ABSTRACT

MEASURING ADOLESCENTS' PERCEPTIONS OF ACADEMIC SOCIAL SUPPORT: THE RELATIONSHIP BETWEEN ACADEMIC SOCIAL SUPPORT, GLOBAL SOCIAL SUPPORT, AND LEVEL OF FUNCTIONING

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The present study investigated middle school students' perceptions of academic social support from siblings, parents, classmates, and close friends. The purpose of the current study was to develop a measure of academic social support. Academic social support was compared with global social support and overall level of functioning. The following measures were used to investigate the psychometric properties: the Child and Adolescent Social Support Scale-Academic (CASSS-A), the Child and Adolescent Social Support Scale (CASSS), the Behavioral Assessment System for Children, second edition (BASC-2-SRP), and the Academic Competence Evaluation Scale (ACES). The factor analysis supported the four-factor structure of the CASSS-A overall. Evidence of internal consistency was strong for the entire measure and within each source subscale, as well as by gender and by grade. Evidence of content validity, construct validity, and convergent validity was strong, with one exception; evidence of construct validity of academic achievement was low. Results did not provide support for the matching hypothesis of academic social support.

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MEASURING ADOLESCENTS' PERCEPTIONS OF ACADEMIC SOCIAL SUPPORT: THE RELATIONSHIP BETWEEN ACADEMIC SOCIAL SUPPORT, GLOBAL SOCIAL SUPPORT, AND LEVEL OF FUNCTIONING

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CHAPTER ONE

INTRODUCTION

Literature Review

The central responsibility of schools is to aid in the development of students' cognitive and academic skills. However, it is increasingly recognized that effective learning is significantly influenced by factors beyond classroom instruction and curricula. According to the National Association of School Psychologist's (NASP) Blueprint for Training and Practice (2006), school psychologists and educators in schools should create positive environments that are more conducive to raising the achievement levels of all students. This work is complex as a student is the center of many levels of contexts (e.g., community, schools, family, and friends) that interact to influence development over time (Bronfenbrenner, 1979). Each of these contexts are complex. For example, school systems must be viewed as a system with multiple components, such as teachers, peers, curriculum, instruction, and environment, that all affect learning (NASP, 2006). Academic achievement is also intertwined in social and emotional contexts that cannot be teased apart (Liew & McTigue, 2009). Keeping all of these complex factors in mind, educators must promote environments that not only promote learning, but also foster social and emotional success for students (NASP, 2010).

Aside from NASP's (2006) Blueprint for Training and Practice providing a focus of practice for school psychologists and educators, the legislation of *No Child Left Behind* (2001) was implemented as a national reform to improve educational outcomes in students. *No Child Left Behind* (2001) requires schools to close the achievement gap between high- and low- performing students, close the achievement gap between disadvantaged children and their more advantaged peers, and implement prevention programs that are grounded in scientific research to provide evidence of effectiveness. This legislation has increased the standards for students, ensuring the growth of every student. However, ensuring growth can be challenging. This challenge has led teachers and administrators to look for research that suggests the most important variables that affect students' successful academic outcomes.

Student academic success is cumulative, whereby early academic success leads to future academic success (Chapin Hall, 2012). There are many predictors of future success, such as high school grade-point average (GPA), high school graduation, college attendance, and college GPA, that are related to better economic and social outcomes. For example, high school graduation predicts future economic success, with graduates making 50% more of the wage earned than a non-high school graduate (Conrad-Curry, 2011; Heckman & LaFontaine, 2010). Researchers also found that high school GPA is a predictor of college attendance and college GPA (Elias & MacDonald, 2007), with college enrollment a predictor of future success itself (Conrad-Curry, 2011; Elias & MacDonald, 2007). In addition, academic performance has a negative relationship with the onset of delinquency: the poorer the academic performance, the higher the delinquency (Maguin & Loeber, 1996). Because of

these important implications of academic achievement, it is imperative for educators to understand the factors that influence academic achievement.

Academic Success Factors

Among the many factors that contribute to academic success, academic enablers are considered to be the primary focus of instruction in school (DiPerna & Elliott, 2002). Academic enablers include factors that are both inside and outside of the student that influence academic achievement. Academic enablers are defined as "attitudes and behaviors that allow a student to participate in, and ultimately benefit from, academic instruction in the classroom. These enablers include motivation, interpersonal skills, engagement, and study skills" (DiPerna & Elliot, 2002). Research investigating these academic enablers of academic achievement suggests that prior achievement and interpersonal skills, influence motivation, and motivation influences study skills and engagement that both promote achievement (DiPerna, Volpe, & Elliott, 2001). Each of these academic enablers are multifaceted constructs consisting of multiple factors. For example, interpersonal skills, as an academic enabler, include cooperative learning behaviors necessary to interact with others. These include both communication and cooperation behaviors. In order for educators to help students benefit from their education, they must look at all aspects of academic achievement, including these academic enablers. The most influential internal factor in academic achievement is students' motivation to achieve.

Motivation is a multifaceted construct that lies on a continuum but can be easily measured by engagement. Motivation is not a stable trait; students' motivation varies among situations, contexts, and domains (Linnenbrink & Pintrich, 2002). Key components of motivation are engagement, academic self-efficacy, attributions, and achievement goals (DiPerna et al., 2001; Linnenbrink & Pintrich, 2002). All components are necessary for motivation, though engagement can be easily observed. Students who are motivated are engaged as well. However, it is important to note that students can be engaged in academics but not be motivated. Engagement is a "multidimensional construct, involving aspects of students' behavior, cognition, and affect" (Christenson et al., 2008, p. 1100). The time that students spend actively engaged in learning is a strong predictor of academic achievement (Gettinger & Ball, 2008); if students are engaged longer in learning, they are provided with more opportunities to learn, influencing their overall academic performance. Family, peers, and schools can facilitate school engagement (Christenson et al., 2008). Educators can promote engagement by providing social supports in order for students to feel a sense of belonging, connectedness, and support. These social supports can motivate students to engage in learning activities (Wentzel & Watkins, 2002). Educators can also foster engagement and increase academic motivation by increasing students' self-efficacy about their beliefs on school performance.

Academic self-efficacy is another key component of motivation that contributes to academic success. Bandura (1977) defined self-efficacy as the ability perceived by an individual to successfully execute a given behavior. Personal efficacy is based on task-specific accomplishments, success, and failures in that previous success raises expectations

of success, and past failure will lower expectations of success. Self-efficacy contributes to students' academic achievement; past educational performance can predict future educational performance due to academic self-efficacy (Bandura, Barbaranelli, Caprara, & Pasterelli, 1996; Elias & MacDonald, 2007; Linnenbrink & Pintrich, 2002). Students who believe in their ability to learn and succeed are motivated to perform better than those who do not believe in their abilities (Baird, Scott, Dearing, & Hamill, 2009). When student view his/her prior performance as successful, that student's self-efficacy is raised (Zimmerman & Ringle, 1981). Self-efficacy can be facilitated by various teaching styles; educators can provide opportunities for students to succeed on tasks, which increases their academic self-efficacy about those tasks.

Although these factors of academic enablers are important to recognize when understanding the factors in academic achievement, these factors are internal factors of the student. Educators can assist in fostering these factors, such as providing opportunities to learn and be successful; however, many external factors influence academic achievement. What a school can provide for its students, such as school resources and teachers, can affect academic achievement.

School resources are extrinsic factors of the student that also influence the success of students' academic outcomes. Research on school resources suggest that school resources are positively related to student outcomes, in that increased spending per student is associated with significant increases in achievement (Hanushek, 1997). Research on classroom size and student outcomes also suggests that class size affects program quality (Driscoll, Halcoussis, & Svorny, 2003; Ehrenberg, Brewer, Garmoran, & Willms, 2001; Krueger, 2003). The

biggest impact was seen in middle schools, where larger classroom sizes had a negative impact on student performance (Driscoll et al., 2003). The level of teacher education also impacts student performance, having a positive correlation between teacher's education and teacher performance in the classroom (Guyton & Fatokhi, 1987). Other studies also suggest a positive relationship between number of years of teacher experience and teacher's effectiveness (Murnane & Phillips, 1981). Although research suggests that these school resources increase academic performance, school budgets are tight and unchangeable, which provides many challenges to acquiring these ideal resources.

What is changeable and what research suggests as essential external components of student outcomes are effective teaching strategies by teachers. Higher academic performance is significantly impacted by effective instruction by the teachers. There are four critical attributes of effective instruction: explicit instruction, student engagement, opportunities for response, and immediate error correction. Explicit instruction is a systematic instructional approach based on research on effective schools (Archer & Hughes, 2011). Student engagement involves a high degree of student interaction to maintain student focus aligned with teacher-led instruction. Students should have multiple opportunities to practice skills that are being taught by scaffolding students through new concepts. Teachers should also provide immediate error correction to individual response, to ensure mastery of skill before moving toward more complex skills. These critical attributes of effective teaching instruction are external factors of the students but benefit the students.

Together, these internal, external, and motivational academic enablers promote academic achievement. However, many of these factors are difficult to change. In fact,

some students thrive academically but others do not, regardless of these external factors. What are the correlates to poor academic performance? Aside from poor grades, poor test scores, and other more serious consequences, such as dropping out of school, what other outcomes do students experience from failing or struggling academically? One such outcome is stress related to poor academic performance.

Stress

Stress is a feeling created when reacting to particular events. Monate and Lazarus (1977) defined stress as internal and external demands that exceed the adaptive resources of the individual, and an individual's perception that he/she lacks the resources to cope successfully with these demands results in anxiety. People with low psychological resources, such as social supports, are vulnerable to illness and mood disturbance when their stress levels increase (Cohen, Janicki-Deverts, & Miller, 2007, DeLongis, Lazarus, & Folkman, 1988). Social supports buffer against adverse life effects caused by stress; social supports contribute in moderating between the stressful event and the reaction of the event by affecting the appraisement of the event (Cohen & Wills, 1985; Sherbourne, 1988). A stressor can seem less threatening when people know support is available. Thus, social support decreases the experience of the many stressors students experience.

With increasing demands and pressures at home and school, students are more likely to experience various types of stress. Common stressors among students are demands on

oneself, future plans, lack of money, responsibilities, looks, relationships, and home situations (Landstedt & Gillander-Gadin, 2012). However, researchers found that the most frequently reported stressors among students are performance-related stressors (Landstedt & Gillander-Gadin, 2012). Academic performance (current grades) and academic achievement (GPA) contribute to performance-related stressors; if students are not performing well academically, they may experience stress. This performance-related stress could have a reciprocal relationship in that students may not perform well in school and, therefore, are stressed, or students may have high levels of stress to perform well in school, and therefore, do not perform well in school. High levels of stress have been linked to an increased risk of academic failure (Schraml, Perski, Grossi, & Makower, 2012). In a longitudinal study of 273 high school students' measured psychological stress symptoms, 39% of students reported high levels of stress temporarily and 15% of students reported chronic stress (Schraml et al., 2012). Although stress emerges in different formats, students who experienced stress showed significantly worse academic performance than students who did not experience stress (Schraml et al., 2012; Vaez & Laflamme, 2008). Stress can also have significant repercussions on students' future educational and occupational opportunities. Although stressful events are inevitable in students' lives, the way they deal with stress impacts how stress can affect their functioning. Perceived social support has been found to mediate the relationship between stress and adjustment, where "support directly influences health by promoting self-esteem and self-regulation, regardless of the presence of stress" (Lakey & Cohen, 2000, p. 29). Social support can make a stressor seem less threatening because people with such support know that there is help available.

There are some clear research patterns for social support on more general stress. The stress and coping perspective, also known as the stress-buffering hypothesis, states that support contributes to health by protecting people from the adverse effects of stress (Lakey & Cohen, 2000). This perspective suggests that social support acts as a stress buffer, in which the belief that support is available reduces the effects of stressful events (Lakey & Cohen, 2000; Cohen & Wills, 1985). Social support provides resilience during a stressful event, minimizing the negative effects of stress. Social support provides a powerful coping resource for students experiencing stress. The stress-buffering hypothesis suggests that the perception of support from others redefines the potential harm from stress, reduces or eliminates the reaction to the stressful event, and reduces the stress reaction by directly influencing the physiological processes. An individual may be comforted by knowing that social support is available in a time of stress, and social support has been found effective in helping people face stressful events (Cohen, Gottleiv, & Underwood, 2000).

It is evident that stress has adverse life effects. Students experience varying amounts of stress and hassles on a daily basis. The most common stressor among adolescents is their academic performance. Social support has been found to act as a buffer against global stress. However, little is known about how social support can buffer the specific stressor of academic struggles.

Social Support

A common perception in education is that educators focus solely on academics. However, we cannot tease apart social and emotional aspects from academic achievement because learning, sociability, and emotions are all intertwined in academic achievement. These factors are intertwined with and complementary of each other (Liew & McTigue, 2009). For example, research indicates that positive teacher-student relationships increases academic motivation, self-esteem, and achievement (Howes, 2000; Hughes & Kwok, 2006). For this reason, schools have turned to the social and emotional learning standards to help address students' social and emotional developmental needs, as required as a part of the Illinois Learning Standards (Illinois Children's Mental Health Public Act, 2003). These relationships are crucial in understanding the factors of academic achievement, as well as modifying factors when students are struggling. In schools, there is evidence that parents, teachers, and peers provide social support that is crucial for successful outcomes.

Social support has been widely studied as it relates to a variety of outcomes. Social support is a multifaceted concept that can be defined as the feeling that one is cared for and loved, esteemed, and valued and belongs in a social network (Cobb, 1976). Social support means having family, friends, or other people to turn to in times of need or crisis to give a broader focus on positive self-image. Cauce and Srebnik (1990) identify three main sources of support for children and adolescents that provide support, encouragement, and information: family, friends, and school personnel. This network of people can offer resources to support, aid, and comfort the person in need. The cognitive appraisal of support

acts as a buffer against adverse life events (Cohen & Wills, 1985; Lakey & Cohen, 2000). Social support also serves as a protective factor for adolescents, in that higher levels of perceived social support is related to lower levels of depression, lower levels of anxiety, higher self-concept, higher academic performance, and higher quality social skills (Demaray & Malecki, 2002; Malecki & Demaray, 2003; Malecki & Elliot, 1999). Social support has also been recognized to have significant impact on the achievement of the students (Flook, Repetti, & Ullman, 2005; Steinberg & Darling, 1994).

Social support is a multidimensional construct and therefore is analyzed and measured by many different approaches. The current study based the construct of social support on Tardy's (1985) framework, which advanced the measurement of social support with a clear conceptualization of social support. Tardy's model of social support is a comprehensive model that focuses on five elements of social support from multiple sources. Tardy's model is a global overview of social support that encompasses many aspects.

Tardy (1985) poses five elements in measuring social support: direction, disposition, description/evaluation, type, and source. The direction of social support refers to whether the social support is provided by others or received by others. Disposition of social supports is if the social support is available or utilized; measures of social support may ask to describe the social support or evaluate the social support that one entails. The content of measuring social support refers to the type of supportive behaviors one perceives or feels. There are many sources of these supports: family, friends, teachers, peers, etc. However, in the school context, there are family, teachers, and peers. Peers include classmates and friends. There are four main types of support: emotional, instrumental, informational, appraisal.

Those who provide emotional support are warm, kind, and sensitive to social and emotional needs. They demonstrate a caring nature toward the recipient by being respectful and listening to the needs of the recipient. Parents provide emotional support by using an authoritative parenting style in that they listen to their child's needs, listen to their child's concerns, display respect, and encourage the child to be the best that he or she can be. They express that they are proud of their child and their child believes that he/she is understood. Teachers can provide emotional support by displaying a positive affect for the students, listening to their students' needs, tailoring activities to their students' likes, encouraging their students to be kind and caring to one another, and providing encouraging feedback. Teachers provided emotional support create environments in which students are not afraid to ask questions and all students are treated fairly. Peers can also provide emotional support by listening to each other's academic concerns and encourage each other to try hard in school.

Instrumental supports are types of help that one may provide. This involves tangible aid and services to assist the child in need directly. Parents, teachers, and peers all provide instrumental support. Parents provide instrumental support by providing the materials necessary for a child to do school-work, designating an area for the child to do school-work, and helping with school-work when needed. Teachers who provide instrumental support show similar qualities, in that they provide materials necessary for learning. They may provide additional help for students by coming to school early or staying later after school to work with students who do not fully understand the material. They may provide additional resources, such as access to online tutorials that may provide additional assistance to schoolwork. Peers who provide instrumental support may also provide materials for

schoolwork, such as lending a calculator or pencil. They may offer to re-explain a concept that the student has trouble grasping or help them with schoolwork.

Informational support entails providing advice, guidance, or suggestions. Parents, teachers, and peers all provide informational support. Parents, teachers, and peers can provide informational support by giving advice on how to be a successful student. All providers can provide suggestions on how to do an assignment, how to study for an upcoming exam, or how to manage time in order to be successful in school.

Last, appraisal support refers to evaluative feedback. Parents, teachers, and peers all provide appraisal support. Parents and teachers who provide appraisal support provide feedback on assignments and grades. They are encouraging about good grades and are proud when the student is successful. They can offer rewards or incentives for doing well in school. They are encouraging when students do well and provide constructive feedback when students do poorly. Peers who provide appraisal support also show that they are happy and proud when their classmates do well. They do not ridicule a classmate when they do something poorly. They do not laugh or make fun of a classmate when they do not answer a problem correctly.

People seek specific social support from different sources for specific reasons. Social support is useful when the social support matches the stressor (Cohen & Wills, 1985). When looking at academic achievement and social support, there are three main sources of social support: teacher, parent, and peers. These three sources are the sources that the student is surrounded by and are easily accessed. There are also clear developmental trends of the social supports from teachers, parents, and classmates.

Teacher Social Support

Teacher support is necessary to investigate because students spend a significant amount of time with their teachers. Wentzel (1998) found that students' perceptions of teacher social support are significantly linked to students' internal control beliefs, school interest, and academic effort. Students who perceive higher teacher support have better attendance, spend more time studying, avoid problem behaviors, are more engaged in school, and perform better academically than those who perceive lower teacher support (Rosenfeld, Richman, & Bowen, 2000). Research also suggests that teacher support may have the most direct effect on student engagement beyond the support of parents and peers (Freese, 1999; Newmann, 1992). Rosenfeld et al. (2000) found that teacher support is a necessary condition of school success. However, teacher support must come in combination with parent support, peer support, or both. In sum, teacher support leads to higher academic performance. However, across different school age groups, students perceive varying amounts of teacher support.

There is a developmental trend in teacher support among children and adolescents. This may be due to the environmental differences between elementary, middle, and high schools. Elementary schools provide an environment that is comforting and constant, but middle school is considered to be more impersonal and institutionalized (Anderson, Jacobs, Schramm, & Splittgerber, 2000). In elementary school, students have a variety of learning experiences with the same teacher. Teachers who spend the majority of the day with their

students adapt to their students' learning styles and needs. In middle school, there is less variability in teaching style, as teachers are under a greater time constraint and they have each group of students for only a specified amount of time. This leads to less personal and positive student-teacher interactions. Middle school teachers also use comparison-based standards that have a negative impact on adolescents' self-perceptions and motivation (Eccles, Midgley, & Adler, 1984). Comparison-based standards emphasize competition and social comparison among adolescents. It would be expected that less consistency in instruction among teachers exists at the middle school level, a change that may create some distress for students. Among these changes in the environment, research has found significant teacher social support patterns. During elementary grade levels, students' highest support was from their teacher; however, teacher support declined significantly across the transition to middle school (Martinez, Aricak, Graves, Peters-Myszak, & Nellis, 2011). Simmons and Blyth (1987) also found a decline in early adolescents' school grades during the transition into middle school; this could also be explained by these significant changes of school environment and increasing demands placed upon them. It is imperative to understand the effects of declining teacher support in middle school students, when teacher support is linked with academic achievement.

Parent Social Support

Relationships with parents of school-aged children and relationships with parents of adolescents show some similar properties. Parent interactions are play, leisure, and task-

focused. Parental monitoring lessens during the adolescents' years as adolescents carry more responsibility for regulating their behavior. This coincides with adolescents' perceptions of decreasing affection and closeness with their parents. Furman and Buhrmester (1985) assessed various provisions of social support in 11 to 13-year-olds. Children and adolescents most commonly turn to their parents for affection, enhancement of worth, a sense of reliable aid, and instrumental aid. However, the most valuable finding was that out of all providers of social support, children thought that their relationships with their parents were most important. Del Valle, Bravo, and Lopez (2009) studied adolescents and suggest that parental support continues to be the most important in the context of personal relationships in adolescents' lives. These studies suggest that parental support continues to be a crucial factor in adolescents' well-being, providing the most global support. However, between 12 and 14 years of age, adolescents begin to find supports outside of the family, and the role of peer groups becomes stronger.

Peer Social Support

Adolescents begin to expand their social lives to people outside of their family. Peer social supports are easily accessible within schools. As multiple elementary schools combine students into one middle school, adolescents are introduced to more peers. Students who perceive higher social support from classmates during this transition into middle school have greater academic adjustment with these changes (Wang, Iannotti, & Luk, 2011). A

longitudinal study suggests that this school transition from elementary to middle school is associated with intensified supportive relationships with classmates, a pattern consistent for both boys and girls (Cantin & Boivin, 2004; del Valle et al., 2009). When looking at the perceived social support trend in middle school students, a developmental pattern suggests that sixth graders perceive more social support than seventh and eighth graders (Malecki & Demaray, 2006). A significant decrease in perceived social support occurs in seventh grade and eighth grade. With a decreased trend in perceived peer social support throughout middle school, it is valuable to understand the academic consequences that are associated with this trend.

Provisions of Social Support

Students seek different social supports from different sources throughout their education. However, there is a consistent trend in which teachers, parents, and peers are consistently providing social support but at different levels. Teachers provide less support as students get older, but the support is still necessary. Parents' levels of social support also vary, but are still important for students. Last, peers provide more social support as students' social networks begin to widen. All three providers are important in understanding social support among students. Weiss (1974) proposes a theory of social provisions, taking a functional approach in viewing social support, in which individuals seek specific types of social support in their relationships with others. Weiss lists six basic provisions of social support: attachment (emotional closeness), reliable alliance (assurance that others can be

counted on in times of stress), enhancement of worth (recognition of one's competence), social integration (a sense of belonging to a group of friends), guidance (advice or information), and opportunity for nurturance (providing assistance to others). Different provisions are received from relationships with other people. Individuals seek different types of social support in their relationships with others. This idea of seeking specific support should be consistent with academic social support, where students seek different academic provisions.

Social Support and Academic Achievement

Social support plays a vital role in academic achievement and the development of academic adjustment during the early adolescent years (Flook, Repetti, & Ullman, 2005; Steinberg & Darling, 1994). Social support is related to positive academic outcomes. Rosenfeld et al. (2000) assessed adolescents' school outcomes and perception of support from parents, teachers, and friends. Results suggest that students with high support from parents, teachers, and friends had higher grades than students without such support. When measuring adolescents' perceived social support, social skills, self-concept, and GPA, Malecki and Elliot (1999) also found a small, significant correlation between students' GPA and students' perceived global social support. In sum, these studies have found positive relationships between global social support and academic achievement.

Academic attitudes and behaviors are strongly influenced by various social supports in the students' environment. These social contexts facilitate the internal motivation necessary for academic success through autonomy, competence, and relatedness. Lack of these social supports contributes to academic amotivation (Legault, Green-Demers, & Pelletier, 2006). Students who perceive higher teacher support have better attendance, spend more time studying, avoid problematic behaviors, are more engaged in school, and have higher grades than do those who perceive lower teacher support (Rosenfeld et al., 2000). Students who perceive higher social support from classmates have greater academic adjustment during adolescent years (Wang et al., 2011). Levitt, Guacci-Franco, and Levitt (1994) found peer support to be positively related both directly and indirectly to academic achievement in children and adolescents from varied ethnic backgrounds. These studies reveal how the two social supports and academic achievement are related, but much is unknown about how social support might buffer academic stress.

Matching Hypothesis of Social Support

Examining adolescents' specific social support is essential for the understanding of which aspects of social support are most important in adolescents. Academic support includes the direct and indirect resources that people may provide that promote student academic achievement. Measuring academic social support can help reveal a more complete

picture of student relationships and experiences that could impact their academic performance and emotional well-being.

When evaluating academic social support measures, it is important to look at the framework that the measure uses. Tardy's (1985) framework of social support is multidimensional, providing a comprehensive evaluation of the elements and sources of social support. Four main sources of academic social support in adolescents' lives need to be evaluated: teachers, parents, classmates, and close friends. It is important that measures of social support evaluate the four different types of perceived social support—emotional, instrumental, informational, and appraisal—to fully understand which types of educational social support are most influential to academic achievement.

In using the matching hypothesis of stress-buffering to study the relationships among academic stress, social support, and academic success, a measure of support for academics would need to be used. A broad and general measure of social support is typically what is used when studying stress buffering, as many specific "matching" social support measures do not exist. Following are a few examples of social support measures that may, either directly or indirectly, tap into academic social support.

Existing Measures

In exploring potential measures used to measure academic support, the following measures were identified. However, there are advantages and disadvantages to these

measures. For example, the measures that have good psychometric properties are not measures that can be used to assess academic social support among all students. These measures are designed to assess a specific population and cannot be generalized to all children and adolescents. Most of these measures also focus on one aspect of academic social support and do not follow a multidimensional framework, such as Tardy (1985). A multidimensional framework would provide a larger picture of the support being perceived.

The Student Perceptions of Classroom Scale (SPCS) (O'Rourke, 2005) was designed to measure the perceptions of school students with mild disabilities regarding curricular, instructional, physical, and peer supports received in regular classrooms from both an academic and social perspective. The SPCS is a 28-item self-report measure of academic and social support mechanisms. Studies report that the SPCS has good reliability and validity (O'Rourke & Houghton, 2006). This scale follows Tardy's (1985) conceptualization of social support by evaluating access of instrumental and minimal emotional support given by teachers and peers. However, this scale does not have psychometric properties available for the measurement of social support in students without disabilities. A measure that is catered to students with mild disabilities is not a well-rounded image of school support for typically developing students. The SPCS also measures only instrumental and emotional support, which neglects informational and appraisal support. Research does not yet suggest that informational and appraisal support is not related to educational support; therefore, it should not be omitted.

The Student Academic Support Scale (SASS) (Thompson & Mazer, 2009) was designed to assess academic support between college students. The SASS is a 15-item self-

report measure, assessing informational, esteem, motivational, and venting supports among students. Scores on the SASS show evidence of reliability and validity (Mazer & Thompson, 2011). Following Tardy's (1985) conceptualization of social support, the SASS evaluates the access of informational and emotional support given by peers. Similar to the SPCS, this scale does not have psychometric properties available for the measurement of social support among early adolescent students. This measure may not generalize to school-aged children to give an accurate picture of academic social support. This measure also neglects instrumental and appraisal support. Research does not suggest that only informational and emotional supports are related to educational support; therefore instrumental and appraisal should not be omitted.

The Student Personal Perception of Classroom Climate (SPPCC) was designed to assess students' perceptions of the classroom climate (Rowe, Kim, Baker, Kamphaus, & Home, 2010). The SPPCC is a 26-item self-report measure that assesses students' experiences in the classroom, which includes academic competence, school satisfaction, peer academic and personal support, and teacher academic and personal support. When evaluating the SPPCC according to Tardy's (1985) conceptualization of social support, many aspects are present. First, regarding direction of social support, the SPPCC measures the support students have received, not given. Regarding disposition, the SPCC measures the support that is available, not actually being used. With regard to description/evaluation, the SPPCC asks to evaluate the support with a rating. Concerning type of support, the SPPCC measures emotional (5 items) and instrumental (1 item) support. Finally, the SPPCC measures the support from the teacher and peers in the classroom. Although the SPPCC has

evidence for established reliability and validity, it measures only emotional and instrumental support of the classroom climate. There are also many items that cannot be categorized with Tardy's (1985) types of social support.

The Significant Other Academic Support Scale was designed to assess adolescents' academic support (Sands & Plunkett, 2005). The Significant Other Academic Support Scale is a six-item measure. When evaluating the Significant Other Academic Support Scale according to Tardy's (1985) conceptualization of social support, many aspects are present. First, regarding direction of social support, the Significant Other Academic Support Scale measures the support students have received, not given. Regarding disposition, the Significant Other Academic Support Scale measures the support that is available, not actually being used. With regard to description/ evaluation, the Significant Other Academic Support Scale asks to evaluate the support with a rating. Concerning type of support, the Significant Other Academic Support Scale measures emotional (three items), instrumental (one item), and informational (two items) social support. Finally, the Significant Other Academic Support Scale measures the support from mother, father, teacher, and teenage friends. A limitation of this scale is that it only contains six items, which is too brief of a measure to fully understand students' perceived academic support. The Significant Other Academic Support Scale also does not measure appraisal support, therefore not assessing all aspects of academic social support.

The Perceived Parental Academic Support Scale (PPASS), Perceived Teacher Academic Support Scale (PTASS), and the Perceived Friend/Peer Academic Support Scale (PFASS) were designed to assess students' self-perceptions of academic support (Chen,

2005). The PPASS (28-item), PTASS (22-item), and PFASS (23-item) are self-report measures that assess interpersonal, cognitive, emotional, behavioral, and instrumental support among students, specific to education. Students indicate their level of agreement on a 5-point Likert scale, ranging from strongly disagree to strongly agree. When evaluating the PPASS, PTASS, and the PFASS according to Tardy's (1985) conceptualization of social support, many aspects of the model are present. First, regarding direction of social support, the PPASS, PTASS, and PFASS measure the support students have received, not given. Regarding disposition, the PPASS, PTASS, and PFASS measure the support that is available, not actually being used. Regarding description/evaluation, the PPASS, PTASS, and the PFASS ask to evaluate the support with a rating. Concerning type of support, the PPASS, PTASS, and PFASS all measure emotional, instrumental, informational, and appraisal support as defined by Tardy, but the author labels the types of support differently. Additionally, items tap multiple types of support, and there are uneven amounts of each type of support. Some of the items also do not fit within Tardy's types of support.

Specifically, the PPASS measures emotional support (25% of the items), instrumental support (30% of the items), informational support (20% of the items), and appraisal support (20% of the items). Five percent of the items could not be categorized under Tardy's (1985) types of supports. The PTASS measures emotional support (30% of the items), instrumental support (15% of items), informational support (30% of the items), and appraisal support (20% of the items). Five percent of the items could not be categorized under Tardy's types of supports. The PFASS measures emotional support (20% of the items), instrumental support (25% of the items), informational support (15% of the items), and

appraisal support (25% of the items). One item is specific to the Hong Kong Certificate of Education Examination and the other items could not be categorized under Tardy's types of supports. Finally, each scale measures support from a specific source in a student's network; the PPASS measures academic support from parents, the PTASS measures academic support from teachers, and the PFASS measures friend and peer academic support. These scales were developed only for a single study and have not been validated (Chen, 2005). Only evidence for content and construct validity have been demonstrated. There are also questions specific to students in Hong Kong; therefore, some questions may not be generalizable to other cultures being assessed.

The Child and Adolescent Social Support Scale (CASSS) (Malecki, Demaray, & Elliott, 2000) measures social support in youth. The CASSS is a 60-item self-report measure, in which students rate each item on frequency and importance. When evaluating the CASSS according to Tardy's (1985) conceptualization of social support, all aspects are present. First, regarding direction of social support, the CASSS measures the support students have received, not given. Regarding disposition, the CASSS measures the support that is available and enacted upon. With regard to description/evaluation, the CASSS asks to describe the support with a rating. Concerning type of support, the CASSS measures emotional (15 items), instrumental (15 item), informational (15 items), and appraisal (15 items) support. Finally, the CASSS measures the support from parents, teachers, classmates, close friends, and the school. Items are evenly distributed among types of support from each source, so each type of support has three items per source. Studies purport that the CASSS has high reliability and validity (Malecki & Demaray, 2002, 2003). The CASSS is the only current

measure that fully follows Tardy's framework and uses multiple sources of social supports. However, the CASSS is a global measure of social support, not specific to only educational social support. Because of the framework and good psychometric properties, the goal of this study is to revise the CASSS to be specific towards supportive behaviors related to academics.

Current Study

Currently, none of the measures described above have strong evidence for valid and reliable understanding of academic social support. These measures do not capture academic support for all children and adolescents in general education. The SPCS (O'Rourke, 2005) measures academic support for students with mild disabilities, and the SASS (Thompson & Mazer, 2009) measures academic support for college students. Some measures capture only one aspect of academic support; the SPPCC (Rowe et al., 2010) was designed to assess students' perceptions of the classroom climate. Some measures are not comprehensive enough to fully apprehend the perceived academic support: the Significant Other Academic Support Scale is only a six-item measure designed to assess adolescents' academic support (Sands & Plunkett, 2005). The measures that most closely align to understanding academic social support are the PPASS, PTASS, and the PFASS which were designed to assess students' self-perceptions of academic support (Chen, 2005). However, these measures lack the psychometric properties necessary to provide a valid understanding of a students'

academic social support. Also, these measures were translated from Chinese and, therefore, do not fully capture the culture of American students. The CASSS (Malecki, et al., 2000) comes closest to having a measure that follows Tardy's (1985) multidimensional framework of social support and having good psychometric properties. However, the CASSS is not a specific measure of academic social support, but rather a global measure of support in general. Therefore, a measure specific to academic social support is necessary to measure the perceived academic support for all children and adolescents.

Students who are successful academically tend to have more promising futures (Conrad-Curry, 2011; Elias & MacDonald, 2007). As students are viewed as the center of many contexts, it is important to understand these variables as they relate to academic performance and student success. Academic performance is influenced by many different factors. School resources and teaching styles are highly influential in promoting academic achievement. However, these are extremely difficult to change. As discussed, many factors are both internal and external of the student. School resources and teaching styles are highly influential in promoting academic achievement. However, these are extremely difficult to change. Academic enablers are internal of the student, but external factors can influence these academic enablers. For example, teachers can foster social supports to increase students' motivation to engage in learning activities. Also, by definition, social support is an interpersonal transaction among individuals. Therefore, could social support foster these interpersonal skills by providing practice? Could social support be an academic enabler itself, as it relates to many aspects of academic achievement? Or could social support be a buffer

of these academic enablers, as discussed by DiPerna and Elliot (2002)? To examine these questions, a specific academic social support measure is needed.

Understanding academic social support in children is essential toward a richer understanding of their social experiences. Students who perceive greater support from classmates experienced fewer symptoms of internalizing distress (Stewart & Suldo, 2011). Schools have an opportunity to promote positive, supportive relationships within the school setting. However, a better understanding of specific academic supports is necessary to do this.

This exploratory study is to develop a measure of academic social support. This study investigates the following research questions: (1) What is the underlying factor structure of the CASSS-A? (2) What evidence of reliability do scores on the CASSS-A have? and (3) What evidence of validity do scores on the CASSS-A have?

CHAPTER TWO

METHOD

Participants

Participants were students in Grades 7and 8 in an Illinois suburban middle school. The sample of the current study consisted of 76 students (356 males, 350 females). Of these students, 576 were White (70.6%), 61 were Hispanic (8.6%), 26 were African American (3.7%), 13 were Asian (1.8%), 5 were Indian/Alaskan Native (0.7%), 1 was Native Hawaiian/Pacific Islander (0.10%), and 24 reported as "Two or More Races" (3.4%). In the total sample, 373 students were in Grade 7 (52.80%), and 333 students were in Grade 8 (47.2%). Sixty-one of the students received special education (8.6%), and 377 of the students received free or reduced lunch (53.4%). Table 1 displays the descriptive data for the total sample and by gender.

Participants were part of an all-school evaluation. Graduate and undergraduate students from Northern Illinois University collected data at the Illinois suburban middle school on two consecutive days during students' physical education classes. The first day of data collection included CASSS (Malecki et al., 2000), Big Five Questionnaire for Children (BFQ-C; Barbaranelli, Caprara, Rabasca, & Pastorelli, 2003), subsections of the Behavior

Assessment Scale for Children, second edition (BASC-2; Reynolds & Kamphaus, 2004), a brief demographic questionnaire, and the Children's Social Experience Questionnaire (CSEQ; Crick & Grotpeter, 1996). The second day of the data collection included the CASSS-A, Academic Competence Evaluation Scales (ACES; DiPerna & Elliott, 2000), and the Big Five Inventory (BFI; John & Srivastava, 1999). When the data had been deidentified, approval from the Northern Illinois University Institutional Review Board (IRB) was sought to use the extant data for research purposes.

Measures

Data were collected using the CASSS-A, the CASSS (Malecki et al., 2000), the BASC-2 SRP (Reynolds & Kamphaus, 2004), and the ACES (DiPerna & Elliott, 2000). School records included students' last-quarter GPA, last year's ISAT scores, gender, nationality, special education eligibility, and lunch status.

Table 1

Descriptives for Total Sample and by Gender

	Total Sample		Male Subsample		Female Subsample	
	N	% Total Sample	N	% Total Sample	N	% Total Sample
Total	706	---	356	50.40%	350	49.60%
7th Grade	373	52.30%	182	48.8%	191	51.2%
8th Grade	333	48.80%	174	52.2%	159	47.7%
Asian American	13	1.8%	7	2%	6	1.7%
African American	26	3.7%	12	3.4%	14	4.0%
Hispanic American	61	8.60%	35	9.8%	26	7.4%
Indian/Alaskan Native	5	0.70%	3	0.8%	2	0.6%
Native Hawaiian/Pacific Islander	1	0.10%	1	0.3%	0	0%
Two or More Races	24	3.40%	17	4.8%	7	2.0%
White	576	81.60%	281	78.9%	295	84.3%
Receive Special Education	61	8.60%	44	72.1%	17	27.9%
Receive Free/Reduced Lunch	377	53.40%	193	51.2%	184	48.8%

Child and Adolescent Social Support Scale (CASSS; Malecki et al., 2000)

The CASSS is a 40-item, multidimensional, self-report measure of children's and adolescents' perception of social support from others. It can be used for students in Grades 3 through 12 with two levels; Level 1 is for Grades 3 through 6, and Level 2 is for Grades 6 through 12. Students are asked to rate each item on both the frequency and importance of the supportive behaviors. Frequency ratings are measured on a 6-point Likert Scale from 1 (Never) to 6 (Always). Frequency, importance, and total scores also correspond to separate subscales.

The CASSS follows Tardy's (1985) model of social support, measuring the four types of social support (emotional, informational, instrumental, and appraisal support) from five sources of support (parents, teachers, classmates, close-friend friends, and the school). In the current study, only parent, teacher, classmate, and close friend support were assessed. Each source corresponds to a subscale; each subscale consists of 12 items. For each source of support, three items assess emotional support, three items assess information support, three items assess instrumental support, and three items assess appraisal support. An example of an emotional support item is, "My teacher treats me fairly." "My parents make suggestions when I don't know what to do" is an example of an informational support item. An example of an instrumental support item is "My classmates spend time doing things with me." "My

parents tell me I did a good job when I do something well" is an example of en appraisal support item.

The CASSS has evidence of reliability and validity on over 1,110 students Grades 3 though 12 (Malecki & Demaray, 2002). Strong, source-based factor structure was found, categorizing among parents, teachers, close friends, and classmates. There is strong evidence for reliability of the CASSS, with coefficient alphas ranging from .87 to .94 and test-retest reliabilities ranging from .60 to .70. There is also strong evidence for the validity of the CASSS. Internal structure of the CASSS was confirmed with inter-correlations among subscales of the CASSS, with coefficient alphas ranging from .20 to .54. Evidence of convergent validity was obtained with the Social Support Scale for Children (SSSC) (Harter, 1985), with a correlation of .70. Correlations between subscales were quite similar: Parent, .62; Teacher, .64; Classmate, .66; and Close Friend, .55.

Behavior Assessment Scale for Children, Self-Report of Personality (BASC-2)

The BASC-2 SRP is a self-report assessment of children's emotions and self-perceptions. The self-report of personality is part of a larger assessment system to evaluate students' social, emotional, and behavioral functioning comprehensively. The current study utilized the adolescent form that assesses students ages 12 and above. The BASC-2 SRP Adolescent version is a 176-item rating scale that measures personality, self-perceptions,

thoughts, and feelings of adolescents from ages 12 through 21. The BASC-2 SRP-A is written at a third-grade reading level. Anxiety, Attention Problems, Attitude to School, Attitude to Teachers, Atypicality, Depression, Hyperactivity, Interpersonal Relations, Locus of Control, Relations with Parents, Self-Esteem, Self-Reliance, Sensation Seeking, Sense of Inadequacy, Social Stress, and Somatization are measured in the BASC-2 SRP-A. The current investigation examines the following subscales as outcome measures: Attitude to School, Attitude to Teachers, Depression, Interpersonal Relations, and Relations with Parents.

The BASC-2 SRP-A requires participants to respond to one of two types of statements. One type of statement requires the individual to respond to true/false statements. For example, students endorse if a statement such as "My teacher cares about me" is true or false for them. Other questions inquire about the frequency of behavior or emotions using a 4-point Likert-type scale ranging from *Never* to *Always*. An example of the Likert-type scale questions is "I feel that nobody likes me." Administration of the SRP takes about 30 minutes to complete.

The BASC-2 SRP was normed on a large, representative sample of 3,400 children, adolescents, and young adults in the United States. Gender, race, geographic region, socioeconomic status, and parent education were controlled for. There is strong evidence for the reliability of the BASC-2-SRP-A, with coefficient alphas ranging from .67 to .88 and test-retest reliabilities ranging from .61 to .84 for the SRP scales. There is strong evidence for the validity of the BASC-2-SRP-A and the Child Version, with significant intercorrelations, factor analyses, and correlations with other measures. Some examples of these measures include the Achenbach System of Empirically Based Assessment (ASEBA) Youth Self-

Report (Achenbach & Rescorla, 2001), Children's Depression Inventory (CDI) (Kovacs, 2001), and Revised Children's Manifest Anxiety Scale (RCMAS) (Reynolds & Richmond, 1985).

Academic Competence Evaluation Scales (ACES)

The ACES (DiPerna & Elliott, 2000) are a self-report assessment of academic functioning of students in Grades K-12 or in college. The ACES were designed to measure students' skills, attitudes, and behaviors that contribute to academic competence. According to DiPerna and Elliott (2000), academic competence consists of academic skills and academic enablers. "Academic skills are the basic and complex skills that are a central part of academic curricula in schools, and academic enablers are attitudes and behaviors that allow a student to benefit from classroom instruction" (DiPerna & Elliott, 2000, p. 4). The self-report assessment measures academic skills (reading/language art, mathematics, and critical thinking) and academic enablers (motivation, study skills, engagement, and interpersonal skills). The ACES are part of a larger assessment system used. The ACES consist of teacher, student, and college student forms; the current study utilized the student form. The student form consists of 68 items. The ACES student form requires participants to respond to statements on a 5-point Likert-type scale ranging from *Never* to *Almost Always*. An example of an item is "I understand what I read." Administration of the student form

takes about 20 minutes to complete. Scores indicate developing, competent, or advanced student performance from grade-level expectations.

The ACES-student version was normed on a small, representative sample of 302 students in the United States. Gender, race, geographic region, socioeconomic status, and education status were controlled for. Overall, each of the scales in the ACES has demonstrated strong evidence of reliability and validity. There is strong evidence for test-retest reliability, with coefficient alphas ranging from .68 to .81, and strong evidence of internal consistency with coefficient alphas ranging from .84 to .99. However, there is low evidence for content validity. The correlations between the ACES-Student and the Iowa Test of Basic Skills (ITBS) composite score and the correlations between the ACES-Student and the Social Skills Rating System (Gresham & Elliott, 1990) were low but followed a similar pattern of convergent and discriminant relationships that were observed with the ACES-Teacher with these measures. The ACES-Teacher has demonstrated strong evidence of convergent and discriminant validity.

Procedure

The CASSS-A scale development consisted of altering the items on the CASSS (Malecki et al., 2000) to assess specific academic support rather than general support. Specifically, multiple items for each type of support (i.e., emotional, informational, instrumental, and appraisal support) from each source of support (i.e., parent, teacher, classmate, close friend) were compiled to create the academic support scale. An expert

group reviewed, revised, and evaluated each item of the new scale to ensure that the items had face validity, both in-person and by email. After consensus of face validity was derived, the items were piloted with a group of 44 adolescent middle school students to ensure that the questions were clear for adolescents to understand. After feedback about the questions from the pilot-study participants, 79 items were selected. Specifically, about five items for each type of support from each source of support were selected. An example of an emotional support item is, "My parents listen to me about my concerns with schoolwork." "My classmates help me solve schoolwork when I don't know what to do" is an example of an informational support item. "My teacher takes time explaining information to help me learn the concepts well" is an example of an instrumental support item. An example of an appraisal support item is, "My close friend tells me when I did a good job on an assignment." See Figure 1 for a listing of all 79 items used on the academic social support scale.

The expert group were experts in the fields of social support and school psychology. The goal of the group of experts was to gain the most reliable consensus of opinion through a series of sequential questionnaires. A qualified expert is someone who has had extensive professional experience in the field of social support or school psychology. Experts were chosen based on their experience and their willingness to be involved in the study. Experts involved seven doctoral students in school psychology who were familiar with social support and Tardy's (1985) framework of social support. One Northern Illinois University professor with extensive published research in the field of social support was also a part of the expert group.

Item Number	Type of Support Assessed	Item "(Source)…"	Source
1[a]	Emotional	…care about my grades.	Parent Subscale
2[a]	Emotional	…care about my effort in school.	Parent Subscale
3	Emotional	…listen to me about my concerns with schoolwork.	Parent Subscale
4	Emotional	…make it okay to ask questions on school subjects that I don't understand.	Parent Subscale
5	Emotional	…ask me how school is going.	Parent Subscale
6	Instrumental	…help me with my homework.	Parent Subscale
7	Instrumental	…help me study for tests.	Parent Subscale
8[a]	Instrumental	…help me practice my schoolwork.	Parent Subscale
9[a]	Instrumental	…make sure I have what I need for school.	Parent Subscale
10	Instrumental	…take time to help me learn something on my schoolwork.	Parent Subscale
11	Informational	… make suggestions when I don't know how to do a homework problem.	Parent Subscale
12[a]	Informational	… give me advice on how to be a successful student.	Parent Subscale
13	Informational	…help explain concepts that I don't understand on my homework.	Parent Subscale
14[a]	Informational	…give me advice on how to get better grades.	Parent Subscale
15	Informational	…give me advice on how to study well.	Parent Subscale
16	Appraisal	… tell me I did a good job when I do well in school.	Parent Subscale
17[a]	Appraisal	…are proud of me when I do well on an exam.	Parent Subscale
18	Appraisal	…tell me how well I did on school tasks.	Parent Subscale
19	Appraisal	… notice when I work hard in school.	Parent Subscale

Figure 1: Initial CASSS-A Support Subscale Items (Continued on following page).

Note. a = item was removed after item analysis.

Item Number	Type of Support Assessed	Item "(Source)…"	Source
19	Appraisal	… notice when I work hard in school.	Parent Subscale
20 [a]	Appraisal	… expect me to try my hardest in school.	Parent Subscale
21	Emotional	… care about my grades.	Classmate Subscale
22	Emotional	… listen about my concerns with my schoolwork.	Classmate Subscale
23 [a]	Emotional	… help me when I don't understand something on my schoolwork.	Classmate Subscale
24 [a]	Emotional	… understand my feelings about school.	Classmate Subscale
25	Emotional	… respect my thoughts and ideas about school.	Classmate Subscale
26	Instrumental	… take time to help me learn something that I don't understand in school.	Classmate Subscale
27	Instrumental	… help me with my schoolwork.	Classmate Subscale
28 [a]	Instrumental	… lend me materials that I need for school (ex: calculator, pencil, paper).	Classmate Subscale
29 [a]	Instrumental	… help me when I need to brainstorm ideas for schoolwork.	Classmate Subscale
30	Instrumental	… help me study for tests.	Classmate Subscale
31 [a]	Informational	… help me solve my schoolwork when I don't know what to do.	Classmate Subscale
32	Informational	… help explain assignments that I don't understand.	Classmate Subscale
33	Informational	… give me suggestions on how to study better.	Classmate Subscale
34	Informational	… give me suggestions on how to get better grades.	Classmate Subscale
35	Appraisal	… tell me I did a good job when I did well in school.	Classmate Subscale
36	Appraisal	… notice when I work hard in school.	Classmate Subscale
37	Appraisal	… encourage me to do well in school.	Classmate Subscale

Figure 1: Initial CASSS-A Support Subscale Items (Continued on following page).

Note. a = item was removed after item analysis.

Item Number	Type of Support Assessed	Item "(Source)…"	Source
38 [a]	Appraisal	… tell me when I did a good job in school.	Classmate Subscale
39 [a]	Appraisal	… want me to do well in school.	Classmate Subscale
40 [a]	Emotional	…cares about my grades.	Teacher Subscale
41	Emotional	… cares about how well I do in school	Teacher Subscale
42	Emotional	… listens to my concerns about school.	Teacher Subscale
43	Emotional	… makes it okay for me to ask questions on schoolwork.	Teacher Subscale
44	Instrumental	… helps me when I do not understand something in class.	Teacher Subscale
45 [a]	Instrumental	… helps me with my homework.	Teacher Subscale
46	Instrumental	… takes time explaining information to help me learn the concepts well.	Teacher Subscale
47	Instrumental	… provides me with the resources I need to do well in school.	Teacher Subscale
48 [a]	Instrumental	… lends me the materials that I need for school (ex: calculator, pencil, paper).	Teacher Subscale
49 [a]	Instrumental	… is available before or after school to help me with my schoolwork.	Teacher Subscale
50	Informational	… gives me advice on how to be successful in school.	Teacher Subscale
51 [a]	Informational	… helps me solve schoolwork when I don't know what to do.	Teacher Subscale
52	Informational	… explains concepts when I don't understand.	Teacher Subscale
53	Informational	… offers suggestions to help me in school.	Teacher Subscale
54 [a]	Informational	… provides advice on how to be a successful student.	Teacher Subscale
55	Appraisal	… tells me nicely when I make mistakes.	Teacher Subscale
56 [a]	Appraisal	… tells me how well I do on school tasks.	Teacher Subscale

Figure 1: Initial CASSS-A Support Subscale Items (Continued on following page).

Note. a = item was removed after item analysis.

Item Number	Type of Support Assessed	Item "(Source)…"	Source
57	Appraisal	… notices when I worked hard on schoolwork.	Teacher Subscale
58	Appraisal	…encourages me to do well in school.	Teacher Subscale
59 [a]	Appraisal	… gives me feedback on assignments to help me learn.	Teacher Subscale
60	Emotional	… cares about my grades.	Close Friend Subscale
61	Emotional	… listens about my concerns with my schoolwork.	Close Friend Subscale
62 [a]	Emotional	… makes it okay to ask questions about my homework.	Close Friend Subscale
63 [a]	Emotional	… respects my thoughts and ideas about school.	Close Friend Subscale
64	Emotional	… encourages me to be the best student that I can be.	Close Friend Subscale
65	Instrumental	… takes time to help me learn something that I don't understand in school.	Close Friend Subscale
66 [a]	Instrumental	… helps me with my schoolwork.	Close Friend Subscale
67 [a]	Instrumental	… lends me materials that I need for school (ex: calculator, pencil, paper).	Close Friend Subscale
68	Instrumental	… helps me when I need to brainstorm ideas for schoolwork.	Close Friend Subscale
69	Instrumental	… helps me study for tests.	Close Friend Subscale
70 [a]	Informational	… helps me solve schoolwork when I don't know what to do.	Close Friend Subscale
71	Informational	… explains concepts on my homework when I don't understand.	Close Friend Subscale
72	Informational	… helps explain assignments that I don't understand.	Close Friend Subscale
73	Informational	… gives me advice on how to do well in school.	Close Friend Subscale
74 [a]	Appraisal	… is available after school to do assignments.	Close Friend Subscale
75 [a]	Appraisal	… tells me I did a good job when I did well in school.	Close Friend Subscale

Figure 1: Initial CASSS-A Support Subscale Items (Continued on following page).

Note. a = item was removed after item analysis.

Item Number	Type of Support Assessed	Item "(Source)…"	Source
76 [a]	Appraisal	… notices when I work hard in school.	Close Friend Subscale
77	Appraisal	… encourages me to do well in school.	Close Friend Subscale
78	Appraisal	… provides feedback on how I can improve on my schoolwork.	Close Friend Subscale
79	Appraisal	… tells me when I did a good job on an assignment.	Close Friend Subscale

Figure 1: Initial CASSS-A Support Subscale Items.

Note. a = item was removed after item analysis.

Preliminary Analyses

Before investigating the primary research questions posed by the current study, preliminary analyses were conducted using records data provided by the district. Descriptive data were examined for the sample, including the gender, ethnicity, grade, special education eligibility, and lunch status.

Subscale frequency scores on the CASSS (Malecki et al., 2000) and CASSS-A are calculated by summing the frequency ratings of the items on each subscale (i.e., Parent, Teacher, Classmates, and Close Friend). A total frequency score can be calculated by summing all six frequency scores. Furthermore, in order to assess students' perceptions of the various types of support provided by each source, the items reflecting each type of support (i.e., emotional, informational, instrumental, and appraisal) can be summed together within each source subscale (e.g., Parent, Teacher, Classmates, and Close Friend). The current investigation used this method to compare the perceived frequency levels of each

type of support attributed to parents, teacher, classmates, and close friends in Research Question 2. All other analyses in the current study used the total frequency scores for the Parent, Teacher, Classmate, and Close Friend subscales.

Research Question 1

Research Question 1 was an investigation of the underlying factor structure of the CASSS-A. An exploratory factor analysis was conducted to investigate the factor structure of the students' scores on the CASSS-A. The current analyses investigated the factor structure of the CASSS-A based on the source of subscales. The proposed statistical analyses included an exploratory factor analysis of parent support, teacher support, classmate support, and close friend support. The Kaiser eigenvalue criterion determined whether factor-loadings indicated a clear four-factor structure corresponding to the four sources of social support. Oblique rotations were used because the factors were assumed to be related and in order to make the data more interpretable. The Kaiser eigenvalue criterion determined whether factor-loadings indicated a clear four-factor structure corresponding to the four sources of social support. Oblique rotations were used because the factors were assumed to be related and in order to make the data more interpretable. Scree plots were examined to confirm the number of factors. These analyses were used to determine overall factor structure, and confirm that the factor structure was adequate for males and females separately. It was expected that there would be an adequate fit of the four sources: teacher, parent, classmates, and friends.

Research Question 2

Research Question 2 examined what evidence of reliability the scores on the CASSS-A had. Internal consistency reliability was assessed using Cronbach's coefficient alpha computed on the items that made up the Total frequency score and on the items that made up each of the source subscales (parent, teacher, classmate, and close friend). Coefficient alphas were conducted on the total sample, by gender, and by grade. It was expected that there would be moderate to fair internal consistency (r = .70 to .79) within each source of academic support.

Research Question 3

Research Question 3 examined the evidence of validity that the scores on the CASSS-A had. Content validity was assessed through a panel of experts. This group selection was from experts in the fields of social support and school psychology. The initial pool of 120 items for the CASSS-A was provided to the expert group. The expert group rated which type of social support the item was assessing and the quality of the item following Tardy's (1985) framework. It was expected that the group would agree upon at least 80% of the items within each source of academic social support. Only items with 80% of agreement were included in the version of the CASSS-A used in this study.

Preliminary analyses suggested whether validities must be assessed by gender. Convergent validity was assessed using the CASSS (Malecki et al., 2000). It was expected that the parent subscale of the CASSS-A would be strongly correlated with the parent subscale of the CASSS (Malecki et al., 2000). It was expected that the teacher subscale of the CASSS-A would be strongly correlated with the teacher subscale of the CASSS (Malecki et al., 2000). It was expected that the classmate subscale of the CASSS-A would be strongly correlated with the classmate subscale of the CASSS (Malecki et al., 2000). It was expected that the close friend subscale of the CASSS-A would be strongly correlated with the close friend subscale of the CASSS (Malecki et al., 2000). It was also expected that there would be a low correlation between the CASSS-A parent source of academic support and the CASSS-A classmate support and CASSS-A teacher support. It was expected that there would be a low correlation between the CASSS-A teacher source of social support and the CASSS-A classmate support and the CASSS-A parent support.

Construct validity was examined using the BASC-2 SRP (Reynolds & Kamphaus, 2005), the ACES (DiPerna & Elliott, 2000), students' most recent GPA, and students' most current and available ISAT scores. Correlations between the CASSS-A total score and BASC-2 SRP subscale scores of Attitude to School, Attitude to Teachers, Depression, Interpersonal Relations, and Relations with Parents were examined. It was expected that there would be a moderate correlation between the total CASSS-A score and the BASC-2 SRP Attitude to School, a strong correlation between the CASSS-A teacher source of social support with the BASC-2 SRP Attitude to Teachers score, a strong correlation between the CASSS-A total score and the BASC-2 SRP Interpersonal Relations score, a strong

correlation between the CASSS-A parent source of social support and the BASC-2 SRP Relations with Parents score, and a moderate negative correlation between the CASSS-A total score and the BASC-2 SRP Depression score.

Correlations between the CASSS-A total score and students' total Academic Enablers score from the ACES were examined. It was expected that there was a moderate to high correlation between the CASSS-A total score and the ACES Academic Enabler total score. Academic enablers are behaviors that interact with instruction to enable learning and productive use of academic skills; it was hypothesized that social support would influence the attitudes and behaviors that allow a student to benefit from classroom instruction.

Correlations between the CASSS-A total score and students' current GPA was examined. It was expected that there would be a moderate to high correlation between the CASSS-A total score and students' current GPA; students with low levels of academic social support would have lower GPAs. Correlations between the CASSS-A total score and group achievement scores were also examined. It was expected that there would be a moderate to high correlation between the CASSS-A total score and students' current ISAT score; students with low levels of academic social support would perform lower on the ISAT.

CHAPTER 3

RESULTS

Preliminary Analyses

Descriptive information on key variables presented by gender, grade level, and ethnicity is listed in Table 1 (Chapter 2 above).

Research Question 1

Item Analysis

Although the source subscale (i.e., parent, teacher, classmate, and close friend) of the original CASSS (Malecki et al., 2000) consisted of 12 items each, comprised of three items per support (i.e., emotional, instrumental, appraisal, and informational), the CASSS-A consisted of 79 items. Specifically, the CASSS-A parent subscale consisted of 20 items (5 items per support type); the classmate subscale consisted of 19 items (5 items for emotional,

instrumental, and appraisal, and 4 items for informational); the teacher subscale consisted of 20 items (5 items per support type); and the close friend subscale consisted of 20 items (5 items for emotional and instrumental, 4 items for informational, and 6 items for appraisal). Before conducting the primary analyses for Research Question 1, an item analysis was conducted to eliminate poorer items and create subscales of equal length, as the CASSS had. Specifically, for the items, factor loadings and descriptive statistics (i.e., means, standard deviations, and skewness), and inter item correlations were examined for patterns of weaker and stronger items. The items were first narrowed down by examining the strongest factor loadings. They were then examined by item correlations. After all the narrowed down items met stringent criteria, the items were then chosen based on theoretical and practical reasons. For example, if there were five items narrowed down in one source and type of support, the items were chosen not be repetitive (e.g., all items asking about tests or all items asking about homework). See Figure 1 (in Chapter 2) for deleted items, Figure 2 for the resulting 48-item academic support scale, and Table 2, 3, 4, and 5 for the frequency item descriptives, respectively.

Items were separated by source and by type of support. Then three items from each of type of support were selected. These items typically had the largest factor loadings and item correlations. Items deleted from the parent source of support were items 1, 2, 8, 9, 12, 14, 17, and 20. Items 1, 2, 9, 12, 14, 17, and 20 were deleted because they had the lowest factor loadings and item correlations. Item 8, "My parents help me practice my schoolwork," was deleted based off on practical reasons. Parents do not "practice" schoolwork; rather help with homework or practice studying for a test.

Items deleted from the classmate source of support were items 23, 24, 28, 29, 31, 38, and 39. Items 24, 28, and 39 were deleted because they had the lowest factor loadings and item correlations. Item 23, "My classmates help me when I don't understand something on my schoolwork," was deleted because it was an informational question rather than emotional. Item 29, "My classmates help me when I need to brainstorm ideas for schoolwork," was deleted for practical reasons. Classmates can help brainstorm ideas for projects or papers, but schoolwork is not specific. Item 31, "My classmates help me solve schoolwork when I don't know what to do," was deleted for practical reasons. Schoolwork is not specific enough; classmates can help solve homework instead. Item 38, "My classmates tell me when I did a good job in school," was deleted based on practical reasons. Item 35, "My classmates tell me when I did a good job when I did well in school," was an extremely similar question with higher factor loadings; therefore item 35 was chosen over Item 38.

Items deleted from the teacher source of support were items 40, 45, 48, 49, 51, 54, 56, and 59. Items 40, 45, 48, 49, 54, 56, and 59 were deleted because they had the lowest factor loadings and item correlations. Item 44, "My parent helps me when I do not understand something in class," was changed from an emotional question to instrumental question. Item 51, "My parent helps me solve schoolwork when I don't know what to do," was deleted for practical reasons. Again, schoolwork is not specific enough; parents can help solve homework instead.

Items deleted from the close friend source of support were items 62, 63, 66, 67, 70, 74, 75, and 76. Items 63, 66, 67, 70, 74, 75, and 76 were deleted because they had the lowest factor loadings and item correlations. Item 62, "My close friend makes it okay to ask

questions about my homework," was deleted because of practical reasons. This item was from the emotional type of support and the other questions measure how the close friend cares, listens, and encourages; these items better measure emotional support better than Item 62.

In sum, most of the items were deleted because they had the lowest factor loadings and item correlations. Other items were deleted because the items were not specific enough or the items did not measure the specified type of support clearly.

Factor Analysis of the CASSS-A

An exploratory factor analysis using principal axis factoring with oblique rotations (direct oblimin) was conducted in order to examine the underlying factor structure of the CASSS-A frequency items. The initial analysis of the frequency items was first run using Kaiser's criteria, which resulted in four factors with eigenvalues of 20.72, 6.06, 4.79, and 4.09 retained. Therefore, the factor analyses of the four factors specified (one for each source subscale) fit the data. Specifically, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was superb (KMO = 0.970) and Bartlett's test of sphericity was significant ($p <$ 0.01), indicating that the data had good factorability and that there were correlations between the factors. The four factors explained 74.3% of the variance, and the scree plot also provided support for a four-factor interpretation (see Figure 3). All items loaded well onto discrete subscales matching the four sources of support (see Table 6). The factor analysis supported the four factor structure of the CASSS-A overall.

Original Item Number	Type of Support Assessed	Item "(Source)…"	Source
3	Emotional	…listen to me about my concerns with schoolwork.	Parent Subscale
4	Emotional	…make it okay to ask questions on school subjects that I don't understand.	Parent Subscale
5	Emotional	…ask me how school is going.	Parent Subscale
6	Instrumental	…help me with my homework.	Parent Subscale
7	Instrumental	…help me study for tests.	Parent Subscale
10	Instrumental	…take time to help me learn something on my schoolwork.	Parent Subscale
11	Informational	… make suggestions when I don't know how to do a homework problem.	Parent Subscale
13	Informational	…help explain concepts that I don't understand on my homework.	Parent Subscale
15	Informational	…give me advice on how to study well.	Parent Subscale
16	Appraisal	… tell me I did a good job when I do well in school.	Parent Subscale
18	Appraisal	…tell me how well I did on school tasks.	Parent Subscale
19	Appraisal	… notice when I work hard in school.	Parent Subscale
21	Emotional	… care about my grades.	Classmate Subscale
22	Emotional	… listen about my concerns with my schoolwork.	Classmate Subscale
25	Emotional	… respect my thoughts and ideas about school.	Classmate Subscale
26	Instrumental	… take time to help me learn something that I don't understand in school.	Classmate Subscale
27	Instrumental	… help me with my schoolwork.	Classmate Subscale
30	Instrumental	… help me study for tests.	Classmate Subscale

Figure 2: Final CASSS-A Support Subscale Items (Continued on following page).

Original Item Number	Type of Support Assessed	Item "(Source)…"	Source
32	Informational	… help explain assignments that I don't understand.	Classmate Subscale
33	Informational	… give me suggestions on how to study better.	Classmate Subscale
34	Informational	… give me suggestions on how to get better grades.	Classmate Subscale
35	Appraisal	… tell me I did a good job when I did well in school.	Classmate Subscale
36	Appraisal	… notice when I work hard in school.	Classmate Subscale
37	Appraisal	… encourage me to do well in school.	Classmate Subscale
41	Emotional	… cares about how well I do in school	Teacher Subscale
42	Emotional	… listens to my concerns about school.	Teacher Subscale
43	Emotional	… makes it okay for me to ask questions on schoolwork.	Teacher Subscale
44	Instrumental	… helps me when I do not understand something in class.	Teacher Subscale
46	Instrumental	… takes time explaining information to help me learn the concepts well.	Teacher Subscale
47	Instrumental	… provides me with the resources I need to do well in school.	Teacher Subscale
50	Informational	… gives me advice on how to be successful in school.	Teacher Subscale
52	Informational	… explains concepts when I don't understand.	Teacher Subscale
53	Informational	… offers suggestions to help me in school.	Teacher Subscale
55	Appraisal	… tells me nicely when I make mistakes.	Teacher Subscale
57	Appraisal	… notices when I worked hard on schoolwork.	Teacher Subscale
58	Appraisal	. . . encourages me to do well in school.	Teacher Subscale
60	Emotional	… cares about my grades.	Close Friend Subscale

Figure 2: Final CASSS-A Support Subscale Items (Continued on following page).

Original Item Number	Type of Support Assessed	Item "(Source)…"	Source
61	Emotional	… listens about my concerns with my schoolwork.	Close Friend Subscale
64	Emotional	… encourages me to be the best student that I can be.	Close Friend Subscale
65	Instrumental	… takes time to help me learn something that I don't understand in school.	Close Friend Subscale
68	Instrumental	… helps me when I need to brainstorm ideas for schoolwork.	Close Friend Subscale
69	Instrumental	… helps me study for tests.	Close Friend Subscale
71	Informational	… explains concepts on my homework when I don't understand.	Close Friend Subscale
72	Informational	… helps explain assignments that I don't understand.	Close Friend Subscale
73	Informational	… gives me advice on how to do well in school.	Close Friend Subscale
77	Appraisal	… encourages me to do well in school.	Close Friend Subscale
78	Appraisal	… provides feedback on how I can improve on my schoolwork.	Close Friend Subscale
79	Appraisal	… tells me when I did a good job on an assignment.	Close Friend Subscale

Figure 2: Final CASSS-A Support Subscale Items.

Table 2

CASSS-A Parent Subscale Frequency Item Descriptives

Item #	Mean	SD	Skewness	Range	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Factor Loading
1[a]	**5.7**	**0.8**	**-2.88**	**5.00**	**0.46**	**0.97**	**.447**
2[a]	**5.6**	**0.8**	**-2.26**	**5.00**	**0.49**	**0.97**	**.448**
3	5.0	1.2	-1.32	5.00	0.80	0.97	.797
4	5.1	1.2	-1.40	5.00	0.78	0.97	.794
5	5.1	1.3	-1.33	5.00	0.69	0.97	.706
6	4.6	1.6	-0.81	5.00	0.81	0.97	.864
7	4.2	1.8	-0.54	5.00	0.81	0.97	.844
8[a]	**4.3**	**1.7**	**-0.59**	**5.00**	**0.82**	**0.97**	**.856**
9[a]	**5.1**	**1.3**	**-1.49**	**5.00**	**0.73**	**0.97**	**.723**
10	4.5	1.6	-0.79	5.00	0.87	0.97	.902
11	4.7	1.5	-0.95	5.00	0.85	0.97	.878
12[a]	**4.7**	**1.5**	**-0.91**	**5.00**	**0.82**	**0.97**	**.818**
13	4.6	1.6	-0.85	5.00	0.85	0.97	.872
14[a]	**4.8**	**1.5**	**-1.02**	**5.00**	**0.82**	**0.97**	**.813**
15	4.5	1.7	-0.77	5.00	0.82	0.97	.845
16	5.0	1.4	-1.27	5.00	0.80	0.97	.784
17[a]	**5.1**	**1.4**	**-1.48**	**5.00**	**0.79**	**0.97**	**.774**
18	4.7	1.5	-0.98	5.00	0.85	0.97	.852
19	4.9	1.5	-1.19	5.00	0.82	0.97	.795
20[a]	**5.5**	**1.0**	**-2.32**	**5.00**	**0.51**	**0.97**	**.457**

Note. For items, see Figure 1. Bold items were deleted for final subscale.

Table 3

CASSS-A Classmate Subscale Frequency Item Descriptives

Item #	Mean	SD	Skewness	Range	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Factor Loading
21	2.7	1.6	0.64	5.00	0.67	0.98	.692
22	3.2	1.5	0.32	5.00	0.81	0.98	.820
23 [a]	**3.7**	**1.5**	**-0.06**	**5.00**	**0.83**	**0.98**	**.850**
24 [a]	**3.6**	**1.6**	**-0.06**	**5.00**	**0.75**	**0.98**	**.788**
25	3.6	1.6	0.00	5.00	0.82	0.98	.827
26	3.4	1.6	0.11	5.00	0.87	0.97	.892
27	3.5	1.5	0.08	5.00	0.85	0.98	.900
28 [a]	**4.1**	**1.5**	**-0.30**	**5.00**	**0.71**	**0.98**	**.693**
29 [a]	**3.6**	**1.5**	**0.02**	**5.00**	**0.84**	**0.98**	**.839**
30	3.4	1.6	0.12	5.00	0.82	0.98	.804
31 [a]	**3.6**	**1.6**	**-0.02**	**5.00**	**0.88**	**0.97**	**.875**
32	3.7	1.5	-0.07	5.00	0.86	0.97	.863
33	3.2	1.6	0.29	5.00	0.84	0.98	.854
34	3.1	1.6	0.33	5.00	0.82	0.98	.832
35	3.3	1.6	0.23	5.00	0.82	0.98	.858
36	3.3	1.6	0.25	5.00	0.83	0.98	.824
37	3.4	1.6	0.21	5.00	0.86	0.97	.858
38 [a]	**3.3**	**1.6**	**0.24**	**5.00**	**0.85**	**0.98**	**.824**
39 [a]	**3.7**	**1.7**	**0.00**	**5.00**	**0.81**	**0.98**	**.795**

Note. For items, see Figure 1. Bold items were deleted for final subscale.

Table 4

CASSS-A Teacher Subscale Frequency Item Descriptives

Item #	Mean	SD	Skewness	Range	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Factor Loading
40 [a]	**4.9**	**1.3**	**-1.08**	**5.00**	**0.77**	**0.98**	**.818**
41	4.9	1.3	-0.96	5.00	0.80	0.98	.845
42	4.5	1.4	-0.78	5.00	0.82	0.98	.797
43	4.8	1.3	-0.87	5.00	0.84	0.98	.875
44	4.8	1.3	-0.98	5.00	0.86	0.98	.881
45 [a]	**4.6**	**1.4**	**-0.75**	**5.00**	**0.83**	**0.98**	**.807**
46	4.7	1.3	-0.74	5.00	0.86	0.98	.869
47	4.6	1.3	-0.73	5.00	0.83	0.98	.828
48 [a]	**4.4**	**1.4**	**-0.59**	**5.00**	**0.73**	**0.98**	**.745**
49 [a]	**4.6**	**1.3**	**-0.70**	**5.00**	**0.76**	**0.98**	**.749**
50	4.5	1.4	-0.70	5.00	0.84	0.98	.834
51 [a]	**4.7**	**1.3**	**-0.80**	**5.00**	**0.90**	**0.98**	**.903**
52	4.7	1.3	-0.81	5.00	0.87	0.98	.880
53	4.5	1.4	-0.72	5.00	0.86	0.98	.838
54 [a]	**4.5**	**1.4**	**-0.70**	**5.00**	**0.84**	**0.98**	**.800**
55	4.5	1.4	-0.73	5.00	0.85	0.98	.837
56 [a]	**4.5**	**1.4**	**-0.70**	**5.00**	**0.83**	**0.98**	**.801**
57	4.5	1.4	-0.71	5.00	0.83	0.98	.807
58	4.7	1.4	-0.90	5.00	0.86	0.98	.876
59 [a]	**4.6**	**1.4**	**-0.76**	**5.00**	**0.81**	**0.98**	**.800**

Note. For items, see Figure 1. Bold items were deleted for final subscale.

Table 5

CASSS-A Close Friend Subscale Frequency Item Descriptives

Item #	Mean	SD	Skewness	Range	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Factor Loading
60	4.3	1.6	-0.54	5.00	0.79	0.98	.805
61	4.3	1.5	-0.61	5.00	0.85	0.98	.836
62 [a]	**4.4**	**1.5**	**-0.67**	**5.00**	**0.85**	**0.98**	**.827**
63 [a]	**4.6**	**1.5**	**-0.78**	**5.00**	**0.79**	**0.98**	**.780**
64	4.3	1.6	-0.63	5.00	0.85	0.98	.876
65	4.3	1.6	-0.62	5.00	0.87	0.98	.904
66 [a]	**4.3**	**1.5**	**-0.60**	**5.00**	**0.84**	**0.98**	**.856**
67 [a]	**4.6**	**1.4**	**-0.82**	**5.00**	**0.77**	**0.98**	**.760**
68	4.4	1.5	-0.68	5.00	0.87	0.98	.890
69	4.2	1.6	-0.55	5.00	0.86	0.98	.856
70 [a]	**4.5**	**1.5**	**-0.73**	**5.00**	**0.87**	**0.98**	**.859**
71	4.4	1.5	-0.61	5.00	0.89	0.98	.877
72	4.3	1.5	-0.61	5.00	0.89	0.98	.887
73	4.2	1.6	-0.51	5.00	0.88	0.98	.889
74 [a]	**4.0**	**1.7**	**-0.36**	**5.00**	**0.76**	**0.98**	**.794**
75 [a]	**4.2**	**1.6**	**-0.48**	**5.00**	**0.85**	**0.98**	**.857**
76 [a]	**4.2**	**1.6**	**-0.56**	**5.00**	**0.86**	**0.98**	**.864**
77	4.3	1.6	-0.55	5.00	0.86	0.98	.885
78	4.1	1.7	-0.39	5.00	0.85	0.98	.881
79	4.2	1.7	-0.46	5.00	0.86	0.98	.888

Note. For items, see Figure 1. Bold items were deleted for final subscale.

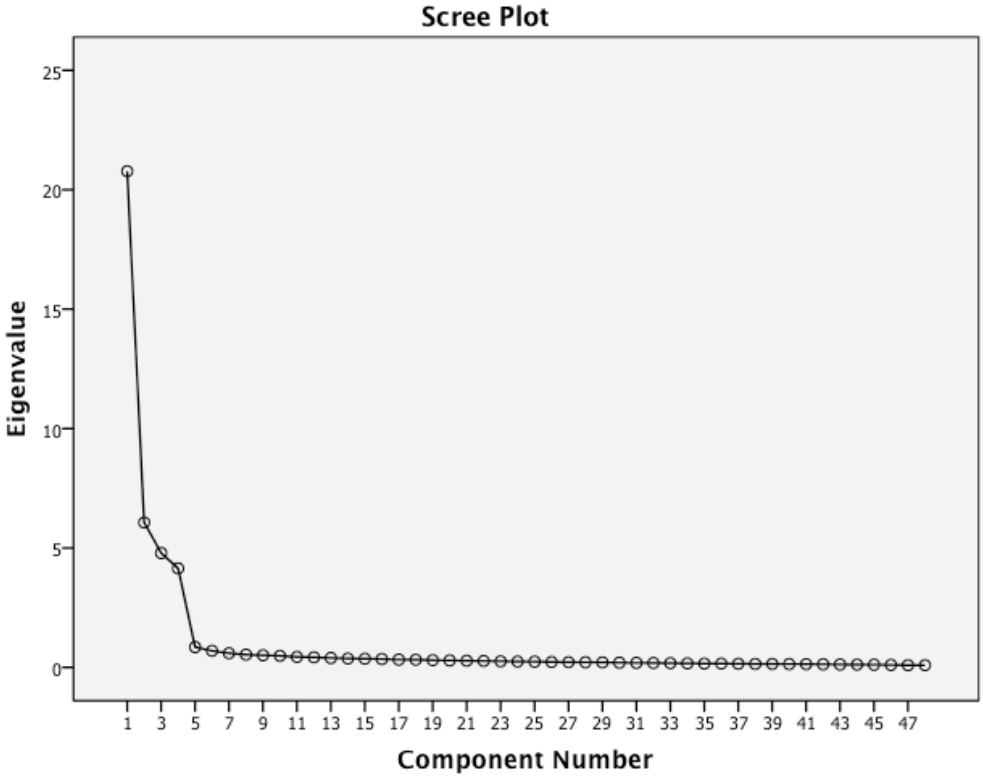

Figure 3. Scree Plot of CASSS-A Frequency Items Factor Analysis.

Table 6

Factor Loadings of CASSS-A Frequency Items Factor Analysis

Item	Item Loadings on Source Subscales			
	Close Friend	Teacher	Parent	Classmate
My close friend…				
gives me advice on how to do well in school.	**.902**	.320	.376	.491
helps explain assignments that I don't understand.	**.896**	.350	.389	.496
explains concepts on my homework when I don't understand.	**.893**	.344	.373	.517
helps me when I need to brainstorm ideas for schoolwork.	**.890**	.342	.365	.470
encourages me to do well in school.	**.889**	.342	.341	.462
takes time to help me learn something that I don't understand in school.	**.887**	.302	.334	.469
tells me when I did a good job on an assignment.	**.884**	.319	.356	.472
provides feedback on how I can improve on my schoolwork.	**.882**	.288	.368	.470
helps me study for tests.	**.874**	.295	.383	.493
encourages me to be the best student that I can be.	**.874**	.357	.369	.443
listens about my concerns with my schoolwork.	**.869**	.349	.405	.482
cares about my grades.	**.829**	.324	.366	.417
My teacher(s)…				
takes time explaining information to help me learn the concepts well.	.341	**.889**	.389	.315
explains concepts when I don't understand.	.335	**.888**	.371	.338
encourages me to do well in school.	.323	**.884**	.357	.357
helps me when I do not understand something in class.	.312	**.882**	.368	.311
makes it okay for me to ask questions on schoolwork.	.275	**.874**	.348	.324
offers suggestions to help me in school.	.398	**.871**	.393	.344
tells me nicely when I make mistakes.	.347	**.858**	.400	.325
listens to my concerns about school.	.335	**.852**	.399	.385
gives me advice on how to be successful in school.	.327	**.851**	.394	.330
provides me with the resources I need to do well in school.	.357	**.849**	.368	.337
notices when I worked hard on schoolwork.	.334	**.848**	.410	.369
cares about how well I do in school	.276	**.828**	.288	.318

(Continued on following page).

Table 6

Factor Loadings of CASSS-A Frequency Items Factor Analysis

	Close Friend	Teacher	Parent	Classmate
My parent(s)…				
take time to help me learn something on my schoolwork.	.392	.326	**.899**	.387
help explain concepts that I don't understand on my homework.	.387	.332	**.884**	.405
make suggestions when I don't know how to do a homework problem.	.344	.367	**.881**	.384
tell me how well I did on school tasks.	.381	.378	**.872**	.403
help me with my homework.	.320	.318	**.851**	.366
give me advice on how to study well.	.366	.301	**.849**	.419
help me study for tests.	.387	.278	**.848**	.392
notice when I work hard in school.	.385	.421	**.844**	.402
listen to me about my concerns with schoolwork.	.336	.426	**.817**	.341
tell me I did a good job when I do well in school.	.354	.411	**.809**	.377
make it okay to ask questions on school subjects that I don't understand.	.300	.434	**.806**	.310
ask me how school is going.	.323	.346	**.715**	.298
My classmates…				
take time to help me learn something that I don't understand in school.	.477	.330	.382	**.891**
encourage me to do well in school.	.498	.345	.386	**.879**
help me with my schoolwork.	.421	.317	.364	**.877**
give me suggestions on how to study better.	.462	.307	.398	**.876**
help explain assignments that I don't understand.	.456	.368	.375	**.868**
give me suggestions on how to get better grades.	.465	.304	.395	**.858**
help me study for tests.	.490	.342	.410	**.854**
notice when I work hard in school.	.490	.315	.373	**.850**
tell me I did a good job when I did well in school.	.469	.349	.348	**.847**
respect my thoughts and ideas about school.	.450	.341	.361	**.833**
listen about my concerns with my schoolwork.	.428	.319	.407	**.818**
understand my feelings about school.	.410	.292	.317	**.783**
take time to help me learn something that I don't understand in school.	.477	.330	.382	**.891**

Research Question 2

Reliability of the CASSS-A

Evidence for the internal consistency of the CASSS-A subscale scores was investigated by computing coefficient alphas on the total frequency score and each of the source subscale items (i.e., parent, teacher, classmate, and close friend). These analyses were first conducted with the total sample, followed by analyses by gender and then by grade. Tables 7, 8, and 9 display the means, standard deviations, and alphas for these analyses for the total sample, by gender, and by grade. Figure 4 displays the frequency mean ratings by the sources and types of support. Figures 5 and 6 display the means by gender and then by grade. All subscale and total score alphas were above 0.96, indicating strong internal consistency for the sources of support and the overall frequency scale.

A gender X grade MANOVA was conducted on the CASSS-A subscale scores to determine if the scores differed by males and females and by seventh- and eighth-grade students. First, the frequency scores of the four sources of academic support by grade were examined. This MANOVA was statistically significant, $F(4, 699) = 6.498$, $p < .001$; Wilks' $\lambda = .964$, indicating statistically significant differences in perceived support between seventh- and eighth-grade students. Specifically, seventh-grade students perceived significantly more academic support from parents ($p = .015$) and teachers ($p < .001$) than did eighth-grade

students. Next, the frequency scores of the four sources of academic support by gender were examined. This MANOVA was also statistically significant, $F(4, 699) = 7.949$, $p < .001$; Wilks' $\lambda = .956$, indicating statistically significant differences in perceived support between males and females. Specifically, females perceived significantly more academic social support from classmates ($p = .025$) and close friends ($p < .001$).

Research Question 3

Validity of the CASSS-A

Evidence for the construct validity of the CASSS-A subscale scores was investigated by examining intercorrelations between each of the source subscales (i.e., parent, teacher, classmate, and close friend). Correlations among the subscales were examined for the total sample, gender, and grade. Table 10 contains these correlations for the total sample, Table 11 contains these correlations by gender, and Table 12 contains these correlations by grade. All correlations among the subscales were significant ($p < 0.01$) for the total sample, with correlations ranging from 0.39 to 0.79 (see Table 10). All correlations among the subscales were significant ($p < 0.01$) for males, with correlations ranging from 0.36 to 0.81 (see Table 11). All correlations among the subscales were also significant ($p < 0.01$) for females, with correlations ranging from 0.37 to 0.79 (see Table 11). All correlations among the subscales were significant ($p < 0.01$) for seventh-grade students, with correlations ranging from 0.40 to 0.82 (see Table 12). All correlations among the subscales were also significant ($p < 0.01$) for

Table 7

Sample Size, Alpha, Means, and Standard Deviations of CASSS-A for the Total Sample

	Total Sample			
	N	*a*	*M*	*SD*
Total Academic Support	706	0.97	204.76	47.29
Parent Academic Support	706	0.96	56.87	14.98
Emotional	706		15.27	3.28
Instrumental	706		13.28	4.56
Informational	706		13.77	4.37
Appraisal	706		14.54	3.98
Classmate Academic Support	706	0.97	40.77	16.25
Emotional	706		10.43	4.21
Instrumental	706		10.37	4.33
Informational	706		10.02	4.33
Appraisal	706		9.95	4.56
Teacher Academic Support	706	0.97	55.82	14.06
Emotional	706		14.13	3.66
Instrumental	706		14.13	3.58
Informational	706		13.75	3.77
Appraisal	706		13.80	3.84
Close Friend Academic Support	706	0.97	51.30	16.66
Emotional	706		12.95	4.34
Instrumental	706		12.98	4.34
Informational	706		12.89	4.31
Appraisal	706		12.49	4.61

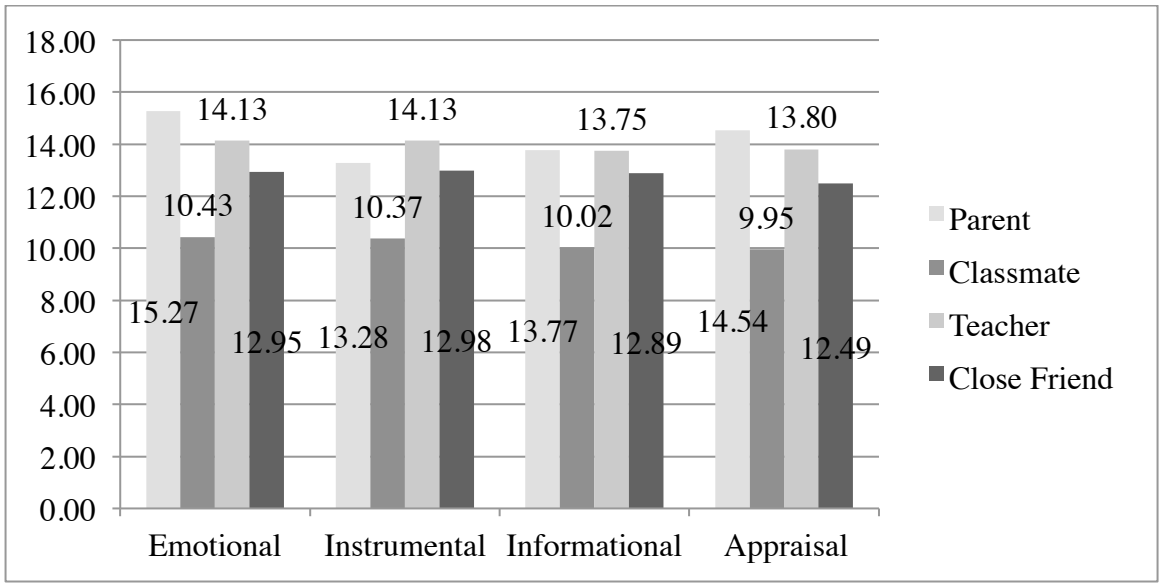

Figure 4. Mean Frequency Ratings of the Sources and Types of Support.

Table 8

Sample Size, Alpha, Means, and Standard Deviations of CASSS-A by Gender

	Male Subsample				Female Subsample			
	N	*a*	*M*	*SD*	*N*	*a*	*M*	*SD*
Total Frequency	356	0.97	200.33	47.09	350	0.97	208.76	47.18
Parent Frequency	356	0.96	57.08	14.91	350	0.96	56.66	15.05
Teacher Frequency	356	0.97	55.73	13.69	350	0.97	55.91	12.45
Classmate Frequency	356	0.96	39.37	15.94	350	0.96	42.20	16.47
Close Friend Frequency	356	0.98	48.41	16.84	350	0.97	54.25	15.96

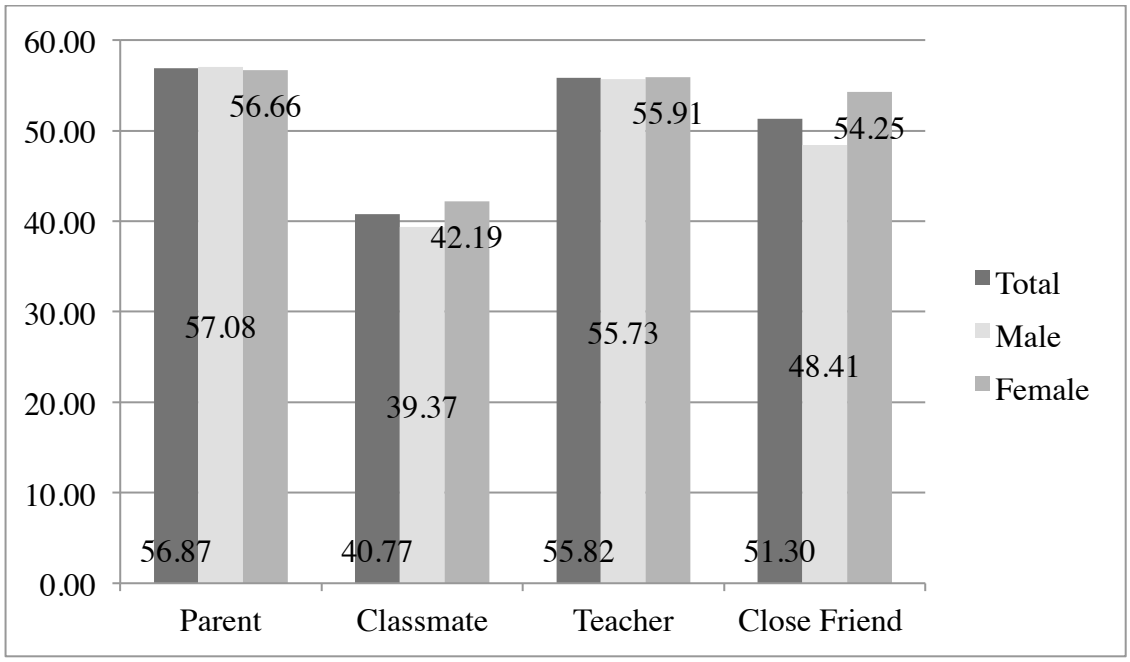

Figure 5. Gender Mean Frequency Ratings of the Sources of Support.

Table 9

Sample Size, Alpha, Means, and Standard Deviations of CASSS-A by Grade

	7th Grade Subsample				8th Grade Subsample			
	N	*a*	*M*	*SD*	*N*	*a*	*M*	*SD*
Total Frequency	373	0.97	209.22	46.65	333	0.97	199.23	47.51
Parent Frequency	373	0.96	58.15	14.24	333	0.97	55.42	15.65
Teacher Frequency	373	0.96	58.14	12.59	333	0.98	53.22	15.14
Classmate Frequency	373	0.97	41.16	16.80	333	0.96	40.33	15.62
Close Friend Frequency	373	0.97	51.80	16.84	333	0.97	50.75	16.47

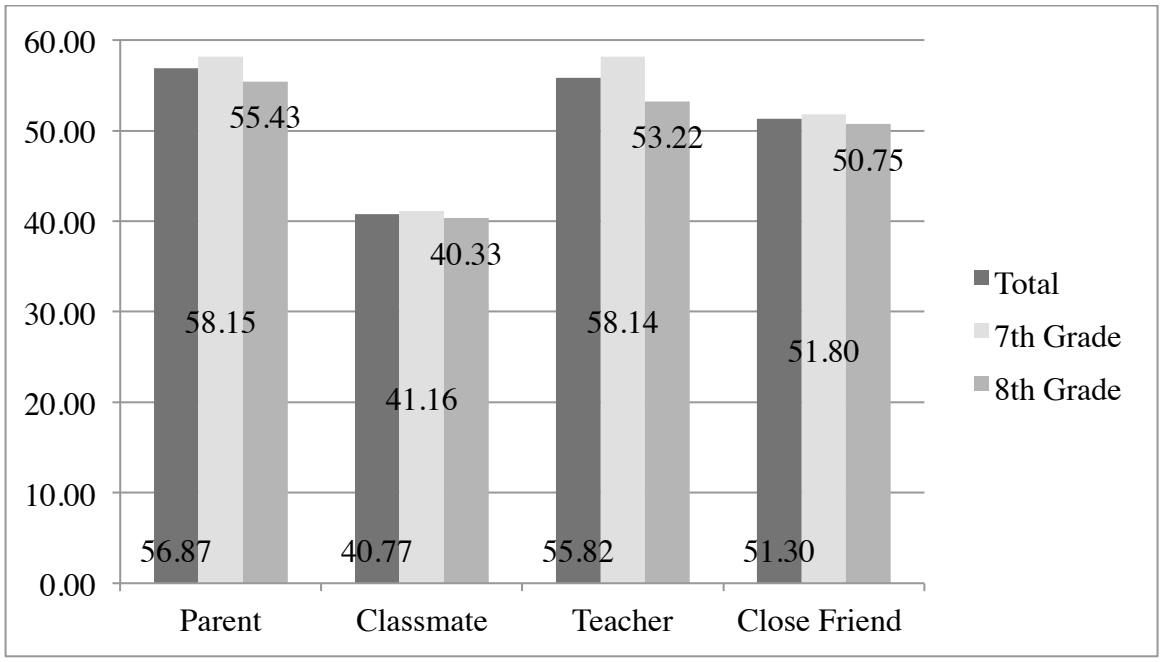

Figure 6. Grade Mean Frequency Ratings of the Sources of Support.

Table 10

Correlations Between CASSS-A Frequency Subscale Scores for Total Sample

	1	2	3	4	5
1. Total Academic Support	---				
2. Parent Academic Support	.753**	---			
3. Teacher Academic Support	.797**	.453**	---		
4. Classmate Academic Support	.709**	.438**	.400**	---	
5. Close Friend Academic Support	.790**	.430**	.545**	.387**	---

Note. ** $p < .01$.

Table 11

Correlations Between CASSS-A Frequency Subscale Scores by Gender

	1	2	3	4	5
1. Total Academic Support	---	.753**	.800**	.696**	.808**
2. Parent Academic Support	.762**	---	.477**	.432**	.420**
3. Teacher Academic Support	.791**	.438**	---	.355**	.581**
4. Classmate Academic Support	.726**	.444**	.443**	---	.415**
5. Close Friend Academic Support	.771**	.461**	.499**	.371**	---

Note. Girls are below the diagonal, and boys are above the diagonal; ** $p < .01$.

Table 12

Correlations Between CASSS-A Frequency Subscale Scores by Grade

	1	2	3	4	5
1. Total Academic Support	---	.760**	.785**	.719**	.761**
2. Parent Academic Support	.744**	---	.470**	.422**	.411**
3. Teacher Academic Support	.812**	.443**	---	.412**	.496**
4. Classmate Academic Support	.696**	.441**	.398**	---	.366**
5. Close Friend Academic Support	.819**	.449**	.585**	.415**	---

Note. 7th Grade is below the diagonal, and 8th Grade is above the diagonal; * $p < .05$, ** $p < .01$.

eighth-grade students, with correlations ranging from 0.37 to 0.79 (see Table 12). Overall, these correlations provide support for the construct validity of the CASSS-A.

The source subscales (i.e., parent, teacher, classmate, and close friend subscales) are generally correlated but not to a high degree that indicates significant overlap. These four subscales appear to be measuring four separate sources within the larger construct of academic social support.

Furthermore, evidence for the convergent validity of the CASSS-A subscale scores was investigated by examining the Pearson correlation coefficients on the CASSS-A frequency subscale scores and the CASSS frequency subscale scores. The correlation between the CASSS-A parent subscale score and the CASSS parent subscale score was found to be statistically significant, $r = .72, p < .01$, providing support for the convergent validity of the CASSS-A parent subscale. The correlation between the CASSS-A teacher subscale score and the CASSS teacher subscale score was found to be statistically significant, $r = .71, p < .01$, providing support for the convergent validity of the CASSS-A teacher subscale. The correlation between the CASSS-A classmate subscale score and the CASSS classmate subscale score was found to be statistically significant, $r = .63, p < .01$, providing support for the convergent validity of the CASSS-A classmate subscale. The correlation between the CASSS-A close friend subscale score and the CASSS close friend subscale score was found to be statistically significant, $r = .56, p < .01$, providing support for the convergent validity of the CASSS-A close friend subscale.

Divergent validity of the CASSS-A was examined by conducting correlations between the other non corresponding source subscales of the CASSS (i.e., parent, teacher, classmate, and close friend). According to Cohen's (1988) classification of effect size, all the categorically corresponding correlations were large, whereas the non-corresponding correlations were moderate. These correlations ranged from .300 to .428, $p < .01$, with one exception: the CASSS-A close friend had a small correlation with the CASSS teacher, $r = .270, p < .01$. This provides support that the CASSS-A subscales measured that specific construct of academic support from that specific source (see Table 13 for the correlations between the CASSS and the CASSS-A source subscales).

Table 13

Simple Pearson Correlations Between CASSS-A Frequency Subscale Scores and the CASSS for the Total Sample

	CASSS-A-Parent	CASSS-A-Teacher	CASSS-A-Classmate	CASSS-A-Close Friend
CASSS Parent Support	.722**	.377**	.428**	.339**
CASSS Teacher Support	.347**	.711**	.303**	.270**
CASSS Classmate Support	.387**	.378**	.631**	.385**
CASSS Close Friend Support	.370**	.300**	.380**	.559**

Note. CASSS = Child and Adolescent Social Support Scale (Malecki et al., 2000), CASSS-A = Child and Adolescent Social Support Scale-Academic, ** $p < .01$.

Construct validity of the CASSS-A was examined by conducting correlations between BASC-2 SRP (Reynolds & Kamphaus, 2005), the ACES (DiPerna & Elliott, 2000), students' current GPA, and students' most current and available ISAT score.

Evidence for construct validity of the CASSS-A subscale scores was investigated by examining the correlations between the CASSS-A total frequency score and the BASC-2-SRP T-scores. Pearson's correlations were all significant between the CASSS-A and the BASC-2-SRP T-Scores, $p < .01$. The CASSS-A total frequency score and the BASC-2 Attitude to School score were significantly correlated, $r = -.41$, $p < .01$. The CASSS-A total frequency score and the BASC-2 Attitude to Teachers score were significantly correlated, $r = -.47$, $p < .01$. The CASSS-A Total Frequency score and BASC-2 Depression score were significantly correlated, $r = -.43$, $p < .01$. The CASSS-A total frequency score and the BASC-2 Interpersonal Relations score were significantly correlated, $r = .44$, $p < .01$. The CASSS-A total frequency score and the BASC-2 Relations with Parents score were

significantly correlated, $r = .56$, $p < .01$. The CASSS-A teacher subscale score and the BASC-2 Attitude to Teachers score were significantly correlated, $r = -.56$, $p < .01$. The CASSS-A parent subscale score and the BASC-2 Relations with Parents score were significantly correlated, $r = .64$, $p < .01$. These correlations provide strong evidence of construct validity of the CASSS-A (see Table 14 for the correlations between the CASSS-A and the BASC-2-SRP).

Table 14

Simple Pearson Correlations Between CASSS-A Frequency Subscale Scores and BASC-2-SRP Outcome Variable

	CASSS-A-Total	CASSS-A Teacher	CASSS-A-Parent
BASC-2 Attitude to School	-.405**		
BASC-2 Attitude to Teachers	-.473**	-.561**	
BASC-2 Depression	-.434**		
BASC-2 Interpersonal Relations	.439**		
BASC-2 Relations with Parents	.555**		.644**

Note. CASSS-A = Child and Adolescent Social Support Scale-Academic, BASC-2 = Behavioral Assessment System for Children, 2nd edition (Reynolds & Kamphaus, 2004), ** $p < .01$

Evidence for construct validity of the CASSS-A subscale scores was investigated by examining the correlations between the CASSS-A total frequency score and Academic Enablers scaled score using the ACES. Pearson's correlations between the CASSS-A total frequency score and all the ACES subscales (i.e., Reading/Language Arts Skills,

Mathematics Skills, Critical-Thinking Skills, Interpersonal Skills, Engagement, Motivation, Study Skills, Academic Skills Scale, and Academic Enablers Scale) were all significant ($p <$ 0.01). Most importantly, the CASSS-A total frequency score and the ACES Academic Enablers Scale were significantly correlated, $r = .62$, $p < 0.01$. These correlations provide strong evidence of construct validity of the CASSS-A (see Table 15 for the correlations between the CASSS-A and the ACES).

Table 15

Correlations Between CASSS-A Frequency Total Score and the ACES

	CASSS-A-Total
ACES Reading/Language Arts Skills	.461**
ACES Mathematics Skills	.414**
ACES Critical Thinking Skills	.525**
ACES Interpersonal Skills	.569**
ACES Engagement	.537**
ACES Motivation	.573**
ACES Study Skills	.533**
ACES Academic Skills Scale	.519**
ACES Academic Enablers Scale	.620**

Note. CASSS-A = Child and Adolescent Social Support Scale-Academic, ACES = Academic Competence Evaluation Scales (DiPerna & Elliott (2000), ** p < .01.

Evidence for construct validity of the CASSS-A subscale scores was investigated by examining the correlations between the CASSS-A total frequency score and academic achievement using students' GPA, student's ISAT math scaled score, and student's ISAT

reading scaled score. The CASSS-A total score and students' GPA were significantly correlated, $r = .127$, $p < 0.01$. The CASSS-A total score and students' ISAT Reading Scaled Score were not significantly correlated, $r = .006$. The CASSS-A total score and students' ISAT Math Scaled Score were not significantly correlated, $r = -.003$ (see Table 16 for the correlations between the CASSS-A and academic achievement).

Table 16

Correlations Between CASSS-A Frequency Total Score and Academic Achievement

	CASSS-A- Total Score
GPA	.127**
ISAT Reading Scaled Score	.006
ISAT Math Scaled Score	-.003

Note. CASSS-A = Child and Adolescent Social Support Scale-Academic, GPA, ISAT = Illinois Standard Achievement Test, ** p < .01.

Additional Exploratory Analyses

In addition to the proposed factor structure and evidence for validity and reliability of the CASSS-A scores, this study posed exploratory questions based on the previous analyses. Because GPA and academic social support were significantly correlated, this study posed the exploratory question whether a specific source of academic social support was a greater predictor of students' GPA over general social support. Multiple regression analyses were

conducted to examine the relationship between students' GPA and both CASSS-A and CASSS predictors (see Table 17).

Table 17

Regression with Sources of Support in Relation to Student GPA

	B	*SE B*	β	R^2	Adjusted R^2
Student GPA				.043*	.040
Parent CASSS-A	-.003	.004	-.046		
Parent CASSS	.019	.004	.239*		
Student GPA				.033	.030*
Teacher CASSS-A	.002	.004	.031		
Teacher CASSS	.013	.004	.159*		
Student GPA				.010**	.007
Classmate CASSS-A	.007	.003	.108**		
Classmate CASSS	-0.001	.004	-0.15		
Student GPA				.003	-.001
Close Friend CASSS-A	-.002	.003	-.029		
Close Friend CASSS	.004	.004	.060		

Note. CASSS-A = Child and Adolescent Social Support Scale-Academic, CASSS = Child and Adolescent Social Support Scale (Malecki et al., 2000), GPA = Grade Point Average, ** $p < .01$, * $p < .05$.

A multiple regression was run to predict GPA from parent academic support (CASSS-A) total frequency score and parent support (CASSS) total frequency score. The regression was overall significant, with about 4% of the variance in GPA accounted for by parent support (CASSS) and parent academic support (CASSS-A), $R^2 = .043$, $F(2, 636) = 14.413$, $p < .001$. However, parent support (CASSS) was a significant, individual predictor

of students' GPA, $p < .001$, but parent academic support (CASSS-A) was not significant, $p = .416$.

A multiple regression was run to predict GPA from teacher academic support (CASSS-A) and teacher support (CASSS). The regression overall was significant, with about 3% of variance in GPA accounted for by teacher general and academic support together, $R^2 = .033$, $F(2, 635) = 10.939$, $p < .001$. However, teacher support (CASSS) was a significant, individual predictor of students' GPA, $p < .001$, but teacher academic support (CASSS-A) was not significant, $p = .576$.

A multiple regression was run to predict GPA from classmate academic support (CASSS-A) and classmate support (CASSS). The regression overall was significant, with about 1% of variance in GPA accounted for by classmate general and academic support together, $R^2 = .010$, $F(2, 635) = 3.155$, $p = .043$. Classmate academic support (CASSS-A) was a significant, individual predictor of students' GPA, $p = .034$, whereas classmate support (CASSS) was not significant, $p = .764$.

A multiple regression was run to predict GPA from close friend academic support (CASSS-A) and close friend support (CASSS). This regression overall was not significant, $R^2 = .003$, $F(2, 636) = .806$, $p = .447$.

These correlations provide evidence that CASSS predicted student GPA more strongly than the CASSS-A. However, close friend academic support (CASSS-A) predicted students' GPA greater than any of the other CASSS-A sources (i.e., parents, teachers, and classmates).

Because ACES Academic Enablers and Academic Social Support were significantly correlated, this study posed the exploratory question whether a specific source of academic social support was a greater predictor of ACES Academic Enablers over general social support. Multiple regression analyses were conducted to examine the relationship between students' Academic Enablers and both Academic Support (CASSS-A) and Global Support (CASSS) as predictors (see Table 18).

A multiple regression was run to predict Academic Enablers (ACES) from parent academic support (CASSS-A) and parent support (CASSS). The regression overall was significant, with about 27% of variance in Academic Enablers (ACES) accounted for by parent general and academic support, $R^2 = .278$, $F(2, 541) = 104.367$, $p < .001$. Both parent academic support (CASSS-A) and parent support (CASSS) were significant predictors of students' Academic Enabling Skills (ACES), $p < .001$.

A multiple regression was run to predict Academic Enablers (ACES) from teacher academic support (CASSS-A) and teacher support (CASSS). The regression overall was significant, with about 29% of the variance in Academic Enablers (ACES) accounted for by teacher general and teacher academic support together, $R^2 = .291$, $F(2, 540) = 110.804$, $p < .001$. Both teacher academic support (CASSS-A) and teacher support (CASSS) were significant predictors of students' Academic Enablers, $p < .005$.

A multiple regression was run to predict Academic Enablers (ACES) from classmate academic support (CASSS-A) and classmate support (CASSS). The regression overall was significant, with about 23% of the variance in Academic Enablers (ACES) accounted for by classmate general and classmate academic support together, $R^2 = .237$, $F(2, 540) = 83.807$,

Table 18

Regression with Sources of Support in Relation to Student Academic Enablers

	B	*SE B*	β	R^2	Adjusted R^2
Student Academic Enablers				.278**	.276
Parent CASSS-A	.553	.094	.309**		
Parent CASSS	.544	.111	.259**		
Student Academic Enablers				.291**	.288
Teacher CASSS-A	.804	.098	.419**		
Teacher CASSS	.327	.108	.155**		
Student Academic Enablers				.237**	.234
Classmate CASSS-A	.614	.079	.372**		
Classmate CASSS	.316	.094	.160**		
Student Academic Enablers				.211	.208
Close Friend CASSS-A	.586	.074	.362**		
Close Friend CASSS	.299	.092	.148**		

Note. CASSS-A = Child and Adolescent Social Support Scale-Academic, CASSS = Child and Adolescent Social Support Scale (Malecki et al., 2000), GPA, ** $p < .01$, * $p < .05$.

$p < .001$. Both classmate academic support (CASSS-A) and classmate support (CASSS) were significant predictors of students' Academic Enablers (ACES), $p < .005$.

A multiple regression was run to predict Academic Enablers (ACES) from close friend academic support (CASSS-A) and close friend support (CASSS). The regression overall was significant, with about 21% of the variance in Academic Enablers (ACES) accounted for by close friend general and close friend academic support, $R^2 = .211$, $F(2, 540) = 72.462$, $p < .001$. Both close friend academic support (CASSS-A) and close friend support (CASSS) were significant predictors of students' Academic Enablers (ACES), $p < .005$.

These correlations provided evidence that teacher support accounted for more variance of students' Academic Enablers than any other source of support.

This study posed the exploratory question that asked whether a specific source of academic social support was the greatest predictor of BASC-2 Attitude to School, Depression, and Interpersonal Relations.

A multiple regression analysis was run to predict students' Attitude to School (BASC-2) from the four sources of Academic Support (CASSS-A) (see Table 19). The regression overall was significant, with about 19% of variance in Attitude to School (BASC-2) accounted for by the four sources of academic support (CASSS-A) together, $R^2 = .190$, $F(4, 491) = 28.757$, $p < .001$. Both parent academic support (CASSS-A) and teacher academic support (CASSS-A) were significant predictors of students' Attitude to School (BASC-2), $p < .001$, but classmate academic support (CASSS-A) and close friend academic support (CASSS-A) were not significant, $p = .188$ and $p = .795$.

Table 19

Regression with Sources of Academic Support in Relation to BASC-2 Attitude to School

	B	*SE B*	β	R^2	Adjusted R^2
Student Attitude to School				.190**	.183
Parent CASSS-A	-.152	.033	-.227**		
Teacher CASSS-A	-.159	.034	-.229**		
Classmate CASSS-A	-.042	.032	-.067		
Close Friend CASSS-A	-.008	.032	-.013		

Note. CASSS-A = Child and Adolescent Social Support Scale-Academic, BASC-2 = Behavioral Assessment System for Children-2nd edition (Reynolds & Kamphaus, 2004), ** $p < .01$.

A multiple regression analysis was run to predict Depression (BASC-2) from the four sources of academic support (CASSS-A) (see Table 20). The regression overall was significant, with about 24% of the variance in Depression (BASC-2) accounted for by academic support (CASSS-A), $R^2 = .249$, $F(4, 512) = 28.757$, $p < .001$. Parent academic support (CASSS-A), teacher academic support (CASSS-A), and academic support (CASSS-A) were significant predictors of students' Depression (BASC-2), $p < .05$, but close friend academic support (CASSS-A) was not significant, $p = .153$.

Table 20

Regression with Sources of Academic Support in Relation to BASC-2 Depression

	B	*SE B*	β	R^2	Adjusted R^2
Student Depression				.249**	.243
Parent CASSS-A	-.313	.038	-.382**		
Teacher CASSS-A	-.094	.039	-.110*		
Classmate CASSS-A	-.115	.036	-.151*		
Close Friend CASSS-A	-.052	.036	.069		

Note. CASSS-A = Child and Adolescent Social Support Scale-Academic, BASC-2 = Behavioral Assessment System for Children-2nd edition (Reynolds & Kamphaus, 2004), ** $p < .01$, * $p < .05$.

A multiple regression was run to predict Interpersonal Relations (BASC-2) from the four sources of Academic Support (CASSS-A) (see Table 21). The regression overall was significant, with about 22% of variance in Interpersonal Relations (BASC-2) accounted for by academic support (CASSS-A), $R^2 = .471$, $F(4, 472) = 33.714$, $p < .001$. Both parent academic support (CASSS-A), teacher academic support (CASSS-A), and classmate

academic support (CASSS-A) were significant predictors of students' Interpersonal Relations (BASC-2), $p < .05$, but close friend academic support (CASSS-A) was not significant, $p = .429$.

Table 21

Regression with Sources of Academic Support in Relation to BASC-2 Interpersonal Relations

	B	*SE B*	β	R^2	Adjusted R^2
Student Interpersonal Relations				.222**	.216
Parent CASSS-A	.159	.039	.198**		
Teacher CASSS-A	.094	.041	.112*		
Classmate CASSS-A	.229	.039	.302**		
Close Friend CASSS-A	-.031	.039	-.041		

Note. CASSS-A = Child and Adolescent Social Support Scale-Academic, BASC-2 = Behavioral Assessment System for Children-2nd edition (Reynolds & Kamphaus, 2004), ** $p < .01$, * $p < .05$.

CHAPTER 4

DISCUSSION

The primary goal of the current study was to develop a measure of academic social support that was theoretically grounded and supported in psychometric properties. The secondary goal was to gather pilot data investigating the relationship between academic social support and academic enablers and academic outcomes.

The final sample of the current study consisted of 706 middle school participants. Based on the most current 2013 United States Census, the current study's sample was somewhat representative of the Illinois population. Specifically, in 2013, 77.7% of the Illinois population was White, 14.7% was African American, 0.6% was Native American, 5.1% was Asian, 16.5% was Hispanic/Latino, and 1.9% was Other. This is similar to the current study's sample of 81.6% White, 3.7% African American, 1.8% Asian, 8.6% Asian, and 4.3% Other; this study consisted of fewer minority participants than are represented in the Illinois population. Also, although the Illinois population in 2013 consisted of 50.9% female and 49.1% male, the current study consisted of a representative sample of 49.6% females and 50.4% males.

Overall, the current study's sample represented the gender of Illinois but was limited in the minority ethnicity representation, suggesting that this is a limitation of the current study.

Psychometric Analyses

Research Question 1 examined the underlying factor structure of the CASSS-A. Factor analyses suggested a four-factor structure of the CASSS-A corresponding to the four source subscales. The KMO measure of sampling adequacy and Bartlett's test of sphericity indicated that the data had good factorability and that there were correlations among the factors. The factor analysis supported the four-factor structure of the CASSS-A overall.

Research Question 2 examined the reliability of the CASSS-A scores. It was predicted that there would be moderate to fair internal consistency within each source of academic support. Evidence of internal consistency was strong for the total measure, as well as within each source subscale (i.e., parent, teacher, classmate, and close friend). Evidence of internal consistency was also strong for the analysis by gender and grade. Test-retest reliability was not examined due to receiving the data from an all-school evaluation, suggesting a limitation of the study. Given the other evidence suggesting that the CASSS-A functions similarly to the CASSS, one may infer that evidence for the test-retest would be strong for the CASSS-A as well. However, it is impossible to know this without re-administering the measure.

Research Question 3 examined the evidence of validity of the CASSS-A scores. Content validity, construct validity, convergent validity, and divergent validity were assessed

when examining the validity of the CASSS-A scores. Content validity was assessed using the expertise of six school psychology graduate students. These graduate students were given a description of Tardy's (1985) model of social support and a pool of 120 items. These graduates looked over each item and rated if it was a good or bad item, and reworded some items when necessary. These items were then given to a school psychology faculty member, who also examined each question. It was expected that the group would agree upon at least 80% of the items within each source of academic support. However, the final agreed upon items were 67% of the original 120 items. Therefore, only 67% of the items were included in the version of the CASSS-A used in this study. An item analysis was conducted after the study to narrow the items even more to be consistent with the format of the CASSS (Malecki et al., 2000) (three items per type of support, for each source of support). All analyses were conducted after this item analysis was conducted.

Construct validity of the CASSS-A scores were assessed among the source subscales. These correlations were examined by total sample, gender, and grade. The total academic support score, parent academic support subscale score, teacher academic subscale score, classmate academic support subscale score, and close friend academic support subscale score were all significantly related to each other. According to Cohen's (1988) classifications of the strength of a relationship, the total academic support scale score had a large relationship among all of the subscale scores. The subscale scores varied between medium and large relationships. This suggests that as students experience academically support from one source of support, they typically experience support from all of the sources of support. These analyses were also run by gender and grade also finding that all the scores were

significantly related to each other. These relations provide support for the construct validity of the CASSS-A scores.

Construct validity of the CASSS-A scores were also assessed using the BASC-2-SRP. It was predicted that there would be a moderate relationship between the CASSS-A total score and the BASC-2 SRP Attitude to School score. As expected, there was a significant negative relationship between the CASSS-A total score and the BASC-2 SRP Attitude to School score. However, on the BASC-2, on the clinical scales (Attitude to School, Attitude to Teachers, and Depression) the higher the T-score, the more concerning the score was. On the Adaptive Scales (Interpersonal Relations and Relations with Parents), the lower the T-score, the more concerning the score was. Therefore, the negative relationship suggests that the more academically supported students experience, the more the satisfaction with school they experience. It was predicted that there would be a strong relation between the CASSS-A teacher source of academic social support and the BASC-2-SRP Attitude to Teachers score. As expected, there was a strong negative relationship between the CASSS-A-SRP teacher score and BASC-2-SRP Attitude to Teachers T-score, suggesting that the more support students experience from their teachers, the less likely they are to feel resent and dislike for their teachers. Types of questions included positive statements about experiencing support, understanding, and care from teachers, whereas negative statements measured self-worth and negative reactions of teachers toward students.

It was predicted that there would be a strong relation between the CASSS-A total score and the BASC-2-SRP Interpersonal Relations T-score. As expected, there was a strong relationship between the CASSS-A total score and the BASC-2-SRP Interpersonal Relations

T-score, suggesting that the more support students experience overall, the better their perception of having good social relationships and friendships with peers.

It was predicted that there would be a strong relation between the CASSS-A parent subscale score and the BASC-2-SRP Relations with Parents T-score. As expected, there was a strong relationship between the CASSS-A parent subscale score and the BASC-2-SRP Relations with Parents T-score, suggesting that the more support students experience from parents, the more positive regard students had toward parents and the more esteem they experience from parents. Specifically, more positive regard toward parents indicated that students had good relationships with their parents and enjoyed talking and spending time with their parents and their parents trusted and supported them.

It was predicted that there would be a moderate relation between the CASSS-A total score and the BASC-2-SRP Depression T-score. As expected, there was a strong negative relationship between the CASSS-A total score and the BASC-2-SRP Depression T-score suggesting that the more support students experience overall, they perceive less unhappiness and sadness. With increased social support, students indicated that they cared more, they had more self worth, they were understood, and they were not sad or depressed.

Construct validity of the CASSS-A scores were also assessed using the ACES (DiPerna & Elliott (2000), students' current GPA, and students' most current and available ISAT score. It was expected that there would be a moderate to high relation between the CASSS-A total score and the ACES Academic Enabler total score. As expected, there was a large relationship between the CASSS-A total score and the ACES Academic Enabler total score. This suggests that academic social support could influence attitudes and behaviors that allow a student to benefit from classroom instruction.

One of the major influences of the study was to examine the relationship between academic social support and academic enablers and examine whether academic social support is, in fact, an academic enabler itself. Results suggest that there is a strong relationship between academic social support and academic enablers. However, based on theoretical reasons, academic social support is not an academic enabler. Academic enablers are skills and attitudes in which students actively engage. As measured by the ACES, students rate these skills and behaviors as *Never* engaging in these to *Almost Always* engaging in these. However, social support is the perception that the support is available, even if the student is not necessarily actively engaging in the support. Therefore, academic social support is more of a passive belief, whereas academic enablers are active behaviors. Nonetheless, the specific relationship between academic social support and academic enablers needs further investigation.

It was expected that there would be a moderate to high relation between the CASSS-A total score and students' current GPA. As expected, there was a significant but small relation between the CASSS-A total score and students' current GPA. This suggests that students with higher levels of academic social support have higher GPA's. This is consistent with previous research that found a small, significant correlation between students' GPA and students' perceived global social support (Malecki & Elliot, 1999).

It was also expected that there would be a moderate to high relation between the CASSS-A total score and student's current ISAT scores. The ISAT Reading Scaled Score and ISAT Math Scale Score were used in this analysis, and the CASSS-A was not significantly related to these group academic achievement scores. When analyzing why GPA was related to academic social support and standardized achievement was not, it was

important to understand what each construct entailed. Standardized achievement tests measure academic skill in reading and math at one point in time, whereas GPAs take into account multiple scores involving tests on academic skill but also much more. GPAs not only measure homework accuracy but also homework completion. GPAs measure participation, therefore engagement in school. GPAs can measure class attendance because it may be difficult to receive full credit on homework or tests if one does not come to school regularly. GPAs also measure various types of assessments (i.e., scantron assessments, written responses, group projects). Therefore, standardized achievement tests measure pure skill, whereas GPAs take into account the many other factors embedded in academic achievement. In this study, social support is more related to GPA because social support also influences those academic enabling skills that are related to GPA.

Convergent validity of the CASSS-A scores was also assessed using the corresponding source of support from the CASSS-A and CASSS. It was predicted that the parent subscale of the CASSS-A would be strongly correlated with the parent subscale of the CASSS. The CASSS-A parent subscale was significantly related to the CASSS parent subscale. It was predicted that the teacher subscale of the CASSS-A would be strongly correlated with the teacher subscale of the CASSS. The CASSS-A teacher subscale was significantly related to the CASSS teacher subscale. It was predicted that the classmate subscale of the CASSS-A would be strongly correlated with the classmate subscale of the CASSS. The CASSS-A classmate subscale was significantly related to the CASSS classmate subscale. It was predicted that the close friend subscale of the CASSS-A would be strongly correlated with the close friend subscale of the CASSS. The CASSS-A close friend subscale was significantly related to the CASSS close friend subscale. As hypothesized, these strong

correlations between corresponding sources of support provide evidence of convergent validity of the CASSSA subscale scores.

Divergent validity of the CASSS-A scores was also assessed using the non-corresponding sources of support from the CASSS-A and CASSS. It was predicted that there would be low correlations between the non-corresponding sources of support (i.e., parent with teacher, classmate, and close friend). Results suggest that there were significantly but moderate relations between non-corresponding sources of support. This provides support for the CASSS-A subscales measuring that specific construct of academic support from that specific source.

Exploratory Analyses

In addition to the psychometric analyses conducted for the three research questions posed, this study investigated exploratory questions based on the previous analyses. Specifically, the significant correlations found when assessing construct validity in Research Question 3 were further examined to distinguish which of the sources of support would best predict the outcome variable.

The first set of regressions that were conducted examined both the CASSS-A and CASSS and their relation to GPA. The CASSS parent and teacher source of support both significantly predicted students' GPA, whereas the CASSS-A did not. However, the CASSS-A classmate significantly predicted students' GPA, whereas the CASSS classmate did not. Both the CASSS-A close friend and CASSS close friend did not predict students'

GPA. These findings may suggest that although the CASSS-A is specific to academics, a more global measure may predict academic outcomes better than the CASSS-A.

Referring back to the major influence of the study, Cohen and Wills (1985) suggested that stress buffering occurs when the social support matches the stress. Although research suggests that social support and academic achievement are related, that social support was assessed using a global measure (Flook et al., 2005; Steinberg & Darling, 1994). In this study, a matching social support measure was developed to examine the relationship between academic achievement and social support. Results suggested that matching social support might not necessarily predict students' GPA as expected.

There are a few possible hypotheses about this relationship between academic social support and academic achievement. Academic achievement could be influenced by more than only academic support. For instance, if a student is supported to do well in school and that is the primary focus of all of the sources of support, the student may feel too pressured to do well in school or the student may believe he or she is not worth more than just good grades. This could explain why global support was a better predictor of students' GPA. Students need to experience support all around. Being supported academically may be only a small sliver of why students achieve.

Another hypothesis is that academic social support may be predictive of students' GPA when combined with predictors, but just academic social support alone does not provide a complete picture of the student's achievement. For instance, being supported academically, having good academic enabling skills, having academic competence, and having a well-balanced personal well-being such as average amounts of stress must be

included. Academic social support could be only a small predictor when combined with other types of supports.

Another hypothesis of this relationship examines the role in Response to Intervention. It could be that students receive more academic support when they begin to struggle academically. Response to Intervention provides academic support to students when the students are identified as at-risk for poor learning outcomes. During this process, students may be receiving additional academic social support from the teachers who are providing the academic support, additional academic social support from the parents when they are aware that their child may be at risk for poor learning outcomes, and additional support from the peers with whom they may be receiving additional academic support. These students may be thriving academically but do receive intensive instruction in specific areas. Therefore, because of this additional academic social support, academic social support may not be specifically correlated with students' GPA. However, these hypotheses would need additional investigation.

Another set of analyses investigated the relationship between Academic Social Support and Global Social Support predicting ACES Academic Enablers. The exploratory question posed whether a specific source of social support was a greater predictor of ACES Academic Enablers over general social support. A series of regressions were conducted, and both sources of support, global and academic, significantly predicted ACES Academic Enablers Score. However, the teacher source of support accounted for the most variance in academic enabling scores. The second largest significant relation was between the parent source of support and academic enablers score. Therefore, adults influence these academic enablers (i.e., motivation, study skills, engagement, and interpersonal skills) more than peers

do. The previous findings suggest that adolescents value their relationships with parents as most important, even though they begin finding supports outside of the home (del Valle et al., 2009). As stated previously, adolescents seek different social supports from different sources throughout their education. Taking this into account, it could be that adolescents tend to be more influenced by peers on more trivial issues such as hair, clothing, or taste in music, whereas for larger moral issues, such as education, adolescents still value adult's input.

The last set of analyses investigated whether a specific source of academic support was a greater predictor of attitude to school, depression, and interpersonal relations. Both parent and teacher academic support significantly predicted students' attitude to school score, whereas classmate and close friend did not significantly predict students' attitude to school. When examining the questions measuring attitude to school, questions asked about being bored in school and liking school. Therefore, teachers may influence school by sustaining learning environments that prevent student boredom. This is consistent with the previous findings with academic enablers; parents and teachers had the greatest influence on academic enablers. Therefore, parents could influence those same academic enablers that influence how students perceive school.

Another analysis examined the relationship between academic support and student depression. Parents, teachers, and classmate sources of academic support all statistically predicted depression, whereas close friend source of academic support did not.

The last analysis examined which source of support significantly predicted the interpersonal relations score. Both parents and teachers significantly predicted the BASC-2-SRP interpersonal relations score, whereas classmate and close friend sources of support did not. This relationship is interesting because the questions ask to measure interpersonal

relations referenced classmates, other children, and friends. The questions measured a student's perception of being liked by others and catering to peers. However, the two peer sources of support did not significantly influence the interpersonal relations scores. In sum, parents and teachers had the greatest influence on students' psychosocial outcomes.

General Summary and Implications

Overall, the current study established a new measure of academic social support that is theoretically based and has evidence for psychometrically valid use with adolescents. Furthermore, it was found that adolescents perceive receiving a higher academic social support from parents and teachers, and receiving the least amount of social support from classmates. The only large gender difference was between close friends, in which females perceived receiving more academic support from their close friends than did males. There were no differences in perceived academic support between seventh- and eighth-grade students.

Students who perceived more academic support tended to have a better attitude to school, better attitude to teachers, less depression, better interpersonal relations, and better relations with parents. Students who perceived more academic support also perceived themselves as having higher academic enabling skills (i.e., engagement, motivation, and study skills). However, results did not provide significant support that academic social support is related to academic achievement; results provided evidence that a general social support measure was related to academic achievement more than was academic social

support. Furthermore, results did not provide support for the matching hypothesis of academic social support.

The current study also investigated how the CASSS-A functions in comparison to the CASSS. Results suggested that the general academic support measure functions similarly, if not better, than the academic social support measure. Following, a diagram presents the relationship between the two types of support in order to visualize why general academic support functions similarly to academic social support (see Figure 8). Social support is a multidimensional construct that people turn to in time of specific need. The CASSS measures global social support, meaning that overall the individual experience support. The CASSS-A measures only a specific aspect of social support. This diagram demonstrates that academic social support is only one small portion of global social support and that global social support measures the same construct. Therefore, the global social support measure may be a more efficient measure of social support because it captures the greater representation of social support.

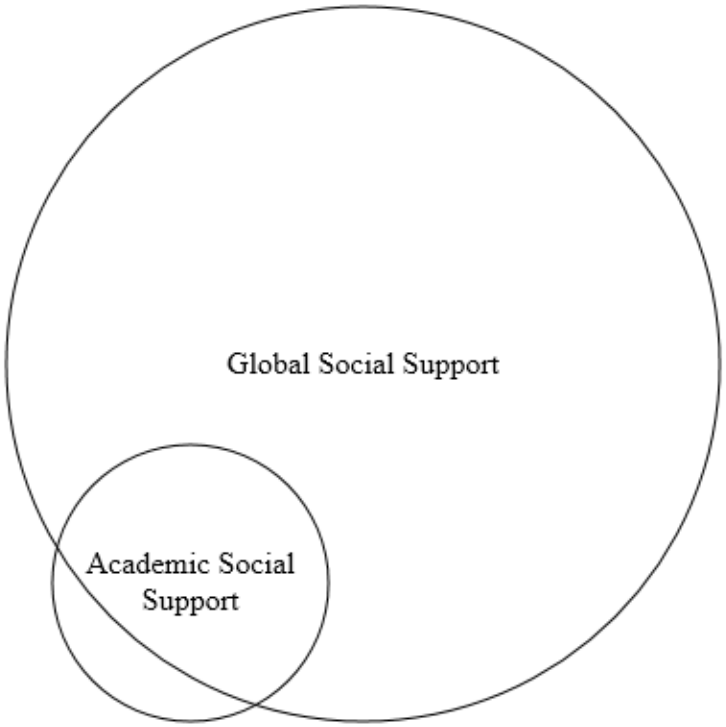

Figure 8: Diagram Demonstrating the Relationship Between Academic Social Support and Global Social Support.

Limitations and Future Directions

Despite the important findings of the current study, there are several limitations to be discussed. First of all, the data provided for the analyses were part of an all-school-evaluation extant data set. Therefore, missing data were handled in a way that did not meet strict research standards, and instead, attention was given to having the most complete data possible for the school. Also, due to the way these measures were administered, the order of the measures was not counterbalanced. Therefore, fatigue and outside factors may have influenced the results. In addition, the testing environment was a large gymnasium with

many students taking the measure at one time; this may not have been ideal or may have been overwhelming, and students may not have answered honestly. Also, the population, although large, was limited in the minority ethnicity compared to the United States Census. The data were also taken from only one school and, therefore, were not generalizable. If other schools were involved, there could have be more fluctuation in scores, including academic social support scores, academic enabling scores, and academic achievement scores. Having data on only early adolescents may not have provided an accurate understanding of academic social support. Academic social support could vary more using older populations, such as high school or college-aged students. Further research could examine the outcomes of this study using other school populations, including different demographics and also additional grades.

Another limitation of the current study was that test-retest reliability was not examined. As stated, the data were provided from extant data that did not provide a second time when students answered the CASSS-A. Therefore, it is unknown if the scores would have been consistent over time. Future research should administer the CASSS-A to a smaller sample to analyze the test-retest reliability.

A further limitation of the current study was that analyses were correlational, rather than causal. Therefore, questions regarding cause-and-effect relationships cannot be answered. This limits the conclusions and implications that can be drawn from the current results. Future research may use more complex analyses, examining mediating factors of academic achievement, as previously hypothesized. Overall, despite these limitations, the current study adds to the existing literature in several ways. The current study provides a new measure of academic social support that is practical and based in theory. Also, the

current study provided initial work in several areas for the first time, such as exploring students' perceptions of the types of academic social support. The current study thus provides a basis for future research that may further understanding of the relationship between academic achievement and social support.

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APPENDIX A

CHILD AND ADOLESCENT SOCIAL SUPPORT SCALE-ACADEMIC (CASSS-A)

Northern Illinois University Research Project

ID #: _____ AGE: _____ GRADE: _____

SCHOOL: _____ BIRTH DATE: _____

DATE: _____

On the next FOUR pages, you will be asked to respond to sentences about some form of support or help that you might get from either a parent, a teacher, classmates, or close friend in your school. Read each sentence carefully and respond to them honestly. There are no right or wrong answers.

For each sentence you are asked to rate how often you receive the support described. Below is an example. Please read it carefully before starting your own ratings.

HOW OFTEN?

	NEVER	ALMOST NEVER	SOME OF THE TIME	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS
1. My teacher(s) cares about how well I do in school.	1	2	(3)	4	5	6

In this example, the student describes her 'teacher cares about how well I do in school' as something that happens 'some of the time.'

Please ask for help if you have a question or don't understand something. Do not skip any sentences. Please turn to the next page and answer the questions. Thank you!

My Parent(s)…	How Often? Never	Almost Never	Some of the Time	Most of the Time	Almost Always	Always
1. …listen to me about my concerns with schoolwork.	A	B	C	D	E	F
2. …make it okay to ask questions on school subjects that I don't understand.	A	B	C	D	E	F
3. …ask me how school is going.	A	B	C	D	E	F
4. …help me with my homework.	A	B	C	D	E	F
5. …help me study for tests.	A	B	C	D	E	F
6. …take time to help me learn something on my schoolwork.	A	B	C	D	E	F
7. … make suggestions when I don't know how to do a homework problem.	A	B	C	D	E	F
8. …help explain concepts that I don't understand on my homework.	A	B	C	D	E	F
9. …give me advice on how to study well.	A	B	C	D	E	F
10. … tell me I did a good job when I do well in school.	A	B	C	D	E	F
11. …tell me how well I did on school tasks.	A	B	C	D	E	F
12. … notice when I work hard in school.	A	B	C	D	E	F

My Teacher(s)…	How Often? Never	Almost Never	Some of the Time	Most of the Time	Almost Always	Always
13. … cares about how well I do in school	A	B	C	D	E	F
14. … listens to my concerns about school.	A	B	C	D	E	F
15. … makes it okay for me to ask questions on schoolwork.	A	B	C	D	E	F
16. … helps me when I do not understand something in class.	A	B	C	D	E	F
17. … takes time explaining information to help me learn the concepts well.	A	B	C	D	E	F
18. … provides me with the resources I need to do well in school.	A	B	C	D	E	F
19. … gives me advice on how to be successful in school.	A	B	C	D	E	F
20. … explains concepts when I don't understand.	A	B	C	D	E	F
21. … offers suggestions to help me in school.	A	B	C	D	E	F
22. … tells me nicely when I make mistakes.	A	B	C	D	E	F
23. … notices when I worked hard on schoolwork.	A	B	C	D	E	F
24. … encourages me to do well in school.	A	B	C	D	E	F

My Classmates…	How Often? Never	Almost Never	Some of the Time	Most of the Time	Almost Always	Always
25. … care about my grades.	A	B	C	D	E	F
26. … listen about my concerns with my schoolwork.	A	B	C	D	E	F
27. … respect my thoughts and ideas about school.	A	B	C	D	E	F
28. … take time to help me learn something that I don't understand in school.	A	B	C	D	E	F
29. … help me with my schoolwork.	A	B	C	D	E	F
30. … help me study for tests.	A	B	C	D	E	F
31. … help explain assignments that I don't understand.	A	B	C	D	E	F
32. … give me suggestions on how to study better.	A	B	C	D	E	F
33. … give me suggestions on how to get better grades.	A	B	C	D	E	F
34. … tell me I did a good job when I did well in school.	A	B	C	D	E	F
34. … notice when I work hard in school.	A	B	C	D	E	F
36. … encourage me to do well in school.	A	B	C	D	E	F

My Close Friend…	How Often? Never	Almost Never	Some of the Time	Most of the Time	Almost Always	Always
37. … cares about my grades.	A	B	C	D	E	F
38. … listens about my concerns with my schoolwork.	A	B	C	D	E	F
39. … encourages me to be the best student that I can be.	A	B	C	D	E	F
40. … takes time to help me learn something that I don't understand in school.	A	B	C	D	E	F
41. … helps me when I need to brainstorm ideas for schoolwork.	A	B	C	D	E	F
42. … helps me study for tests.	A	B	C	D	E	F
43. … explains concepts on my homework when I don't understand.	A	B	C	D	E	F
44. … helps explain assignments that I don't understand.	A	B	C	D	E	F
45. … gives me advice on how to do well in school.	A	B	C	D	E	F
46. … encourages me to do well in school.	A	B	C	D	E	F
47. … provides feedback on how I can improve on my schoolwork.	A	B	C	D	E	F
48. … tells me when I did a good job on an assignment.	A	B	C	D	E	F

APPENDIX B

CHILD AND ADOLESCENT SOCIAL SUPPORT SCALE (CASSS)

Northern Illinois University Research Project

ID #: _____ AGE: _____ GRADE: _____

SCHOOL: _____ BIRTH DATE: _____

DATE: _____

On the next four pages, you will be asked to respond to sentences about some form of support or help that you might get from either a parent, a teacher, classmates, or close friend in your school. Read each sentence carefully and respond to them honestly. There are no right or wrong answers.

For each sentence you are asked to rate how often you receive the support described. Below is an example. Please read it carefully before starting your own ratings.

HOW OFTEN?

	NEVER	ALMOST NEVER	SOME OF THE TIME	MOST OF THE TIME	ALMOST ALWAYS	ALWAYS
1. My teacher(s) helps me solve problems.	1	2	(3)	4	5	6

In this example, the student describes her 'teacher helps me solve problems' as something that happens 'some of the time'.

Please ask for help if you have a question or don't understand something. Do not skip any sentences.
Please turn to the next page and answer the questions. Thank you!

My Parent(s)…	How Often? Never	Almost Never	Some of the Time	Most of the Time	Almost Always	Always
1…show they are proud of me.	A	B	C	D	E	F
2…understand me.	A	B	C	D	E	F
3…listen to me when I need to talk.	A	B	C	D	E	F
4…make suggestions when I don't know what to do.	A	B	C	D	E	F
5…give me good advice.	A	B	C	D	E	F
6…help me solve problems by giving me information.	A	B	C	D	E	F
7…tell me I did a good job when I do something well.	A	B	C	D	E	F
8…nicely tell me when I make mistakes.	A	B	C	D	E	F
9…reward me when I've done something well.	A	B	C	D	E	F
10…help me practice my activities.	A	B	C	D	E	F
11…take time to help me decide things.	A	B	C	D	E	F
12…get me many of the things I need.	A	B	C	D	E	F

My Teacher(s)…	How Often? Never	Almost Never	Some of the Time	Most of the Time	Almost Always	Always
13…cares about me.	A	B	C	D	E	F
14…treats me fairly.	A	B	C	D	E	F
15…makes it okay to ask questions.	A	B	C	D	E	F
16…explains things that I don't understand.	A	B	C	D	E	F
17…shows me how to do things.	A	B	C	D	E	F
18…helps me solve problems by giving me information.	A	B	C	D	E	F
19…tells me I did a good job when I've done something well.	A	B	C	D	E	F
20…nicely tells me when I make mistakes.	A	B	C	D	E	F
21…tells me how well I do on tasks.	A	B	C	D	E	F
22…makes sure I have what I need for school.	A	B	C	D	E	F
23…takes time to help me learn to do something well.	A	B	C	D	E	F
24…spends time with me when I need help.	A	B	C	D	E	F

My Classmates…	How Often? Never	Almost Never	Some of the Time	Most of the Time	Almost Always	Always
25…treat me nicely.	A	B	C	D	E	F
26…like most of my ideas and opinions.	A	B	C	D	E	F
27…pay attention to me.	A	B	C	D	E	F
28…give me ideas when I don't know what to do.	A	B	C	D	E	F
29…give me information so I can learn new things.	A	B	C	D	E	F
30…give me good advice.	A	B	C	D	E	F
31…tell me I did a good job when I've done something well.	A	B	C	D	E	F
32…nicely tell me when I make mistakes.	A	B	C	D	E	F
33…notice when I have worked hard.	A	B	C	D	E	F
34…ask me to join activities.	A	B	C	D	E	F
35…spend time doing things with me.	A	B	C	D	E	F
36…help me with projects in class.	A	B	C	D	E	F

My Close Friend…	How Often? Never	Almost Never	Some of the Time	Most of the Time	Almost Always	Always
37…understands my feelings.	A	B	C	D	E	F
38… sticks up for me if others are treating me badly.	A	B	C	D	E	F
39… spends time with me when I'm lonely.	A	B	C	D	E	F
40…gives me ideas when I don't know what to do.	A	B	C	D	E	F
41…gives me good advice.	A	B	C	D	E	F
42…explains things that I don't understand.	A	B	C	D	E	F
43…tells me he or she likes what I do.	A	B	C	D	E	F
44…nicely tells me when I make mistakes.	A	B	C	D	E	F
45…nicely tells me the truth about how I do on things.	A	B	C	D	E	F
46…helps me when I need it.	A	B	C	D	E	F
47…shares his or her things with me.	A	B	C	D	E	F
48…takes time to help me solve my problems.	A	B	C	D	E	F

APPENDIX C

BEHAVIOR ASSESSMENT SYSTEM FOR CHILDREN, SECOND EDITION (BASC-2)

Self-Report Adolescent (SRP-A)

Computer-Entry Form **Ages 12-21**

BASC-2

Behavior Assessment System for Children, Second Edition

Directions:

This booklet contains sentences that young people may use to describe how they think or feel or act. Read each sentence carefully. For the first group of sentences, you will have two answer choices: **T** or **F.**

Circle **T** for **True** if you agree with a sentence.

Circle **F** for **False** if you do not agree with a sentence.

Here is an example.

1. I like parties. **(T)** **F**

For the second group of sentences, you will have four answer choices: **N, S, O,** and **A.**

Circle **N** if the sentence **never** describes you or how you feel.

Circle **S** if the sentence **sometimes** describes you or how you feel.

Circle **O** if the sentence **often** describes you or how you feel.

Circle **A** if the sentence **always** describes you or how you feel.

Here is an example:

2. I enjoy doing homework. **N** **(S)** **O** **A**

If you wish to change an answer, mark an X through it, and circle your new choice, like this:

2. I enjoy doing homework. **N** **S** **(O)** **A**

Give the best response for you for each sentence, even if it is hard to make up your mind. There are no right or wrong answers. Please do your best, tell the truth, and respond to every sentence.

*Only selected subsections from the BASC-2 have been selected

Mark: T - True F - False								
1. Nothing goes my way	T	F		9. I don't like thinking about school	T	F		
2. I used to be happier	T	F		10. I get along well with my parents	T	F		
3. I don't care about school . . .	T	F		11. I don't seem to do anything right	T	F		
4. My classmates don't like me	T	F		12. Other children don't like to be with me	T	F		
5. Nothing is fun anymore	T	F		13. Nothing ever goes right for me	T	F		
6. Nobody ever listens to me . .	T	F		14. My teacher cares about me	T	F		
7. My teacher understands me .	T	F		15. Nothing about me is right	T	F		
8. I just don't care anymore . . .	T	F						

Remember: N – Never S – Sometimes O – Often A – Almost always								
16. My school feels good to me	N	S	O	A	31. Teachers are unfair	N	S	O	A
17. I am proud of my parents.	N	S	O	A	32. My mother and father like my friends	N	S	O	A
18. Other kids hate to be with me	N	S	O	A	33. People think I am fun to be with	N	S	O	A
19. I feel like my life is getting worse and worse	N	S	O	A	34. My mother and father help me if I ask them to	N	S	O	A
20. School is boring	N	S	O	A	35. I feel like I want to quit school.	N	S	O	A
21. My teacher trusts me	N	S	O	A	36. My teacher is proud of me	N	S	O	A
22. I feel depressed	N	S	O	A	37. I am slow to make new friends.	N	S	O	A
23. Teachers make me feel stupid	N	S	O	A	38. My parents listen to what I say.	N	S	O	A
24. No one understands me . .	N	S	O	A	39. I like to be close to my parents.	N	S	O	A
25. I like going places with my parents	N	S	O	A	40. My teachers want too much	N	S	O	A
26. I feel that nobody likes me.	N	S	O	A	41. I am liked by others. . . .	N	S	O	A
27. I feel sad	N	S	O	A	42. My parents trust me	N	S	O	A
28. I get bored in school	N	S	O	A	43. I hate school.	N	S	O	A
29. Teachers look for the bad things that you do	N	S	O	A	44. My parents are proud of me.	N	S	O	A
30. My parents are easy to talk to	N	S	O	A	45. My teacher gets mad at me for no good reason.	N	S	O	A

APPENDIX D

ACADEMIC COMPETENCE EVALUATION SCALES (ACES)

ACES- About my Learning

Academic Competence Evaluation Scales™

Directions

	Never	Seldom	Sometimes	Often	Almost Always
If you **never** use the skill, circle 1	①	2	3	4	5
If you **seldom** use the skill, circle 2	1	②	3	4	5
If you **sometimes** use the skill, circle 3	1	2	③	4	5
If you **often** use the skill, circle 4	1	2	3	④	5
If you **almost always** use the skill, circle 5	1	2	3	4	⑤

Below is an example.

	Never	Seldom	Sometimes	Often	Almost Always
I correctly spell words without assistance	1	②	3	4	5

The student circles a 2, which means that he or she **seldom** spells words correctly without help from a parent, teacher, or dictionary.

Please be sure to answer all of the questions on the following pages. There are no right or wrong answers, just your ideas about how often you use these skills.

ACADEMIC SKILLS

Reading/Language Arts Skills	Never	Seldom	Sometimes	Often	Almost Always
1. I understand what I read	1	2	3	4	5
2. I try to read unfamiliar words by sounding out each of the letters separately to myself	1	2	3	4	5
3. I know the meaning of many words	1	2	3	4	5
4. I identify the main idea of what I am reading	1	2	3	4	5
5. I read at a steady pace	1	2	3	4	5
6. I correctly spell words without assistance	1	2	3	4	5
7. I use punctuation (periods, commas, etc.) correctly	1	2	3	4	5
8. I use grammar (verb tense, noun-verb agreement, etc.) correctly	1	2	3	4	5
9. Other people understand what I write	1	2	3	4	5
10. Other people understand what I mean when I speak	1	2	3	4	5
11. I learn from what I read	1	2	3	4	5

Mathematics Skills	Never	Seldom	Sometimes	Often	Almost Always
12. I solve math problems correctly	1	2	3	4	5
13. I measure length, volume, and area accurately	1	2	3	4	5
14. I recognize similarities between shapes or objects	1	2	3	4	5
15. I correctly solve math problems in my head	1	2	3	4	5
16. I use my math skills in my day-to-day life	1	2	3	4	5
17. I break difficult problems down into many different steps	1	2	3	4	5
18. I know which rules to use to solve a problem	1	2	3	4	5

Critical Thinking Skills	**Never**	**Seldom**	**Sometimes**	**Often**	**Almost Always**
19. I understand how learning something new fits with what I already know	1	2	3	4	5
20. I learn from watching or listening to what happens around me	1	2	3	4	5
21. I compare similarities and differences among things or ideas	1	2	3	4	5
22. I organize objects or ideas into categories	1	2	3	4	5
23. I use what I already know to solve new problems	1	2	3	4	5
24. I identify mistakes in information	1	2	3	4	5
25. I can list reasons for or against an opinion	1	2	3	4	5
26. I identify patterns from information	1	2	3	4	5
27. I examine both sides of an argument	1	2	3	4	5
28. I explore problems or issues	1	2	3	4	5
29. I develop good solutions to problems	1	2	3	4	5
30. I test hypotheses	1	2	3	4	5

ACADEMIC ENABLERS

Interpersonal Skills	Never	Seldom	Sometimes	Often	Almost Always
31. I follow classroom rules	1	2	3	4	5
32. I am able to correct my behavior when my teacher asks	1	2	3	4	5
33. I tell people when I am unhappy about something	1	2	3	4	5
34. I listen to suggestions from my teacher	1	2	3	4	5
35. I work well in large groups of students	1	2	3	4	5
36. I get along well with other adults in the classroom	1	2	3	4	5
37. I listen to what others have to say	1	2	3	4	5
38. I get along with people who are different from me	1	2	3	4	5
39. I work effectively in small groups of students	1	2	3	4	5
40. I get along well with other students in my class	1	2	3	4	5

Engagement	Never	Seldom	Sometimes	Often	Almost Always
41. I ask questions about tests or projects	1	2	3	4	5
42. I participate in class discussions	1	2	3	4	5
43. I volunteer an answer hen I think I am right	1	2	3	4	5
44. I am a leader in my class	1	2	3	4	5
45. I volunteer to read aloud in class	1	2	3	4	5
46. I start conversations with my classmates	1	2	3	4	5
47. I ask questions when I am confused	1	2	3	4	5
48. I share my ideas when my teacher calls on me	1	2	3	4	5

Motivation	**Never**	**Seldom**	**Sometimes**	**Often**	**Almost Always**
49. I like to learn about new things	1	2	3	4	5
50. I like assignments that challenge me	1	2	3	4	5
51. I try to produce good work	1	2	3	4	5
52. I try to improve my work with each assignment	1	2	3	4	5
53. I try my hardest on everything I do in school	1	2	3	4	5
54. I look for ways to challenge myself in school	1	2	3	4	5
55. I hold myself responsible for my own learning	1	2	3	4	5
56. I set goals for myself in my classes	1	2	3	4	5
57. I stay on task when doing schoolwork	1	2	3	4	5

Study Skills	**Never**	**Seldom**	**Sometimes**	**Often**	**Almost Always**
58. I complete my homework	1	2	3	4	5
59. I correct my own work without being asked	1	2	3	4	5
60. I turn in my class work on time	1	2	3	4	5
61. I take notes in class	1	2	3	4	5
62. I review my class materials	1	2	3	4	5
63. I turn in my homework on time	1	2	3	4	5
64. I take care of my materials (books, desk(s), and locker)	1	2	3	4	5
65. I follow directions on assignments	1	2	3	4	5
66. I study for tests	1	2	3	4	5
67. I prepare for class	1	2	3	4	5
68. I pay attention in class	1	2	3	4	5