Bracy's (2015) study, students that were the most at-risk for school dropout also had the highest number of discipline incidences, which demonstrated they lacked the competence to be successful in school

and may have therefore also lacked academic motivation (and therefore, dropped out of school). Additionally, those students were less likely to view themselves as a member of the school community due to the social removal that occurs as a result of school discipline practices like detention or suspension (Peguero & Bracy, 2015). Here students not only failed to demonstrate their competence within the school environment, they also began to perceive themselves as academically unsuccessful students, which resulted in a higher risk for school dropout (Peguero & Bracy, 2015).

In addition to the model's alignment with Bandura's (1977) SCT, the multidirectional paths between each component also align with Bronfenbrenner's (1979) ecological model. Bronfenbrenner's (1979) ecological systems theory posits that individuals are affected by their surrounding environment with the first level (microsystem) having the most influence on an individual. The microsystem includes family, peers, and caregivers. A student's classroom teacher, school staff, and peers would reside within this microsystem and interactions with these individuals influence both how the student interacts with their environment and how their environment influences them (Bronfenbrenner, 1979). This contributes to the multidirectional nature of each component (self-efficacy, competence, and goal orientation) in this study's conceptual model of academic motivation as negative interactions with teachers (e.g. discipline for problem behavior), could result in failed demonstrations of competence, which can then negatively affect a student's self-efficacy and future likelihood to set academic goals. Subsequently, if a student has low self-efficacy regarding a specific academic task, they may be less likely to continue to work towards that task and subsequently demonstrate less competence (Anderson et al., 2004). In summary, this

study's conceptual model of academic motivation is comprised of three subconstructs; self-efficacy, competence, and goal orientation, which aligned with SCT (Bandura, 1977). Additionally, in alignment with Bronfenbrenner's (1979) ecological model, this study's conceptual model included a multidirectional relationship between each subconstruct to demonstrate that self-efficacy, competence, and goal orientation interact with one another to form an individual's overall academic motivation.

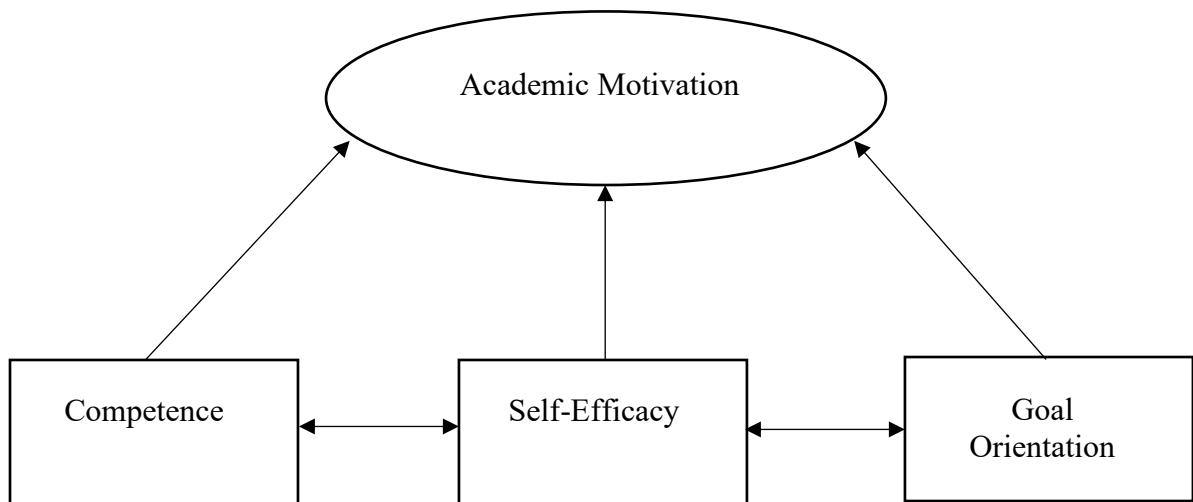


Figure 1.1. *Conceptual Model of Academic Motivation*

Descriptions of Key Terms

Self-Efficacy

Within a SCT framework of academic motivation, self-efficacy refers to students' perception of their ability to complete academic tasks well (Cham et al., 2014). Self-efficacy can be domain specific, so that students may have differing perceptions of their abilities in different academic subjects (Cham et al., 2014). However, self-efficacy can also refer to more global constructs such as overall academic ability (Cham et al., 2014; Cattelino, Morelli, Baicco, & Chirumbolo, in press). Students who believe that they possess the ability to complete an academic task successfully are more likely to engage in

that task (Bandura, 1991; Cham et al., 2014; Usher, Li, & Butz, 2018). Similarly, students who believe they do not possess the necessary skills are less likely to engage in those tasks and are less likely to display competence within that domain (Bandura, 1991; Cham et al., 2014).

Competence

The demonstration of a student's academic ability is a key component to a student's overall academic motivation (Cham et al., 2014). While self-efficacy involves interpersonal perceptions, competence is how a student demonstrates their skill in a specific domain to others. Demonstrations of failed competence have the potential to harm a student's self-efficacy related to the skill the student failed to demonstrate. Additionally, as a student's self-efficacy decreases, actual competence in a specific domain may decrease as well. Likewise, with successful demonstrations of competence, a student is more likely to have an improved self-efficacy and increased competence regarding that skill (Bandura, 1991; Muenks, Wigfield, & Eccles, 2018; Raufelder & Ringeisen, 2016).

Goal Orientation

The last component of academic motivation from a SCT framework is goal orientation. Goal orientation involves the setting of short- and long-term goals and working towards those goals (Cham et al., 2014). Goal orientation, self-efficacy, and competence are all interdependent and connected (Cham et al., 2014) Individuals that engage in goal-oriented behavior typically believe that they have the skills needed to achieve those goals and have successfully demonstrated those skills. Academic

motivation is the additive effect of self-efficacy, competence, and goal orientation of individuals within an academic context.

Motivation Terminology

Within the literature there is wide range of terminology used to refer to motivation. Commonly used terms include resilience (Cassidy, 2016), self-efficacy (Caraway, Tucker, Reinke, & Hall, 2003), self-concept (Chen, Yeh, Hwang, & Lin, 2013), and motivation (Klapp, 2017). While multiple terms have been used within motivation literature, often the varying, and at times conflicting terminology originates in the theoretical foundation of the research. While the majority of motivation research is theoretically aligned with Bandura's SCT (1977), terms such as resilience, can blur the lines between similar yet differing theoretical approaches such as SCT and SDT. Additionally, terms such as resilience have been used with narrower definitions that mirror a SCT perspective on motivation (Cassidy, 2016).

Cassidy's (2016) Academic Resilience Scale-30 (ARS-30) is one such example where resilience aligns with SCT (Bandura, 1991). Cassidy (2016) defines resilience in two parts. First as, "people's judgements of their capabilities to organize and execute courses of action required to attain designated types of performances," (Bandura, 1997, p.391). Second, as "behavioral responses to academic adversity, representing positive enabling factors such as a sense of mastery, belief that one's efforts can make a difference and effective approaches to learning" (Cassidy, 2016, p. 10). These definitions mirror those of self-efficacy, goal orientation, and competence, which are the components that comprise academic motivation within SCT.

Cassidy's (2016) ARS-30 measure was adopted for the current study.

Theoretically based in Bandura's (1977) SCT, resilience in the ARS-30 has been defined as the ability to persevere through academic difficulties to achieve academic goals (Cassidy, 2016). Unlike resilience theory which examines the effects of positive adaptive behaviors in the face of traumatic life events (Tafarodi & Swann, 2001), Cassidy's (2016) ARS-30 seeks to measure students' 'resilience' in the face of academic setbacks such as doing poorly on an assignment. As such, Cassidy's (2016) definition of resilience more appropriately aligned with the SCT conceptualization of motivation adopted within the current study (Bandura, 1977; Bronfenbrenner, 1979).

Research on Academic Motivation

Academic motivation refers to students' personal beliefs of their academic ability and interest in achieving academically associated goals (Cham et al., 2014). This has been linked to many positive school outcomes including improvements in academic achievement, attendance rates, perceptions of school climate, graduation rates, and reduced problem behaviors (Anderson et al., 2004; Høigaard et al., 2015; Thapa et al., 2013). These outcomes become especially important during adolescence as they have long-term effects on post-secondary options and life after high school (Jansen, Scherer, & Schroeders, 2015). Students with greater academic motivation are more likely to graduate from high school and successfully pursue long-term goals (e.g. a career in the sciences; Cham et al., 2014; Jansen et al., 2015).

In schools, higher levels of motivation have been shown to predict higher academic performance (Høigaard et al., 2015). Høigaard and colleagues' (2015) examined the effects of academic orientation on student levels of academic motivation

and academic performance with 482 ninth- and tenth-grade Norwegian students. The authors conducted mediation analyses to examine the effects of academic orientation on academic motivation, academic performance, and perceptions of school climate. In the mastery orientation condition, students were found to have higher ratings of academic motivation and had higher overall academic achievement than students in the performance orientation condition (Høigaard et al., 2015). Mastery orientation focused on the efforts that students attribute to their work versus results on measures of success such as exams (performance orientation). Additionally, the authors found that students in the mastery conditioned reported greater school attachment and exhibited fewer anxious behaviors such as test anxiety (Høigaard et al., 2015). Within a SCT framework, mastery orientation provides the opportunity for students to demonstrate their competence in academic tasks, while also providing the opportunity for teachers to support and encourage students' self-efficacy and goal orientation regarding those tasks through positive feedback (Bandura 1991; Høigaard et al., 2015).

Despite the numerous positive outcomes associated with academic motivation, there is a gap in the school psychology literature related to academic motivation. There is also a limited understanding of how to measure and target academic motivation within intervention and prevention practices. Specifically, the relationship between student disciplinary events and academic motivation has not been extensively explored. While the negative outcomes associated with school discipline such as lower academic performance have been demonstrated (Mizel et al., 2016; Skiba et al., 2013), how academic motivation potentially mediates or moderates the relationship between disciplinary events and academic performance is not well understood.

Even so, there is evidence to suggest that students' academic motivation can predict future disciplinary experiences (or lack thereof) in addition to academic achievement (Høigaard et al., 2015; Reyes, Brackett, Rivers, White, & Salovey, 2012; Way, Reddy, & Rhodes, 2007). A 6-year longitudinal study of 1,897 high school students showed that students with higher levels of motivation and achievement had a significantly lower likelihood for substance abuse and school misbehavior (Bryant, Schulenburg, O'Malley, Bachman, & Johnston, 2003). Bryant and colleagues (2003) also found that students who struggled in certain domains, such as engaging in problem behaviors in school, also struggled in other areas such as lower ratings in academic performance and academic motivation (Bryant et al., 2003). This implies that there is a negative relationship between problem behavior and academic performance (Bryant et al., 2003). However, it is still unclear whether student ratings of academic motivation may potentially mediate or moderate this relationship between behavior and academics.

Additionally, it has been shown that academic motivation changes as students progress through school (Anderson et al., 2004). Anderson and colleagues (2004) in a study of 206 12th grade students, found that students' level of academic motivation was strongly linked to student perceptions of classroom and school climate. Past research suggests that students' academic motivation decreases simultaneously with a decrease in positive perceptions of school climate and positive school attachment beginning in middle school and continuing in high school (Reyes et al., 2012; Thapa et al., 2013). This has been hypothesized to result from an environmental disconnect between the needs of adolescent students and the school environment that they interact with (Bronfenbrenner, 1979; Eccles & Midgley, 1989; Eccles, Midgley, & Wigfield, 1993; Osher & Kendziora,

2010). Student academic motivation becomes increasingly important during high school as students' academic performance and behavior in high school can have significant effects on future outcomes such as graduation, pursuit of higher education, and employment (Jansen et al., 2015). Additionally, understanding the relationship between academic motivation, academic performance, and disciplinary events could broaden the understanding of the adolescent experience in high school and inform school practices that support student success. Academic motivation is important for adolescents due to its strong relationship with academic performance and positive outcomes after high school (Chen et al., 2013; Høigaard et al., 2015; Jansen et al., 2015).

Academic Outcomes

Academic performance is typically used as the marker for student success or failure in school (Chen et al., 2013). Grades are one common way of measuring academic performance as they are subject specific and are measured over time (Chen et al., 2013). However, academic performance is only one facet of a student's school experience. Often, students who seem to have the ability to perform well academically, do not. A myriad of factors may contribute to this including behavioral challenges such as inattention and poor prosocial skills (Luiselli, Putnam, Handler, & Feinberg, 2005; Suárez-Álvarez, et al., 2014).

Past research on academic motivation and academic performance has demonstrated that students with high levels of academic motivation have higher academic performance (Chen et al., 2013). Additionally, students who perform well academically are found to be highly academically motivated (Skinner et al., 1990). This creates a chicken or the egg scenario, where it may seem unclear as to which variable is occurring

first. However, while there is evidence supporting both relationships, there is a consensus that academic motivation is more often the catalyst that is associated with higher academic performance (Cham et al., 2014; Chen et al., 2013). The components of academic motivation: self-efficacy, goal orientation, and competence are all necessary ingredients to students perceiving and demonstrating themselves as academically successful students who are able to achieve academically oriented goals such as completing high school (Cham et al., 2014). The rationale is that academic motivation, specifically, the perseverance in working towards academic goals despite challenges, is a key ingredient to students' academic success (Høigaard et al., 2015).

Academic Performance and Academic Motivation

Current research has demonstrated a positive relationship between students' academic performance and their academic motivation. Students who are highly motivated are more likely to have higher academic achievement (Høigaard et al., 2015; Suárez-Álvarez et al., 2014). Academic performance in high school has been linked to graduation rates, pursuit of higher education, and potential employment opportunities after high school (Jansen et al., 2015). Within this study's conceptual model of academic motivation, student's academic performance both influences and is influenced by academic motivation. Student's with lower academic performance are more likely to have lower self-efficacy with regard to their academic ability (Suárez-Álvarez et al., 2014). Those students may have had several negative academic experiences (e.g. failing an exam or a class), which were demonstrations of failed competence. Conversely, students who have successful demonstrations of competence, such as performing well on academic

tasks, are more likely to have higher self-efficacy and are more likely to engage in goal-oriented behavior in regard to their academics (Skinner et al., 1990).

Academic Performance and Disciplinary Events

Past literature has suggested a link between the rates of school discipline a student experiences and their overall academic performance. Students who are frequently disciplined often have lower academic achievement (Luiselli, Putnam, & Handler, 2001; Luiselli et al., 2005; Taylor, Davis-Kean, & Malanchuk, 2007). However, the relationship between academic performance and discipline is complex. Often students who struggle academically also exhibit problematic behaviors (Alberto & Troutman, 2012; Hawkins, Barnett, Morrison, & Musti-Rao, 2010). While it may have been previously thought that a student's academic and behavioral challenges were isolated from one another, they are often connected (Hawkins et al., 2010). Many students who exhibit problematic behaviors in the classroom do so to escape challenging academic demands (Schmidt, Shanholtzer, Mezhoudi, Scherbak, & Kahng, 2014). By engaging in problematic behaviors, the student may be removed from the classroom, or gain the attention of the teacher or peers in a way that disrupts the class and allows for further task avoidance (Alberto & Troutman, 2012; Schmidt et al., 2014). This results in another chicken or the egg debate, where it is difficult to discern if academic or behavioral challenges are the root cause of the problem. Students can either be exhibiting challenging behaviors as a symptom of underlying academic challenges or have academic challenges as a result of exhibiting problematic classroom behaviors (Luiselli et al., 2005).

This begins a vicious cycle where a student who is already struggling academically continues to get in trouble, which often results in removal from the

classroom. This can further exacerbate that student's academic challenges. Frequent removal from the classroom results in a lack of access to the general education curriculum (Petras, Masyn, Buckley, Ialongo, & Kellam, 2011). For a student who may have existing academic skill deficits, those deficits become larger and more difficult to overcome with increased time out of the classroom due to problematic behavior (Barth, Dunlap, Dane, Lochman, & Wells, 2004; Petras et al., 2011). The potentially widening academic deficits as a result of disciplinary events will negatively affect a student's academic performance, and potentially their academic motivation as well (Høigaard et al., 2015; Luiselli et al., 2001; 2005).

Frequent disciplinary events increase the likelihood that students will perceive themselves as socially rejected from the school community (Mikami, Schad, Teachman, Chango, & Allen, 2015; Peguero & Bracy, 2015; Reynolds, Lee, Turner, Bromhead, & Subasic, 2017). Within a social-cognitive approach, social rejection is a result of failed social competence (Bandura, 1991). Students who do not perceive themselves as competent in the school environment are less likely to view themselves as included in the broader school community. With decreasing competence, students are likely to perceive themselves as less able to meet academic and behavioral expectations, and subsequently may be likely to engage in the problematic behaviors.

Caraway and colleagues (2003) surveyed 206 high school (grades 9-12) students on their self-efficacy, goal orientation, and fear of failure in regard to school engagement in line with Bandura's (1977) SCT. While the authors did not examine competence explicitly, the variables studied, namely self-efficacy and goal orientation, indicated that students with greater academic self-efficacy demonstrated higher competence (e.g. grades

in school), and engaged in more goal-oriented behaviors (Caraway et al., 2003). Although the authors did not examine problematic behaviors specifically, lower perceptions of self-efficacy and goal orientation were indicative of less school engagement and poor academic performance (Caraway et al., 2003). Caraway and colleagues (2003) did not examine these variables in relation to frequency of disciplinary events, which within a SCT framework may affect a student's overall academic motivation.

While the negative relationship between disciplinary events and academic performance is largely understood (Barth et al., 2004; Petras et al., 2011), how a student's academic motivation alters that relationship is unclear. Highly motivated students tend to perform better academically (Taylor et al., 2007); however, it is unclear how academic motivation may be related to disciplinary events, and whether academic motivation potentially mediates or moderates the relationship between discipline and academic performance entirely. Within a SCT perspective of academic motivation, it is this study's hypothesis that academic motivation may lessen the negative affect that disciplinary events can have on students' academic performance and overall school success. However, there is not current research supporting this perspective. Examining these effects is important to understand how each of these variables may interact with one another in the school environment. This will allow for a more nuanced understanding of school discipline practices and their associated outcomes (McCrystal et al., 2007).

School Discipline

Discipline is often used in schools with the intention of correcting and preventing behavior infractions (Monahan, VanDerhei, Bechtold, & Cauffman, 2014). However, punitive disciplinary practices (e.g. detention, suspension) can have far more detrimental

effects on students than benefits (Monahan et al., 2014). Frequent disciplinary events are associated with negative academic outcomes, as well as an increased risk for negative life outcomes (Monahan et al., 2014). Students who are suspended or expelled from school for behavior infractions have been associated with an increased risk of poverty, incarceration, poor health, and poor employment prospects (American Psychological Association Zero Tolerance Task Force APAZTTF, 2008; Hirschfield, 2004; McCrystal et al., 2007; Monahan et al., 2014).

Time spent out of the classroom (e.g. sent to the principal's office) has been demonstrated to have negative effects of students' learning trajectories and overall academic achievement (McCrystal et al., 2007; Mitchell & Bradshaw, 2013; Morrison et al., 2001). Punitive disciplinary practices not only affect a student's future behavior in school, but also their academic motivation and overall performance (APAZTTF, 2008; Morrison et al., 2001). With discipline increasing the likelihood that students are missing instruction (Barth et al., 2004; Petras et al., 2011), it can become increasingly difficult for a student to perform at the same level as their peers. Over time, this deficit may become insurmountable for the student and result in a decrease in the student's motivation to do well in school or even go to school at all (Hirschfield, 2004; Monahan et al., 2014).

With evidence demonstrating the negative effects of frequent punitive discipline, it is apparent that current disciplinary practices in high schools can be more harmful than helpful to students (APAZTTF, 2008; Civil Rights Project, 2000; Mizel et al., 2016). Discipline practices such as office referrals, detentions, and suspensions are punitive practices that have been linked to numerous adverse school outcomes such as poor academic performance, drop out, and problem behaviors (McCrystal et al., 2007).

Further investigation of the relationship between current discipline practices and students' academic motivation may provide information to inform school discipline practices. Through understanding these relationships, schools may be better equipped to foster students' academic motivation in high schools where there are higher stakes regarding academic performance (Gregory et al., 2010; Raufelder, Jagenow, Drury, & Hoferichter, 2013; Raufelder, Scherber, & Wood, 2016).

A longitudinal study using school and individual-level data from the National Educational Longitudinal Study of 1988 found that students who perceive school discipline practices as fair and legitimate were rated as less disruptive by their teachers (Way, 2011). Additionally, schools with stricter policies often reported higher rates of disruptive behaviors within their classrooms (Way, 2011). Within a SCT framework, this could be interpreted as an example of how punitive discipline practices actually encourage instead of deter problem behavior. As students experience more disciplinary events; which are failed demonstrations of competence, those students are less likely to believe or have the self-efficacy in their ability to be successful in school. Similarly, students that perceive school discipline practices as fair and legitimate are more likely to have greater self-efficacy in their ability to be successful in school (through successful demonstrations of competence) than students who do not perceive school discipline practices to fair and legitimate. It is most likely that has been reinforced through either positive or negative interactions with their teachers and successes or failures in school (Caraway et al., 2003; Raufelder et al., 2013). Students who lack positive interactions with teachers or other positive school experiences are more likely to engage in disruptive behaviors and may perceive themselves as less competent in school (Way, 2011).

The present study examined just one of the many important remaining questions related to school discipline: the relationship between disciplinary events and academic motivation. There are several things that need to happen for students to excel academically in school. First, students need to be in the classroom receiving instruction. The more frequently a student experiences discipline that removes them from the classroom, the less likely they are to feel that school is a positive place and be motivated to succeed academically (McCrystal et al., 2007; Peguero & Bracy, 2015; Thapa et al., 2013). Consequently, more time spent out of the classroom due to behavior may also increase the likelihood that the student will struggle academically which then may have a negative effect on their academic motivation and academic performance over time. With consensus on the relationships between academic motivation and academic performance, and academic performance and discipline, the next step is to examine potential mediation and moderation effects between discipline and academic motivation. While prior studies have examined these variables in isolation (Høigaard et al., 2015; McCrystal et al., 2007), they do not occur in isolation in the school environment.

The Current Study

The aim of this study was to empirically examine the relationships between students' perceptions of their own academic motivation, the frequency of disciplinary events they experienced in school, and students' academic performance. The current study was designed to build on the research base in this area in four important ways.

First, this study examined the relationships between the frequency of student disciplinary events and students' ratings of their own academic motivation, and the relationship between disciplinary events and students' overall academic performance. It

was hypothesized that student ratings of academic motivation would be positively related to their academic performance. Based on findings in past literature, it was hypothesized that results would confirm previous findings in the literature that there is a positive relationship between academic motivation and academic performance (Høigaard et al., 2015). Next, it was hypothesized that student disciplinary events would be negatively associated with students' ratings of academic motivation. Considering the positive relationship between academic motivation and academic performance (Høigaard et al., 2015), and the negative relationship between disciplinary events and academic performance (McCrystal et al., 2007), it was hypothesized that academic motivation and disciplinary events would be negatively related. The specific research questions addressed included:

1. *To what extent, if any, are student disciplinary events related to student ratings of academic motivation?*
2. *To what extent, if any, are student ratings of academic motivation related to academic performance?*
3. *To what extent, if any, are student disciplinary events related to academic performance?*

Finally, academic motivation was examined as both a mediator and a moderator on the relationship between student disciplinary events and academic performance to answer the following questions:

4. *Does academic motivation partially mediate the relationship between the frequency of students' discipline events and their academic performance?*

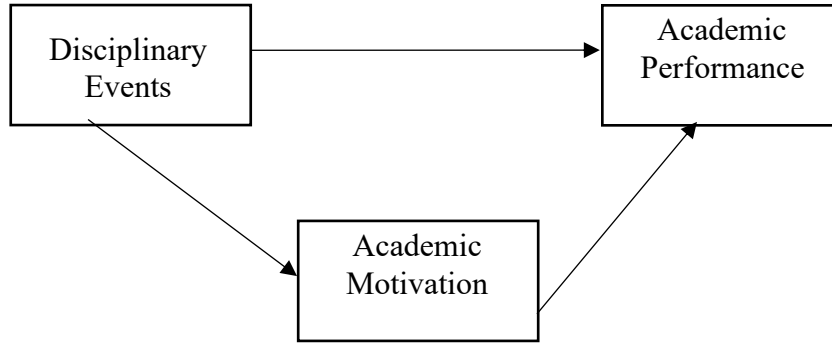


Figure 1.2. Conceptual model of Academic Motivation as a mediator on the direct relationship between Disciplinary Events and Academic Performance.

5. *Does academic motivation moderate the relationship between the frequency of student's disciplinary events and their academic performance?*

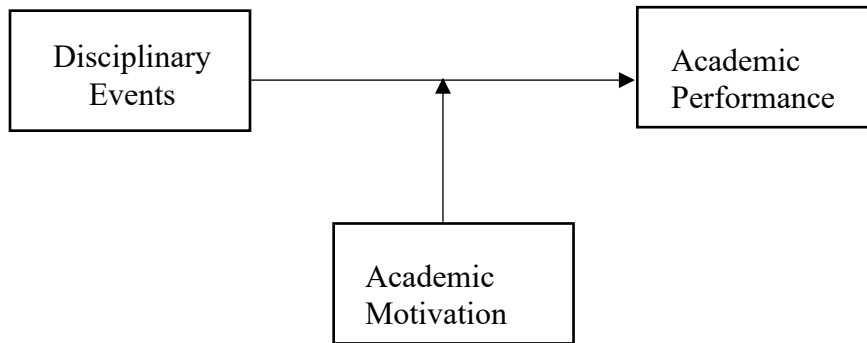


Figure 1.3. Conceptual model of Academic Motivation as a moderator on the direct relationship between Disciplinary Events and Academic Performance.

While there is literature indicating relationships between disciplinary events and academic performance, and between academic performance and academic motivation, it is unknown whether academic motivation alters these relationships (McCrystal et al., 2007; Mitchell & Bradshaw, 2013; Raufelder et al., 2013; Raufelder et al., 2016). It was hypothesized that academic motivation would partially mediate the direct relationship of disciplinary events on academic performance. It was also important to examine the potential moderation effects of academic motivation on the relationship between

disciplinary events and academic performance. It was hypothesized that students with higher levels of academic motivation would have stronger moderation effects than students with lower levels of academic motivation, indicating that the strength of the relationship between disciplinary events and academic performance would change depending on the degree to which academic motivation moderated the relationship between those two variables.

In conclusion, the current study aimed to understand the extent that academic motivation and disciplinary events are related to academic performance in high school students. A more detailed explanation of theoretical underpinnings and previous research informing this study is provided in the next chapter.

CHAPTER II

REVIEW OF THE LITERATURE

Motivation is a broad term that has been used to explain human behavior in a variety of contexts. Throughout the history of psychology, multiple theories of motivation have been conceptualized to explain human behavior. This chapter will address the three prominent theories of motivation and their application within a school context. Unlike the broad term motivation, academic motivation seeks to explain the behaviors of school-aged students that are associated with students' abilities to succeed academically in school. Furthermore, this chapter will address the importance of student disciplinary events and the effects of disciplinary events on students' academic motivation and academic performance. Finally, this chapter will address current research that has integrated one or all of the variables of interest of this study (academic motivation, disciplinary events, and academic performance) and the implications for high school students.

Theoretical Foundations of Motivation

In the current study, motivation was examined within an academic context from a social-cognitive framework. When looking at motivation in this way there are several theories that may be applicable. Social-cognitive theory (SCT), self-determination theory (SDT), and resilience theory are three prominent theories that examine motivation within the educational context (Bandura et al., 2002; Ryan & Deci, 2017; Masten, 2018). While each theory has its merits in examining motivation, motivation is most often considered through a social-cognitive perspective (Bandura, 1991). In the following section, a

discussion of each of these three theories of motivation will be examined for its appropriateness and applicability to the current study.

Self-Determination Theory of Motivation

Foundations of Self-Determination Theory

Self-Determination Theory (SDT), originating in the 1980s, suggested that humans have three fundamental needs to have constructive social development and personal well-being (Deci & Ryan, 1985; Ryan & Deci, 2000). SDT proposes that humans have the need for autonomy, for competence, and for relatedness; and individuals' motivation is affected by whether these are supported or inhibited through the concept of intention (Deci & Ryan, 1985; Ryan & Deci, 2000). Additionally, SDT incorporates environmental factors and considers social environments that are antagonistic to positive developmental tendencies.

In addition, SDT's central concept of intention or motivation is necessary for the understanding of the regulation of behavior (Deci & Ryan, 1985; Ryan & Deci, 1994). Ryan and Deci (1994) premise that all motivated behaviors are mediated by intention. Any behavior not mediated by intention is classified as amotivated (Ryan & Deci, 1994). The distinction between motivation and amotivation is particularly important because SDT also suggests that motivation is not a singular construct but is made up of motivated behaviors with different qualities (Ryan & Deci, 1994). For motivated or intentional behaviors, those behaviors may vary to the extent in which they are self-determined or controlled. An individual's free will or choice, and the extent to which they are able to exercise that choice, determine if their behaviors are considered self-determined (Ryan &

Deci, 1994). The extent to which an individual's behavior is coerced is considered controlled or amotivated (Ryan & Deci, 1994).

Within a school context, intentional behaviors that are both self-determined and coerced occur every day. For example, a student that completes an academic task because they find the task both worthwhile and interesting is engaging in a self-determined behavior. Whereas, a student that completes the same academic task because they wish to avoid teacher disapproval is engaging in a coerced behavior (Deci & Ryan, 1985). This differentiation is critical in SDT because it explains the differences observed in student academic performance and well-being (Ryan & Deci, 1994).

This clarification included the developmental processes of internalization and integration (Deci & Ryan, 1985). Internalization is the transformative process of individuals transforming external regulatory processes into internal regulatory processes (Schafer, 1968). Integration is the process that occurs after internalization where the now internalized values and regulations are integrated into one's self (Deci & Ryan, 1985). Ryan and Deci (1994) posit that individuals naturally will internalize the regulation of prosocial behaviors in order to feel a sense of belonging within a social context. Individuals will further integrate these prosocial behaviors to maximize their feeling of self-determination (Ryan & Deci, 1994). In other words, individuals engage in and integrate prosocial behaviors to feel socially competent and autonomous within the world around them (Deci & Ryan, 1991). However, the degree of integration is of particular importance. The more or less a behavior is integrated by an individual will determine how much that behavior is either self-determined or controlled (Ryan & Deci, 1994).

To integrate extrinsically motivated behaviors, there must be a focus on the three fundamental needs (autonomy, competence, and relatedness; Deci & Ryan, 1985; Ryan & Deci, 2000). In schools, SDT proposes relatedness can be achieved through having prosocial behaviors that are extrinsically prompted by significant others in the student's life. This could involve teachers, fellow students, parents, and caregivers (Ryan & Deci, 2000). The important factor is that other individuals not only prompt or model the behavior for the student, but that they also value that behavior (Ryan & Deci, 2000). Ryan, Stiller, and Lynch (1994) found that children who fully internalized the regulation for positive school behaviors also felt a secure connection with their parents and teachers.

Similarly, individuals are more likely to adopt behaviors that are valued by the larger social group when they feel they are able to adequately perform those behaviors (Ryan & Deci, 2000). For example, a student is more likely to turn in their homework if they feel that they have done a good job. Completing homework assignments is both valued by the larger community (i.e. academic success) and if the student has a strong connection to the teacher who values homework completion, a student will be more likely to engage in completing homework behavior.

An environment that has these characteristics allows for individuals to actively incorporate the values of that environment as their own (Ryan & Deci, 2000). In a laboratory study conducted by Deci, Eghrari, Patrick, and Leone (1994) with 192 undergraduate psychology students, the authors found that providing a meaningful rationale for an uninteresting behavior, coupled with supports for autonomy and relatedness, was related to greater internalization and integration of the uninteresting behavior.

Ryan and Deci (2017) have continued to expand SDT to include six mini-theories under the umbrella term of SDT. The original foundations of traditional SDT still holds true in this expanded theory. However, SDT now seeks to explain a specific set of motivationally based phenomena (Ryan & Deci, 2017). Each mini-theory delves more deeply into one of the main tenants of SDT: need for autonomy, competence, and relatedness (Ryan & Deci, 2017). Each of these six mini-theories have emerged from both laboratory and field research and all seek to either fortify original aspects of SDT or incorporate newer understandings of motivation (Ryan & Deci, 2017). While the current iteration of SDT has provided a more in-depth analysis of the original components of the theory, these six mini-theories still maintain the original spirit of SDT (Ryan & Deci, 2017).

Self-Determination Theory and Academic Motivation

Ryan and Deci (1994) have long supported that a self-determined education will promote the best positive outcomes for students. Ryan, Connell, and Plant (1990) examined the effects of non-directional instruction for 92 undergraduate students. In this study, all participants were provided a factual text to read and then completed questionnaires when participants reported their emotions regarding the reading (e.g. “I thought this was interesting information,” “I was very relaxed while reading this material.”) on a 7-point Likert scale (Ryan et al., 1990). After the reading and questionnaires were completed, participants completed a reading comprehension assessment that was not disclosed to them prior to being given the reading. The authors found that there was a strong positive correlation between participants’ enjoyment in reading the text and their actual recall of information of the text (Ryan et al., 1990).

Studies by Grolnick and Ryan (1987) and Schiefele (1991) also had similar findings that greater self-determination was positively associated with conceptual learning in students as young as late-elementary students. Additionally, Vallerand and Bissonnette (1992) found that the more controlling forms of motivation (e.g. extrinsic forces) utilized in education, had a positive correlation to high school dropout. More recently, research involving SDT has sought to expand the applications of SDT both within specific domains in the field of education. Standage and colleagues (2005) sought to examine SDT in the context of physical education for 950 British secondary school students (ages 11-14). The authors were specifically interested if the SDT framework would be invariant across gender. In the study, participants completed several questionnaires to assess perceptions of support from the PE teacher, how satisfied participants felt in regard to the three fundamental psychological needs (autonomy, competence, and relatedness), motivation regulation, concentration in PE, positive and negative affect, and preference for challenging tasks (Standage et al., 2005). Results of the study concluded that participants who perceived a needs-supporting environment experienced greater levels of satisfaction. Additionally, needs-satisfaction negatively predicted amotivation indicating that SDT fit as a model for physical education classes (Standage et al., 2005). Finally, Standage and colleagues' (2005) also found that the SDT-model was invariant across gender, supporting Ryan and Deci's (1994) claim that SDT is universally applicable.

Similarly, Stroet and colleagues (2015) conducted a longitudinal analysis with 489 female participants ages 12-13 across their first year of secondary education in mathematics within an SDT framework. Using video recordings of teacher-student

interactions and student questionnaires with a multilevel, hierarchical linear modeling approach, the authors found that student perceptions of their educational environment are not the only important factor in the development or regression of motivation in adolescent students (Stroet et al., 2015). Ultimately, according to Stroet and colleagues (2015), teachers that are reported to incorporate practices that are supportive of the three fundamental needs outlined by SDT are more likely to have students who demonstrate greater motivation in school than teachers who do not incorporate such practices (support for autonomy, relatedness, and competence). Similar findings have been demonstrated for students engaging in online education (Butz & Stupnisky, 2017). Here, the authors incorporated an online discussion board for an online course to better support relatedness for students. Of the 290 graduate student participants that completed self-report questionnaires, those that received the online discussion board reported greater relatedness to their class and classmates than students who did not (Butz & Stupnisky, 2017).

However, not all research involving SDT has shown such promising effects. Garon-Carrier and colleagues (2016) conducted a longitudinal study with 1,478 Canadian school-aged children in grades 1 to 4. Participants were asked to self-report their intrinsic motivation towards mathematics, while their achievement was measured through direct assessment of mathematical ability (Garon-Carrier et al., 2016). Using cross-lagged models it was shown that achievement predicted intrinsic motivation for grades 1 to 2 and grades 2 to 4. However, intrinsic motivation was not associated of achievement at any time. These findings contradict hypotheses that motivation and achievement are reciprocal over time and suggest that students who perform better academically are

typically more motivation, but simply being motivated does not result in higher academic achievement (Garon-Carrier et al., 2016).

Similarly, Marsh, Trautwein, Lüdtke, Köller, and Baumert (2005) studied 7,913 seventh-grade German students, utilizing longitudinal data from the Learning Processes, Educational Careers, and Psychosocial Development in Adolescent and Young Adulthood study conducted by the Max Planck Institute for Human Development. The authors demonstrated that there was not a reciprocal relationship between motivation and achievement over time. Both studies suggest that this contradicting evidence is due to the cross-lagged analysis, which was not utilized in studies that support the notion that motivation and achievement are reciprocal over time (Butz & Stupnisky, 2017; Garon-Carrier et al., 2016; Marsh et al., 2005; Stroet et al., 2015). These findings directly challenge SDT's premise that intrinsic motivation leads to higher achievement. This also suggests that the tenets of autonomy and competence are not necessarily the factors that contribute to academic success. Garon-Carrier and colleagues' (2016) study is one such example that suggests that motivation cannot be explained by autonomy, competence, and relatedness as outlined in SDT (Ryan & Deci, 1994).

These findings are particularly troublesome from an SDT framework because they propose that providing an environment that supports competence, autonomy, and relatedness is not necessarily enough to produce academic success for students. Ryan and Deci (1994) postulate that by providing a self-determined educational environment, students will obtain higher academic achievement and greater intrinsic motivation for their academics. However, Garon-Carrier and colleagues (2016) and Marsh and

colleagues (2005) have demonstrated that intrinsic motivation may not be enough to support academic achievement.

SDT attempts to offer a more differentiated approach to the concept of motivation, by asking which kind of motivation is being exhibited at a given time for a specific behavior (Ryan & Deci, 2000). However, there have been findings that demonstrate that an SDT approach, while potentially leading to positive effects, does not apply in every educational setting. Garon-Carrier and colleagues (2016) and Marsh and colleagues (2005) found that environments that are supportive of intrinsic motivation were not enough to produce positive academic achievement in students. This indicates that there may be other critical factors, not emphasized in a SDT lens, needed in the educational environment that not only support students' motivation, but also their academic achievement. SDT is perhaps too narrowly focused to encompass the broad factors that influence students' academic motivation in school.

Within the scope of the current study, SDT did not provide for the global examination of academic motivation. Despite literature demonstrating SDT's appropriateness within broader educational research, SDT is most focused on specific or singular instances of motivation such as motivation to do well in mathematics (Garon-Carrier et al., 2016). Additionally, SDT often focuses solely on an individual's level of autonomy when examining motivation and does not consider social and environmental factors (Liu et al., 2016). Due to the specificity of SDT, this theory does not fully align the conceptualization of academic motivation used within the current study.

Resilience Theory

Resilience theory, similar to SDT, emerged during the 1970s. Investigators were concerned with the effects of adversity on mental health and development (Masten, 2018). Researchers sought to explain the variation in adaptive functioning and life course of individuals considered “at-risk” due to factors such as family or genetic history, exposure to trauma, and/or poverty (Anthony & Cohler, 1987; Garmezy, 1983; Murphy & Moriarty, 1976; Rutter, 1979; Werner & Smith, 1982). Originally, positive adjustment in the face of adversity was conceptualized as invulnerability or stress resistance (Masten, 2018). However, scholars later settled on the term ‘resilience’ to refer broadly to the study of capabilities, processes, or outcomes as a result of desirable adaptation in the context of risk often associated with dysfunction (Masten, 2018).

Despite this initial consensus about the term ‘resilience,’ theory and research about resilience have been met with challenges related to varying definitions of key concepts (Masten, 2018). Resilience as a concept has been defined as both a trait, a process, an outcome or pattern of behavior, or as a broad conceptual domain that encompasses all of these ideas (Luthar, 2006; Masten, Best, & Garmezy, 1990; DeHaan, Hawley, & Deal, 2013; Patterson, 2002). In addition to a lack of consensus regarding key concepts of resilience theory, family and individual resilience literature have also diverged from one another (Masten, 2018). These varying pathways within the field of resilience have led to differing definitions of the term ‘resilience’ within other theoretical frameworks, as well as a lack of consensus as to what resilience actually is.

Identifying Promotive and Protective Processes

A main focus of resilience theory research is the identification of which processes are associated with positive outcomes in environments where there is adversity (Masten,

2018). By identifying these processes, researchers hope that this could improve interventions, and inform practice and policy (Masten, 2018). However, during the first wave of individual resilience studies, many of the same factors emerged as both protective and promotive, despite varying definitions, measures, and situations studied (Masten 2001; Wright, Masten, & Narayan, 2013). Within individual resilience research, attributes that were identified as protective and promotive were problem-solving skills, self-regulation skills, hope or faith, mastery motivation, and sense that life has meaning (Masten, 2001; Wright et al., 2013). From a relational perspective, attributes such as secure attachment relationships with parents and/or caregivers, friends, partners, schools, and community supports were seen as adaptive processes associated with the best outcomes (Masten, 2018).

There are many parallels within individual and family resilience research, though they are often framed at different levels of analysis (Masten, 2018). While this may lead to a blurring of the lines between individual and family resilience, it is not surprising. Only recently is research investigating the links between individual and family processes that are supportive of resilience in children (Black et al., 2017; Huebner et al., 2016). Due to the independence of family and individual resilience science researchers in the past, there is a lack of a consensus on how to define resilience and other related concepts.

A Definition of Resilience

Despite the lack of consistency in definitions and core concepts within research focused around resilience theory, a broad definition that encompasses many of the different applications of resilience is that resilience is “a phenomenon or process reflecting positive adaptation despite experiences of adversity or trauma,” (Luthar, 2003,

pg. 6). According to Luthar (2003), for an individual to be resilient, that individual must demonstrate positive adaptation to a threat or trauma (e.g. family illness or death of family member, homelessness, food insecurity, etc.). This definition, while not as operationally defined as others, offers the broadest scope of resilience across family and individual resilience (Masten, 2018). However, one critical component within resilience theory across both family and individual resilience is that of self-esteem (Masten, 2018; Miller & Daniel, 2007).

Resilience Theory and Academic Motivation

Self-esteem has been defined as a “valuative imprint on general self-efficacy on identity,” (Tafarodi & Swann, 2001, p.655). This translates into that an individual’s self-esteem provides either a positive or negative value to experiences of success and failure, influencing that individual’s sense of self-esteem (Tafarodi & Swann, 2001). Self-esteem is seen as an essential component because individuals with greater self-esteem have been found to be more resilient to threats to their self-image than those who do not (Steele, Spencer, & Lynch, 1993). In a study conducted by Steele and colleagues (1993) with 114 college students, students completed a questionnaire and then at another sessions given feedback and asked to complete the same questionnaire rating their self-esteem. The authors found that students with higher ratings of self-esteem showed more resilience through high self-ratings even when given negative feedback (Steele et al., 1993). Similarly, Jindal-Snape and Miller (2008) examined the resilience and self-esteem literature in the context of primary to secondary school transitions for students. Similarly, to Steele and colleagues’ (1995) findings, Jindal-Snape and Miller (2008) found that resilience and self-esteem show these constructs are influenced by a myriad of factors

that are both protective and harmful, which can lead to the success or failure for students to transfer from primary to secondary school. The authors make the case that schools; primary schools especially, are in a unique position to identify and support students who have or may be at risk of experience traumatic and stressful events that could negatively affect students' academic outcomes (Jindal-Snape & Miller, 2008).

However, despite Jindal-Snape and Miller's (2008) emphasis that schools are in a unique position to build resiliency in students, often the goal of promoting resilience is not primarily academic success and often focuses on preventing broader negative life outcomes after students have left school (Miller & Daniel, 2007). Additionally, much of resilience theory is focused on resilience in broader social terms (e.g. within the community) and outcomes (e.g. employment, contact with law enforcement, etc.) than on the school environment or academic achievement specifically (Patton, 2013

There is also a body of literature that uses the term 'resilience' but does not rely on resilience theory specifically. This adds to the lack of consensus of what is resilience and how to define it. For example, Pitzer and Skinner (2017) examined the role of teacher support, self-appraisal, and emotional reactivity on changes in students' motivational resilience within a school year. Motivational resilience is defined as the processes of engagement, coping, and persistence that work together to promote students' learning and academic success (Pitzer & Skinner, 2017). The authors examined 1,608 New York elementary and middle school students through self-report questionnaires and found that teacher support had the strongest positive correlation with motivational resilience (Pitzer & Skinner, 2017). However, the authors grounded this study in SDT and thus utilized definitions that more closely aligned with Ryan and Deci's (1985) theory versus those

found within the literature on resilience theory. Despite the evidence supporting resilience theory within broader social contexts, the lack of consensus of definitions and concepts, as well as limited educational applications make resilience theory difficult to apply in examining effects of academic motivation within the school context.

A rare example of the application of resilience theory to education is a qualitative review conducted by Kim and Hargrove (2013) which examined the academic success of African American males in higher education through the lens of resilience theory. The authors suggest that African American males must “exert exhaustive psychic energy” to succeed at the post-secondary level. However, there is insufficient quantitative evidence examining this relationship across the diverse experiences of African American males at all levels of education, geographic location, racial climate, and institution (Kim & Hargrove, 2013). The authors argue that resiliency was the key factor in the academic success of African American males in higher education. While this provides evidence that resilience may be a key factor given broad social and environmental contexts, educational attainment is more often viewed as one of many positive outcomes associated with resilience (Kim & Hargrove, 2013; Miller & Daniel, 2007; Tafarodi & Swann, 2011). Despite the evidence presented by Kim and Hargrove (2013), there are no known studies that explicitly examine academic motivation through the lens of resilience theory.

While resilience theory is a noteworthy theory related to motivation, it did not fit with the current study’s conceptualization of academic motivation because of the focus on the variation in adaptive life functioning as a result of factors such as family or genetic history, exposure to trauma, and/or poverty (Anthony & Cohler, 1987; Werner & Smith, 1982). Resilience theory is typically applied with a broad brushstroke, with the emphasis

on larger social and environmental factors, and often does not focus on educational contexts (Kim & Hargrove, 2013; Tafarodi & Swann, 2001).

Social-Cognitive Theory of Motivation

Unlike resilience theory and SDT, social-cognitive theory (SCT) provides both the specificity and global applications needed to examine constructs such as academic motivation within the school environment. SDT often lends itself well to the examination of motivation with singular contexts such as performance in a single academic class, versus overall academic performance across subjects (Garon-Carrier et al., 2016; Marsh et al., 2005). Unlike the specificity of SDT, SCT allows for the examination of psychosocial factors that may affect a student's academic motivation such as disciplinary events, teacher-student relationships, and school attachment.

On the other hand, the broad, often family or individual focus of resilience theory does not provide enough specificity for examining students' academic motivation (Tafarodi & Swann, 2001). Additionally, resilience theory views self-esteem as intertwined with self-efficacy, while SCT views these constructs separately (Bandura, 1991). Within SCT, self-efficacy as an individual's belief of their ability to perform a specific skill (Bandura, 1991), whereas resilience theory views self-efficacy as an individual's sense of autonomy or competency within a global context (Tafarodi & Swann, 2001).

In addition, the incorporation of Bronfenbrenner's (1979) ecological model within a SCT framework allows for the examination of academic motivation in relation to other environmental factors that influence a student's school experience. For example, disciplinary events and academic performance both interact with a student's self-efficacy,

competence, and goal orientation and influence a student's overall academic motivation (Anderson et al., 2004; Daly et al., 2014; Peguero & Bracy, 2015). Misbehavior in school and poor academic performance are both demonstrations of failed competence (Anderson et al., 2004; Peguero & Bracy, 2015). Since neither a student's academic motivation, their academic performance, or disciplinary events exist within a vacuum, the incorporation of the ecological model within the SCT framework provides the specificity needed for the school environment, with a more global definition of motivation that incorporates the entirety of the school experience instead of only specific aspects (Bandura, 1977; Bronfenbrenner, 1979). As will be discussed, SCT is relied upon as the theoretical foundation of this study because it provides a targeted yet global framework that allows for an in-depth analysis of academic motivation within the school environment and has been widely used for research in educational (Bandura, 1991).

Historical Foundations of Social-Cognitive Theory

SCT has origins in early behaviorist work beginning in the 1920s and 1930s. The foundation for SCT began with the work of Edward Tolman (1920) which viewed all behavior as purposeful and goal directed. Additional foundation was laid with work by Holt and Brown's (1931) book, which in addition to supporting Tolman's (1920) views of behavior, theorized that all behavior is learned through imitation. The work of Miller and Dollard (1941) had perhaps the most influence on Bandura's (1991) SCT. Miller and Dollard (1941) looked to expand upon Holt's (1931) social learning and imitation theory.

Miller and Dollard (1941) argued that if an individual was motivated to learn a behavior, that the behavior would be learned through clear observations. That individual would then imitate the observed behavior and the learned action would be solidified

through positive reinforcement. This premise alone had a very large impact on Bandura's work. The famous Bobo doll experiment was Bandura, Ross, and Ross' (1961, 1963) direct application of Miller and Dollard's (1941) theory to learning behavior.

As a result of this experiment, Bandura and his colleagues (1961, 1963) demonstrated the importance of modeling for novel behavior acquisition. These studies would later lead to Bandura's (1977) article about social-cognitive theory in which he claimed that there was a direct correlation between an individual's self-efficacy and behavioral change. Through the work of his predecessors, Bandura was given the groundwork for what became his social-cognitive theory, as well as the groundwork for understanding and studying the construct of motivation.

Bandura's Social-Cognitive Theory

Albert Bandura first conceptualized SCT within the concept of self-efficacy (1977). Initially, Bandura posited that the amount of effort an individual engaged in when faced with obstacles and aversive experiences was due to the level and strength of that individual's self-efficacy (Bandura, 1977). Bandura (1977; 2005) theorized that an individual's self-efficacy; or their perception of their own ability to do a specific task, directly affected how that individual engaged in the behavior needed for that task as well as the overall outcome. For example, if a student perceived themselves as being a poor reader, that student may not engage in reading assignments with as much effort, which would result in the student performing poorly on the reading assignment.

Bandura (1977) proposed that self-efficacy was derived of four principal sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. The more dependable these sources are for an individual, the

greater an individual's self-efficacy will be (Bandura, 1977). Performance accomplishments is considered especially influential because it is based in an individual's personal mastery experiences (Bandura, 1977). The more successes an individual experiences, the less likely singular failures will affect that individual's self-efficacy in regard to that specific task. Likewise, the more failures that occur early on for an individual, the more it will adversely affect that individual's self-efficacy. For the current study, frequent disciplinary events could be interpreted as failed demonstrations of competence. For every disciplinary event a student experiences, it communicated to them that they failed to demonstrate appropriate in-school behavior. The more frequently this occurs, the greater an accumulation of instances of failure are communicated to the student. As discussed previously, failed demonstrations of competence lead to lower self-efficacy and less goal orientation (Dahling & Ruppel, 2016).

Current Iteration of Social-Cognitive Theory

Following Bandura's (1977) initial theory of self-efficacy, self-efficacy and social-learning theory were combined to formulate what is now known as SCT (Bandura, 1986). SCT subscribes to a model of emergent interactive agency between both physical and cognitive attributes (Bandura, 1986). Similar to social-learning theory, SCT proposes that cognitive processes are not disembodied or immaterial from physical world events (Bandura, 2005). So, while self-efficacy is a critical component of SCT, other factors must come into play for individuals to demonstrate "motivated" behaviors. Within the current iteration of SCT, what is needed for individuals to demonstrate motivated behavior are a perceived ability (self-efficacy), creating action plans or setting goals (goal orientation), and reflecting on success or failure of performing a specific task

(competence; Bandura, 2018). It is these three properties that are essential to the foundation of SCT and the application of SCT used to examine academic motivation in students for the present study.

Academic motivation is students' personal beliefs of their academic ability and interest in achieving academically oriented goals (Cham et al., 2014). Through a social-cognitive (Bandura, 1991) lens, academic motivation can be conceptualized as comprising of three main sub-components. First, is an individual's perception of their academic ability (self-efficacy). Second, is the demonstration of that ability by the individual (competence). Finally, the last component, is the setting of short- and long-term academic goals (goal orientation; Bandura, 1991; Cham et al., 2004). These components have been studied individually or all together in efforts to determine how and why students are either highly academically motivated or not all.

Self-Efficacy

Self-efficacy refers to students' perception of their ability to complete an academic task well (Cham et al., 2014). Self-efficacy can either be examined as domain specific (e.g. perception of math ability) or as a global construct (e.g. overall academic performance). For the current study, self-efficacy is considered as one factor that contributes to a student's academic motivation. In a study of 916 high school students (ages 14-19) from 5 high schools across Northwestern Italy, self-efficacy was examined as a mediator on the relationship between school achievement and perceived severity of school and parental rules (Cattelino et al., in press). Using mediational analyses, Cattelino and colleagues (in press) found that self-efficacy did mediate this relationship indicating

that students that reported higher self-efficacy in school demonstrated higher school achievement and perceived school and parental rules as less severe.

Another study conducted by Usher and colleagues (2018) examined the associated effect of self-efficacy on academic performance for 2,430 elementary and middle school students in Southeastern U.S. Using structural equations modeling, the authors found that self-efficacy was associated of student academic performance (Usher et al., 2018). Additionally, the authors found that this relationship held true over the course of an entire school year (Usher et al., 2018). While self-efficacy is an important factor when examining academic motivation, for the current study, a student's perception of their ability does not encompass their overall academic motivation. Additional factors such as competence and goal orientation are other facets of SCT that are integral to the examination of academic motivation in schools. For the current study, the modified ARS-30 School questionnaire (Cassidy, 2016) was chosen as it measured self-efficacy, competence, and goal orientation. This directly aligns with both Bandura's (1991) conceptualization of SCT and this study's conceptual model of academic motivation grounded in SCT.

Competence

While self-efficacy speaks to a student's perception of their ability to perform a task, competence is the demonstration of that ability (Cham et al., 2014). Competence and self-efficacy are two complimentary factors in this study's conceptualization of academic motivation. Demonstrations of failed competence have the potential to harm a student's self-efficacy regarding their ability as a student. Also, lower self-efficacy perceptions may lead to a decrease in competence either within a specific domain or

generally as well. In a review of students' self-efficacy and competence found that teacher or parent feedback was a significant influence in both student's perceptions of their ability (self-efficacy) and their overall academic performance (competence; Muenks et al., 2018). Muenks and colleagues (2018) propose that when a student receives feedback, whether it be positive or negative, that directly influences a student's perception of their ability regarding the domain they have received feedback on. This would imply that students with repeated failed demonstrations of competence (e.g. poor grades, poor exam scores, corrective statements made by parents or teachers, etc.) will experience decreased self-efficacy and will lead to future demonstrations of failed competence. Additionally, this relationship also holds true for students with demonstrations of successful competence (e.g. high grades, high exam scores, praise/positive statements from teachers or parents, etc.), with more successful demonstrations of competence contributing to higher self-efficacy.

An empirical study of 845 German adolescent students conducted examined the relationship between academic self-efficacy and competence using confirmatory factor and mediation analyses to show a significant relationship between students' self-efficacy and their ability (i.e. competence) to perform well on tests (Raufelder & Ringeisen, 2016). Similar to the current study's conceptual model of academic motivation, Raufelder and Ringeisen's (2016) study demonstrate the bidirectional nature between self-efficacy and competence. The authors argue that prior demonstrations of competence, such as success on tests, inform a student's self-efficacy in their academic ability. Consequently, self-efficacy informs future opportunities to demonstrate competence, thus indicating that

when examining academic motivation based SCT; such as the current study does; both self-efficacy and competence must be considered (Raufelder & Ringeisen, 2016).

Goal Orientation

The final component of academic motivation within SCT is goal orientation. Goal orientation is the setting of short- and long-term goals and actively working towards those goals (Cham et al., 2014). Just as self-efficacy and competence are interrelated, goal orientation is also connected to these other factors, which in combination make the construct of academic motivation. Students with higher self-efficacy typically demonstrate more competence and thus more inclined to set short- and long-term goals around the domains where they perceive themselves as successful. Duchesne and Larose (2018) examined the relationship between student perceptions of academic competence and the setting of achievement goals for 339 French Canadian adolescents using structural equation modeling. The authors found that academic competence was significantly associated of students setting achievement goals (Duchesne & Larose, 2018).

Another study of 181 undergraduate students examined students' goal orientation in relation to teacher feedback (Dahling & Ruppel, 2016) and found that students who received positive teacher feedback reported higher self-efficacy and engaged in more goal setting around academic achievement. For students who received negative feedback, they also reported lower self-efficacy and were less likely to engage in goal setting around academic achievement (Dahling & Ruppel, 2016). Dahling and Ruppel's (2016) study demonstrates the interconnectedness of goal orientation within the current study's conceptualization of academic motivation. Within the current study's conceptual model

of academic motivation, goal orientation, self-efficacy, and competence all interact with one another to influence a student's overall academic motivation.

Use of Academic Resilience Scale-30 (ARS-30)

For the current study, academic motivation was measured using a modified ARS-30 (Cassidy, 2016). Within the motivation literature there is a lack of consensus regarding terminology. Motivation is frequently referred to as resilience (Cassidy, 2016), self-efficacy (Caraway et al., 2003), self-concept (Chen et al., 2013), and motivation (Klapp, 2017). This lack of consensus in terminology can often lead to confusion and misinterpretations of empirical research. Cassidy's (2016) ARS-30 measure uses the term resilience, however, the measure is not grounded in resilience theory. In fact, the ARS-30 (Cassidy, 2016) is grounded within a SCT framework. This is a prime example of the conflicting use of terms to examine motivation. However, the ARS-30 (Cassidy, 2016) was chosen due to its theoretical alignment with the current study. Resilience from the resilience theory foundation is focused on promoting positive behaviors despite traumatic life events (Tafarodi & Swann, 2001). Despite Cassidy's (2016) use of the word resilience to describe the measure, the ARS-30 seeks to measure 'resilience,' or for the purposes of the current study 'academic motivation,' of students when faced with academic setbacks. This definition is directly aligned with SCT and this study's conceptualization of academic motivation (Bandura, 1991). Cassidy (2016)'s ARS-30 measure incorporates items that directly to the components of academic motivation as defined in this study. For example, items such as "I would not change my long-term goals and ambitions," are indicative of goal orientation in that it exemplifies the setting of a goal and continuing to work towards that goal, despite a setback. Another example item,

“I would give myself encouragement,” is indicative of self-efficacy, because an individual that would rate this item as “Strongly Agree,” would mean that they still believe in their ability to do a task well. Finally, an item that represents competence would be, “I would try different ways to study,” because it shows that the individual is still willing to engage in the behavior needed to demonstrate success at a particular task. This alignment with Bandura’s (1977) SCT and this study’s conceptualization of academic motivation was why Cassidy’s (2016) ARS-30 measure was chosen to measure academic motivation for this study.

Academic Motivation

Currently, the majority of SCT-based research is conducted within the field of education, despite SCT’s foundation in the field of psychology (Martin, 2004). By including directly observable behaviors such as competence and goal orientation within SCT, academic motivation has become not only a construct of interest, but one that can be directly measured. With the addition of components such as goal-orientation and competence, academic motivation can be measured through both self-report and records data such as grades and test performance (Joët, Usher, & Bressoux, 2011). There is currently a large body of evidence that supports SCT as an approach to measuring academic motivation in students across grade levels (Ruzek & Schenke, 2018).

Academic Motivation and Social-Cognitive Theory

Joët and colleagues (2011) conducted an investigation into sources of self-efficacy for 395 3rd-grade elementary students in France. The authors conducted Likert-scale self-report surveys, which focused on self-efficacy for mathematics and French. Utilizing the four sources (mastery experience, vicarious experience, social persuasions,

and physiological and emotional states) of self-efficacy as theorized by Bandura (1997), the authors examined whether the classroom context could explain the variety in self-efficacy beliefs, and if this difference was potentially a function of gender (Joët et al., 2011). Using hierarchical linear modeling, the authors found that all four sources of self-efficacy, Joët and colleagues (2011) found that all four sources of self-efficacy predicted self-efficacy levels for mathematics and French for both male and female participants. The authors also found a significant difference between male and female participants, with male students reporting higher self-efficacy and outperforming females. Whereas, female students outperformed male students in French, but reported lower self-efficacy (Joët et al., 2011). The significant gender differences were interpreted as a result of female students not experiencing more mastery experiences as well receiving fewer positive social messages about their performance (Joët et al., 2011).

In further support of SCT in examining academic motivation, Phan and Ngu (2016) conducted a longitudinal study across one academic year of 328 elementary school students in Sydney, Australia. Three times throughout the school year, students completed Likert scale self-report questionnaires (*Sources of Information Questionnaire*; Phan, 2012b, Phan & Walker, 2001; *Academic Self-Efficacy Questionnaire*; Phan, 2012a, 2012b) and a 30-item mathematics achievement assessment and end-of-school assessment mark to measure academic achievement (Phan & Ngu, 2016). Phan and Ngu (2016), similar to Joët and colleagues (2011) found that students reporting higher self-efficacy was associated of higher academic achievement. While the authors did not directly measure academic motivation, their examination of self-efficacy; a component to students' academic motivation, demonstrate that students' beliefs of their ability to do

well at a specific academic task is directly related to their level of academic motivation (Phan & Ngu, 2016).

Finally, a longitudinal, multi-wave study of 910 American middle and high school students examining students' self-perceptions of their classroom environment on their motivation over the course of one academic school year (Ruzek & Schenke, 2018).

Ruzek and Schenke (2018) showed similar findings to Phan and Ngu (2016) and Joët and colleagues' (2011), in that students' self-perceptions of not only their self-efficacy, but their goal orientation and competence for academic tasks is associated of their overall academic motivation and academic success. Ruzek and colleagues (2018) emphasize the bidirectionality between these three constructs (self-efficacy, goal orientation, and competence) and their direct role in influencing students' academic motivation, which also aligns with the current study's conceptual model of academic motivation.

The implications of these studies not only provide support for SCT within an academic context, but also that self-efficacy is a vital component to students' academic success. Similar to Ruzke and Schenke (2018), in review conducted by Pajares (2003), also found that student self-efficacy, competence, and goal orientation are necessary components to predicting academic success for students across grade levels. By providing students with the opportunity to experience success in school (competence), students are more apt to perceive their ability positively (self-efficacy) and continue in engaging in similar behaviors to achieve the same successful experiences (goal-orientation).

However, a particularly critical component to both the fostering of positive self-efficacy and engagement in academics, is frequent contact with success in school (Pajares, 2003; Bandura 2018). It is known that with fewer experiences of success in school, students are

more apt to not perceive positive self-efficacy, which has been linked to lower academic performance (Joët et al., 2011). One critical feature of the educational experience that may contribute to fewer experiences of success for students is school discipline practices (Way, 2011).

Outcomes Associated with Academic Motivation

Academic motivation has been associated with numerous positive outcomes including higher academic achievement, attendance rates, perceptions of school climate, graduation rates, and reduced problem behaviors (Anderson, Hamilton, & Hattie, 2004; Høigaard, Kovač, Øverby, & Haugen, 2015; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). Such positive outcomes are particularly important for adolescent students, as they have long-term effects on post-secondary options and life after high school (Jansen et al., 2015). Regueiro, Núñez, Valle, Piñeiro, Rodríguez, and Rosário (2016) examined different motivational profiles of 714 high school students based on whether academic or non-academic goals were generated. The authors found that students who either had multiple goals (both academic and non-academic) or had learning-centered goals engaged in more academically motivated behaviors such as spending time completing homework assignments (Regueiro et al., 2016). Additionally, these same students were found to have higher academic achievement than their peers who had an unmotivated profile (Regueiro et al., 2016).

Several studies have utilized longitudinal methods (Bryant, Schulenburg, O'Malley, Bachman, & Johnston, 2003; Chen et al., 2013; Garon-Carrier et al., 2016), more sophisticated analyses such as mediation or moderation analyses (Høigaard et al., 2015; Klapp, 2017), and have incorporated measures of school climate, academic

performance, and school discipline (Heilbrun, Cornell, & Konold, 2017; Luiselli et al., 2005). Studies such as Bryant and colleagues (2003) longitudinal study of 1,897 adolescent students (ages 14-20) across six years demonstrated that positive factors such as high academic motivation and perception of school climate were protective factors in preventing substance abuse and increasing overall academic performance

Currently, academic motivation is conceptualized as a student's personal belief in their academic ability and interest in achieving academically associated goals (Cham et al., 2014). When examined in relation to outcomes such as academic performance, perceptions of school climate, and reduced problem behaviors, academic motivation is often seen as a contributing factor to either the prevalence or lack thereof of these outcomes. However, much of current research is examining the effects of students' relationships with teachers or parents on the effect of academic motivation with factors such as academic performance used as outcome measures (Trolan, Jach, Hanson, & Pascarella, 2016). Trolan and colleagues (2016) conducted a study with 1,803 undergraduate students from across the United States from the Wabash National Study of Liberal Arts Education (WNS) dataset. Across the participants' four years in college, the authors found that positive student-teacher relationships positively affected students' academic motivation (Trolan et al., 2016). Similarly, Heilbrun and colleagues (2017) analyzed survey responses from seventh and eighth grade students and their teachers throughout the state of Virginia. The authors used the responses to the Authoritative School Climate survey and school records data for reported suspensions to examine perceptions of teacher-student relationships and rates of discipline (Heilbrun et al., 2017).

The authors found that students and teachers that reported more positive relationships were typically in schools that had lower discipline rates (Heilbrun et al., 2017).

Similarly, Kreigbaum, Villarreal, Wu, and Heckhausen (2016) found that in a study with 862 undergraduate students in California that parent-child relationships were also significantly related to students' academic motivation in college. When parents and their children shared similar academic goals, both parents and their children engaged jointly in behaviors that worked towards obtaining those goals (Kreigbaum et al., 2016). Thus, children with parents that were academic motivated to achieve academically, were more likely to have children that would engage in similar academically motivated behaviors (Kreigbaum et al., 2016). However, parent involvement needed to be developmentally appropriate such as aiding older children in problem solving efforts versus more directive or controlling approaches (Eccles et al., 1993; Kreigbaum et al., 2016). These studies highlight the importance of the ecological framework in examining academic motivation (Bronfenbrenner, 1979). Academic motivation is not an entirely internal phenomenon and is directly influenced by environmental factors such as relationships with teachers and parents (Kreigbaum et al., 2016; Trolan et al., 2016) and rates of school discipline (Heilbrun et al., 2017).

Both Kreigbaum and colleagues' (2016) and Trolan and colleagues' (2016) findings demonstrate that academic motivation can be influenced by environmental factors and are not entirely an internal behavior within the student (Bronfenbrenner, 1979). While current academic motivation research is predominately concerned with the effects of student relationships on academic motivation, other factors such as academic performance itself have also been shown to have effects on students' academic

motivation. However, there is a gap in the literature with examining disciplinary events as a influence for academic motivation. While oftentimes academic performance or disciplinary events are used as outcome measures, there are studies examining the relationships between these variables and academic motivation specifically. Additionally, most studies focus primarily on undergraduate students (Kreigbam et al., 2016; Trolan et al., 2016), which creates a gap in the literature examining these relationships at the secondary school level.

Taken together, theoretical and empirical work related to academic motivation clearly demonstrates that there are several factors that support high levels of academic motivation in students. However, more is needed to understand how the components of SCT (self-efficacy, goal orientation, and competence) interact with other variables (e.g. disciplinary events, academic performance) in an educational and ecological context (Bronfenbrenner, 1979). Further understanding of these three variables may provide greater insight into the educational experiences of adolescent students and support further examination of interventions and supports that target academic motivation, students' discipline rates, and overall academic performance. The current study seeks to examine academic motivation, disciplinary events, and academic performance in order to provide a better understanding of how these variables interact with one another to influence the academic experience of adolescent students.

Academic Performance

The typical marker for measuring student success or failure in school is academic performance (Chen, Yeh, Hwang, & Lin, 2010). Usually taken in the form of grades or test scores, academic performance data has been collected by schools as a way of

tracking students' progress over time and by specific academic subject (Chen et al., 2010). The main purpose of measuring academic performance has historically been as an outcome measure for curriculum or other initiatives employed by schools (Cham, West, Hughes, & Im, 2014; Chen et al., 2010; Suárez-Álvarez, Fernández-Alonso, & Muñiz, 2014). However, it has been shown that academic performance is influenced by a myriad of factors, which may cause students who otherwise should have high academic achievement to have low achievement. Factors such as behavioral challenges or poor school attachment have been linked to poor academic achievement (Luiselli et al., 2005; Suárez-Álvarez et al., 2016).

In a study of 3,669 students across a nationally representative sample of elementary, middle, and high school students using hierarchical linear modeling, Marks (2000) found that the level of student engagement, or motivation to engage in academically motivated behavior (e.g. attending class, completing assignments, etc.) was associated of student academic achievement over time. Student engagement was measured in relation to students' disciplinary events. Students who had lower levels of engagement also showed lower levels of academic performance and had an increased risk for high school drop-out (Marks, 2000). Additionally, those students typically reported higher numbers of disciplinary events (Marks, 2000). Marks' (2000) study suggests that academic performance and disciplinary events are not only negatively related, but that more frequent contacts with school discipline is associated of lower academic performance.

Back, Polk, Keys, and McMahan (2016) examined how classroom management, staff relations, and school climate contribute to academic achievement with 208 teachers

from 38 high schools within the Chicago Public Schools. The authors used a classroom management survey aligned with the CHAMPs classroom management curriculum (Sprick, Garrison, & Howard, 1998), the U.S. Department of Education's Public Schools and Staffing Survey (2000), the school climate scale from the National Association of Secondary School Principals (2001), and students' average American College Testing (ACT) scores (Back et al., 2016). Back and colleagues (2016) found that school and classroom factors such as classroom management strategies and positive learning environments were significantly associated of students' academic achievement. The authors build the case for an ecological approach, with an emphasis on environmental factors in the school, within an urban high school environment to support student academic achievement (Back et al., 2016).

Datu (2018) found similar results in a study of 525 Filipino high school students. Using correlational analysis, students that were found to have higher academic achievement also reported greater overall positive affect and life satisfaction in regard to school (Datu, 2018). When schools created environments utilizing Brofenbrenner's (1979) ecological framework across various school settings, regardless of students' demographic variables, student demonstrated higher academic achievement and higher overall well-being (Datu, 2018). This ecological framework involves the forming of positive student-teacher relationships, restorative or preventative practices versus punitive practices, and positive school climate (Chen et al., 2010). By incorporating these approaches within the school environment higher academic achievement and academic motivation is often observed, as well as fewer instances of problem behavior (Suárez-Álvarez et al., 2016). Suárez-Álvarez and colleagues (2016) have reported that these

strategies can transcend factors such as race/ethnicity and socio-economic status, demonstrating that any student can flourish in the appropriate environment.

Høigaard and colleagues' (2015) connected academic performance to academic motivation by determining if motivation has a mediating effect on the relationship between school climate and academic achievement. The authors examined the differences between mastery and performance orientation within classrooms (Høigaard et al., 2015). Performance orientation, which emphasizes performance with a focus on errors in a competitive lens, was found to be significantly correlated to more negative perceptions of school climate and lower academic achievement (Høigaard et al., 2015). However, mastery orientation, which focuses on overall effort towards a goal versus just performance on a singular measure, was significantly correlated to more positive school climate perceptions and higher overall academic achievement (Høigaard et al., 2015).

In a study conducted by Suárez-Álvarez and colleagues (2014), academic motivation was investigated among 7729 students from different demographic backgrounds (average age 13.78 years; e.g. race/ethnicity, socioeconomic status, and gender). The authors, using confirmatory factor analysis, found that students in environments that support academic motivation can succeed academically regardless of their race/ethnicity, socioeconomic status, and gender (Suárez-Álvarez et al., 2014). While these studies provided some insight about how academic motivation may affect students' in schools, they do not examine other factors such as the disciplinary experiences that some students may have throughout their academic careers. However, despite connections between academic performance and disciplinary events, the interaction of academic performance, disciplinary events, and academic motivation has

not been thoroughly examined and might provide additional explanation of how these variables interact with one another in the scope of adolescent school experiences.

School Discipline

Traditional school discipline practices have origins dating as far back as the assimilation forced upon societies through colonialism (Raichle, 1977). What was inherited into school discipline practices is the enforcement of a singular culture and its norms for child development, where family, church, and community once previously shared the responsibility for child development (Raichle, 1977). However, as schools attempted to incorporate discipline practices that enforced a dominant culture's norms, the cultural, class, religious, and racial/ethnic differences of students in American schools created numerous sources of conflict (Raichle, 1977). Often times exclusionary and corporal punishment practices were used as a method of controlling children's behavior in order to enforce predetermined cultural norms that did not necessarily reflect students' diverse backgrounds (Raichle, 1977).

Punitive and exclusionary discipline practices (e.g. detention, suspension, expulsion) have often been used as a means to correct or prevent student misbehavior in schools (Monahan, VanDerhei, Bechtold, & Cauffman, 2014). These practices are often informed by the perspective that one role of public schools is to develop self-discipline among children (Baer, 1998). With the adoption of zero tolerance policies in the 1980s and 1990s over concerns about violence in schools, punitive and exclusionary practices were enforced at even higher rates (Baer, 1998; Skiba 2013). However, despite the agreement between educators and families on some discipline policies and practices,

neither party has been satisfied with the result of these disciplinary practices (Baer, 1998; Skiba, 2013).

Beyond dissatisfaction, punitive disciplinary practices have been shown to be ineffective (Monahan et al., 2014). Additionally, these practices have also been linked to negative outcomes for students outside of school (Monahan et al., 2014). Disciplinary events has been linked to increased risk for high school dropout, poverty, incarceration, and unemployment (American Psychological Association Zero Tolerance Task Force APAZTTF, 2008; Hirschfield, 2004; McCrystal et al., 2007; Monahan et al., 2014). Many schools continue to utilize these discipline practices despite their relationship with these negative outcomes and school discipline, many schools continue to utilize these disciplinary practices (Baer, 1998).

Examining the effects of punitive discipline practices on students is of paramount importance considering the use of punitive practices. While the increased risk for negative life outcomes is a moving argument towards the reform of school discipline practices, it has not yet been effective enough in fostering change (McCrystal et al., 2007). Recent research has examined in greater detail the effects of school discipline practices on both educational outcomes and differences in the application of these practices on students of different racial/ethnic or gender background (Mizel et al., 2016; Skiba, Chung, Trachok, Baker, Sheya, & Hughes, 2014). Across all student identities disciplinary events has been associated with increased risk for academic failure (Luiselli, Putnam, Handler, & Feinberg, 2005).

Students who frequently come into disciplinary events typically spend less time in their classrooms (McCrystal et al., 2007). Less time spent in the classroom translates into

less time accessing the curriculum (Way, 2011). With increasing time spent outside of the classroom due to misbehavior, skill deficits students may continue to worsen, often leading to an increase in the misbehavior that is already exacerbating the problem and leading to further academic failure (Hirschfield, 2004; Monahan et al., 2014; Myers, Baker, Milne, & Ginsburg, 1987). This relationship has been known even prior to the 1987 study conducted by Myer and colleagues, which examined the academic trajectories of high school sophomore students based on rates of misbehavior in school. The authors found that of the 30,000 sophomore students across 1,100 schools in the United States, those with higher rates of misbehavior in sophomore year had significant negative effects on academic achievement in the same students' senior year of high school (Myers et al., 1987).

Similar studies have come to the same conclusion: students that have frequent disciplinary events are at an increased risk for poor academic performance for years (Myers et al., 1987; Mizel et al., 2016). Additionally, these studies have demonstrated that the discipline practices schools have employed have not been successful at correcting problem behavior, and often have damaging side effects in poor academic performance and increased risk for numerous negative life outcomes (Hirschfield, 2004; McCrystal et al., 2007; Monahan et al., 2014). This is particularly important for adolescent students due to the high stakes often associated with academic success or lack thereof in high school (Myers et al., 1987; Mizel et al., 2016). Mizel and colleagues (2016) used multivariable logistic regression to examine factors that were associated of higher or lower rates of school discipline among 2539 10th to 12th grade students in southern

California. The authors found that academic aspiration (i.e. motivation) predicted lower rates of disciplinary events (Mizel et al., 2016).

In a longitudinal study, McCrystal and colleagues (2007) found that adolescent students who were excluded from school through disciplinary practices (e.g. suspension) showed increased risk for antisocial behavior and contact with the criminal justice system. Within a SCT framework, McCrystal and colleagues' (2007) study demonstrates how increased disciplinary events may result in failed demonstrations of academic competence. These failures of competence then result in fewer goal-oriented behaviors towards appropriate pro-social behaviors such as completing academic tasks or graduating high school. However, this study did not examine how students' self-efficacy regarding their behavior in school and how disciplinary events systems ultimately effected students' academic motivation.

Disproportionality in School Discipline Practices

Even with the evidence of negative effects correlated to punitive school discipline practices, these studies do not tell the entire story. Disproportionality in school discipline practices has been shown to lead to even greater disparities between students of different racial/ethnic or gender backgrounds (Skiba, 2013). Students of color, particularly African American students have been shown to have more disciplinary events systems than their white peers, even when the behavior infraction is the same (Balfanz et al., 2014; Civil Rights Project; 2000; U.S. Department of Education, 2014). Disproportionality of discipline in schools is a pervasive issue that is not isolated to only specific schools or states. Gagnon, Gurel, and Barber (2017) conducted a statewide analysis of discipline practices in schools for the state of Florida. The authors used publicly available data from

the 2010-2011 Florida Department of Education and Common Core of Data to analyze the associations between punitive discipline practices (i.e. suspension, expulsions, restraints, corporal punishments, and changes of placement), student characteristics (i.e. grade level, gender, and race), and local education agency (LEA) characteristics (Gagnon et al., 2017). Gagnon and colleagues (2017) found through multilevel regression analysis that schools with higher ratios of students receiving free and reduced lunch and Black or African American students employed punitive discipline practices at a higher rate. In addition, male Black or African American students were even more disproportionately represented and were the most likely subgroup to come into contact with punitive discipline practices (Gagnon et al., 2017).

Gastic (2017) conducted a similar statewide analysis of school discipline practices focused on Massachusetts. In a sample of 30,000 high school students in Massachusetts in 2007, Gastic (2017) examined disciplinary, incident, and school enrollment data to examine the rates of school discipline by racial/ethnic groups and the types of infractions often cited for that discipline. By calculating relative risk ratios and confidence intervals, Gastic (2017) found both Black and Latino students were more likely to be disciplined at school than their White peers, and often more harshly. Additionally, Gastic (2017) found that Black students were 1.7 times more likely to be cited for physical fighting in school than their White peers, despite being just as likely as their White peers to engage in fighting.

Disproportionate discipline practices have disproportionately harmed students of color in regard to overall academic achievement, connectedness to school, and academic motivation (Mizel et al., 2016; Way, 2011). Students who experience less disciplinary events are typically more prepared for class, spend more time on homework, and have

greater school achievement than students who have greater disciplinary events (Mizel et al., 2016). While these relationships exist across groups, disproportionate discipline rates among students of color, disproportionately places those students of color at greater risk for academic failure, and increased risk for negative life outcomes such as participation in the criminal justice system (Mizel et al., 2016).

Current school discipline research has shown that students who have more contacts with school discipline are at an increased risk for negative outcomes such as poor academic performance, high school dropout, poverty, unemployment (APAZTTF, 2008; Hirschfield, 2004; McCrystal et al., 2007; Monahan et al., 2014). While the relationship between academic performance and disciplinary events has been documented (Mizel et al., 2016), less is known about the relationship between disciplinary events and academic motivation. The current study sought to examine this relationship to provide a more nuanced understanding of how academic motivation interacted with other school experiences such as disciplinary events.

Academic Motivation and School Discipline

Alongside studies that have demonstrated a positive relationship between academic motivation and academic performance (Høigaard et al., 2015), Luiselli and colleagues (2005) study with 550 elementary school students (grades K-5) across three years found that a whole-school model of positive behavior supports was associated with lower rates of school discipline and higher rates of academic performance. Although this study did not explicitly examine academic motivation, it did show that there was a strong correlational relationship between students' disciplinary events, the type of school discipline students came in contact with, and their academic performance (Luiselli et al.,

2005). The authors suggest that a positive behavior support model is more supportive of students' in-school behavior, which in turn allows students to spend more time in the classroom engaging in academics (Luiselli et al., 2005). Considering the findings of Luiselli and colleagues (2005) and Høigaard and colleagues (2015), it could be proposed that specific environmental factors within schools (e.g. mastery orientation, positive behavior supports) could increase students' chances of higher academic achievement, higher likelihood to engage in academic tasks, and a decreased likelihood to engage in problematic school behaviors.

While Suárez-Álvarez and colleagues (2014) did not examine discipline in their study, they did demonstrate that factors such as race/ethnicity, socioeconomic status, and gender do not have to have a significant effect on a student's academic motivation or academic performance, given a positive and supportive school environment. When considering the rate of disproportionate discipline in schools (Gagnon et al., 2017; Gastic, 2017), a focus on academic motivation may point to a potential area to target for intervention to mitigate some of the negative effects associated with disciplinary events (Mizel et al., 2016; Skiba, 2013).

Academic Motivation, Academic Performance, and School Discipline

While there is a literature base on the topics of academic motivation, academic performance, and disciplinary events, no previous research has directly looked at the relationship between these important variables. Bandura's (1977) research on self-efficacy and formation of SCT was some of the earliest work investigating the effects of motivation on performance, both within and outside of the school context. Additionally, studies such as Heilbrun and colleagues (2018) and examinations of early school

disciplinary practices (Raichle, 1977; Skiba, 2013) have demonstrated the negative effects of traditional punitive disciplinary systems employed in schools.

While the literature has clearly stated the negative relationship between disciplinary events and academic performance (Mizel et al., 2016), and the positive relationship between academic motivation and academic performance (Høigaard et al., 2015), there is little known about the interaction of these variables. With what is known about these variables individually, a next step is to examine all three together as neither variable exists in isolation during students' academic careers.

The Current Study

This study explored high school students' perceptions of academic motivation in relation to their frequency of disciplinary events and academic performance. Given what has consistently been demonstrated in the literature about positive outcomes associated with high academic motivation, and its relation to higher academic performance, it has become imperative to examine how academic motivation may affect other variables such as disciplinary events. Additionally, as there is a greater push toward preventative approaches from the traditionally punitive school disciplinary practices, it has become more important to examine the role that academic motivation may play as a contributor to, or as an outcome of, these practices (Civil Rights Project, 2000; Luiselli et al., 2005). The present study examined student perceptions of academic motivation in high schools in relation to their academic performance and discipline history to provide support that academic motivation may be an important factor for a student's academic experience beyond their academic performance. The current study sought to fill several gaps in the literature. First, the current study examined the relationship between these three key

variables with adolescent students. Many studies either explore these variables with elementary aged students or college undergraduates (Luiselli et al., 2005; Kriegbaum et al., 2006). Additionally, this study explored these relationships using school records data for disciplinary events and academic performance (i.e. grade point average). Prior studies have largely relied on self-report for all variables (Høigaard et al., 2015; Mizel et al., 2016). Lastly, the present study sought to provide a foundation for targeting and measuring academic motivation for intervention in schools.

CHAPTER III

METHOD

The current study was designed to examine student perceptions of academic motivation, academic performance, and disciplinary events in high school students (grades 9-12). Data was collected from students using self-report questionnaires and from school records. Academic performance and discipline data were collected from students using a self-report questionnaire as well as their school records. Academic motivation ratings were collected using a self-report measure. The data collected from these sources were intended for the examination of differences across groups (e.g. race/ethnicity, gender, grade level) within each of the key variables of self-reported student perception of academic motivation, and academic performance and school discipline from school records. Next, the data collected were analyzed using regression to understand the relationships between academic motivation and academic performance, and the hypothesized negative associated relationships between disciplinary events and academic performance, and disciplinary events and academic motivation. Further, potential mediation and moderation effects of academic motivation on the direct relationship between disciplinary events and academic performance were examined.

Setting and Participants

This study was conducted at a public high school in Central Massachusetts. The high school that participated served students in grades 9-12. In the 2016-2017 academic year, according to the Massachusetts Department of Elementary and Secondary Education (MA DESE, 2016), the school had 1,056 students enrolled. About one-third of the school population draws from a low socioeconomic status population, with 29.5% of

students identified as economically disadvantaged (MA DESE, 2016). A total of 78 students participated in this present study. The demographic information from the participants were aligned with the school population suggesting that the current sample is representative of the students who attended the school (Table 3.1). The two exceptions to this were participation among Latinx and White students. Latinx students made up 25.9% of the school population yet no participating student identified as Latinx. Additionally, White students made up 58.9% of the school population, yet made up 78.2% of this study's sample, which is an overrepresentation of White students.

Recruitment Method

Active parental consent and student assent were used for this study. Through a recruitment packet parents were notified about the study and asked to sign a parental consent form either granting or not granting consent for their child to participate in the study. The recruitment packet informed them of the study, the purpose, how their child would be involved, any potential risks or benefits to children participating, and the researcher's contact information for any questions or concerns. Active parent consent is often required when conducting school-based research (Shaw, Cross, Thomas, & Zubrick, 2015). For the purposes of this study, active parental consent was necessary for two reasons. First, the author was required to obtain active parent consent as a requirement set by the University of Massachusetts Institutional Review Board. Second, the study also required access to student records for discipline and academic data and therefore active parent consent was needed in order to be compliant with the Family Educational Rights and Privacy Act (FERPA, 1974).

All students who attended the participating high school were eligible for participation in this study. Specific exclusion criteria were determined collaboratively with the building principal on a case by case basis to ensure that students did not participate in the study if it would be inappropriate for them to do so. Students primarily served in the special education setting, those whose primary language was not English, and those who may have been unable to complete the survey on paper or online for any other reason would be discussed with the building principal to determine if the student could participate in the study.

Measures

Student Demographic Data

Demographic data were collected including student grade level, gender, and race/ethnicity. For this study students were asked to self-report their identified gender by either selecting “Male,” “Female,” “Non-Binary,” “Prefer Not to Describe,” or “Prefer to Describe.” Similarly, students were asked to report their present grade level at the time of the study. Race/ethnicity was collected from school records to control for consistency in reporting aligned with schools’ Massachusetts Department of Elementary and Secondary Education District and School Profile (2016).

Academic Resilience Scale - School (ARS-30 School)

The ARS-30 (Cassidy, 2016) has been demonstrated to measure academic motivation based on specific adaptive cognitive-affective and behavioral responses to academic adversity (Cassidy, 2016). This measure is rooted in Bandura’s social-cognitive theory and aligned with this study’s definition of academic motivation (Bandura, 1991; Cham et al., 2014). The ARS-30 School was chosen to obtain student self-reported

perceptions of academic motivation because of its theoretical foundation in social cognitive theory, as well as the use of a vignette that allowed for the measure to be time-neutral when administered. The original ARS-30 measure was normed and intended for use with university level students. This measure was found to have a global scale Cronbach's alpha of 0.90 indicating a high internal consistency reliability. Additionally, higher global academic resilience scores were associated with increased academic self-efficacy ($r = 0.49$, $N = 319$, $p < 0.01$), which lended support to the validity of this scale.

The ARS-30 School measure is an adapted version of the ARS-30 for school aged students (S. Cassidy, personal communication, April 7, 2017). While this measure has not been individually examined for reliability and validity, it is highly similar to the original measure. The ARS-30 School measure was chosen for this study due to its theoretical alignment with Bandura's (1977) social-cognitive theory, and because of the reliability and validity evidence for the ARS-30. It is important to note that, while research has shown that self-report measures are not the strongest measures for objective behaviors, self-report remains one of the most viable methods of collecting data on covert behaviors such as academic motivation (Kormos & Gifford, 2014). Adaptations to the ARS-30 School measure were made to account for grammatical and vocabulary differences from British English to American English (e.g. changing "marks" to "grades") to allow for easier readability for the participants for the current study (S. Cassidy, personal communication, April 7, 2017). The adapted version used in this study had a Flesh-Kincaid reading level of 6.3 (Farr, Jenkins, & Peterson, 1951).

The ARS-30 School scale consisted of thirty items measuring an individual's perception of motivation. To administer the ARS-30 School survey, participants were

presented with a time neutral vignette and then prompted to answer thirty Likert scale items based on their reaction to the vignette (see Appendix D). Of note, the vignette from the original ARS-30 measure and the ARS-School measure are very closely aligned, with the only difference being that the ARS-30 School vignette mentions pursuit of higher education. Sample items from the ARS-30 School measure are stated as statements such as, “I would seek help from my teacher.” The Likert scale ranges from 1 (“Strongly Agree”) to 5 (“Strongly Disagree”). A total score is calculated by summing the responses for each item of the ARS-30 School scale (Cassidy, 2016). The ARS-30 total score reflected the three components of academic motivation: self-efficacy, competence, and goal orientation, by measuring an individual’s beliefs of their abilities, likelihood to pursue goals, and demonstration of skills needed to obtain those goals (Cassidy, 2016).

Student Record Data and Self-Report

Student academic (overall grade point average; GPA) data were collected from student self-report (see Appendix D) as well as through school records. As stated previously some information may not be measured accurately through self-report measures (Kormos & Gifford, 2014); therefore, information about grades and discipline collected from school records were used to answer all questions of interest in the current study. The self-report items were intended to provide a snapshot of each students’ overall academic performance from their perspective, while school record data provided more objective information such as exact grade point average (G.P.A.) for each student (Myers, Milne, Baker, & Ginsburg, 1987).

Student records data (discipline history and overall G.P.A.) were collected and given to the author in a de-identified spreadsheet by the building principal. The

spreadsheet provided unique identification numbers developed for the purpose of this study that were not associated with any student identification to pair de-identified school records data with the corresponding survey data. School discipline records were represented by frequency totals for each discipline type (office discipline referral, detention, and suspension) and a grand total across all discipline types. Academic performance was represented by students' overall G.P.A. to two decimal places (e.g. 3.75) on a four-point scale. For the purposes of this study only school records data for academic performance and disciplinary events were analyzed.

Procedure

The survey was administered on the date and time decided upon collaboratively with the building principal. The paper administration of the survey was administered during students' homeroom period. Prior to the day of the survey administration, the building principal sent an email to all teachers in the school informing them of the study and requesting that they set aside approximately 15-20 minutes for students in their classes to participate. The researcher decided collaboratively with the building principal to continue administration of the survey through a Google Form sent directly to parent Gmail accounts in order to recruit more participants after a low yield of participants for the in-school administration of the survey. The researcher was available by phone and email throughout this entire time period in case questions or concerns came up.

For the in-school administration, each student whose parents provided consent was given a paper copy of the survey. Students were instructed to complete the student assent form and then continue on to complete the paper survey. Once completed, students turned in completed surveys to their teacher. Following the conclusion of homeroom

period all completed surveys were brought down to the main office where the building principal recorded the appropriate school records data (school discipline history and overall G.P.A.) into an Excel spreadsheet. Once complete, the deidentified spreadsheet was given to the researcher.

For the online Google Form, parents were emailed through their school Gmail account with a link to the survey. This was used to ensure that students only took the survey following parent consent and could not access the survey from their own personal school email accounts. After clicking on the link, parents were provided with all the recruitment information and needed to provide consent for the survey prior to accessing the survey. Parents were required to record their full name so that the building principal could verify parental consent before the researcher could access data. For both the paper and online administrations the survey included three main sections. The first section consisted of the student assent form which explained that the student may discontinue their participation at any time or skip any question they did not feel comfortable answering. Any student who indicated that they agreed and would like to participate was then directed to the survey. If a student selected not to participate in the survey, they were either instructed by their teacher to go on to their next task (for in-school administration) or did not submit a completed Google Form (online administration). For in-school administration, students took the survey during their homeroom class, and they were to complete additional school-specific (unrelated to this study) surveys if they selected not to participate in the survey or upon completion of the survey. Only one student opted out during the in-school administration of the survey. All student responses were confidential and while student names were initially collected for the purposes of pairing survey data

with school records data, any documentation with identifiable information was separated and all data collected was deidentified.

Students who gave affirmative consent or assent completed the survey either during the time allotted by the school or independently through the Google Form following parental consent. In school, students were given space and time to complete the survey independently. Teachers, school counselors, and the researcher were available during the in-school administration for any questions. The researcher was available at all times for any questions for the online administration. Any student who participated in the survey was entered to win a gift card. There were a total of four \$25.00 Target gift cards available. One gift card was available for each grade.

Data Analysis

This study included three primary independent and dependent variables (academic motivation, disciplinary events, and academic performance). In addition, interaction terms were created in order to conduct a mediation and moderation analysis. SPSS software version 20.0 (IBM Corp, 2011) was used to conduct multiple linear regression and mediation and moderation analyses to analyze the primary research questions for this study. A Sobel test was conducted to determine the significance of the conducted mediation analysis. Analyses for demographic differences across all key variables in the study were not conducted due to small sample sizes within demographic groups. Demographic variables were analyzed broadly utilizing multiple linear regression analyses. Bonferroni adjustments were conducted to determine if demographic variables were significant besides key variables for multiple regression analyses.

Prior to analyses, all data were entered into a single deidentified Excel spreadsheet. Outlier and missing data were examined to determine if participants should be excluded from analyses. One participant's school record indicated a total of 28 disciplinary events, which was significantly different from the rest of the sample and thus was excluded from the analysis. Guidance by Osborne and Overbay (2004) state that the removal of extreme outliers often reduce errors of inference and increase accuracy in data analysis. Additionally, surveys identified as missing more than ten percent of entries were planned to be removed from the sample prior to analysis (Dong & Peng, 2013). Ultimately, no participant surveys met this exclusionary criterion as all surveys were complete. Six surveys were missing an overall G.P.A. due to those students either being new to school or in their freshman year prior to the calculation of their overall G.P.A. Those six participants were excluded from analyses pertaining to academic performance, but were included for analyses examining academic motivation and disciplinary events.

Finally, due to this study's small sample size, power was examined to ensure that the current study had enough power to conduct all planned analyses. A post hoc power analysis for multiple linear regression with an effect estimate of 0.15 was conducted using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009). Faul and colleagues (2009) align G*Power with effect size estimates aligned with Cohen's (1988) effect size estimates. An effect size 0.15 is considered a medium effect size for R^2 or coefficients of determination, which are typically used for regression analyses (Cohen, 1988). A post hoc power analysis with an alpha value of 0.05, beta value of 0.95, and an effect size of 0.15 indicated that this study had a power value of .80. A power value of .80 is considered strong enough to make meaningful interpretations of regression analyses from

this study's sample (Faul et al., 2009). Additionally, prior research has identified sample sizes as small as 50 participants as adequate for interpretation (Bridges & Holler, 2007). However, Piovesana and Senior (2018) argue that normative sample sizes should be no smaller than 85 participants and that samples below this threshold should be interpreted with caution. The current study yielded a participant sample of 78 participants, falling just below the 85 participant threshold (Piovesana & Senior, 2018). However, according to recent methodological guidance from Iacobucci (2018), meaningful analyses can be conducted with sample sizes as small as 50. While many structural equation models may not perform well with small sample sizes, simple models, like those analyzed for this study can yield meaningful results (Iacobucci, 2010). While this study did not specifically conduct structural equation modeling analyses, the PROCESS macro (which utilized ordinary least squares regression; Hayes, 2013) yields similar results for observed variables (as analyzed in this study) and follows similar sample size guidance as stated by Iacobucci (2018; Hayes, Montoya, & Rockwood, 2017). Hayes and colleagues (2017) state that when conducting analyses with observed variables, the choice between utilizing the PROCESS macro or structural equation modeling is largely inconsequential. Hayes and colleagues (2017) state that the PROCESS macro is best used for observed variables (as analyzed in this study) as it provides investigators with relevant statistics and inferences and requires less programming than structural equation modeling but yields nearly identical results. With these considerations, the PROCESS macro was utilized to conduct the mediation and moderation analyses in the current study.

In order to ensure that multiple linear regression could be used, each of the assumptions associated with this approach were tested. The first assumption of multiple

linear regression is that there must be a linear relationship between the outcome and independent variables. To test for this assumption, scatterplots were generated in SPSS for each of the following multiple regressions conducted: the concurrent relationship of disciplinary events on academic performance, the concurrent relationship of academic performance on academic motivation, and the concurrent relationship of academic motivation on disciplinary events. Through visual analysis all scatterplots indicated a linear relationship between the outcome and independent variables.

The second assumption for multiple regression is multivariate normality, which assumes that residuals are normally distributed. To test for multivariate normality, Q-Q plots were generated in SPSS to determine if the errors between observed and predicted values were normally distributed. When interpreting Q-Q plots, if the two variables examined are normally distributed the data points for that variable will create roughly a straight line (Ghasemi & Zahediasl, 2012). Upon visual analysis for all three key variables, the Q-Q plots indicated a near straight line, which indicated that all key variables measured in this study's sample were normally distributed. While the school records data collected for disciplinary events and academic performance may be hypothesized to not be normally distributed, the Q-Q plots generated in SPSS did not indicate a curved line. This indicates that the sampling for the current study's key variables are normally distributed (Ghasemi & Zahediasl, 2012).

The third assumption of multiple regression indicates that there cannot be multicollinearity. A lack of multicollinearity indicates that the variables examined through multiple regression are not highly correlated with one another. This assumption was tested using SPSS statistical analysis. Correlations must be smaller than .80 and the

Variance Inflation Factor (VIF) value must be less than 10 for this assumption to be satisfied (Belsley, Kuh, & Welch, 1980; Berry & Feldman, 1985). Both were calculated for the key variables in this study. No variable was found to have a correlation value that exceeded .80 or a VIF value above 10. The correlations and VIF values for all key variables in this study are reported in the next chapter. Finally, the fourth assumption of multiple linear regression is homoscedasticity. This was tested to ensure that the error variance was constant. This was done using SPSS by visual inspection of normal probability-probability plots (P-P plot; Ghasemi & Zahediasl, 2012; Lund & Lund, 2013). This was tested for each of the models analyzed and presented in Chapter 4. According to the P-P plot, the data from all three regression models tested were approximately normally distributed.

After the assumptions were sufficiently tested, linear regression was used to examine the relationships between disciplinary events and academic performance, academic motivation and academic performance, and academic motivation and disciplinary events. The adjusted R^2 was examined to determine the proportion of variance for each regression model. In addition to examining these regression models, academic motivation was examined to determine if it served as a moderating or mediating variable for the relationship between disciplinary events and the dependent variable of academic performance. The researcher wanted to determine whether student self-ratings of their perception of their academic motivation either partially mitigated or altered the strength of the relationship between disciplinary events and academic performance. This interaction effect was examined to see if there was a significant change in the R^2 value. More specifically, the significance of each of the models was

examined to determine if including academic motivation as either the mediating or moderating variable accounted for significantly more variance than including only disciplinary events and academic performance.

Table 3.1
Participant Demographics

	School Sample (<i>N</i> = 78)		School Population (<i>N</i> = 1,056)	
	<i>n</i>	%	<i>n</i>	%
Gender				
Male	34	43.6	486	46.0
Female	44	56.4	570	54.0
Other	0	0	0	0
Grade				
9	17	21.8	174	16.6
10	24	30.8	273	25.9
11	19	24.4	282	26.7
12	18	23.1	327	30.9
Race/Ethnicity				
African American	13	16.7	102	9.7
Asian	4	5.1	32	3.0
White	61	78.2	622	58.9
Latinx	0	0	274	25.9
Other	0	0	24	2.3

CHAPTER IV

RESULTS

This study examined the relationships between academic motivation, disciplinary events, and academic performance. More specifically, the following primary research questions were assessed: (1) To what extent, if any, are student disciplinary events related to student ratings of academic motivation?, (2) To what extent, if any, are student ratings of academic motivation related to academic performance?, (3) To what extent, if any, are student ratings of academic motivation related to disciplinary events and do they differ by gender, grade level, or race/ethnicity?, (4) Does academic motivation partially mediate the relationship between the frequency of students' disciplinary events and their academic performance?, (5), Does academic motivation moderate the relationship between the frequency of student's disciplinary events and their academic performance? Multiple linear regression was conducted to examine the associated relationships between student ratings of academic motivation, and self-reports of academic performance, and disciplinary events (RQ 1-3). Additionally, the PROCESS macro (ordinary least squares regression; Hayes, 2013) was used to analyze the interactions of the three key variables within the moderation and mediation models.

Descriptive Statistics for Key Variables

Descriptive statistics were calculated for each of the key variables in this study. School records data were used for overall grade point average and total number of disciplinary events. The average grade point average was 3.170 ($SD=.684$) with school records including a range from 1.32 to 4.00 on a 4-point scale. The average number of disciplinary events was 1.01 ($SD=3.13$) with occurrences ranging from 0 to 6. One

participant's school record indicated 28 overall disciplinary events (a total of office referrals, detentions, and suspensions), which was far greater than the next highest reported number of disciplinary events and was excluded from analysis. For academic motivation, student self-report was used to collect the data. The total average self-reported rating for academic motivation was 113.78 ($SD= 22.276$) with responses ranging from 60 to 148 (total score range of 30-150). Of the study's 78 participants, 33 participants completed a paper survey and 45 completed the online Google Form. A comparison using an independent samples t-test of the two administration differences yielded no significant differences ($t = -1.336, p = .185$).

Additionally, Pearson correlation coefficients were calculated between all main variables of interest in this study (See Table 4.1). As shown in the table, all key variables were significantly correlated to one another ranging from a weak to high correlation. It is not surprising to see that disciplinary events would have a high negative correlation with academic performance. Thus, as students had more disciplinary events, their academic performance appeared to be lower than students who had fewer disciplinary events. As hypothesized, there was a positive correlation between academic motivation and academic performance ($r= .352$). This indicated that as students self-reported higher ratings of their academic motivation they also had higher overall academic performance from school record data. Lastly, it was found that disciplinary events via school records and academic motivation were negatively correlated. Thus, as a student has more disciplinary events, they reported lower self-ratings of their academic motivation. These correlations aligned with the directions that were originally hypothesized.

Academic Performance and Disciplinary Events

Multiple linear regression was used to determine if the independent variable (i.e. disciplinary events) significantly influenced scores on the dependent variable (i.e. academic performance). First, the multiple linear regression was conducted with just academic performance as the outcome variable. Next, academic performance alongside demographic variables (race/ethnicity, gender, and grade level) were examined together to determine if the relationship was significant considering specific demographic information. The first multiple regression model (Model 1A) indicated that disciplinary events was significantly related to overall academic performance ($\beta = -1.361, p < .000$). This showed that as students had more frequent disciplinary events, their overall academic performance was lower. The adjusted R^2 for this model was .526, suggesting that 52.6% of the variance in overall academic performance was shared with total contacts with school discipline. The second multiple regression model (Model 1B) examined the same relationship as Model 1A with the addition of demographic variables. Model 1B also indicated that disciplinary events were significantly related to overall academic performance ($\beta = -1.335, p < .000$). A Holm-Bonferroni adjustment was conducted to control for familywise error (Shaffer, 1995). Using the Holm-Bonferroni adjusted alpha, no demographic variables were found to be significant in this model. The adjusted R^2 for this model was .545, suggesting that 54.5% of the variance in overall academic performance was shared by both disciplinary events and demographic variables such as grade level, race/ethnicity, and gender. However, the difference in variance explained between the two models was smaller than was expected. It was also surprising that factors such as race/ethnicity and gender did not appear to be significant within this

relationship. Potential explanations for this finding are discussed in Chapter 5. See Table 4.3 for a summary of this analysis.

Academic Performance and Academic Motivation

Next, multiple linear regression was used to determine if academic motivation was related to academic performance (overall G.P.A. from school records). Similar to the multiple linear regression analysis examining disciplinary events and academic performance, two models were tested. The first model (Model 2A) examined the relationship between academic motivation and academic performance. The second model (Model 2B) examined the same relationship with the inclusion of demographic variables. The first model indicated that academic motivation was significantly related to academic performance ($\beta = .011, p = .002$). This demonstrated that students who self-reported higher ratings of academic motivation also had higher academic performance. The adjusted R^2 for this model was .112, suggesting that 11.2% of the variance in overall academic performance was shared by academic motivation. The second model also indicated that academic motivation in combination with demographic variables was also significantly associated of academic performance ($\beta = .011, p = .002$). However, no single demographic variable was found to be significant. Interestingly, the adjusted R^2 for this model was .088, which indicates that Model 2B shared only 8.8% of the variance in overall academic performance. Model 2B explained slightly less of the variance in academic performance than Model 2A, despite having additional variables. The smaller R^2 for Model 2b indicated that the added factors of grade level, gender, and race/ethnicity did not improve the model by more than what would have been expected by chance (Miles, 2005). Adjusted R^2 values account for the difference between the

number of factors between models when comparing models for model fit (Miles, 2005). Potential explanations for this finding as well as potential implications for this result are discussed in Chapter 5. See Table 4.4 for a summary of this analysis.

Academic Motivation and Disciplinary Events

The final multiple linear regression analysis was used to determine if academic motivation was significantly related to students' disciplinary events. Similar to prior analyses, two models were analyzed. The first model (Model 3A) examined the associated relationship between academic motivation and disciplinary events. The second model (Model 3B) examined the same associated relationship with the inclusion of demographic variables. The first model indicated that academic motivation was a significantly related to disciplinary events a student had ($\beta = -5.697, p = .007$). This indicates that as a student had a higher self-rating of academic motivation, the number of disciplinary events they experienced were lower. The adjusted R^2 for this model was .080, suggesting that 8% of the variance of disciplinary events was shared with academic motivation. Similarly, the second model also found that academic motivation was a significantly related to disciplinary events, however the demographic variables included were not individually significant ($\beta = -5.796, p = .009$). The adjusted R^2 for this model was 0.069, which suggested that this second model explained 6.9% of the variance in disciplinary events. The smaller R^2 for Model 3b indicated that the added factors of grade level, gender, and race/ethnicity did not improve the model by more than what would have been expected by chance (Miles, 2005). Adjusted R^2 values account for the difference between number of factors between models when comparing models for model

fit (Miles, 2005). Potential explanations for this finding as well as potential implications for this result are discussed in Chapter 5. See Table 4.5 for a summary of this analysis.

Academic Motivation as a Mediator

A mediation analysis was conducted using the PROCESS macro (Hayes, 2013) in SPSS to answer the question of whether academic motivation influenced the relationship between disciplinary events and academic performance using ordinary least squares regression. This analysis compared the direct effect of disciplinary events on academic performance with the indirect effect of academic motivation. In Step 1 of the mediation analysis, the regression of disciplinary events on academic performance while ignoring the mediator was significant, $b = -8.935$, $t(70) = -8.935$, $p < .000$. Step 2 showed that the regression of disciplinary events on the mediator, academic motivation, was also significant, $b = -5.824$, $t(70) = -5.824$, $p = .007$. Step 3 of the mediation process showed that the mediator (academic motivation) was significant, $b = .0055$, $t(69) = .0055$, $p = .026$ when controlling for disciplinary events. Step 4 of the analyses revealed that when controlling for academic motivation, disciplinary events remained a significantly related to academic performance, $b = -.3595$, $t(69) = -.3595$, $p < .000$. This indicated that while academic motivation had a mediation effect on the relationship of disciplinary events on academic performance, it was not a strong enough effect to fully mediate the relationship. To confirm this finding and determine the significance of the mediation effect, a Sobel test (Kline, 2016; Sobel, 1982) was conducted and confirmed that full mediation did not occur ($z = -1.694$, $p = .0903$). As hypothesized, academic motivation partially mediated the relationship of disciplinary events on academic performance. Further explanation of this finding will be discussed in Chapter 5.

Academic Motivation as a Moderator

A moderation analysis was also conducted using the PROCESS macro (Hayes, 2013) in SPSS to test whether self-reported academic motivation altered the strength of the relationship between disciplinary events and academic performance. Following prior significant regression analyses (See Tables 4.2-4.4), the interaction of academic motivation and disciplinary events was tested to determine if level of academic motivation (low vs. high) moderated the direct effect of disciplinary events on academic performance. The interaction effect (DisciplineXAcademicMotivation) was not significant ($\beta = .006$, $p = .244$) which indicated that moderation did not occur. The change in R^2 with the inclusion of the interaction was .06 which indicated that the interaction accounted for less than one percent of the overall model which had an adjusted R^2 of .626. Potential explanations for this finding as well as potential implications for this result are discussed in Chapter 5. See Table 4.6 for a summary of this analysis.

Table 4.1

Means and Standard Deviations of Key Variables

	<i>M</i>	<i>SD</i>	Range
Academic Motivation	113.78	22.276	88
Disciplinary events	1.01	3.13	28
Academic Performance	3.170	.684	2.68

Table 4.2

Correlation Matrix

Variable	1	2	3
1. Academic Motivation	---		
2. Disciplinary events	-.303**	---	
3. Academic Performance	.352**	-.730**	---

Note: ** $p < 0.01$ (2-tailed)

Table 4.3
Academic Performance and Disciplinary Events Analyses

	Unstandardized Coefficients			Adjusted R^2	Collinearity VIF
	β	Standard Error	t		
Model 1a				.526	
Academic Performance	-1.361	.152	-8.935	.000**	1.000
Model 1b				.545	
Academic Performance	-1.335	.151	-8.827	.000**	1.025
Grade Level	-.212	.094	-2.266	.027	1.061
Gender	-.087	.203	-.426	.671	1.082
Race/Ethnicity	-.083	.201	-.411	.683	1.111

Note: VIF = Variance Inflation Factor; ** $p < .001$

Table 4.4

Academic Performance and Academic Motivation Analyses

	Unstandardized				Adjusted R^2	Collinearity VIF
	Coefficients					
	β	Standard Error	t	p		
Model 2a					.112	
Academic Motivation	.011	.003	3.173	.002*		1.000
Model 2b					.088	
Academic Motivation	.011	.004	3.178	.002*		1.053
Grade Level	.085	.074	.875	.385		1.059
Gender	.071	.181	.442	.660		1.091
Race/Ethnicity	.008	.158	.050	.960		1.109

Note: VIF = Variance Inflation Factor, * $p < .05$

Table 4.5

Academic Motivation and Disciplinary events Analyses

	Unstandardized				Adjusted	Collinearity
	Coefficients				R^2	
	β	Standard	t	p		VIF
		Error				
Model 3a					.080	
Discipline	-5.697	2.071	-2.751	.007*		1.000
Model 3b					.069	
Discipline	-5.796	2.148	-2.699	.009*		1.063
Grade Level	-1.668	2.435	-.685	.495		1.138
Gender	-3.962	5.183	-7.64	.447		1.089
Race/Ethnicity	4.242	4.860	.873	.386		1.158

Note: VIF = Variance Inflation Factor, * $p < .05$

Table 4.6

Academic Motivation as a Moderator Analysis

	Unstandardized				Adjusted R^2
	Coefficients				
	β	Standard Error	t	p	
					.626
Discipline	-.342	.132	-2.587	.012*	
Academic Motivation	.005	.004	1.523	.132	
DisciplineXAcademic Motivation	.006	.005	1.176	.244	

* $p < .05$

CHAPTER V

DISCUSSION

Overview

The purpose of the present study was to examine the relationships between academic motivation, academic performance, and disciplinary events for adolescent students. While there is a literature demonstrating that academic motivation and academic performance are positively associated, and that there is a negative relationship between disciplinary events and academic performance (Høigaard et al., 2015; Luiselli et al., 2005; Suárez-Álvarez et al., 2014), there is a much more limited amount of research that examines all three variables together. The current study examined the direct relationships between academic motivation and academic performance, academic motivation and disciplinary events, as well as disciplinary events and academic performance. Furthermore, the interaction of disciplinary events, academic performance, and academic motivation was examined. Specifically, academic motivation was examined as both a mediating and moderating variable influencing the relationship between disciplinary events and academic performance. While past research supports that disciplinary events are negatively correlated to academic performance across grade levels (Monahan et al., 2014; Myers et al., 1987), there is a gap in the literature as to how academic motivation alters that relationship. While the present study was exploratory in nature, it is the first known to directly examine the interaction of disciplinary events, academic performance, and academic motivation.

This study utilized school records and a survey administered to 78 students in a public high school in Central Massachusetts. Students were asked to report their rating of

their academic motivation. Additionally, school records were utilized to obtain specific school discipline (number of office referrals, detentions, and suspensions) and academic performance (overall grade point average) data. The following discussion will present a summary of the findings of this study, address some of the limitations, discuss contributions to the field, and end with future directions for this work.

Summary of Findings

In the present study, disciplinary events, academic performance, and academic motivation were examined. First, the key variables were examined to determine the nature of relationship between each key variable. Analyses indicated that academic motivation was positively correlated with academic performance and negatively correlated with disciplinary events. Additionally, academic performance was found to be negatively correlated with disciplinary events. Findings related to the relationships between these three key variables (academic motivation, academic performance, and disciplinary events) are consistent with results from past research (Hirschfield, 2004; Høigaard et al., 2015; Jansen et al., 2015).

Multiple linear regression was used to answer the primary research questions in this study. Results showed that student self-reported ratings of academic motivation were associated with academic performance. More specifically, higher ratings of academic motivation were associated with higher academic performance (overall grade point average from school records). Academic performance has been a metric that schools have used to measure the success or failure of their students, curriculum choices, and teacher performance (Cham et al., 2014; Chen et al., 2010, Suárez-Álvarez et al., 2014). Specifically, within the context of academic motivation, most research has been focused

on subject-specific performance such as motivation for mathematics, reading, or science, versus a more global application of academic motivation (Jansen et al., 2015; Marsh, Smith, & Barnes, 1984). Even studies where the focus was subject-specific, there is consensus that more highly motivated students have higher academic performance than students who are less motivated (Suárez-Álvarez et al., 2014). This study also found the same significant positive relationship between academic motivation and overall academic performance (i.e. G.P.A.) from school records, providing additional support in the understanding of the relationship between academic motivation and academic performance.

The hypothesis that academic motivation would be significantly positively related to academic performance was confirmed. These findings are aligned with previous studies such as one conducted by Reguero and colleagues (2016) which found that students with higher ratings of academic motivation showed higher overall academic performance (Datu, 2018; Høigaard et al., 2015). While this work focused on the number and type of goals students set (academic and non-academic), which the current study did not, both the present study and the Reguero and colleagues (2016) study found the same significant relationship between student self-reports of academic motivation and academic performance.

Another study conducted by Høigaard and colleagues (2015) also demonstrated a positive relationship between academic motivation and academic performance. Additionally, Høigaard and colleagues (2015) demonstrated the importance of environmental factors and how they may influence these key variables. In this study, the authors compared the effects of mastery and performance orientations on students'

academic motivation and academic performance. The incorporation of environmental factors (e.g. mastery and performance orientations) and their effect on academic motivation and academic performance follows an ecological approach which emphasizes the importance of how the individual and environmental factors interact with one another (Bronfenbrenner, 1979; Høigaard et al., 2015).

Additionally, academic performance was examined in relation to disciplinary events. It was hypothesized that students with higher rates of disciplinary events would have lower academic performance. Results from this study showed that disciplinary events were significantly related to academic performance, with higher rates of discipline associated with lower academic performance. This finding is aligned with past literature. Myers, Baker, Milne, and Ginsburg (1987) found higher rates of problem behavior had significant negative effects on academic performance. Similarly, Mizel and colleagues (2016) found that frequent disciplinary events systems are associated with an increased risk for poor academic performance. With the addition of academic motivation, this study provided additional nuance in the understanding of the relationship between disciplinary events and academic performance by incorporating an ecological approach in how these variables interacted with one another (Bronfenbrenner, 1979). The ecological approach incorporates environmental factors and their influence on individuals' interaction with their environment. Students who experience frequent disciplinary events are less likely to have higher academic performance. Within the ecological model, the environmental factor of a disciplinary experience interacts with the student, who then, in interacting with their school environment, demonstrates lower academic performance (Bronfenbrenner, 1979).

Academic motivation was found to be significantly related to the number of disciplinary events a student may have. As students self-reported higher ratings of academic motivation, the number of disciplinary events (office discipline referrals, detentions, and suspensions) were lower. Previous research has not accounted for this relationship, although academic motivation and disciplinary events have both been individually examined in studies examining school climate and positive behavior interventions and supports (PBIS; Høigaard et al., 2015; Luiselli et al., 2005). While the current findings align with existing literature (e.g. positive school climate is linked to higher academic performance and lower rates of school discipline; Luiselli et al., 2005), currently there is no known literature beyond the current study that explicitly examined academic motivation and disciplinary events. The findings of the current study suggest that this is an important relationship to be examined further.

Next, academic motivation was examined as a mediator on the relationship between disciplinary events and academic performance. It was hypothesized that academic motivation would act as a partial mediator on this relationship, meaning that while the effects of disciplinary events on a student's academic performance changes depending on that student's academic motivation, it does not fully negate that relationship. Previous research has shown that disciplinary events have negative effects on students' overall academic performance (Hirschfield, 2004; Monahan et al., 2014; Myers et al., 1987). However, the effect of academic motivation as a mediator on this relationship has not been previously explored. While there is currently no known literature that examines academic motivation as a mediator, there is theoretical support for this premise. Bandura's (1977) SCT emphasizes the importance of both internal

perceptions and external actions. Additionally, Bronfenbrenner's (1979) ecological model emphasizes the bidirectional interaction between an individual and their environment. With this theoretical foundation, it is plausible that academic motivation would be able to mediate the effects of an environmental event (disciplinary events) on an external behavior (academic performance).

Academic motivation was then examined as a moderator on the relationship between disciplinary events and academic performance. Here, it was hypothesized that higher self-ratings of academic motivation would result in a non-significant or less significant effect of disciplinary events on academic performance. This means that if a student was highly academically motivated, the same number disciplinary events would have less of an effect on their overall academic performance than if they had low academic motivation. In this study, no significant moderation effects were found. Similar to academic motivation as a mediator, there is no current literature base that examines academic motivation in this context. Without current literature to reference, it was unclear if the non-significant findings were due to a limitation within the current study or if academic motivation moderates this relationship at all.

In sum, the findings from the present study provided a further rationale for the examination of academic motivation for adolescent students. The results highlighted the importance of examining factors that previous work has also found to be critical when assessing adolescent academic performance (Datu, 2018; Høigaard et al., 2015; Luiselli et al., 2005; Monahan et al., 2014). Additionally, this study found a significant relationship between self-reported ratings of academic motivation and disciplinary events which suggested that further study of this previously unstudied relationship is warranted.

Lastly, the present study found mixed results regarding how academic motivation interacted with the relationship between disciplinary events and academic performance. There is currently no known literature regarding the relationship between these three variables. Findings from this study suggested that self-ratings of academic motivation may play role in the effect of disciplinary events on academic performance. Academic motivation may provide additional nuance to the current understanding of this relationship and may provide for a more in-depth understanding of the adolescent school experience. While the findings concerning moderation found no significant effects, that does not necessarily indicate that moderation does not occur among these three variables. Due to the limitations of the present study it is possible that a study including a larger, more representative sample may be able to uncover potential moderation effects.

However, the present study found that student self-ratings of academic motivation is a partial mediator on the negative relationship between disciplinary events and academic performance. The significant partial mediation of academic motivation in the negative relationship between disciplinary events and academic performance provided evidence that academic motivation may be a protective buffer on this negative relationship, potentially lessening the adverse risks associated with this negative relationship. Past research demonstrates that protective factors such as positive associations to school, school interest or motivation, and parental and peer influences act as buffers against problem behaviors and substance abuse for adolescent students (Bryant et al., 2003). These findings provided a rationale for further examination of these three key variables together, as students' self-ratings of academic motivation, their academic performance, and rates of disciplinary events do not exist in a vacuum and interact with

one another. While there is currently no known study that examines these three key variables, this study's findings are aligned with a social-cognitive theoretical foundation within an ecological framework (Bandura, 1991; Bronfenbrenner, 1979). The current study provides preliminary evidence that a student's perception of their academic motivation may be associated with both their school environment and that this relationship is multi-directional. However, the findings of the current study are preliminary, and additional research is needed to further understand this relationship across demographic variables such as race/ethnicity, gender, grade level, socioeconomic status, and geographic location.

Limitations

Despite these findings that add to the existing literature base, there are several limitations that are important to acknowledge when interpreting the results of this study and considering implications for the field. First, when conducting survey research, the limitations of self-report data should be considered. Self-report data has been shown to contain data that is either intentionally or unintentionally inaccurate (Kormos & Gifford, 2014). As such, students' ratings of their perceptions of their academic motivation may not necessarily be an accurate indicator of their actual academic motivation. For example, students may have wanted to present themselves in a more positive light and subsequently rated themselves higher on the survey than what truly reflects themselves (Kormos & Gifford, 2014). However, school record data was utilized for all analyses related to disciplinary events and academic performance, so those variables were not at the same risk for inaccuracy as academic motivation. A self-report measure was chosen for feasibility due to the exploratory nature of this study and work in this area. For

variables such as academic motivation that are not directly observable through objective means, self-report is currently the best-known method of measurement (Huizinga & Elliott, 1986).

Second, when conducting research, sample size is an integral factor for both analysis and interpretation of those analyses. While prior research identified sample sizes as small as 50 participants is adequate (Bridges & Holler, 2007) for interpretation, Piovesana and Senior (2018) argue that normative sample sizes should be no smaller than 85 participants. However, Piovesana and Senior (2018) do state that samples that fall below that threshold can be interpretable but, should be interpreted with caution. The current study included 78 participants, which fell just below the 85-participant threshold (Piovesana & Senior, 2018). The author hypothesized that this small sample may be due to several factors. First, it is possible that the time of the school year when this study was conducted may have affected the participant yield. The survey was administered toward the end of the school year, which is often a hectic time in public high schools. Due to this, fewer students may have participated than expected. Second, it is possible that the active parental consent used in this study potentially limited the number of participants.

Active parent consent is often required when conducting school-based research (Shaw, Cross, Thomas, & Zubrick, 2015). For the purposes of this study, active parental consent was necessary to be in compliance with the University of Massachusetts Institutional Review Board and FERPA (1974). The author hypothesized that the need for active parent consent may have resulted in a lower participant yield for several reasons. First, parents of students who either have frequent disciplinary events or low academic performance may not have wanted that information shared, even though student identities

would be protected, and all data would be deidentified. Another could have been that students themselves did not want to participate and thus, did not give parental consent forms to their parents.

In addition, there was limited variability in the school records data for number of contacts with school discipline and overall academic performance amongst student participants, with student records indicating no contacts within the current school year for the majority of participants. More specifically, 67.9 percent ($n = 53$) of student files indicated no disciplinary events. This would be a typical percentage for what we would expect for a school in terms of number of students having no disciplinary events (Horner & Sugai, 2015). Even though disciplinary events were shown to be normally distributed following the visual analysis of Q-Q plots (Ghasemi & Zahediasl, 2012), the limited range in number of disciplinary events may have altered how disciplinary events related with other variables in the current study. Additionally, this may have also been due to the current study's sampling methods being more likely to capture more highly motivated and high achieving students that experience fewer disciplinary events than the general school population.

Fourth, while the sample for this study fulfilled the minimum requirements of the conducted power analysis, the representation of racial/ethnic groups within the sample was not large enough to conduct analyses examining differences across racial/ethnic groups. The author hypothesized that this may have been due to previously mentioned limitations such as the time of the year in which the survey was administered and the process of active parent consent. Additionally, the demographic makeup of the school consisted of 58.6% White, 9.7% African American, 25.9% Latinx, 3.0% Asian, and 2.3%

of other racial/ethnic background (Massachusetts Department of Elementary and Secondary Education, 2016) students. Even though this study had a similar percentage break down for some groups (62.9% White, 13.4% African American, 4.1% Asian, 0% Latinx, 0% other race/ethnicity), the groups were too small to make meaningful interpretations in regard to specific racial/ethnic groups. Finally, the lack of Latinx participants were hypothesized to be due to a possible failure of recruitment materials to be received by Latinx students that may have wanted to participate. The recruitment materials were available only in English and a lack of a Spanish-language version may have contributed to the lack of Latinx participants in this study.

Finally, the survey was initially intended to be administered on one day, school-wide, during students' homeroom period. However, due to a low yield of participating students, the survey was then transferred to a Google Form that was sent directly to parents through their school Gmail account. While this additional method allowed for there to be enough participants for analyses, it may have also contributed to this study's small sample size. The author hypothesized that similar to the initial survey, active parent consent may have prevented some students from participating as previously discussed. Additionally, by utilizing school email, parents and students would need access to either a computer, or internet-capable device such as a tablet or smartphone. Access to technology (e.g. having a computer or internet access within the home) may have prevented students from participating as well as the frequency to which parents, if capable, check the school email. Of the study's 78 participants, 33 participants completed a paper survey and 45 completed the online Google Form. A comparison using an

independent samples t-test of the two administration differences yielded no significant differences ($t = -1.336, p = .185$).

Contributions of the Research

In recent years, traditional school discipline practices have been examined for their effects on student outcomes such as academic performance, graduation rates, and risk for negative life outcomes (APAZTTF, 2008; Hirschfield, 2004; McCrystal et al., 2007; Monahan et al., 2014). It is well established in the literature that increased rates of punitive discipline have a negative relationship with students' academic performance (Hirschfield, 2004; Monahan et al., 2014; Myers et al., 1987). This study also found a significant negative relationship between disciplinary events and academic motivation, which supports the idea that frequent contacts with school discipline is harmful to students (Monahan et al., 2014; Myers et al., 1987). Despite, the current study's limitations, it replicated previous findings that support a negative relationship between disciplinary events.

Additionally, the present study provided further evidence in support of a SCT and ecological theoretical orientation to academic motivation. The negative relationships found between disciplinary events and academic motivation as well as discipline and academic performance, highlighted the three main components of academic motivation: self-efficacy, competence, and goal orientation. Students who have frequently been disciplined by the school have had repeated experiences of failed demonstrations of competence. Thus, they would be less likely to engage in goal-oriented behaviors about school (i.e. performance) and would be more likely to feel that they do not possess the skills needed to be successful in school (i.e. motivation).

In sum, the present study served two main purposes. The first was to explore how academic motivation interacts with disciplinary events in isolation, which had not been examined previously. The negative relationship found between self-reported ratings of academic motivation and disciplinary events provided rationale for further exploration of this relationship and how academic motivation may be incorporated into school discipline research. The second was to further expand understanding of the interaction between academic motivation, academic performance, and disciplinary events within one model. This was also the first known study to examine these three variables within mediation and moderation models. This study set out to explore both together, but did not find a significant moderation effect. Even with mixed findings, this study provided exploratory evidence of new areas of future research by examining these three key variables together. This study provided additional evidence of the negative relationship between disciplinary events and academic performance and the positive relationship between academic performance and academic motivation. This provides further replication of previous findings, lending additional support to previously examined relationships. Additionally, this study provided foundational evidence for academic motivation as a mediating variable on the negative relationship between disciplinary events and academic performance.

Future Directions

While this study provided preliminary evidence for the link between academic motivation and disciplinary events, as well as some initial evidence that academic motivation partially mediates the negative relationship between disciplinary events and academic performance, this is the first known study that directly examined the link

between these three variables. Future research should attempt to replicate and expand this work in additional high schools. Furthermore, this study could be expanded by consideration of comparing both self-report and school record data for disciplinary events and academic performance. This would first allow us to determine if differences existed among objective versus self-report indicators of discipline history and academic performance, and also could provide evidence in the use of self-report measures for other variables that are not able to be measured through objective means, such as academic motivation. Crockett, Schulenburg, and Peterson (1987) found in a comparison of self-report and objective data for adolescents regarding course grades, height, and weight, that self-reports were valid. This provided evidence that especially in the absence of objective measures, self-report can be a useful substitute. However, previous research has not yet examined consistency among student self-report and objective measures of discipline history.

Future research related to the interaction of the three key variables over time would also be a valuable contribution to the field. Academic motivation, disciplinary events, and academic performance are not static factors in a student's academic career, and it is possible that over time, the relationships between these variables may change. This study provided preliminary evidence from a social-cognitive and ecological foundation (Bandura, 1991; Bronfenbrenner, 1979), that environmental factors (i.e. discipline, academic performance) influence and are influenced by internal factors (i.e. academic motivation), and the nature of that influence may change over time. A longitudinal analysis of these variables may provide a more nuanced understanding of the interaction and provide useful information in how this knowledge could be applied in

secondary schools. It is hypothesized that as students have disciplinary events, academic motivation may lower, but then over time increase if the same students do not experience further disciplinary events. Additionally, these variables should be examined over time to determine if the significant relationships observed in the current study may be due to an accumulation of experiences over time. For example, it may be possible that disciplinary events become more significant in influencing students' academic performance in secondary school due to more opportunities for failed demonstrations of competence than with students in earlier grades. Furthermore, future research should examine these variables across key demographic characteristics to provide a nuanced understanding of this relationship and how it may differ across demographic groups. With research demonstrating the effects of disproportionate discipline on students of color (Skiba et al., 2013), it is hypothesized that this relationship over time could more severely affected, demonstrating lower levels of academic motivation for students of color for fewer disciplinary events than for white peers who may have more disciplinary events.

While the purpose of the present study focused on the relationship between academic motivation and overall rate of disciplinary events, future work should examine this relationship with a focus on discipline type (e.g. office referrals, detentions, suspensions). This could provide insight on the specific effects of different types of school discipline in the context of the relationship between academic motivation, disciplinary events, and academic performance and provide a rationale for alternatives to traditional discipline methods in schools.

Finally, academic motivation was found to be a significant partial mediator on the relationship between disciplinary events and academic performance. Since academic

motivation only partially mediates this relationship, this indicates that there are other factors that may also play a mediating role in this relationship. Future research should look to examine other factors such as demographic differences, school climate, alternative or restorative discipline practices, and teacher-student relationships to uncover all that potentially interacts with the key variables examined in this study. Results from this study suggest that there is more to the relationship between disciplinary events and academic performance. These findings also provided additional support for the application of SCT as the theoretical foundation for examining academic motivation (Bandura, 2005). SCT alongside an ecological framework allows for the examination of academic motivation and the environmental factors that may influence it (Bandura, 2005; Bronfenbrenner, 1979). Academic motivation plays a significant role, but there is still more to examine and understand. As more is understood about the negative effects of school discipline on students, it is becoming increasingly important to examine protective factors that may mitigate or lessen the risks often associated with higher rates of disciplinary events. Academic motivation plays a role, and this study provided a preliminary foundation for further exploration and understanding of how academic motivation may be an integral component to bolster adolescent students' school experience and performance. These findings provided an initial foundation for an increased focus on adolescent academic motivation at the school and policy level. Further understanding of academic motivation and how it interacts with students' school experiences (disciplinary events, academic performance) may be key to supporting students and promoting positive school outcomes.

APPENDIX A
STUDENT RECRUITMENT LETTER

Date: MONTH 2018

To: Students of XXXX High School

From: Cynthia Shuttleton, M.Ed.

Doctoral Candidate, School Psychology Program

University of Massachusetts Amherst

Subject: Research on adolescent academic motivation and discipline

Dear Students,

I'm sending out this letter to introduce myself to you to gauge your interest in participating in a project that I will be conducting at Leominster High School this MONTH as part of my dissertation research.

I am specifically interested in your experiences as a high school student. I am specifically interested in how students' experience of being disciplined in high school relates to their academic motivation. For my dissertation project, I hope to test this relationship to gain a better understanding of how discipline may affect students' academic motivation in school. This is where I need your help!

My number one consideration in conducting this research in a practical school setting is to gain the perspective of current high school students, in a minimally burdensome way, that would require a very low time investment on your part. To that end, I will detail below everything that I would be asking of you as a participant in this study:

1. To complete a survey on your perceptions of academic motivation, discipline, and academic performance, and demographic information. The survey should take no longer than 15-20 minutes. Surveys will be administered during your Homeroom period.
2. Allow access to your demographic (race/ethnicity), academic, and discipline data, only.

I want to assure you that if you do choose to participate, all data collected will be kept securely to protect your privacy and anonymity in participating in this study and used solely for a) understanding the relationship between perceptions of academic motivation and disciplinary experiences in school, and b) determining differences within this relationship between groups (e.g. gender, race/ethnicity). A list for pairing survey responses to school record data will be destroyed 2 months after analyses are completed. Additionally, all personal data will be de-identified and that the data will be securely stored for a minimum of 3 years after collection. If at any point you would like to withdraw from participation in this study, you would be free to do so without negative consequences for you, your family, or your relationship with the University of Massachusetts, or your high school.

I am seeking as many willing student participants as possible from your school. You can email me at cshuttleton@umass.edu or call at (845) 554-2063, or speak to my

advisor, Dr. Sarah Fefer at sfefer@educ.umass.edu or (413) 545-0211 with any questions you may have. If you would like to participate in this study, please have your parent and/or guardian read and sign the informed consent form on the next page. Thank you for your interest.

APPENDIX B

PARENTAL CONSENT FOR VOLUNTARY PARTICIPATION

Parental Consent for Voluntary Participation

This form is called a Parental Consent for Voluntary Participation Form. It will give you information about the study that your child would participate in so you can make an informed decision about whether or not you would like your child to be included in this study.

I allow my child to volunteer to participate in this research study and I understand that:

1. The purpose of this research study is to understand the relationships between academic motivation, discipline, and academic performance for typical high school students in a public high school. The goal of our research is to understand how being disciplined in high school relates to your academic motivation.
2. My child will be asked to complete a survey containing questions regarding their perceptions of academic motivation, school discipline experiences, and academic performance, and demographic information (gender, and grade level). It is estimated that it will take my child above 15-20 minutes to complete this study's survey. My child eligible to participate in this study because they are a general education student at a public high school.
3. My child's demographic (e.g. race/ethnicity), academic, and discipline data will be paired with their survey responses for analysis. A spreadsheet of my child's academic (overall grade point average) and discipline data (instances of office referrals, detention, and suspension) will contain randomly assigned numbers to pair that data with my child's completed survey. No identifiable information will be contained on this list. This list will be compiled by a Leominster Public School official and sent to the researcher only. This list will be destroyed 2 months after analyses have been conducted for this study.
4. Results from the study will be included in the researcher's doctoral dissertation and may also be included in manuscripts to professional journals for publication. Only the researcher (Cynthia Shuttleton) and their advisor (Dr. Sarah Fefer) will have access to the data. Only general research findings will be made available to the dissertation committee, Leominster school district, or any other individual seeking information regarding the study, in publications or presentations. If you would like to receive a copy of the final report of this study (or a summary of the findings) when it is completed, please feel free to contact us.
5. Neither I or my child may directly benefit from being included in this study. However, we hope that your inclusion in this study may lead to greater benefits for students in high schools.

6. Participating in this study presents minimal risk to me or my child as neither my name or my child's name, nor the name of their school will be used in any written or oral presentation of the study. Demographic information will include race/ethnicity, gender, and grade level, but will be de-identified.
7. All of my child's data that is collected for use in this study will be kept in password-protected electronic databases. Any computer hosting such files will also have password protection to prevent access by unauthorized users. De-identified research data, parental consent, and assent forms will be securely kept for a minimum of 3 years before being destroyed. Signed parental consent forms and child assent forms will be stored separately from the collected data in the faculty advisor's (Dr. Sarah Fefer) office.
8. Only Cynthia Shuttleton and her advisor, Dr. Sarah Fefer will have access to all data collected for this study.

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this study you may contact Cynthia Shuttleton at cshuttleton@umass.edu or at (845) 554-2063, or her advisor, Dr. Sarah Fefer at sfefer@educ.umass.edu or at (413) 545-0211. If you have any questions concerning you and your child's rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu.

Your child does not have to be a part of this study if they do not want to. If you agree to allow your child to be in the study, but they later change their mind, they may drop out at any time. There are no penalties or consequences of any kind if they decide that they do not want to participate.

I have read this form and decided that I will allow my child the opportunity to participate in this study. I consent to not only my child's participation to this study, but also that the researchers have access to my child's academic and discipline school records. The general purposes and particulars of this study as well as possible risks and inconveniences have been explained to my satisfaction. I understand that I can withdraw my consent at any time.

Student's Name	High School
_____ I give consent	_____ I do NOT give consent
Parent/Guardian Signature	Participant Signature
	Date

***Please turn this sheet in to the marked box in the office no later than SOME DATE.
Thank you for your willingness to consider participating in this study!***

APPENDIX C
STUDENT ASSENT FORM

Student Assent Form

What is a research study?

- A research study is a way to find out new information about something. You do not need to be in a research study if you don't want to.

Why are you being asked to be part of this research study?

- You are being asked to take part in this research study because we are trying to learn more about student perceptions of academic motivation and discipline. We are inviting you to be in the study because you are a current high school student who can give your unique perspective on this topic. At least 75 participants will be in this study.

If you join the study what will you be asked to do?

- You will be asked to complete a survey that will ask you questions about your experiences in high school around academic motivation and discipline.
- You will be in the study for 15-20 minutes.

How will being in this study affect me?

- You will be asked questions about times you have gotten in trouble in school. You will be asked how often that has occurred. Your answers will be confidential and will not be given to your parents, teachers, or friends.
- You will be asked questions about how you feel about yourself as a student. Your answers will be confidential and will not be given to your parents, teachers, or friends.
- You will be asked questions about your identity (gender, grade level). Your answers will be confidential and will not be given to your parents, teachers, or friends.
- Your personal demographic (racial/ethnic identity), academic (overall GPA) and discipline data (number of office referrals, detentions, and suspensions) will be paired with your survey responses. Once paired, the data will be de-identified. Your answers will be confidential and will not be given to your parents, teachers, or friends. Your academic and discipline data will be contained on a list that will have a randomly assigned number to pair that data with your completed survey. No identifiable information will be contained on this list. Only your de-identified survey responses, demographic, academic, and discipline data will be given to the researcher.
- De-identified research data, parental consent, and this assent form will be securely kept for a minimum of 3 years before being destroyed.
- You may not directly benefit from being included in this study, however, we hope that your inclusion in this study may lead to greater benefits for students in high schools.

Do your parents know about this study?

- This study was explained to your parents and they said that we could ask you if you want to be in it.

Who will see the information collected about you?

- The information collected about you during this study will be kept safely locked up. Nobody will know it except the people doing the research.

- The study information about you will not be given to your parents, teachers, or school. The researchers will not tell your friends.

What do you get for being in the study?

- You will not receive any monetary or tangible items for participating in this study.

Do you have to be in the study?

- You do not have to be in the study. No one will be upset if you don't want to do this study. If you don't want to be in this study, you just have to tell us. It's up to you.
- You can also take more time to think about being in the study.

What if you have any questions?

- You can ask any questions that you may have about the study. If you have a question later that you didn't think of now, you can call Cynthia Shuttleton at 845-554-2063 or cshuttleton@umass.edu, or Dr. Sarah Fefer at 413-545-0211 or sfefer@educ.umass.edu.
- You can also take more time to think about being in the study and also talk some more with your parents about being in the study.
- If you have any concerns about your rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu.

Other information about the study:

- If you decide to be in the study, please write your name below.
- You can change your mind and stop being part of it at any time. All you have to do is tell the person in charge. It's okay.
- You will be given a copy of this paper to keep.
- General research findings will be made available to the dissertation committee, Leominster school district, or any other individual seeking information regarding the study.
- If you would like to receive a copy of the final report of this study (or a summary of the findings) when it is completed, please feel free to contact us.

If you want to be in this study, please sign your name below.

Signature _____

Date _____

Participant Name _____

Date _____

Name of Person obtaining consent _____

Date _____

APPENDIX D
STUDENT PERCEPTIONS SURVEY

STUDENT PERCEPTIONS SURVEY

Please answer each of the following questions. Mark your answer on the line or circle the answer that best represents how you feel about each item. Answer every item on every page. Thank you!

1. Student ID Number: _____

2. Grade: _____

3. Please circle the gender that you identify with:

Male

Female

Non-Binary

Prefer Not to Say

Prefer to Describe: _____

Please continue on to the next page.

Please read the paragraph in the box below. Do your best to imagine that you are in the situation being described:

You have received a failing grade for a recent assignment. Your grades for two other recent assignments were also poorer than you would want. You want to get as good a school grade as you can because you have college and career goals in mind. You also don't want to disappoint your family. The feedback from your teacher is quite critical, including reference to a 'lack of understanding' and 'poor writing and expression.' It also includes ways that the work could be improved. Similar comments were made by the same teacher who marked your other two assignments.

If you were in the situation described above how do you think you would react?

Read each of the statements below and **check (√) the box** between **1** (*strongly agree*) and **5** (*strongly disagree*). Select what best reflects how much you think each statement describes how you would react.

Please make sure that you give a response to **ALL** the statements. Try to be as accurate as possible in your answers.

	Strongly Agree 1	2	√ 3	4	Strongly Disagree 5
1. I would not accept the teacher's feedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I would use the feedback to improve my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I would just give up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I would use the situation to motivate myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I would change my college and career plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I would probably get annoyed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I would begin to think my chances of success at school were poor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I would see the situation as a challenge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I would do my best to stop thinking negative thoughts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I would see the situation as temporary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I would work harder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I would probably get depressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I would try to think of new solutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I would be very disappointed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I would blame the teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I would keep trying	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. I would not change my long-term goals and ambitions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I would use my past successes to help motivate myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I would begin to think my chances of getting into the college or job I want were poor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I would start to monitor and evaluate my achievements and effort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I would seek help from my teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I would give myself encouragement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I would stop myself from panicking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I would try different ways to study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I would set my own goals for achievement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. I would seek encouragement from my family and friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. I would try to think more about my strengths and weaknesses to help me work better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. I would feel like everything was ruined and was going wrong	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. I would start to self-impose rewards and consequences depending on my performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. I would look forward to showing that I can improve my grades	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please continue on to the next page.

4. What grades do you typically earn in your classes?

___ Mostly A's ___ Mostly B's ___ Mostly C's ___ Mostly D's

5. How many times have you gotten in trouble during this school year (i.e. sent to the office, detention, suspension, etc.)?

___ None ___ 1-5 times ___ 6-10 times ___ 11 or more

6. Of the times you have gotten into trouble, how many times were you sent to the office?

___ None ___ 1-2 times ___ 3-4 times ___ 5 or more

7. Of the times you have gotten into trouble, how many times were you given a detention?

___ None ___ 1-2 times ___ 3-4 times ___ 5 or more

8. Of the times you have gotten into trouble, how many times were you suspended?

___ None ___ 1-2 times ___ 3-4 times ___ 5 or more

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