

2009

# Barriers and facilitating factors to high school students' school engagement

Amy Green

*University of South Florida*

Follow this and additional works at: <http://scholarcommons.usf.edu/etd>

 Part of the [American Studies Commons](#)

## Scholar Commons Citation

Green, Amy, "Barriers and facilitating factors to high school students' school engagement" (2009). *Graduate Theses and Dissertations*. <http://scholarcommons.usf.edu/etd/1990>

This Dissertation is brought to you for free and open access by the Graduate School at Scholar Commons. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Scholar Commons. For more information, please contact [scholarcommons@usf.edu](mailto:scholarcommons@usf.edu).

Barriers and Facilitating Factors to High School Students' School Engagement

by

Amy Green

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
Department of Psychology  
College of Arts and Sciences  
University of South Florida

Major Professor: Ellis Gesten, Ph.D.  
Michael Brannick, Ph.D.  
Judith Becker Bryant, Ph.D.  
Vicky Phares, Ph.D.  
J. Kevin Thompson, Ph.D.

Date of Approval:  
May 27, 2009

Keywords: extracurricular activities, student-teacher relationships, social capital,  
social support, support seeking

© Copyright 2009, Amy Green

## Table of Contents

List of Tables	iii
Abstract	iv
Introduction	1
School Engagement	3
Activity Involvement	4
Measurement	5
Outcomes Related to Activity Involvement	6
Predictors	9
Support Seeking from Adults at School	10
Teacher Support	11
Teacher Support Among at Risk Students	11
Support Seeking	12
Hypothesized Predictor Variables	13
Social Competence	13
Perceived School Support	14
Social Anxiety	15
Psychological Distress	15
Parent Involvement in School	16
Global Self-Worth	16
Antisocial Peer Group	17
Hours of Employment	17
High Risk Demographic Status	17
Current Study	18
Main Effect Hypotheses	20
Moderator Hypotheses	20
Methods	23
Participants	23
Measures	23
Procedures	29
Results	30
Descriptive Statistics	30
Correlations	33
Intercorrelations	33
Intercorrelations of Outcomes	35
Correlations of Predictors with Outcomes Variables	35
Regression Analyses	40

Activity Involvement	40
Support Seeking from Adults at School	40
Moderator Analyses	45
Additional Analyses	45
Discussion	48
Demographic Variables	48
Barriers and Facilitating Factors	49
Limitations and Future Directions	50
Response Sample	50
Construct Measurement	52
Conceptual Model	52
Conclusions	53
Policy Implications	54
Reference List	56
Appendices	65
Appendix A: Survey Items	66
Appendix B: Student Survey	72
Appendix C: Activity Survey	74
About the Author	End Page

## List of Tables

Table 1	Internal Consistency of Predictor Measures	27
Table 2	Overall Sample Descriptive Statistics	31
Table 3	Descriptive Statistics by Gender and Race	32
Table 4	Intercorrelations of Demographic and Predictor Variables	34
Table 5	Intercorrelations of Predictor and Outcome Variables	36
Table 6	Intercorrelations of Predictor and Outcome Variables by Gender	38
Table 7	Intercorrelations of Predictor and Outcome Variables by Race	39
Table 8	Linear Regression of Predictor Variables on Total Number of Activities	41
Table 9	Linear Regression of Predictor Variables on Total Number of Activity Categories	42
Table 10	Linear Regression of Predictor Variables on Support Seeking from Adults at School Scale	43
Table 11	Linear Regression of Predictor Variables on Number of Supportive Adults	44

## Barriers and Facilitating Factors to High School Students' School Engagement

Amy Green

### ABSTRACT

Students who are engaged in their high school environment have higher graduation rates, fewer discipline problems, and lower delinquency rates. In addition, students who are connected to teachers and involved in extracurricular activities consistently experience positive outcomes. However, although the benefits of school resources such as extra-curricular activities and connections to supportive individuals during high school have been well documented, the factors influencing utilization of these resources have not yet been established. Given the known benefits of activity participation and connection to supportive individuals in school settings, and the voluntary nature of their utilization, it is important to investigate factors influencing students' decision to use these resources.

The current study investigated potential barriers and facilitating factors for high school students' activity involvement and support seeking from school personnel. Survey data were collected from 1522, 9-12<sup>th</sup> grade students in four Pinellas County high schools. Questions regarding students' school, family, and social relationships were assessed via psychometrically valid scales, district records, and items created collaboratively with school district administrators for this specific project. Results were analyzed using bivariate correlations and hierarchical multiple regression. Race, free/reduced lunch status, parent involvement and psychological distress were among the strongest correlates with the support seeking outcomes whereas gender, race, free/reduced lunch status, global self worth, self esteem, antisocial peer group,

and perceived school support were among the variables most strongly correlated with the activity involvement outcomes. All significant relationships found were in the predicted direction with barrier variables leading to lower levels of school engagement and facilitating factors leading to higher levels of school engagement. Contrary to the hypotheses, the selected barriers and facilitating factors did not contribute to a significant amount of variance above that accounted for by gender, race, and free/reduced lunch status. In general, males, students receiving free/reduced lunch, and black students had the lowest rates of school engagement. The current results add to existing literature by showing that students who would benefit most from positive assets such as support seeking from adults at school and activity involvement are least likely to engage in the behaviors.

## Introduction

Research on positive youth development has revealed a number of factors influential in producing positive outcomes in adolescents. Among the most consistently documented relationships are the ability of connections to supportive individuals, including mentors and teachers, and involvement in extracurricular activities to generate positive youth outcomes (Croninger & Lee, 2001; Eccles, Barber, Stone, & Hunt, 2003; Rose-Krasnor, Busseri, Willoughby, & Chalmers, 2006; Rosenfeld, Richman, & Bowen, 2000; Zaff, Moore, Papillo, & Williams, 2003). Although the benefits of school resources such as extra-curricular activities and connections to supportive individuals during high school have been well documented, factors influencing utilization of these resources have received minimal research attention. Given the known benefits of activity participation and connection to supportive individuals in school settings, and the voluntary nature of their utilization, it is important to investigate factors influencing students' decisions to use these resources in order to remove barriers, increase access, and increase desirability for those students who do not utilize these school resources.

Most studies of activity involvement and mentoring have relied on either cross-sectional or longitudinal data to link utilization of these resources with a variety of outcomes such as academic success, mental health, anti-social behavior, and substance abuse (Fredricks & Eccles, 2006; Harrison & Narayan, 2003; Mahoney, 2000; McNeely & Falci, 2004). However, the majority of studies fail to investigate antecedents that may influence a student's choice to utilize these resources. Self-selection has been described as a major limitation of studies investigating the outcomes of activity involvement and mentoring (Eccles et al., 2003; Mahoney & Cairns,



1997). Although a small number of these studies attempt to examine the effects of self-selection on results by controlling for characteristics such as SES, race, parental education, and gender that may influence participation, few examine self-selection factors as a focus of their investigations, and no study had investigated a wide range of possible predictor variables (Bohnert, Martin, & Garber, 2007; Eccles et al., 2003; Simpkins, Ripke, Huston, & Eccles, 2005). Investigation of these predictors can increase understanding of utilization of school resources and assist school personnel in improving youth involvement and engagement. Prospective longitudinal investigations which have the ability to track students' development over time serve as the best method for examining antecedents and consequences of the utilization of school resources. The investigation of antecedents of school engagement resources would require measurement of student characteristics beginning in elementary school, before students begin to utilize school resources, to differentiate antecedents from consequences. However such an investigation could take up to 12 years, requiring large time and financial investments. Cross-sectional results, although less compelling than those of a longitudinal study, could set the stage for the development of a longitudinal study by contributing information on correlated variables that are hypothesized to precede activity involvement and connections to school personnel.

The current study addressed these questions by investigating correlates of both high school activity involvement and support seeking from school personnel hypothesized to influence utilization of these school resources. Additionally, in line with current research on resilience, this study examined possible moderators to determine whether those most in need of these resources were actually getting them and which predictive variables may serve as facilitating factors for high risk students.

### *School Engagement*

With increasing rates of school violence, high school dropout, student alienation, and poor academic achievement among American high school students, school engagement has been gaining increased attention as a potential source of positive outcomes (Fredricks, Blumenfeld, & Paris, 2004). However, the process of engaging students has proved challenging for educators and school administrators, with studies showing levels of engagement decreasing as students progress from elementary to high school, and almost half of high school students “chronically disengaged” from urban, suburban, and rural schools (Klem & Connell, 2004).

In response to growing concerns about the status of American schools, the Wingspread Conference was held in 2003, with support from the Centers for Disease Control and Prevention’s Division of Adolescent School Health, to bring together representatives from government, education, and health sectors to identify the current state of research on students’ connections to schools and to develop a set of core principles to guide American schools (Bets, 2004). One of the primary reasons such attention has been given to student engagement lies in its malleable nature, lending it to prevention and intervention efforts that effect student-school interactions (Fredricks et al., 2004). Student engagement has also been targeted for intervention based on the assumption that once engagement is established, it results in improvements in a variety of relevant proximal and distal outcomes. Routes to student engagement have been hypothesized to follow from opportunities in schools for participation, interpersonal relationships, as well as academic endeavors.

While the practice of examining the interactions between students and their school environment is not new, researchers have only recently begun to distinguish among the various dimensions of student-school interactions by clarifying among key terms and their hypothesized components. One author recently examined student relationships with their schools by

reviewing the health, psychology, and education literature concerning what has been labeled “school engagement”, “school attachment”, “school bonding”, “school climate”, “school involvement”, “teacher support”, and “school connectedness” (Libbey, 2004). Libbey found that these terms often overlap in both their construct components and measurement items. Components common to most of the constructs included a sense of belonging to the school, teacher supportiveness and caring, participation in extracurricular activities, fair school practices, and engagement in academic progress. Libbey concluded that, although there was no predominant measure or construct in the field, each of the measures and constructs examined in the literature were unequivocally related to positive academic and health outcomes in youth, suggesting greater attention be given to non-academic aspects of school to foster greater levels of school success.

A recent review of “school engagement” indicated that the construct is usually defined in one of three ways including: behavioral, cognitive, and emotional engagement (Fredricks et al., 2004). Behavioral engagement includes actions that students take such as involvement in school activities, cognitive engagement includes aspects of student motivation towards education, while emotional engagement includes positive feelings students hold towards their school and its members. This review determined that both longitudinal and cross-sectional research on these factors indicate behavioral engagement to be most strongly related to outcomes such as academic achievement, skipping school, school suspension, and school dropout.

#### *Activity Involvement*

Although many different terms and measures are used to describe students' relationships to their schools, student activity involvement remains an important component of almost all of the indices described in the literature. According to most recent data regarding

high school activity involvement from the National Center for Education Statistics (2005), overall levels of high school activity involvement are highest for athletics with 39% participating in athletic clubs and teams, 25% participating in music or performing arts, 18% participating in student council or government, 15% participating in academic clubs, 10% involved with the school newspaper or yearbook, and 35% participating in other school activities. Overall levels of participation vary across gender with higher levels for females in music or performing arts (31% vs. 19%), academic clubs (19% vs. 12%), and student council or student government (13% vs. 8%) and higher levels of participation by males in athletics (45% vs. 32%).

Having a special talent or hobby valued by society has been shown to be a protective factor for those at high risk (Werner, 1993). One study found the presence of two or more hobbies to significantly discriminate between children who do and do not develop behavior problems (Grizenko & Pawliuk, 1994). Student involvement in activities may also promote the development of prosocial competence in those at risk for behavioral problems and delinquency. School-related activity involvement has been hypothesized to serve four main positive functions in adolescence: identity exploration, generation of social connections, structured use of time that may leave less time for involvement in problem behaviors, and competence outside of academics (Feldman & Matjasko, 2005). The ability of activity involvement to foster social connections is of particular interest to school engagement as it allows students to develop supportive networks of friends and adults at school. During extracurricular activities students have the opportunity to both develop mentoring relationships with adults from the school as well as personal relationships with peers who share similar interests that may not be as readily available during the fast-paced school day (Dworkin, Larson, & Hansen, 2003)

*Measurement.* There is no standard approach to assessing activity involvement. The two most frequently used methods are having students report their involvement on a

researcher-created list of activities (Eccles & Barber 1999; Bohnert & Garber 2007) and using yearbook activity listings (Mahoney & Cairns, 1997). The assessment of activity involvement also varies, with studies selecting the number of total hours, the number of total activities, the number of activity categories, dichotomous participation (yes, no), and/or dichotomous participation in a specific activity category. More recent research has suggested the need to examine activity involvement using more than one index such as combining breadth or dispersion (number of categories) with depth (total involvement) to gain a better picture of the nature of involvement (Rose-Krasnor, Bussner, Willoughby, & Chalmers, 2006; Eccles & Barber, 1999).

*Outcomes Related to Activity Involvement.* The majority of studies concerning student activity involvement utilize a cross-sectional design to relate involvement to hypothesized behavioral outcomes. The most researched outcome is academic achievement. Results from both longitudinal and cross-sectional investigations have found a positive relationship between extracurricular activity participation and academic achievement (Eccles & Barber, 1999; Mahoney & Cairns, 1997; Mahoney, Cairns, & Farmer, 2003; McHale, Crouter, & Tucker, 2001). These findings apply not only to concurrent high school academic achievement but also to future education and aspirations (Barber, Eccles, & Stone, 2001).

Using data from the Michigan Study of Adolescent Life Transitions (MSALT), a longitudinal study consisting of mostly Caucasian children from Michigan, Eccles and Barber (1999) reported a positive association between extracurricular activity participation and academic outcomes. In perhaps the largest longitudinal examination of high school extracurricular activity involvement, Barber and colleagues (2001) examined the association between activity types and subsequent educational and occupational outcomes. The authors found that participation in any type of extracurricular activity was related to completing more

years of education. Additionally, rates of college graduation were positively related to all types of activity involvement in high school, and high school sports participation was related to feelings of “having a job with a future” and having more job autonomy. Although all types of activities were related to higher rates of college completion, only sports and academic club participation were related to better occupational status at 25–26 years of age (Eccles et al., 2003). Activity participation was, however, not related to young adult outcomes once controls for maternal education and prior math and verbal ability scores were included in their models. This series of studies also examined mediational relationships including the impact of students’ friendship group on the association between activity involvement and academic success. Specifically, peer group associations were found to mediate the relationship between activity involvement, where students with positive academic outcomes had a higher proportion of friends who planned on attending college and were succeeding academically in high school (Eccles & Barber, 1999).

Although Eccles and colleagues found the relationship between activity involvement and academic outcomes to diminish once control factors were entered, others have found the relationships between activity involvement and positive youth outcomes to remain even after controlling for a large number of predictor variables. For example, Zaff and colleagues (2003) found the relationships between activity involvement and attending college, volunteering, and civic involvement to remain statistically significant, even after family SES, student ethnicity, student gender, reading and math scores, retention prior to 8<sup>th</sup> grade, emotional disability, and student disability were entered as controls in a logistic regression model. These results suggested participation in extracurricular activities can predict academic achievement and prosocial behaviors in young adulthood even after controlling for a variety of individual factors.

Mahoney and colleagues have also conducted a series of studies examining the

relationship between activity involvement and school outcomes, specifically focusing on moderator analyses involving activity involvement and high school dropout among at-risk students (Mahoney, 2000; Mahoney & Cairns, 1997). Person-centered cluster analyses were used to identify a “high risk” group of students comprised of low scores on academic competence, social competence, SES, and popularity and high scores on aggression. Mahoney and Cairns (1997) reported that school dropout rates among these at-risk students were significantly lower for those who participated in extracurricular activities than for those who had not. Further, the authors found that linear increases in activity participation were associated with large reductions in dropout rates. Similarly to Eccles and colleagues, Mahoney (2000) also found that social networks and school engagement served as mediators between higher rates of activity involvement and lower rates of high school dropout in high risk students, with the benefits of activity involvement dependent on the presence of a positive social network.

In addition to academic outcomes, school activity involvement has also been predictive of a number of psychological and behavioral outcomes (Barber et al., 2001; Fredrick & Eccles, 2006; Fredrick & Eccles, 2005, Mahoney, Schweden, & Statlin, 2002). In a more recent examination of data from Michigan Study of Adolescent Life Transitions, extracurricular participation was related not only to more favorable academic outcomes, but also psychological outcomes including lower depression and greater self-worth and behavioral outcomes including lower substance abuse and risk behaviors (Fredrick & Eccles, 2005). These finding held true even after controlling for gender, age, socioeconomic status, and academic ability, and once again were partially mediated by the presence of a prosocial peer group. However, although a number of the more recent studies attempted to address self-selection variables by including them as covariates in analyses, few studies made the examination of self-selection variables as predictors of activity involvement the focus of their investigation.

*Predictors.* Although the apparent benefits of organized activity involvement during high school have been well documented, little is known about what family, school, and individual characteristics may be associated with greater levels of participation. Currently only three published studies have attempted to investigate factors which may predict activity involvement as their primary focus (Bohnert & Garber, 2007; Bohnert, Martin, & Garber, 2007; Fletcher, Elder, & Mekos, 2000). The study by Fletcher and colleagues utilized data from 362 Iowa students from 9<sup>th</sup> and 10<sup>th</sup> grade to determine whether parental community involvement, parental warmth, and parental reinforcement (support for a child's ideas, interests, and activities) related to adolescent activity involvement. Using path analysis, students whose parents were involved in the community were most likely to be involved in extracurricular activities, with parental warmth and parental reinforcement serving as moderators for students when parents were not involved in the community. In this model, parental warmth led to higher levels of parental reinforcement which in turn strengthened students' activity involvement regardless of their parents' involvement in the community.

Bohnert and colleagues presented two recent investigations of predictors of activity involvement that related psychological and family predictors to student activity involvement. In the first study, the authors examined a model investigating the contribution of maternal depression history, family relationship quality, and adolescent cognitions (self-worth and attributional style) to adolescent activity involvement using a sample of 145 adolescents who were oversampled for a history of maternal depression (Bohnert et al., 2007). Results showed that when controlling for adolescent depression level and SES, maternal depression predicted less adolescent high school activity involvement. This relationship was mediated by family relationship quality, which also mediated the relationship between maternal depression and



adolescents' cognitions. Additionally maternal depression and adolescents' cognitions mediated the association between family relationship quality and activity involvement. In a second study, Bohnert and Garber (2007) attempted to further investigate the role of psychopathology as a predictor of activity involvement using the same sample of adolescents. Higher levels of students internalizing and externalizing behaviors, reported by students' mothers during the eighth grade, significantly predicted lower levels of involvement in academic clubs during high school, over maternal depression risk and SES. Additionally, early onset tobacco use (prior to high school) predicted lower involvement in academic clubs and performance arts clubs during high school.

Although Bohnert, Fletcher, and their colleagues (Bohnert & Garber, 2007; Bohnert et al., 2007; Fletcher et al., 2000) identified predictors of activity involvement, both studies used relatively small sample sizes, limiting the extent to which the results may generalize to a more ethnically and socioeconomically diverse sample. Additionally, both studies included only a small subset of potential predictors, primarily related to family characteristics and psychopathology. Finally, both studies suggested the need for larger studies to examine what factors may influence adolescents' involvement in extracurricular activities so that parents, teachers, coaches, community leaders, and mental health professionals can work to overcome barriers and more effectively promote adolescent involvement.

#### *Social Support Seeking from Adults at School*

Social support has been conceptualized as something that leads a person to believe that he or she is cared for and loved, esteemed and valued, and belongs to a network of communication and mutual obligation (Cobb, 1976). Research on social support has examined the effects of different forms of support including emotional, tangible, and informational (Cobb, 1976). Emotional support is comprised of expression of concern, compassion, and comfort for

an individual during emotional experiences and has been described as the most critical type of social support which allows for both coping with specific stressors and contributes to an individual's overall psychological well-being (Richman, Rosenfeld & Bowen, 1998; Ryan, La Guardia, Couchman, & Deci, 2000). A large body of literature has found social support to be beneficial in moderating life stress, resulting in lower levels of both psychological distress and physical illness among child, adolescent and adult populations (Cohen & Wills 1985; Dubow, Felner, Brand, Adan, & Evans, 1992). Social support also has been shown to promote adaptive development in children and adolescents, including improving academic and behavioral adjustment (Dubow, Tisak, Causey, Hryshko, & Reid, 1991).

*Teacher support.* Teachers influence their students beyond academics by providing emotional support in addition to informational and tangible support. Teacher support has been shown to influence behavioral, emotional, and cognitive engagement in school, which are in turn related to educational outcomes (Frederick et al., 2004; Richman, Rosenfeld, & Bowen, 1998; Rosenfeld, Richman, & Bowen, 2000). For example, a recent study investigating the role of support provided by parents, peers, and teachers to middle school students, found perceived teacher support to be the sole significant predictor of students' social skills, academic competence, and school maladjustment (Malecki & Demaray, 2003).

*Teacher support among at risk students.* Social support is often less present in the lives of youth at risk of school failure (Coie et al., 1993; Richman et al., 1998). Yet, given its contribution as both a facilitator of positive adaptation and a stress buffering variable, the literature on risk and resilience has highlighted the importance of support from schools and teachers, particularly among at risk students (Birch & Ladd, 1998; Hamre & Pianta, 2001; Meehan, Hughes, & Cavell, 2003; Werner, 1993). In one study of middle and high school students at risk of academic failure, the presence of social support from family, peers, and

teachers all predicted positive academic outcomes including better attendance, more hours studying, greater avoidance of problem behaviors, higher school satisfaction, greater self-efficacy, and better grades (Richman et al., 1998; Rosenfeld et al., 2000). More surprising was that these high risk students perceived both parents and teachers as their primary sources of support, over their friends. Support from teachers and other adults at school has been found to be more important for the academic success of racial and ethnic minority students, because such support is often harder for this population to obtain in the school setting (Stanton-Salazar, 1997). Stanton-Salazar has suggested that racial minorities' lower perceived school support may be related to the greater number of White school personnel. Teacher support is also different for boys and girls. Specifically, teachers' interactions with boys often include more disciplinary action, possibly leading males to perceive teachers as less supportive (Finn & Rock, 1997).

*Support Seeking.* Social support research has examined not only individuals' subjective perceptions of potential support (perceived support), but also actual support seeking behavior. Whereas perceived support research examines whether an individual perceives that actual resources are available, support-seeking research examines whether an individual turns to others for support. Although it has been suggested that merely having others available who can provide emotional support is positive for psychological well-being and physical health (Cohen, Sherrod, & Clark, 1986; Ryan, Stiller, & Lynch, 1994), studying only perceptions of social support overlooks both the willingness and ability of an individual to actually utilize that support when needed and the features of the interpersonal relationship that may influence the utilization of support (Ryan, La Guardia, Solky-Butzel, Chirkov, & Kim, 2005; Ryan, et al., 1994). Ryan and colleagues (1994, 2005) have therefore investigated "emotional reliance," defined as a person's readiness to enter into interactions where emotional supports may be available. Emotional reliance is viewed as an individual difference variable on which individuals differ in overall

willingness to turn to others for support. Ryan and colleagues (2005) found that this willingness to turn to others for support varies within individuals and across different types of relationships including parents, peers, and teachers. Investigations of these individual variations have revealed that individuals who perceive a relationship as autonomy supportive are most likely to turn to the support figure in emotionally salient situations (Ryan et al., 2005). However, no study has investigated predictors of emotional support seeking in adolescent populations or predictors of emotional support seeking among those at higher levels of risk.

#### *Hypothesized Predictor Variables*

Since very few studies have investigated predictors of student activity involvement and student support seeking, many of the predictor variables in this study were selected based on relationships with other developmental outcomes and face valid connections. Variables were derived from the literature on activity involvement, student support seeking, and positive youth development, as well as discussions with school staff and administration

*Social competence.* Social competence is a broad term that encompasses social behaviors indicative of adaptive, healthy, and productive interpersonal functioning. Perceived social competence is an individual's self-reported confidence in his or her social abilities. Social competence has been examined as an important developmental characteristic that allows children to successfully navigate social relationships, including those at higher levels of risk (Luthar, 1995). One study, using a sample of 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup> grade students, measured the impact of social competence, academic competence, shyness, and social support on student passivity in school (Paulsen, Bru, & Murberg, 2006). Student passivity in school was characterized by students who endorsed items such as not initiating contact with teachers and not being active in class discussions. Social competence, academic competence, teacher emotional support, parent support, peer support, and shyness were all entered into a regression

model that controlled for gender. Although shyness was the strongest predictor, social competence, measured by Harter's Self Perception Profile, negatively predicted school passivity, contributing to a significant amount of the variance in student passivity in school even after controlling for other related variables. The authors stated that the relationship between lower levels of social competence and passivity in school may be due to lower levels of confidence in social skills causing the student to avoid social situations in school because of a fear of failure. Similarly, higher levels of social competence can be hypothesized to lead to higher levels of school engagement, with greater levels of confidence in the student's social skills allowing for greater levels of self esteem and confidence when approaching teachers and joining social activities.

*Perceived school support.* Perceived support is the perception that support from an individual would be available if needed. Higher levels of perceived school support have been related to more positive outcomes in students, especially among children who lack support from alternative sources such as peers and parents (Birch & Ladd, 1998; Hamre & Pianta, 2001; Meehan et al., 2003). Specifically, the quality of student perceived teacher support has been found to be associated with students' motivation and engagement in school (Klem & Connell, 2004; Ryan et al., 1994). Skinner and Belmont (1993) have reported that students' self-report ratings of supportive relationships with teachers were associated with motivation, behavioral engagement, and emotional engagement in school. Klem and Connell (2004) found elementary and middle school students' perceived teacher support to be important to student engagement in school as reported by both students and teachers. In the model supported by the research of Klem and Connell, students who perceive teachers as creating a caring, well-structured learning environment reported higher levels of engagement in school, which subsequently related to higher attendance and test scores. Paulsen and colleagues' (2006) investigation of predictors of

student passivity also found perceived emotional support from teachers to be negatively related to passivity, including initiating contact with teachers and being involved in class discussions. Although researchers have primarily investigated academic indices of engagement, perceived support from adults at school also likely enhances social engagement in school, including seeking support and enrolling in extracurricular activities.

*Social Anxiety.* Social anxiety is correlated with a number of negative behaviors and cognitive responses including avoidance of others, decreased verbal and nonverbal interaction in the presence of others, negative thoughts, negative self-evaluations, irrational beliefs, and evaluation apprehension (Patterson & Ritts, 1997). Social anxiety and social support have been found to have a reciprocal relationship in adolescents with both social support impacting subsequent social anxiety and social anxiety affecting subsequent social support (Calsyn, Winter, & Burger, 2005; Compas, Wagner, Slavin, & Vannatta, 1986; Stice & Barrera, 1995). Although no studies have directly investigated social anxiety as a predictor of school engagement or activity involvement, Paulsen and colleagues' (2006) investigation found shyness, a variable related to social anxiety, to be the strongest predictor of students' passivity in school. Additionally, theories stating that students with higher levels of social anxiety are less likely to seek out social situations and social supports coincide with a hypothesis of greater levels of social anxiety in adolescents leading to lower levels of support seeking from adults at school and engagement in extracurricular activities. Findings may be particularly relevant for adolescent girls who generally have higher levels of social anxiety than boys. Additionally, social anxiety has been found to be more strongly linked to poorer social functioning in girls (La Greca & Lopez, 1998).

*Psychological distress.* Support for the role of psychological distress as a barrier to activity involvement has previously been demonstrated by Bohnert and Garber (2007) who found higher levels of internalizing and externalizing behaviors to predict lower levels of

involvement in academic clubs during high school even after controlling for maternal depression risk and SES. Additionally, higher levels of distress have been related to higher levels of support seeking in a sample of high school students (Galaif, Sussman, Chou, & Wills, 2003). This relationship has been found to be stronger for females and predictive of decreases in using anger as a coping mechanism.

*Parent involvement in schooling.* Parent involvement in their children's schooling, often predicted by other parenting variables including parental warmth and parental supervision, has been shown to be related positively to student achievement (Steinberg, Lamborn, Dornbusch, & Darling, 1992). Additionally, parent community involvement has been found to be a significant predictor of student activity involvement. Using path analysis techniques, Fletcher and colleagues (2000) found that students whose parents were involved in the community were most likely to be involved in extracurricular activities. Although this study did not specifically relate to parents' school involvement, it is likely that the relationship will hold true based on similar theories that parents who place greater emphasis on involvement will have children who are more involved. Parents who are involved in their children's schooling might also be more aware of the available options and therefore encourage their children's participation. Although research has not examined whether students who have parents involved in school are more likely to approach teachers for support, following the same theory, students whose parents are involved in school may be more likely to have relationships with teachers because their parents are more likely to assist in the development of these relationships through school involvement.

*Global self worth.* A predictive relationship between adolescent cognitions and activity involvement has been suggested (Seligman, 1995). This relationship was only recently tested by Bohnert and colleagues (2007) who examined the relationship of adolescent self-worth, measured by the global self-worth index of the Self Perception Profile for Children, to activity

involvement. Adolescents who reported higher self-worth tended to become more involved in organized activities during high school. Further, global self-worth served to mediate the relationship between family relationship quality and activity involvement, strengthening its predictive ability. Although the association has not been directly investigated, self-worth is also hypothesized to facilitate interpersonal relationships including adolescents' abilities to reach out socially to adults.

*Antisocial peer group.* Although there is no known research investigating the influence that an antisocial peer group has on a student's initiation of activity involvement or support seeking from teachers, previous research has conversely found affiliation with an antisocial peer group to be among the strongest predictors of involvement in maladaptive activities such as delinquency and drug use (Jenkins, 1996; Jenkins, 1998; Vitaro, Brendgen, & Tremblay, 2000). Students who are most likely to engage in antisocial behaviors are also likely to be viewed negatively by teachers and many peers, limiting the extent of positive interactions such as involvement in extracurricular activities and support seeking.

*Hours of employment.* The number of hours that students work per week has been found to be negatively related to academic achievement, amount of time devoted to homework, the odds of staying in high school, rates of college attendance, and rates of college completion (Steinberg, Greenberger, Garduque & McAuliff, 1982). However, these results were qualified by the amount of time devoted to work, with negative outcomes only present in 10<sup>th</sup> graders who worked 15 hours or more per week and 11<sup>th</sup> graders who worked 20 or more hours per week. According to Steinberg and colleagues (1982) the increased time and energy adolescents apply to a job weakens their investments in school including achievement, attendance, and extracurricular activity involvement.

*High risk demographic status.* Research suggests African American students of low



socioeconomic status are at high risk for both engaging in problem behaviors and school failure. Low socioeconomic status and African-American students are more likely than their peers to feel detached from school and have negative expectations for school success (McLoyd, 1998; Steele, 1997; Tucker & Herman, 2002). Additionally, African American students from lower socioeconomic status families are more likely to view interactions with adults at school as punitive rather than supportive, making them less likely to connect with adults (Blumenfeld, Modell, Bartko, Secada, Fredricks, Friedel, & Paris, 2005; McLoyd, 1998). The failure of African American students to connect with adults may also be in part due to the greater number of White teachers and other adults than minority teachers or adults in the schools. Research on activity involvement also has consistently found ethnicity and lower socioeconomic status (SES) to be associated with less involvement (McNeal, 1998). SES also likely influences extracurricular activity participation due to a lack of financial resources that may limit the student's ability to participate regardless of interest.

#### *Current Study*

Recent research has shown that students who report lower levels of school engagement report higher levels of emotional distress, school violence, disruptive behaviors, suicide attempts, and substance/tobacco use. Support from adults at school and activity involvement, two components of school engagement, have consistently been associated with positive outcomes in students, including those at high risk.

Prior research conducted by Gesten and Green (2005) has highlighted the importance of connections to teachers and activity involvement in predicting positive outcomes. As part of the Omnibus Project, Pinellas County Schools collected longitudinal data on over 8,000 students who began school in the 1989-90 kindergarten class. These students were followed through their thirteen years of schooling with data collected each year from combinations of student

surveys, parent surveys, and teacher surveys. Additionally, follow-up interviews were conducted interviews were conducted when the students were ages 20-21. Although connections to teachers and activity involvement were important for all Omnibus students, they were particularly helpful for those at the highest level of risk. Following this line of work, the current study examined the relationships between constructs hypothesized to be barriers and constructs hypothesized to be facilitating factors with both high school students' activity involvement and their seeking of support from adults at school.

The current study addressed the following sets of hypotheses:

#### *Main Effect Hypotheses*

*Hypothesis 1:* The presence of hypothesized barriers (hours of employment, social anxiety, psychological distress, and antisocial peer group) and facilitating factors (social competence, parent involvement in schooling, and global self-worth) will predict extracurricular activity involvement even after controlling for race, free/reduced lunch status, and gender.

*Hypothesis 2:* The presence of hypothesized barriers (social anxiety and antisocial peer group) and facilitating factors (activity involvement, perceived school support, and social competence) will predict support seeking from adults at school even after controlling for race, free/reduced lunch status, and gender.

#### *Moderator Hypotheses*

*Hypothesis 3:* Social competence will moderate the relationship between high risk demographic status and activity involvement. Having higher levels of social competence will be more influential in activity involvement for Black students with free or reduced lunch than other groups of students since they are the least likely to be engaged in school activities.

*Hypothesis 4:* Parental involvement in schooling will moderate the relationship between being a Black student with free or reduced lunch and activity involvement. Higher levels of parent involvement in schooling will be most beneficial to Black students with free or reduced lunch who otherwise are less likely than other groups of students to engage in school activities.

*Hypothesis 5:* Global self-worth will moderate the relationship between being a Black student with free or reduced lunch and activity involvement. Higher levels of self worth will be most beneficial to Black students with free or reduced lunch who otherwise are less likely than other groups of students to engage in school activities.

*Hypothesis 6:* Social competence will moderate the relationship between being a Black

student with free or reduced lunch and support seeking from adults at school. Having higher levels of social competence will be more related to higher levels of support seeking in Black students with free or reduced lunch than other groups of students since they are less likely to connect with adults in their schools.

*Hypothesis 7:* Perceived School Support will moderate the relationship between being a Black student with free or reduced lunch and support seeking from adults at school. Having higher levels of perceived school support will be more related to higher levels of support seeking in Black students with free or reduced lunch than other groups of students since they are less likely to connect with adults in their schools.

*Hypothesis 8:* Activity involvement will moderate the relationship between being a Black student with free or reduced lunch and support seeking from adults at school. Having higher levels of activity involvement will be more related to higher levels of support seeking in Black students with free or reduced lunch than other groups of students since these students are less likely to connect with adults in their schools.

*Hypothesis 9:* Social competence will moderate the relationship between high risk stress status and support seeking from adults at school. Having higher levels of social competence will be more related to higher levels of support seeking in students with high stress levels since these students are most likely to be in need of social support from adults at school.

*Hypothesis 10:* Perceived School Support will moderate the relationship between high risk stress status and support seeking from adults at school. Having higher levels of perceived school support will be related to higher levels of support seeking in students with high stress levels since these students are most likely to be in need of social support from adults at school.

*Hypothesis 11:* Activity involvement will moderate the relationship between high risk

stress status and support seeking from adults at school. Having higher levels of activity involvement will be more related to higher levels of support seeking in students with high stress levels since these students are most likely to be in need of social support from teachers, mentors, and coaches.

## Methods

### *Participants*

Four classrooms from each grade in four selected high schools were randomly selected to participate in the survey administration. Schools were selected to represent the northern (n=1), central (n=2), and southern (n=1) parts of Pinellas County School District. These geographic areas represent socioeconomic diverse areas with the north county being highest in SES, the central county being in the middle of levels of SES, and the south county being lowest in SES. Schools grades were distributed as one “A” rated school, two “C” rated schools, and one “D” rated school, respectively. Surveys were returned from 1922 high school students enrolled in one of selected high school classrooms in Pinellas County during the Spring of 2008. Seventy students were removed from the data file due to invalid response patterns (filling out all “1’s” or all “6’s”) on the Student Survey, leaving a sample of 1852 students. Additionally, 330 students did not complete the separate Activity Involvement Survey leaving a final sample of 1522. There were no significant differences between initial and final samples in terms of gender ( $\chi^2=2.08$ ,  $p=.15$ ) and race proportions ( $\chi^2=1.79$ ,  $p=.18$ ). Due to the much lower frequencies of students of a race other than Black or White, race was coded to represent only this subset of students, reducing the sample to  $n=1284$  in analyses involving race.

### *Measures*

*Demographics.* Data including students’ grade, race, gender, and free/reduced lunch status (as a proxy for income) were gathered from Pinellas County Schools’ records. The district is comprised primarily of Caucasian students 62.8%, followed by Black students 19.2%, and Hispanic students 9.3%. The current sample paralleled the district sample with 63.9% of

students completing surveys being Caucasian, 20.7% being Black, and 8.5% being Hispanic.

*Student Support Seeking from Adults at School.* The Inventory of Adolescent Attachments is a self-report scale consisting of two dimensions: felt security and emotional utilization (Greenberg, Siegel, & Leitch, 1983). For the current study the emotional utilization subscale was used to assess the degree to which adolescents turn to adults at school in five emotionally salient situations. These items have also been used by Ryan and colleagues (1994, 2005) to investigate emotional reliance, or emotional support seeking. Additionally, Ryan and colleagues (1994) added three questions related to support seeking in school that were also included in the current study. The term “adults at school” was used in the present survey to represent adults who a student may turn to for support in the school environment. Items are rated on Likert scales from 1-“never” to 6- “always”. Greenberg reports 2-week test-retest reliability of .70 for the emotional utilization subscale. Ryan and colleagues (1994) reported an alpha of .80 for the five emotional utilization items and .66 for the three school support items. An additional question was added for students to indicate the number of “adults at school” they would turn to for support. The internal consistency of this scale for the current sample were lower than those reported in literature with an overall alpha of .51. Additionally, this lower level of internal consistency remained by gender (female=.48; male=.52) and race (white student=.54; black students=.36). Survey items and scale can be found in Appendix A with the actual item layout presented to students found in Appendix B.

*Activity Involvement.* Activity involvement was assessed using Pinellas County Schools’ “Participation in Extracurricular Activities” survey. This survey has been conducted annually since 2000. Participation information is collected using a survey administered to all high school students each spring. Activities are classified into five areas: Athletics, Music Related, Academic/Interest, Leadership, and Honors. This method follows the standard assessment

procedures of Eccles and colleagues (2003). Activities were aggregated to determine: (1) the total number of activities a student reports to have participated in during the 2007-2008 school year as well as (2) the total number of activity categories a student participated in (athletic, academic/interest, music-related, leadership, honors). A copy of the Participation in Extracurricular Activities can be found in Appendix C.

*Perceived Social Support from People at School.* The Child and Adolescent Social Support Scale (CASSS) is a 60-item scale which measures the perceived social support of children and adolescents in grades 3-12 (Malecki & Demaray, 2002). The scale consists of five 12-item subscales (Parent, Teacher, Classmate, Close Friend, and School) with internal reliability on subscales ranging from .90-95 in a sample of high school students. The School Support subscale was used for the current study. Each item is a statement of one of four types of support (emotional, informational, appraisal, and instrumental). Students are asked to read each statement and rate how often they perceive that support with frequency ratings on a 6-point scale ranging from 1-“never” to 6-“always”. The internal reliability for the current sample this scale and other predictor measures can be found in Table 1 for the overall sample and by gender and race.

*Self Perception Profile for Adolescents* The Self-Perception Profile for Adolescents (SPPA) is a 45-item self-report inventory designed to measure eight specific domains of self-perception and a global self-worth dimension (Harter, 1998). Predictive, convergent, discriminant and construct validity have been demonstrated with this instrument (Harter, 1988). The original version of SPPA has a time-consuming item format with lengthy and possibly confusing instructions. Two adolescents are described with opposite characteristics on each item, requiring the adolescent to first choose one most like them and then determine if the description is a little or a lot like them. A revised version of SPPA by Wichstrom (1995) uses only



one statement for each item with response options of: (1) describes me very well, (2) describes me fairly well, (3) describes me a little, and (4) does not describe me at all. The revised version was found to have better reliability, convergent validity, and factorial validity than the original version (Wichstrom, 1995).

The five item *Social Competence* ( $\alpha = .76$ ) and five item *Global Self Worth* ( $\alpha = .77$ ) subscales of the revised version of the SPPA were chosen for the current study.

*Social Anxiety*. The SAS–A (La Greca & Lopez, 1998) consists of 22 items divided into three subscales (Fear of Negative Evaluation, 8 items; Social Avoidance and Distress–New, 6 items; Social Avoidance and Distress –General, 4 items) and four filler items. Adolescents indicate on a 6-point continuum how much each item characterizes themselves from 1-“never” to 6-“always”. Each subscale is scored in so that high scores reflect greater social anxiety. The Social Avoidance and Distress-General subscale from the Social Anxiety Scale for Adolescents was used to measure discomfort in social settings in the current study. This subscale measures adolescent’s discomfort in general social situations (4 items,  $\alpha = .78$ ).

*Parent Involvement in Schooling*. Parent’s involvement in their child’s school experience was assessed using Steinberg’s “Parental Involvement in Schooling” scale (Steinberg et al, 1992). Steinberg has used this scale to measure student’s perceptions of their parents’ involvement in their high school education. The scale has five items measured on a six-point likert scale from 1-“never” to 6-“always” ( $\alpha = .74$ ).

Table 1: Internal Consistency Alpha of Predictor Measures

Scale	# of Items	Original	Current	Female	Male	White	Black
School Support	12	.90	.84	.83	.84	.81	.87
Social Anxiety	4	.78	.93	.92	.92	.93	.92
Parent Involvement	5	.74	.81	.82	.83	.87	.73
Psychological Distress	10	.87	.71	.66	.64	.70	.74
Social Competence	5	.76	.61	.59	.63	.61	.56
Global Self Worth	5	.77	.91	.92	.91	.91	.90
Antisocial Peer Group	5	.74	.66	.45	.60	.59	.52
Perceived Stress	4	.75	.81	.84	.23	.81	.81

*Antisocial Peer Group Affiliation:* The antisocial nature of adolescents peer groups was assessed using a scale developed by Laird, Pettit, Dodge, & Bates (1999). This scale assesses the frequency that a student's friendship group engages in each of five mildly antisocial behaviors on a 5-point scale from 1 –“never” to 5 –“very often” ( $\alpha = .74$ ).

*Student Employment:* In order to determine the amount of time students spend per week engaging in out-of-school work activities during the school year, students were asked to report the average number of hours worked per week. Responses were recorded categorically as “0”, “1-10”, “11-20”, “20-30”, and “30 or more”.

*Psychological Distress:* Students' self reported levels of psychological distress was assessed using a 10 item version of the Symptom Checklist-90 (SCL-90; Derogatis, Lipman, & Covi, 1973). The SCL-90 has been designed to assess psychological symptomatology in individuals ages thirteen and older, providing nine primary symptom dimensions of a global severity index. Recently researchers have developed a 10-item version of this measure (SCL-10) that can be used to assess overall psychological distress by providing a global severity index (Rosen, Drescher, Moos, Finney, Murphy, & Gusman, 2000). Responses were recorded on a 5-point Likert Scale from 1- “not at all” to 5-“extremely.” This measure has excellent convergent validity, correlating with the global severity index of the SCL-90 at .95, and reliability,  $\alpha = .87$ .

*Perceived Stress* The Perceived Stress Scale (PSS-4) is a 4-item shortened measure of perceived stressful life situations assessed on a 5-point Likert from 1- “never” to 5- “very often”(Cohen, 1983). The Perceived Stress Scale is a research instrument commonly used to assess levels of perceived stress in adult populations. Although this scale was developed for adults it has been shown to have reliability and validity in previous studies with adolescents and has been described by its creators as designed for individuals with a junior high school or higher level of education (Cohen, Kamarack, & Mermelstein, 1983; Martin, Kazarian, and Breiter,

1995). Using adolescent psychiatric inpatients, ages 12 to 17, Martin and colleagues (1995) factor analyzed the PSS, providing evidence of construct validity for the Perceived Stress Scale with this age group.

#### *Procedure*

This study was developed in collaboration with Pinellas County Schools as part of an ongoing assessment of students' utilization of school resources. Students were asked to complete the original Pinellas County Activity Involvement SCANTRON, as well as the Student Survey created for this project containing the scales described above (See Appendix B for survey instrument). Consistent with district procedures, pre-labeled survey packets were provided to high school principals. They were then distributed to teachers, who administered the surveys in their classrooms in late April, 2008. Although surveys contained students' school identification numbers, they were replaced with non-identifiable numbers by Pinellas County Schools' research department before the USF research team was provided with the data.

## Results

This study employed a variable-focused approach to determine the impact of hypothesized predictor variables on (1) activity involvement and (2) support seeking from adults at school after controlling for demographic characteristics. Hierarchical regression models were utilized with control variables entered in Step 1, and predictor variables entered in Step 2. Additionally, moderator analyses were conducted for both students with high levels stress and students with high vs. low demographic risk status (free/reduced lunch and black) by entering the risk status in Step 1, the hypothesized protective factor in Step 2, and the interaction of risk and protective variables in Step 3.

Results of the analyses are reported in four sections: (1) descriptive statistics, (2) inter and cross-correlations for control, predictive, and outcome variables, (3) multiple hierarchical regression analyses of the contribution barriers and facilitating factors for activity involvement and support seeking from adults at school, and (4) multiple hierarchical regression analyses testing moderator or protective effects.

### *Descriptive Statistics*

Descriptive statistics for predictor and outcome variables are provided in Table 2. Descriptive statistics are also provided by gender and race, with t-tests computed to compare significance in the differences in means in Table 3.

Table 2: Overall Sample Descriptive Statistic

<b>Predictor Variables</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Range</b>
School Support	1492	38.41	7.32	17-61
Social Anxiety	1515	12.70	5.19	4-24
Parent Involvement	1510	15.39	3.56	7-24
Psychological Distress	1504	20.29	4.97	10-50
Social Competence	1499	13.18	2.77	7-20
Global Self Worth	1499	16.32	3.57	5-20
Antisocial Peer Group	1501	14.83	3.07	7-24
Perceived Stress	1501	12.45	4.22	4-19
Hours Worked Categories	1504	1.84	1.23	1-5
<b>Outcome Variables</b>				
Support Seeking From Adults	1509	25.08	5.02	13-41
Number of Support Figures Categories	1501	2.70	1.05	1-6
Number of Total Activities	1522	1.92	2.50	0-21
Number of Activity Categories	1522	1.11	1.07	0-5

Table 3: Descriptive Statistics by Gender and Race

Predictor and Outcome Variables	Female			Male			t	p	Effect Size (d)
	N	Mean	SD	N	Mean	SD			
School Support	762	38.27	7.25	730	38.55	7.39	-.73	.46	.04
Social Anxiety	772	14.20	5.26	743	11.15	4.64	<b>11.92</b>	<b>&lt;.001</b>	<b>.61</b>
Parent Involvement	769	15.39	3.56	741	15.39	3.56	-.04	.97	.00
Psychological Distress	768	22.17	4.99	736	18.32	4.12	<b>16.23</b>	<b>&lt;.001</b>	<b>.84</b>
Social Competence	763	13.09	2.76	736	13.29	2.78	-1.44	.15	.07
Global Self Worth	765	16.25	3.67	734	16.40	3.46	-.83	.41	.04
Antisocial Peer Group	767	14.01	2.71	734	15.69	3.18	<b>-11.05</b>	<b>&lt;.001</b>	<b>.57</b>
Perceived Stress	766	14.98	4.01	735	9.81	2.30	<b>30.00</b>	<b>&lt;.001</b>	<b>1.55</b>
Hours Worked Categories	771	1.87	1.24	733	1.81	1.23	.88	.38	.05
Support Seeking From Adults	766	24.89	4.91	743	25.27	5.12	-1.50	.14	.08
Number of Support Figures	770	2.66	1.03	731	2.73	1.06	-1.26	.21	.06
Number of Total Activities	777	2.08	2.66	745	1.74	2.60	<b>2.71</b>	<b>&lt;.01</b>	<b>.14</b>
Number of Activity Categories	777	1.16	1.12	745	1.05	1.12	<b>2.03</b>	<b>.04</b>	<b>.10</b>
				<b>White</b>					
					<b>Black</b>				
School Support	959	38.47	7.10	299	38.54	7.84	-.15	.88	.01
Social Anxiety	976	12.82	5.23	301	12.22	5.03	1.83	.07	.12
Parent Involvement	971	15.58	3.67	301	14.83	3.29	<b>3.15</b>	<b>&lt;.01</b>	<b>.22</b>
Psychological Distress	963	20.41	5.02	303	20.14	5.23	.80	.43	.05
Social Competence	961	13.37	2.72	303	12.62	2.75	<b>4.21</b>	<b>&lt;.001</b>	<b>.27</b>
Global Self Worth	958	16.50	3.51	305	15.88	3.61	<b>2.67</b>	<b>&lt;.01</b>	<b>.17</b>
Antisocial Peer Group	962	14.88	3.11	302	14.77	3.06	.52	.60	.03
Perceived Stress	959	12.36	4.21	304	12.59	4.25	-.82	.41	.05
Hours Worked Categories	968	1.90	1.26	300	1.72	1.18	<b>2.21</b>	<b>.03</b>	<b>.14</b>
Support Seeking From Adults	969	25.46	5.18	303	24.45	4.37	<b>3.05</b>	<b>&lt;.01</b>	<b>.20</b>
Number of Support Figures	964	2.76	1.06	300	2.60	1.01	<b>2.40</b>	<b>.02</b>	<b>.15</b>
Number of Total Activities	979	2.07	2.61	305	1.70	2.47	<b>2.16</b>	<b>.03</b>	<b>.14</b>
Number of Activity Categories	979	1.19	1.12	305	0.99	0.97	<b>2.89</b>	<b>&lt;.01</b>	<b>.19</b>

Overall, girls were involved in a greater number of activities. Additionally, girls reported higher levels of psychological distress, perceived stress, and social anxiety than did boys, while males reported greater levels of antisocial peer group affiliations. White students reported greater levels of activity involvement, support seeking from adults at school, parent involvement, and social competence.

### *Correlations*

*Intercorrelations.* Intercorrelations among the predictor variables are displayed in Table 4. The sizes of the correlations were primarily small to medium, with the exception of the correlations among gender, psychological distress, and perceived stress where correlations ranged from  $r=.30$  to  $r=-.61$ , with females reporting higher levels of psychological distress ( $r=-.39$ ) and perceived stress ( $r=-.61$ ). Additionally, moderate sized correlations were found among psychological distress, perceived stress, and social anxiety with intercorrelations ranging from  $r=.13$  to  $r=.30$ . There was also a moderate correlation ( $r=.24$ ) between the social competence and global self worth subscales of the Self Perception Profile for Adolescents. The correlation between antisocial peer group and gender was also moderate ( $r=.27$ ), with males reporting higher levels of antisocial peer group affiliations. Additionally, the relationships between antisocial peer group and the psychosocial variables (perceived stress, psychological distress, and social anxiety) ranged from  $r=-.08$  to  $r=-.14$ , with students reporting higher levels of antisocial peer group affiliations, also reporting lower levels of psychological distress. However, these correlations do not control for the effects of gender, which is strongly related to both antisocial peer group membership and the psychosocial variables.



Table 4: Intercorrelations of Demographic and Predictor Variables ( $N_s=1492-1522$ )

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender													
2. Race	-.02												
3. Lunch Status	-.05	.42											
4. Grade	-.02	-.05	-.04										
5. School Support	.02	.00	-.01	.06									
6. Social Anxiety	-.29**	-.05	-.01	.02	.01								
7. Parent Involvement	.00	-.09**	-.10**	.03	-.01	-.03							
8. Psych. Distress	-.39**	-.02	-.03	.03	-.07**	.13**	-.01						
9. Social Competence	.04	-.12	-.06*	.00	.03	-.03	.03	-.01					
10. Global Self Worth	.02	-.08**	-.05	-.01	.03	.01	.03	-.20**	.24**				
11. Anti-social Peer Group	.27**	-.02	-.03	-.01	-.01	-.08**	.00	-.12**	-.02	.04			
12. Perceived Stress	-.61**	.02	.00	-.05	-.05*	.17**	.04	.30**	-.01	-.07**	-.14**		
13. Hours Worked	-.02	-.06*	-.04	.35**	.01	.02	.02	.04	.03	.01	-.01	.01	

\* $p < .05$ , \*\* $p < .01$ ; Gender coded 1=female, 2=males; Race coded 1=White, 2=Black (for correlations with race  $N_s=1263-1284$ ); Lunch Status code 1=regular lunch, 2=reduced lunch, 3=free lunch.

*Intercorrelations of outcomes.* Among the outcome variables, Support Seeking from Adults at school was significantly correlated with Total Number of Activity Categories ( $r=.05$ ), and was not significantly correlated with number of supportive adults or number of activities. There were not significant correlations between total number of supportive adults and the other three outcome variables. There was a strong correlation between total number of activities and total number of activity categories,  $r=.80$ .

*Correlations between Predictors and Outcomes.* Correlations were also examined between the four outcome variables (total number of activities, total number of activity categories, support seeking from adults at school, total number of adults seeking support from at school, and the demographic and predictor variables (see Table 5). Overall, the correlations were weak, with few significant findings. Most of the significant correlations were found between demographic and outcome variables with white students, female students, students paying for regular lunch prices, and students in higher grade levels reporting both more activities and categories of activities. Paralleling results from the descriptive section, black students and students receiving free or reduced lunches were less likely to report seeking support from adults at school. Other notable relationships include greater levels of support seeking among students who report higher levels of parental involvement ( $r=.24$ ) and lower levels of support seeking among students with higher levels of psychological distress ( $r=-.08$ ). There were additional significant, but small, correlations with students who work more ( $r=.09$ ), have greater levels of social competence ( $r=.07$ ) and self worth ( $r=.06$ ), and lower levels of anti-social peer affiliations reporting more activity involvement.

Table 5: Overall Correlations of Predictor and Outcome Variables (Ns=1492-1522)

	Support Seeking	# of Support Figures	Total # of Activities	Activity Categories
Gender	.04	.03	-.07**	-.05*
Race	-.09**	-.07**	-.06*	-.08**
Lunch Status	-.09**	-.02	-.07**	-.12**
Grade	.04	.00	.16**	.13**
School Support	.04	-.01	.04	.06*
Social Anxiety	-.04	-.02	.00	.00
Parent Involvement	.24**	.00	.02	.04
Psychological Distress	-.08**	.03	.01	.02
Social Competence	.03	.05	.07**	.04
Global Self Worth	.04	-.03	.06*	.03
Anti-social Peer Group	.02	.00	-.05*	-.02
Perceived Stress	-.01	-.04	.02	.00
Hours Worked	.05	.01	.09**	.07**

\*p<.05, \*\*p<.01; Gender coded 1=female, 2=males; Race coded 1=White, 2=Black Lunch Status code 1=regular lunch, 2=reduced lunch, 3=free lunch.

Correlations by gender are presented in Table 6. Notable results include higher levels of psychological distress significantly correlated with lower levels of support seeking in males ( $r=-.11$ ) but not in females. Additionally, the significant correlations between activity involvement and social competence ( $r=.09$ ) and global self worth ( $r=.09$ ) only held true for females. Also, significant relationships between race and activity involvement ( $r=-.13$ ) and race and support seeking from adults at school ( $r=-.10$ ) only appeared for females. Conversely, the relationship between race and number of support figures ( $r=-.10$ ) only held true for males.

For analyses by race (see Table 7), perceived stress was significantly correlated with activity involvement in black students ( $r=-.16$ ), with lower stress indicative of more activity involvement. Additionally the correlation between psychological distress and support seeking from adults at school was stronger for black students ( $r=-.18$ ) than for white students ( $r=-.09$ ), with greater levels of psychological distress relating to less support seeking from adults at school in both groups of students. Also, higher perceived support from people at school was related to more activity categories in black students ( $r=.13$ ). Although these correlational analyses provide information about the strength of the relationships between the individual variables and the outcome, they fail to account for the relationships the predictor variables have with each other. Hierarchical linear regression analyses were performed as a more stringent test of the relationship between the demographic characteristics, predictor variables, and outcome variables.

Table 6: Overall Correlations of Predictor and Outcome Variables by Gender

	Support Seeking		# of Support Figures		Total # of Activities		Activity Categories	
	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male
Race	-.11**	.07	-.03	-.10**	-.13**	.02	-.12**	-.04
Lunch Status	-.09**	-.09*	.02	-.04	-.12**	-.02	-.14**	-.11**
Grade	.06	.01	-.03	.03	.20**	.12**	.18**	.08*
School Support	.07*	.03	-.02	-.02	.03	.05	.05	.07
Social Anxiety	-.02	.04	-.01	.00	-.04	.01	-.03	.00
Parent Involve.	.27**	.20**	.03	-.05	.02	.03	.03	.05
Psych. Distress	-.05	-.11**	.05	.03	.00	-.04	.01	-.02
Social Comp.	.05	.00	.06	.03	.09**	.06	.04	.04
Global Self Worth	.01	.05	-.04	-.06	.09**	.01	.06	.00
Antisoc. Peers	.00	.04	.06	-.01	-.02	-.05	.01	-.01
Perceived Stress	-.01	.04	-.03	-.01	-.03	-.03	-.05	-.03
Hours Worked	.07*	.02	-.02	.03	.12**	.05	.10*	.04

\*p<.05, \*\*p<.01; Race coded 1=White, 2=Black: Lunch Status code 1=regular lunch, 2=reduced lunch, 3=free lunch.

Table 7: Overall Correlations of Predictor and Outcome Variables by Race

	Support Seeking		# of Support Figures		Total # of Activities		Activity Categories	
	White	Black	White	Black	White	Black	White	Black
Gender	.04	.08	.05	-.04	-.11**	.07	-.08	.03
Lunch Status	-.07*	.03	.05	-.05	-.05	.00	-.10**	-.07
Grade	.02	.16**	.01	-.02	.17**	.13**	-.11**	.17**
School Support	.03	.06	-.01	.03	.03	.07	.03	.13**
Social Anxiety	-.04	-.01	-.02	.06	-.01	-.07	-.02	-.04
Parent Involve.	.27**	.11	-.02	-.01	.03	-.05	.06	-.02
Psych. Distress	-.09**	-.18**	.01	.07	.05	-.09	.04	-.04
Social Comp.	.01	.04	.10**	-.06	.09**	.04	.06	-.02
Global Self Worth	.02	.05	-.04	-.08	.05	.07	.05	-.04
Antisoc. Peers	.02	.06	.00	-.02	-.08*	.00	-.03	-.01
Perceived Stress	-.03	-.04	-.06*	.05	.07*	-.16**	.03	-.12**
Hours Worked	.04	.07	.00	.04	.08*	.07	.06	.06

\*p<.05, \*\*p<.01; Gender coded 1=Female, 2=Male; Lunch Status code 1=regular lunch, 2=reduced lunch, 3=free lunch.

### *Regression Analyses*

*Activity Involvement.* Regression analyses examined the first hypothesis that hours of employment, social anxiety, psychological distress, antisocial peer group, social competence, parent involvement, and global self worth would predict: (1) the total number of activities and (2) the total number of activity categories after controlling for the effects of gender, race, and lunch status. Results are presented in Tables 8 and 9.

This model was partially supported for total number of activities because social competence predicted a small but significant amount of variance in the model above that accounted for by the control variables ( $\Delta R^2=.01$ ). However, there was no significant change over the control variables in the amount of variance accounted for by the hypothesized predictor variables when predicting total number of activity categories.

*Support Seeking from Adults at School.* Regression analyses examined the second hypothesis that social anxiety, antisocial peer group, activity involvement, social competence, and perceived school support would predict: (1) support seeking from adults at school and (2) the number of adults at school a student seeks support from after controlling for the effects of gender, race, and lunch status. Results of the analyses are presented in Tables 10 and 11. This hypothesis was not supported for either dependent variable.

Table 8: Linear Regression of Predictors Variables on Total Number of Activities

Step/Predictors	$\beta$	$\beta^1$	R	R <sup>2</sup>	$\Delta R^2$
1. Control			.117	.014	.014**
Gender	-.08**	-.08**			
Race	-.03	-.04			
SES	-.06*	-.06*			
2. Predictors			.158	.027	.013**
Antisocial Peer Group	-.04				
Social Anxiety Scale	-.03				
Psychological Distress	-.01				
Hours of Employment	.04				
Parent Involvement Scale	.01				
Social Competence Scale	.07**				
Global Self Worth	.04				

$\beta$  = Beta at final Step.  $\beta^1$  = Beta at first Step. \* $p < .05$ , \*\* $p < .01$ .

Race coded as 1=White, 2=Black; Gender coded as 1= female, 2=male;

SES coded as 1= regular lunch, 2=reduced lunch, 3=free lunch



Table 9: Linear Regression of Predictor Variables on Total Number of Activity Categories

Step/Predictors	$\beta$	$\beta^1$	R	R <sup>2</sup>	$\Delta R^2$
1. Control			.146	.021	.021**
Gender	-.07**	-.07**			
Race	-.02	-.03			
SES	-.11**	-.11**			
2. Predictors			.161	.026	.005
Antisocial Peer Group	-.01				
Social Anxiety Scale	-.02				
Psychological Distress	.00				
Hours of Employment	.02				
Parent Involvement Scale	.03				
Social Competence Scale	.04				
Global Self Worth	.02				

$\beta$  = Beta at final Step.  $\beta^1$  = Beta at first Step. \* $p < .05$ , \*\* $p < .01$ .

Race coded as 1=White, 2=Black; Gender coded as 1= female, 2=male;

SES coded as 1= regular lunch, 2=reduced lunch, 3=free lunch

Table 10: Linear Regression of Predictor Variables on Support Seeking from Adults at School Scale (N=1213)

Step/Predictors	$\beta$	$\beta^1$	R	R <sup>2</sup>	$\Delta R^2$
1. Control			.106	.011	.011**
Gender	.04	.05			
Race	-.06*	-.06*			
SES	-.03	-.03			
2. Predictors			.100	.011	.001
Antisocial Peer Group	.02				
Social Anxiety Scale	-.01				
School Support Scale	.03				
Social Competence	.00				
Total Number of Activities	.01				

$\beta$  = Beta at final Step.  $\beta^1$  = Beta at first Step. \*p<.05, \*\*p<.01.

Gender coded 1=female, 2=males; Race coded as 1=White, 2=Black; SES coded as 1= regular lunch, 2=reduced lunch, 3=free lunch

Table 11: Linear Regression of Predictor Variables on Number of Supportive Adults (N=1204)

Step/Predictors	$\beta$	$\beta^1$	R	R <sup>2</sup>	$\Delta R^2$
1. Control			.095	.009	.009**
Gender	.06	.05			
Race	-.07**	-.08**			
SES	.00	.01			
2. Predictors			.128	.013	.07
Antisocial Peer Group	-.02				
Social Anxiety Scale	.02				
School Support Scale	-.01				
Social Competence	.05				
Total Number of Activities	.06				

$\beta$  = Beta at final Step.  $\beta^1$  = Beta at first Step. \*p<.05, \*\*p<.01.

Gender coded 1=female, 2=males; Race coded as 1=White, 2=Black; SES coded as 1= regular lunch, 2=reduced lunch, 3=free lunch

*Moderator Analyses.* Moderator analyses were performed to determine whether selected variables act as protective factors for high risk students. One group of high risk students were selected based on perceived stress, as students with higher levels of stress are most in need of receiving social support. Social competence, perceived school support, and activity involvement were hypothesized to moderate the relationship between perceived stress and the two support seeking outcomes. Additionally, moderators were examined for the relationship between “high risk demographic status” (being black and having free or reduced lunch) and the two activity involvement outcomes and the two support seeking outcomes based on findings that low SES black students have the greatest rates of negative outcomes. While “high risk demographic status” was significantly correlated with all outcome measures, the interaction of “high risk demographic status and each of the hypothesized protective factors did not approach significance. Contrary to predictions, neither perceived stress status nor the protective factors selected to moderate it were significantly correlated with support seeking outcomes. Additionally, no significant interactions were found between perceived stress status and the hypothesized protective factors. Thus, there was no support found for hypotheses 3-11.

#### *Additional Analyses*

Exploratory analyses were conducted to further examine possible relationships among the variables investigated. Additional regression analyses were run utilizing only those demographic and predictor variables with significant correlations to the outcome variables. Accordingly, race, lunch status, psychological distress, and parent involvement were regressed onto support seeking from adults at school. Both psychological distress ( $\beta=-.10$ ) and parent involvement ( $\beta=.23$ ) remained significant predictors, accounting for 7% of the variance in support seeking from adults at school.

A separate regression analysis was run regressing gender, race, lunch status, antisocial peer group, number of hours worked, and social competence onto total number of activities. Gender ( $\beta=-.07$ ), social competence ( $\beta=.07$ ), and number of hours ( $\beta=.08$ ) worked remained significant after entered into the regression model. However, the total variance accounted for by all of the entered variables was only 2%. Additionally, when adding grade level ( $\beta=.16$ ) to this model, hours of work ( $\beta=.02$ ) becomes insignificant, as the relationship between hours of work and activity involvement was mediated by grade.

Additional analyses were also conducted to examine the relationships between categories of involvement (total number sports, total number of music, total number of academic/interest, total number of leadership total number of honors) and the predictor variables. Examination of these correlations once again revealed gender, race, lunch status, and grade to be among the largest correlations with the outcome variables. All reported correlations were significant at  $p<.01$ . Race and lunch status operated in the expected direction for honors [race,  $r=-.11$ ; lunch status,  $r=-.11$ ] and leadership categories [race,  $r=-.08$ ; lunch status,  $r=-.09$ ] with White students and student not receiving free or reduced lunch most likely to participate in these activities. Additionally, gender was strongly correlated with sports most related to being male ( $r=.13$ ) while all other categories were correlated with being female ( $r=-.06$  to  $r=-.11$ ).

Significant relationships among the non-demographic predictors and the types of activity categories included social competence ( $r=.14$ ) and global self worth ( $r=.09$ ) predicting greater involvement in leadership activities while antisocial peer group affiliations predicted lower levels of involvement in academic/interest activities ( $r=-.07$ ). Involvement in sports activities was related to lower levels of psychological distress ( $r=-.10$ ), social anxiety ( $r=-.07$ ), and perceived stress ( $r=-.08$ ), and higher levels of global self worth ( $r=.07$ ). However, when

entering these variables into regression model predicting total number of sports, only gender ( $\beta=.08$ ) and global self worth ( $\beta=.06$ ) remained significant.

## Discussion

Evidence that school engagement is predictive of positive academic and social outcomes for students has established the importance of schools as a source of support for adolescents (Fredricks et al., 2004). This has led to increased interest in improving access and use of this resource, especially for high-risk students. Several factors have been hypothesized to influence the degree to which student's engage with their school, including demographic variables, psychological well-being, interpersonal skills, parental modeling, and competing time commitments. A primary goal of this study was to determine the extent to which hypothesized barriers and facilitating factors predicted school engagement, as demonstrated by seeking support from adults at school and participating in school activities. A second focus was the identification of moderating relationships that would increase support seeking and activity involvement in high risk students. Study findings are discussed first, followed by limitations, future recommendations, and conclusions.

### *Demographic variables*

Both correlational and regression analyses revealed significant relationships between demographic and outcome variables. As expected, being male, Black, or poor were generally related to lower levels of school engagement as measured by support seeking from adults at school and activity involvement. Results are consistent with previous research, which suggests that African-American students and those from low socioeconomic status backgrounds are more likely to perceive interactions with teachers as punitive and more likely to feel detached from school (Blumenfeld et al., 2005; McLoyd, 1998). Additionally, these students are at highest risk for a number of negative outcomes. The current results add to existing literature by showing

that students who would benefit most from positive assets such as support seeking from adults at school and activity involvement are least likely to engage in the behaviors.

#### *Barriers and Facilitating Factors*

Hypothesized barriers and facilitating factors were not found to be related to increased school connectedness after controlling for demographics, such as gender, race, and SES. The only variable to predict the number of activities students participated in after taking into account these specific demographic factors was social competence. However, the combined effect of these variables only accounted for 1% of additional variance, limiting clinical significance. The most significant correlates of support seeking were parent educational involvement and psychological distress. The addition of these two variables accounted for 7% of variance above that accounted for by demographic variables. These data add to the literature on support seeking by revealing that students who report their parents were more involved in their education, were also more likely to seek support from adults at school regardless of race and SES. This connection may be understood through social modeling (Bandura, 1977) where students whose parents are more engaged in their education and model frequent communication with school professionals demonstrate to their children that teachers are approachable, helpful, and trustworthy, thus increasing the likelihood that these students will engage and connect with their teachers. Unfortunately, this also indicates that students with less parent educational involvement, and as a result often in the most need of support, would be less likely to seek that support from adults at school. Similarly, students with higher levels of psychological distress are also least likely to seek support from adults at school. Taken together, these findings are troubling, as they suggest that students most in need of support are least likely to seek it from adults at school.

#### *Limitations and Future Directions*



Limitations of the current investigation also provide directions for future research.

Major limitations of the current study can be classified as those involving the response sample, the measurement of constructs, and the study design.

*Response sample.* There was some concern regarding students' motivation to complete the survey accurately; a number of students either presented with obvious invalid response patterns or returned a blank activity survey. Although these missing data did not affect the demographic representativeness of the sample, they speak to the motivation and accuracy with which students may have been filling out this SCANTRON based survey. Unfortunately, we were unable to be directly involved in the survey administration as originally planned, which was handled instead by school staff in a range of administration contexts, probably leading to varying directions and levels of supervision. Potential improvements to survey administration to increase self-report accuracy include having research proctors in the classroom to answer questions, provide clear directions, and encourage students to be honest, as well as incentives provided for the provision of completed/valid response patterns. Our own efforts to provide incentives were rejected by the administration due to the potential impact on subsequent district-sponsored surveys which do not involve incentives. Additionally, the survey originally provided to the school district contained two repeated questions intended to serve as validity checks. However, these questions were subsequently removed from the survey without the research team's knowledge. Such validity checks should be included in future survey designs to improve the detectability of invalid survey responses.

The study is also limited in that it contains solely student-report data. Given the nature of the research questions, students would be expected to be the best reporters of their own qualities and perceptions. Despite this, generally low agreement has been found between raters using survey methods (Achenbach, McConaughy, & Howell, 1987), indicating that it is

advantageous to incorporate measures from multiple sources, such as parent and teacher reports. Unfortunately, this was not feasible in the current study due to the large sample size and the limits imposed by the school district. Because breadth (sample size) and depth (level of assessment detail) are frequent tradeoffs in research studies, future studies may strengthen and extend the current results by obtaining information from multiple raters with regards to barriers and facilitation factors for students' school engagement. Of specific interest would be teacher ratings of student support seeking within each school, a difficult task given the large number of adults each student is in contact with and who could serve as sources of support for that individual.

This project was designed in collaboration with district administrators; however, there was no opportunity for collaboration between the research team and the teachers who directly administered the instrument and work with the students on a daily basis. Persistent efforts to establish these connections were unsuccessful leading to uncertainty about : (1) the teachers' level of commitment to this project, (2) the circumstances and variability of survey administration, and (3) the seriousness with which students approached the task. This implementation challenge may have limited the reliability of some data as reflected by some of the distribution data and lowered alphas on certain scales. The development of a successful working relationship between "outside" university researchers and schools requires not only the collaboration, support, and approval of high level administrators, but also the engagement and active participation of teachers and staff who directly work with students (Cowen & Gesten, 1980). The provision of technical assistance, workshops, and trainings to teachers may help to facilitate the development and flourishing of these relationships. Additionally, meaningful and ongoing consultation with teachers and school staff during research planning facilitates the

incorporation of their unique perspectives and contributions to the research protocol, and fosters relationships for future collaboration.

The study sample was also limited in generalizability as data were collected from one geographic area. However, unlike many studies of school engagement in high school students, the selected schools represented a racially and socioeconomically diverse group of students. Additionally, effort was made to ensure that the four selected schools were representative of Pinellas County Schools, and diverse with regards to location and income level within the county.

*Construct measurement.* Although a concerted attempt was made to measure barriers and facilitating factors to school engagement within the allotted survey space, construct measure length was sacrificed in places in order to include a diverse range of constructs. Several times we chose shortened versions of scales that correlated highly with their lengthier counterparts in the literature. However, ideally we would have been preferable to measure constructs such as social competence and perceived stress utilizing scales with more than four items. Additionally, the outcome measure, Support Seeking from Adults at School Scale was modified from its original form. This scale was originally derived from Greenberg et al's (1983) Inventory of Adolescent Attachments for studying emotional support seeking from parents and friends. Ryan and colleagues (1994) modified this scale to include teachers and added three items investigating school support seeking in addition to emotional support seeking. In the current study, we further modified this version to apply to "adults at school" and to assess actual student behavior (frequency that students "turned to" adults at school rather than willingness to "turn to" adults at school). Although adequate alphas were reported in previous samples using the original scales ( $\alpha=.80$ ), inadequate alphas were present in the current study ( $\alpha=.50$ ). Thus it is not possible to tell whether significant relationships were not found

between the predictor variables and the outcome variable because they truly do not exist, because of limitations with the subjects and scale completion, or because of the limitations of the measures. Future studies should utilize a more psychometrically sound measure of behavioral support seeking or perhaps examine intention to seek support using the original Ryan et al. measure.

*Conceptual Model.* In the current study, predictive relationships were hypothesized. However, without knowing previous levels of both predictor and outcome measures it is impossible to determine the direction of the relationships, if any. Although the current study serves as an initial exploration of these relationships, the research questions of this study are ultimately best answered by a longitudinal design which could identify predictive relationships. Given other limitations of this study, additional refining of measures and design are recommended before investing in a longitudinal investigation. These refinements include: (a) a multi-rater design that includes teacher, school staff and/or parent reports, (b) focus groups to learn ways to improve the survey's readability and adjust any interpretability issues, and (c) monitoring of assessment administration to improve accuracy of student reports.

### *Conclusions*

The findings support previous research indicating that demographic and family risk factors are among the strongest predictors of school engagement for adolescents. Additionally, existing research indicates that boys, African-American students, and students from lower socioeconomic status backgrounds engage in higher levels of problem behavior relative to girls, Caucasian students, and students from higher socioeconomic status backgrounds (Blumenfeld et al., 2005; McLoyd, 1998) Given the lower rates of school engagement among students who receive free or reduced lunch, are black, or are male; the associated higher rates of problem behaviors among these demographic categories; and the opportunities and benefits afforded by

extracurricular activities connections to supportive adults, it is important to continue to explore ways to engage these students. Additionally, students whose parents were not involved in their education and who reported higher levels of psychological distress were least likely to seek support from adults at school. These students represent those most in need of supportive relationships with adults at school. Future research, including qualitative analyses such as focus groups and in depth interviews, should explore effective ways to engage these higher risk students both to support prosocial behaviors and reduce problem behaviors.

### *Policy Implications*

The current samples were derived from four large high schools in one of the nation's biggest school district. Over the past 40 years there has been an increasing trend towards larger schools in the United States. Proponents of large schools have supported these institutions based on cost savings and economics, more comprehensive program availability, and more powerful sports teams. However, the anonymity of such large schools can produce a variety of problems, including greater disconnection from teacher and other adults at school, and less opportunity for participation in competitive sports and activities.

Overall, decreases in school size have been related to increases in school engagement, particularly among minority students (Finn & Rock, 1997; Finn & Voelkl, 1993). Specifically, research has found that students in smaller schools are more likely to participate in extracurricular activities, have relationships with their teachers, have better attendance rates, and have higher rates of parent involvement (Finn, Garber, & Boyd-Zaharias, 2005; Johnson, Crosnoe, & Elder, 2001; Lindsay, 1984; Schoggen and Schoggen, 1988). These findings are robust, with school size found to affect students' levels of participation and satisfaction independent of minority status, SES, and academic ability (Finn & Rock, 1997; Lindsay, 1984).

Thus, students who are already demographically and academically marginalized have even greater disadvantages in a larger school setting.

This evidence of enhanced student and parental engagement in small schools, particularly for low SES and minority students, combined with current findings that race, SES, and parent involvement were the strongest predictors of school engagement, point to the creation of small school environments as a potential key intervention for this at-risk population. In response to research highlighting the beneficial effects of small schools, some large schools have attempted to create a “schools within schools” structure. Would include a reference. Hopefully one in the literature, but there are likely also some available through the Gates Foundation, one that is funding this movement. This design creates small groups of students and assigns them to a teacher or small team of teachers, hence creating a small school community within a larger school setting to facilitate the strengthening of interpersonal relationships and a sense of community typically found in smaller schools. Future research, practice, and policies should continue examine the effectiveness of these structural components at increasing engagement and its associated positive outcomes for high school students.

## Reference List

- Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross informant correlations for situational specificity. *Psychological Bulletin*, *101*, 213-232.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Barber, B.L., Eccles, J.S., & Stone, M.R. (2001). Whatever happened to the jock, the brain, and the princess? Young adult pathways linked to adolescent activity involvement and social identity. *Journal of Adolescent Research*, *16*, 429-455.
- Bets, B. (2004). Wingspread Declaration: A national strategy for improving school connectedness. *Substance*, *1*, 1-19.
- Birch, S.H. & Ladd, G.W. (1998). Children's interpersonal behaviors and the teacher-child relationship. *Developmental Psychology*, *34*, 934-946
- Blumenfeld, P. C., Modell, J. Bartko, W. T., Secada, W., Fredricks, J., Friedel, J., & Paris, A. (2005). School engagement of inner city students during middle childhood. In C. R. Cooper, C. Garcia Coll, W. T. Bartko, H. M. Davis, & C. Chatman (Eds.), *Hills of gold: Rethinking diversity and contexts as resources for children's developmental pathways*. Mahwah, NJ: Lawrence Erlbaum.
- Bohnert, A.M. & Garber, J. (2007). Prospective relations between organized activity participation and psychopathology during adolescence. *Journal of Abnormal Child Psychology*, *35*, 1-13.

- Bohnert, A.M., Martin, N.C. & Garber, J.(2007).Predicting adolescents' organized activity involvement: The role of maternal depression history, family relationship quality, and adolescent cognitions. *Journal of Research on Adolescence, 17*, 221-244
- Calsyn, R.J., Winter, J.P., & Burger, G.K. (2005). The relationship between social anxiety and social support in adolescents: A test of competing causal models. *Adolescence, 40*, 11-19.
- Cobb, S. (1976). Presidential Address-1976. Social support as a moderator of life stress *Psychosomatic Medicine, 38*, 300-314.
- Cohen, S., Sherrod, D.R., and Clark, M.S. (1986). Social skills and the stress-protective role of social support. *Journal of Personality and Social Psychology, 50*, 963-973.
- Coie, J.D., Watt, N.F, West, S.G., Hawkins, J.D., Asarnow, J.R., Markman, H.J., Ramey, S.L, Shure, M.B., & Long, B. (1993). The science of prevention. A conceptual framework and some directions for a national research program. *American Psychologist, 48*, 1013-1022.
- Cohen S, Kamarck T, & Mermelstein R. (1983)A global measure of perceived stress. *Journal Health Social Behavior, 24*, 385-396.
- Cohen, S. & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310-357.
- Compas, B.E., Wagner, B.M., Slavin, L.A., Vannatta, K. (1986). A prospective study of life events, social support, and psychological symptomatology during the transition from high school to college. *American Journal of Community Psychology. 14*, 241-357.
- Cowen, E.L., & Gesten, E.L. (1980). Evaluating community programs. Tough and tender perspectives. In M. Gibbs, J.R. Lachenmeyer and J. Segal (Eds.), *Community psychology: Theoretical and empirical approaches* (pp. 363-393). New York: Gardner Press.



- Croninger, R. and Lee, V. (2001). Social capital and dropping out of high school: Benefits to at-risk students of teachers' support and guidance. *The Teachers College Record*, 103, 548-581.
- Derogatis, L.R., Lipman, R.S., & Covi, L. (1973). SCL-90: an outpatient psychiatric rating scale—preliminary report. *Psychopharmacology bulletin*, 9,13-28.
- DuBois, D.L., Felner, R.D. , Brand, S. , Adan, A.M. , & Evans, E.G. (1992). Prospective study of life stress, social support, and adaptation in early adolescence. *Child Development*, 63, 542-557.
- Dubow, E.F., Tisak, J., Causey, D., Hryshko, A., & Reid, G. (1991). A two-year longitudinal study of stressful life events, social support, and social problem-solving skills: Contributions to children's behavioral and academic adjustment. *Child Development*, 62, 583-599.
- Dworkin, J. B., Larson, R. W., & Hansen, D. M. (2003). Adolescents' accounts of growth experiences in youth activities. *Journal of Youth and Adolescence*, 32, 17-26.
- Eccles, J.S. & Barber, B.L, (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research*, 14, 10-43.
- Eccles, J.S., Barber, B.L. , Stone, M. & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues*, 59, 865-889.
- Feldman, A.F. & Matjasko, J.L. (2005). The role of school-based extracurricular activities in adolescent development: A comprehensive review and future directions. *Review of Educational Research*, 75, 159-210.
- Finn, J.D., Gerber, S.B., & Boyd-Zaharias, J. (2005). Small classes in the early grades, academic achievement, and graduating from high school *Journal of Educational Psychology*, 97, 214–223.

- Finn, J.D. & Rock, D.A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology, 82*, 221-234.
- Finn, J.D. & Voelkl, K.E. (1993). School characteristics related to school engagement. *Journal of Negro Education, 62*, 249-268.
- Fletcher, A.C., Elder, G.H.J., & Mekos, D. (2000). Parental influences on adolescent involvement in community activities. *Journal of Research on Adolescence, 10*, 29-48.
- Fredricks, J.A., Blumenfeld, P.C. & Paris, A.H. (2004). School engagement: Potential of the concept, state of the evidence, *Review of Educational Research, 74*, 59-109.
- Fredricks, J.A. & Eccles, J.S. (2006). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations, *Developmental Psychology, 42*, 698-713.
- Fredricks, J.A. & Eccles, J.S. (2005). Developmental benefits of extracurricular involvement: Do peer characteristics mediate the link between activities and youth outcomes? *Journal of Youth and Adolescence, 34*, 507-520.
- Galaif, E. R. Sussman, S. Chou, C. P. Wills, T. A. (2003). Longitudinal relations among depression, stress, and coping in high risk youth. *Journal of Youth and Adolescence, 32*, 243-258.
- Gesten E., Batsche C., Perrin, K., Raffaele, L., Salcedo, O., Green, A., & Austin-Lue, B.A. (2005). Pathways to resilience: A 19-Year follow-up of Pinellas County youth. Final Report to the Juvenile Welfare Board.
- Greenberg, M.T., Siegel, J.M., & Leitch, C.J. (1983). The nature and importance of attachment relationships. *Journal of Youth and Adolescence, 12*, 373-386.
- Grizenko, N. & Pawliuk, N. (1994). Risk and protective factors for disruptive behavior disorders in children. *American Journal of Orthopsychiatry, 64*, 534-544.

- Hamre, B.K. & Pianta, R.C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*, 625-638.
- Harrison, P.A. & Narayan, G. (2003). Differences in behavior, psychological factors, and environmental factors associated with participation in school sports and other activities in adolescence. *Journal of School Health, 73*, 113-120.
- Jenkins, J. E. (1996). The influence of *peer affiliation* and student activities on adolescent drug involvement. *Adolescence, 31*, 197-306.
- Jenkins, J. E. (1998). The relationship of family structure to adolescent drug use, peer affiliation, and perception of peer acceptance of drug use. *Adolescence, 33*, 811-823
- Johnson, M.K., Crosnow, R., and Elder, G.H. (2001). Students' attachment and academic engagement: The role of race and ethnicity. *Sociology of Education, 74*, 318-340.
- Klem, A.M. & Connell, J.P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health, 74*, 262-273.
- La Greca, A.M. & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Child Psychology, 26*, 83-94.
- Psychologist, 53*, 185-204.
- La Guardia, J. G., Ryan, R. M., Couchman, C. E., & Deci, E. L. (2000). Within-person variation in security of attachment: A self-determination theory perspective on attachment, need fulfillment, and well-being. *Journal of Personality and Social Psychology, 79*, 367-384
- Laird, R. D., Pettit, G. S., Dodge, K. A., & Bates, J. E. (1999). Best friendships, group relationships, and antisocial behavior in early adolescence. *Journal of Early Adolescence, 19*, 413-437.

- Libbey, H.P. (2004). Measuring student relationships to school: attachment, bonding, connectedness and engagement. *Journal of School Health, 74*, 274-283.
- Lindsay, P. (1984). High school size, participation in activities, and young adult social participation: Some enduring effects of schooling. *Educational Evaluation and Policy Analysis, 6*, 73-83.
- Luthar, S.S. (1995). Social competence in the school setting: Prospective cross-domain associations among inner-city teens. *Child Development, 66*, 416-429.
- Mahoney, J.L. (2000). School extracurricular activity participation as a moderator in the development of antisocial patterns, *Child Development, 71*, 502-516.
- Mahoney, J.L. & Cairns, R.B. (1997). Do extracurricular activities protect against early school dropout. *Developmental Psychology, 33*, 241-253.
- Mahoney, J.L., Cairns, B.D., & Farmer, T.W. (2003). Promoting interpersonal competence and educational success through extracurricular activity participation. *Journal of Educational Psychology, 95*, 409-418.
- Mahoney, J.L., Schweder, A.E., & Stattin, H. (2002). Structured after-school activities as a moderator of depressed mood for adolescents with detached relations to their parents. *Journal of Community Psychology, 30*, 69-86.
- Malecki, C. K. & Demaray, M. K. (2002). Measuring perceived social support: Development of the Child and Adolescent Social Support Scale (CASSS). *Psychology in the Schools, 39*, 1-18.
- Malecki, C.K. & Demaray, M.K. (2003). What type of support do they need? Investigating student adjustment as related to emotional, informational, appraisal, and instrumental support. *School Psychology Quarterly, 18*, 231-252.
- Martin, R. A., Kazarian, S. S., & Breiter, H. J. (1995). Perceived stress, life events, dysfunctional attitudes, and depression in adolescent psychiatric inpatients. *Journal of*

*Psychopathology and Behavioral Assessment, 17, 81-95.*

McHale, S.M., Crouter, A.C., & Tucker, C.J. (2001). Free-time activities in middle childhood: Links with adjustment in early adolescence. *Child Development, 72, 1764-1778.*

McLoyd, V.C. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 53, 185-204.*

McNeal, R.B.J. (1998). High school extracurricular activities: Closed structures and stratifying patterns of participation. *The Journal of Educational Research, 91, 183-190.*

McNeely, C. & Falci, C. (2004). School connectedness and the transition into and out of health-risk behavior among adolescents: A comparison of social belonging and teacher support, *Journal of School Health, 74, 284-292.*

Meehan, B. T., Hughes, J. N., & Cavell, T. A. (2003). Student-teacher relationships as compensatory resources for aggressive children. *Child Development, 74, 1145-1157*

National Center for Educational Statistics (2005). Youth Indicators: Trends in the Well-being of American Youth. Indicator 34: Extracurricular Activities. Available at:

<http://nces.ed.gov/programs/youthindicators/Indicators.asp?PubPageNumber=34>

accessed on May 30, 2009.

Patterson, M. L., & Ritts, V. (1997). Social and communicative anxiety: A review and meta-analysis. *Communication Yearbook, 20, 263-303.*

Paulsen, E., Bru, E., & Murberg, T.A. (2006). Students in junior high school: The associations with shyness, perceived Competence and social support. *Social Psychology of Education, 9, 67-81.*

Richman, J.M., Rosenfeld, L.B., & Bowen, G.L. (1998). Social support for adolescents at risk of school failure. *Social Work, 43, 309-323.*

- Rose-Krasnor, L. , Busseri, M.A., Willoughby, T. & Chalmers, H. (2006). Breadth and intensity of youth activity involvement as contexts for positive development, *Journal of Youth and Adolescence*, 35, 365-379.
- Rosen, C. S., Drescher, K. D., Moos, R. H. , Finney, J. W., Murphy, R. T., & Gusman, F. (2000). Six- and ten-item indexes of psychological distress based on the Symptom Checklist-90. *Assessment*, 7, 103-112.
- Rosenfeld, L.B., Richman, J.M. & Bowen, G.L. (2000). Social support networks and school outcomes: The centrality of the teacher. *Child and Adolescent Social Work Journal*, 17, 205-226.
- Ryan, R.M., La Guardia, J.G., Solky-Butzel, J., Chirkov, V., & Kim, Y. (2005). On the interpersonal regulation of emotions: Emotional reliance across gender, relationships, and cultures. *Personal Relationships*, 12, 145-163.
- Ryan, R.M., Stiller, J.D., & Lynch, J.H. (1994). Representations of relationships to teachers, parents, and friends as predictors of academic motivation and self-esteem. *The Journal of Early Adolescence*, 14, 226-249.
- Schoggen, P., & Schoggen, M. (1988). Student voluntary participation and high school size. *Journal of Educational Research*, 81, 288-293
- Simpkins, S.D., Ripke, M., Huston, A.C. & Eccles, J.S. (2005). Predicting participation and outcomes in out-of-school activities: Similarities and differences across social ecologies. *New Directions for Youth Development*, 105, 51-69.
- Skinner, E.A. & Belmont, M.J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology*, 85, 571-581.

- Stanton-Salazar, R.D. (1997). A social capital framework for understanding the socialization of racial minority children and youths. *Harvard Educational Review*, 67, 1-40.
- Steele, C.M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52, 613-629.
- Steinberg, L.D., Greenberger, E., Garduque, L., & McAuliff, S. (1982). High school students in the labour force: Some costs and benefits to schooling and learning, *Education Evaluation and Policy Analysis*, 4, 363–372.
- Steinberg, L., Lamborn S.D., Dornbusch, S.M., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed, *Child Development*, 65, 1266-1281.
- Tucker, C.M., & Herman, K.C. (2002). Using culturally sensitive theories and research to meet the academic needs of low-income African American children. *American Psychologist*, 57, 762-773.
- Vitaro, F., Brendgen, M., & Tremblay, R.E. (2000). Influence of deviant friends on delinquency: Searching for moderator variables. *Journal of Abnormal Child Psychology*, 28, 313-325.
- Werner, E.E. (1993). Risk, resilience, and recovery: Perspectives from the Kauai Longitudinal Study. *Development and Psychopathology*, 5, 502-515.
- Wichstrom, L. (1995). Harter's self-perception profile for adolescents: Reliability, validity, and evaluation of the question format. *Journal of Personality Assessment*, 65, 100-116.
- Zaff, J.F., Moore, K.A. Papillo, A.R. & Williams, S. (2003). Implications of extracurricular activity participation during adolescence on positive outcomes. *Journal of Adolescent Research*, 18, 599-603.

## Appendices



## Appendix A: Survey Items

### Child and Adolescent Social Support Scale-School Support

People at my school care about me:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school treat me fairly:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school make it okay to ask questions:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school explain things I don't understand:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school show me how to do things:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school help me solve problems by giving me information:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school tell me I did a good job when I've done something well:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school nicely tell me when I make mistakes:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school tell me how well I do on tasks:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school make sure I have what I need for school:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school take time to help me learn to do something well:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

People at my school spend time with me when I need help:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

Appendix A: Survey Items (continued)

**Inventory of Adolescent Attachments: Support Seeking from Adults at School**

When I am alone or depressed, I turn to an adult at school:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

When I am anxious or scared about something, I turn to an adult at school:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

When I am feeling very bad about myself and need a boost, I turn to an adult at school:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

When I am feeling happy or have good news, I turn to an adult at school:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

When I have just experienced a tragedy, I turn to an adult at school:

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

When I have a problem with my school work, I share it with an adult at school

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

When I am having trouble understanding a subject at school, I talk it over with an adult at school

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

I can usually rely on an adult at school when I have problems at school

a. never b. almost never c. some of the time d. most of the time e. almost always f. always

*How many adults at school do you turn to when you when you need support?*

a. none b. one c. two d. three-five e. five to eight f. eight or more

**Perceived Stress Scale**

In the last month, how often have you felt that you were unable to control the important things in your life?

a. never b. almost never c. sometimes d. fairly often e. very often

In the last month, how often have you felt confident about your ability to handle your personal problems?

a. never b. almost never c. sometimes d. fairly often e. very often

In the last month, how often have you felt that things were going your way?

a. never b. almost never c. sometimes d. fairly often e. very often

In the last month, how often have you felt difficulties piling up that you could not overcome?

a. never b. almost never c. sometimes d. fairly often e. very often

Appendix A: Survey Items (continued)

**Social Anxiety Scale for Adolescents-Social Avoidance and Distress-General**

I am quiet when I'm with a group of people:

- a. never b. almost never c. some of the time d. most of the time e. almost always f. always

I'm afraid to invite others to do things with me because they might say no:

- a. never b. almost never c. some of the time d. most of the time e. almost always f. always

I feel shy even with peers I know very well:

- a. never b. almost never c. some of the time d. most of the time e. almost always f. always

It's hard for me to ask others to do things with me:

- a. never b. almost never c. some of the time d. most of the time e. almost always f. always

**Parental Involvement in Schooling**

My parent/guardian helps me with homework when asked:

- a. never b. almost never c. some of the time d. most of the time e. almost always f. always

My parent/guardian attends school programs:

- a. never b. almost never c. some of the time d. most of the time e. almost always f. always

My parent/guardian watches me in sports and other activities:

- a. never b. almost never c. some of the time d. most of the time e. almost always f. always

My parent/guardian helps me select courses at school:

- a. never b. almost never c. some of the time d. most of the time e. almost always f. always

My parent/guardian knows how I am doing in school:

- a. never b. almost never c. some of the time d. most of the time e. almost always f. always

Appendix A: Survey Items (continued)

**Self Perception Profile for Adolescents: Global Self Worth**

I am often disappointed with myself

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

I don't like the way I am leading my life

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

I am happy with myself most of the time

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

I like the kind of person I am

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

I am happy being the way I am

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

**Self Perception Profile for Adolescents: Social Competence**

I find it hard to make friends

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

I have a lot of friends

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

I am very hard to like

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

I am popular with others my age

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

I feel socially accepted

- a.describes me very poorly   b.describes me quite poorly   c. describes me quite well  
d. describes me very well

Appendix A: Survey Items (continued)

**Friendship Group Antisocial Behavior**

The members of my group of friends get into trouble at school:

- a. Never b. once in a while c. sometimes d. fairly often e. very often

The members of my group of friends get into fights with others:

- a. Never b. once in a while c. sometimes d. fairly often e. very often

The members of my group of friends use bad language:

- a. Never b. once in a while c. sometimes d. fairly often e. very often

The members of my group of friends lie to their parents and teachers:

- a. Never b. once in a while c. sometimes d. fairly often e. very often

The members of my group of friends like to do things that make people scared or uncomfortable:

- a. Never b. once in a while c. sometimes d. fairly often e. very often

**Symptom Checklist-10: Psychological Distress**

During the past 30 days how often have you been distressed by feeling hopeless about the future

- a. Not at all b. a little bit c. moderately d. quite a bit e. extremely

During the past 30 days how often have you been distressed by feeling blue

- a. Not at all b. a little bit c. moderately d. quite a bit e. extremely

During the past 30 days how often have you been distressed by the idea that something was wrong with your mind

- a. Not at all b. a little bit c. moderately d. quite a bit e. extremely

During the past 30 days how often have you been distressed by your feelings being easily hurt

- a. Not at all b. a little bit c. moderately d. quite a bit e. extremely

During the past 30 days how often have you been distressed by feeling tense or keyed up

- a. Not at all b. a little bit c. moderately d. quite a bit e. extremely

During the past 30 days how often have you been distressed by having difficulty with decisions

- a. Not at all b. a little bit c. moderately d. quite a bit e. extremely

During the past 30 days how often have you been distressed by having trouble getting your breath

- a. Not at all b. a little bit c. moderately d. quite a bit e. extremely

During the past 30 days how often have you been distressed by feeling afraid of open spaces or on the streets

- a. Not at all b. a little bit c. moderately d. quite a bit e. extremely

During the past 30 days how often have you been distressed by temper outbursts that you could not control

- a. Not at all b. a little bit c. moderately d. quite a bit e. extremely

## Appendix A: Survey Items (continued)

During the past 30 days how often have you been distressed by feeling that you are watched or talked about by others

- a. Not at all   b. a little bit   c. moderately   d. quite a bit   e. extremely

### **Employment**

How many hours do you usually spend working in a job during each week?

- a.0   b.1-5   c.6-10   d.11-20   e.21-30   f.31-40

## Appendix B: Student Survey

Pinellas County Schools - Student Survey 2007-2008

School # \_\_\_\_\_ Student ID # \_\_\_\_\_

**Directions:** This survey is being administered to high school students in Pinellas County. Your responses are completely private and will not be shared with anyone. Your responses are important. Please answer honestly. The purpose of this survey is to learn more about the experiences of Pinellas County high school students.

	Never	Almost Never	Some of the time	Most of the time	Almost Always	Always
1. People in my school care about me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. People in my school understand me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. People in my school listen to me when I need to talk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. People in my school give me good advice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. People in my school help me solve my problems by giving me information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. People at my school explain things that I don't understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. People at my school tell me how well I do on tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. People at my school tell me I did a good job when I've done something well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. People at my school nicely tell me when I make mistakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. People at my school take time to help me decide things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. People at my school spend time with me when I need help	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. People at my school make sure I have the things I need for school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I am quiet when I'm with a group of people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I'm afraid to invite others to do things with me because they might say "no"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I feel shy even with peers I know very well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. It's hard for me to ask others to do things with me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. My parent/guardian helps me with homework when asked	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. My parent/guardian attends school programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. My parent/guardian watches me in sports or other activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. My parent/guardian helps me select courses at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. My parent/guardian knows how I am doing in school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. When I am alone or depressed, I turn to an adult at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. When I am anxious or scared about something, I turn to an adult at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. When I am feeling very bad about myself and need a boost, I turn to an adult at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. When I am feeling happy or have good news, I turn to an adult at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. When I have just experienced a tragedy, I turn to an adult at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. When I have a problem with my school work, I share it with an adult at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. When I am having trouble understanding a subject at school, I talk it over with an adult at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. I can usually rely on an adult at school when I have problems at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. How many adults at school do you turn to when you need support	<input type="radio"/> 0 or more	<input type="radio"/> 1-2	<input type="radio"/> 3-4	<input type="radio"/> 5-6	<input type="radio"/> 7-8	<input type="radio"/> 9 or more
31. How many hours do you usually spend working in a job during a normal week	<input type="radio"/> 0	<input type="radio"/> 1-10	<input type="radio"/> 11-20	<input type="radio"/> 20-30	<input type="radio"/> 30 or more	

Appendix B: Student Survey (continued)

				Extremely	
				Quite a bit	
				Moderately	
			A little bit		
			Not at all		
<b>DURING THE PAST 30 DAYS HOW OFTEN HAVE YOU BEEN DISTRESSED BY:</b>					
32. Feeling hopeless about the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. Feeling blue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. The idea that something was wrong with your mind	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Your feelings being easily hurt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. Feeling tense or keyed up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. Having difficulty with decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. Having trouble getting your breath	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. Feeling afraid of open spaces or on the streets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. Temper outbursts that you could not control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. Feeling that you are watched or talked about by others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
				Describes me very well	
				Describes me quite well	
				Describes me quite poorly	
				Describes me very poorly	
42. I find it hard to make friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. I have a lot of friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. I am popular with others my age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. I feel socially accepted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. I am very hard to like	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. I am often disappointed with myself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. I don't like the way I am leading my life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. I am happy with myself most of the time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. I like the kind of person I am	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. I am happy being the way I am	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
				Very Often	
				Fairly Often	
				Sometimes	
				Almost Never	
				Never	
52. The members of my group of friends get into trouble at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. The members of my group of friends get into fights with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. The members of my group of friends use bad language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55. The members of my group of friends lie to their parents and teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. The members of my group of friends like to do things that make people scared or uncomfortable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. In the last month, how often have you felt that you were unable to control important things in your life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. In the last month, how often have you felt confident about your ability to handle your personal problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59. In the last month, how often have you felt that things were going your way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## Appendix C: Activity Involvement Scale

### PINELLAS COUNTY SCHOOLS EXTRACURRICULAR ACTIVITIES SURVEY

**Directions**

This survey is being administered to all high school students. The purpose of the survey is to gather information regarding participation in extracurricular activities.

Your responses and comments are important.

**Please fill out one of the three following sections:**

**1. I attempted to participate:**

- I tried out, but was not selected for the final team.
- I showed up for at least one of the tryouts, but did not return.
- I showed up at an "informational meeting", but decided not to try out.

**2. I did not participate in any activity during 07/08 school year, because of:**

- a.**
  - My concerns about my weight
  - My concerns about my ability on any activity
  - My health condition(s) make it difficult to participate
  - None of the activities interest me
  - I have no time:  school work  work  family obligations
  - I do not like the uniforms
- b.**
  - It costs too much to participate in activities
  - My parents do not support my participation
  - I (my family) cannot provide transportation to activities
- c.**
  - I do not like the sponsor/coach of the activities
  - I do not like the group of students who are participating in activities
  - I get criticized by peers, if I participate in certain activities
  - My community does not support extracurricular activities
  - I have concerns about the eligibility for the activities
  - I do not like the schedule of the activities

**3. I have participated in the following activities during 07/08 school year. (Mark all that apply)**

**ATHLETICS**

- Baseball
- Basketball
- Basketball, J.V.
- Cheerleaders, Varsity
- Cheerleaders, J.V.
- Cheerleaders, 9th
- Cheerleaders, Basketball
- Cheerleaders, Football
- Cross Country
- Cross Country, J.V.
- Diving
- Flag Football
- Flag Football, J.V.
- Football, Varsity
- Football, J.V.
- Golf
- Soccer
- Soccer, Girls J.V.
- Softball
- Swimming
- Swimming, J.V.
- Tennis
- Track
- Track, J.V.
- Volleyball, Girls
- Volleyball, J.V.
- Weightlifting
- Wrestling, Varsity
- Wrestling, J.V.

Other(s) \_\_\_\_\_

**MUSIC RELATED**

- Band, Advanced
- Band, Beginners
- Band, Concert
- Band, Intermediate
- Band, Jazz
- Band, Marching

- Band 1
- Band, Prep
- Band, Stage
- Chorus, Choir
- Chorus
- Color Guard
- Concert Choir
- Dance Club
- Drill Team
- Ensemble
- Ensemble, Jazz
- Ensemble, Mixed
- Ensemble, Wind
- Flute Choir
- Glee Club, Mixed
- Guitar
- Keyboards
- Madrigals
- Majorettes
- Musical Theater
- Orchestra
- Percussion (Drums)

Other(s) \_\_\_\_\_

**ACADEMIC/INTEREST**

- Academic Team
- Afro/American
- Art
- B.C.E.
- Biology Club
- Biology, Marine Club
- Blue 100
- Book Club
- Bowling
- Camera/Photography
- C.B.S.
- C.E.C.F.
- Ceramic Clubs
- Chess
- Civinettes
- Civitan
- Computers Club
- Cosmetology Club
- Dance
- Debate Club
- D.E.C.A.
- Deck-Teck
- Doorways
- Drama Club
- Ecology Club
- Exchangettes
- F.B.L.A.
- F.C.A.
- F.C.L.L.A.
- F.E.A.
- F.F.A.
- F.F.E.A.
- Focus
- Forensic
- Free Tibet
- French Club
- F.T.A.
- Gay Straight Alliance
- German Club
- Greek
- Health
- History
- Hi-Y
- H.O.S.A.
- Hospice Teen Volunteers
- Humanities
- Interact
- J.E.T.S.
- JROTC C. Guard
- JROTC Drill Team
- JROTC Orienteering
- JROTC Raiders
- JROTC Rifle
- Junior Exchange
- Karate/Martial Arts
- Key Club
- Keyettes
- Latin Club

- Lettermans Club
- Literary Magazine
- Li'Sanja
- Logos Club
- Math Club
- Multicultural Club
- Nat'l Jr.-Classic League
- Navigators
- Newspaper
- Pep Club
- Physics Club
- Poetry Club
- Psychology Club
- Robotics Club
- Ro-Jans
- Roller Hockey
- SADD
- Sailing Club
- Science Club
- Science & Eng.Club
- Ski Club
- Spanish
- Speech Club
- Sports Medicine
- Stage Crew
- S.T.E.P.
- Step Team
- Targeted Talent
- Technology Club
- Teen Court
- Thespian Club
- Trisics
- T.S.A.
- United Nations
- Ushorettes
- Vet Explorers Group
- V.I.C.A.
- Work Experience
- Year Book
- 500 Role Models of Excel.

Other(s) \_\_\_\_\_

SCHOOL#	STUDENT#
1	1
1	2
1	3
1	4
1	5
1	6
1	7
1	8
1	9
1	10
1	11
1	12
1	13
1	14
1	15
1	16
1	17
1	18
1	19
1	20
1	21
1	22
1	23
1	24
1	25
1	26
1	27
1	28
1	29
1	30
1	31
1	32
1	33
1	34
1	35
1	36
1	37
1	38
1	39
1	40
1	41
1	42
1	43
1	44
1	45
1	46
1	47
1	48
1	49
1	50
1	51
1	52
1	53
1	54
1	55
1	56
1	57
1	58
1	59
1	60
1	61
1	62
1	63
1	64
1	65
1	66
1	67
1	68
1	69
1	70
1	71
1	72
1	73
1	74
1	75
1	76
1	77
1	78
1	79
1	80
1	81
1	82
1	83
1	84
1	85
1	86
1	87
1	88
1	89
1	90
1	91
1	92
1	93
1	94
1	95
1	96
1	97
1	98
1	99
1	100

Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

School: \_\_\_\_\_

**LEADERSHIP**

- Class Officers
- Club Officer
- Community Leadership
- Interclub Council
- Kaleidoscope
- Organization/Activity Leader
- Quill and Scroll
- SAC
- SR & R
- Student Advisory Comm.
- Student Council
- Youth Crime Watch
- Youth in Government

**HONOR**

- Art Nat'l Honor Society
- English Nat'l Honor Soc.
- French Nat'l Honor Soc.
- German Nat'l Honor Soc.
- Math Nat'l Honor Soc. (Mu Alpha Theta)
- Nat'l Honor Society
- Science Nat'l Honor Soc.
- Spanish Honor Society
- Technology Honor Society

Other(s) \_\_\_\_\_

**Use the back for comments.**

CATEGORY A

PCS FORM 4-2811 (1/05)  
REVIEW DATE 2/06

### About the Author

Amy Green was born in Bloomsburg, PA and attended Central Columbia High School. She began her studies in psychology at the University of Rochester where she graduated Cum Laude. After graduating with her BA in psychology, Ms. Green began a research position at the University of Rochester Medical Center focusing on prevention and positive youth development. Under the mentorship of Dr. Ellis Gesten, she continued exploring these interests with a focus on adolescent resilience. Additionally, during her graduate school years Ms. Green began working with public policy experts at the Florida Mental Health Institute and recently completed her predoctoral internship in public sector psychology and public policy at the Florida Mental Health Institute. She will be completing a postdoctoral fellowship at the University of California-San Diego's Child and Adolescent Services Research Center.