AN INVESTIGATION OF THE EFFECT OF SCHOOL CONTEXT, SCHOOL CONNECTEDNESS, AND ACADEMIC SELF-EFFICACY ON MULTIDIMENSIONAL OUTCOMES AMONG CHILEAN ADOLESCENTS

by

LESLEY M. GRAVES

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Student: Lesley M. Graves

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This dissertation has been accepted and approved in partial fulfillment of the requirements for the Doctor of Philosophy degree in the Department of Counseling Psychology and Human Services by:

Dr. Benedict T. McWhirter	Co-Chair
Dr. Ellen H. McWhirter	Co-Chair
Dr. Lauren Lindstrom	Member
Dr. Joanna Goode	Outside Member

and

Kimberley Andrews Epsy	Vice President for Research & Innovation/Dean of the Graduate School

Original approval signatures are on file with the University of Oregon Graduate School.

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DISSERTATION ABSTRACT

Lesley M. Graves

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In the current study, structural equation modeling is used to explore the complex relationships between environmental and individual factors as they influence multidimensional indices of adjustment among a sample of Chilean adolescents. The first aim was to examine the direct relationships between school contextual factors and both educational and socioemotional outcomes. The second aim was to determine the mediational effect of academic self-efficacy and school connectedness on these relationships. Invariance testing was then applied to the full structural model to determine whether demographic variables such as sex or school placement had significant moderating effects on path coefficients.

Participants in this study included 893 (428 male and 465 female) 9th through 12th grade students sampled from four distinct high school settings in and around Santiago, Chile. The Chilean Ministry of Education identified three of the four schools as "priority" (meaning "high risk") public high schools based on academic achievement, area poverty, local economic prospects, and school demographics (e.g., drop-out rate). The fourth school is a private Catholic school that is partially subsidized by the government and located in central urban Santiago.

Overall, findings from this study highlight that school contextual assets and stressors have a significant impact on the multidimensional adjustment of Chilean adolescents, both directly and by influencing individual academic self-efficacy and school connectedness. Direct relationships were found between school contextual factors and both educational and socioemotional outcomes. In addition, results highlighted the significant mediating effect of both school connectedness and academic self-efficacy in these relationships, reinforcing the central protective role of such factors in the school engagement and adjustment of youth. Lastly, invariance testing revealed significant differences in model fit between groups based on school type but not sex. Culturally embedded implications for intervention and future research are discussed.

CURRICULUM VITAE

NAME OF AUTHOR: Lesley M. Graves

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene
Wellesley College, Wellesley, MA

DEGREES AWARDED:

Doctor of Philosophy, Counseling Psychology, 2014, University of Oregon
Master of Science, Counseling, Family, and Human Services, 2010, University of Oregon
Bachelor of Arts, Psychology, 2004, Wellesley College

AREAS OF SPECIAL INTEREST:

Positive youth and emerging adult development
Social identity development
Multicultural counseling

PROFESSIONAL EXPERIENCE:

Substance Abuse Prevention and Off-Campus Student Services Coordinator, Office of the Dean of Students, University of Oregon, Eugene, 2012-Present

Teaching Assistant, Department of Education Studies, University of Oregon, Eugene, 2010-2011

Clinical Extern, Lane Community College, Eugene, Oregon, 2009-2010

Clinical Intern and Extern, Child and Family Center, University of Oregon, Eugene, 2008-2010

Academic Advisor, Office of Academic Advising, University of Oregon, Eugene, 2008-2010

Clinical Intern, Center for Family Therapy, University of Oregon, Eugene, 2007-2008

Field Study Supervisor, Department of Family and Human Services,
University of Oregon, Eugene, 2006-2008

GRANTS, AWARDS, AND HONORS:

Graduate Teaching Fellowship, University of Oregon, 2006-2013

PUBLICATIONS:

Petersen, T., Alpert, J.E., Mahal, Y., Buchin, J., Farabaugh, A., Matthews, J., Nierenberg, A.A., Holmes, A., Bogdan, R., Graves, L. Pava, J., Fava, M. (2007). The Role of Cognitive-Behavioral Therapy and Fluoxetine in Prevention of Recurrence of Major Depressive Disorder. *Cognitive Therapy and Research, 34(1),* 13-23.

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CHAPTER I

RATIONALE

Adolescence is a sensitive period when youth must face new social and educational demands in the midst of shifting developmental needs (Bandura, 2006; Usher & Pajares, 2008). While many individuals undergo positive changes as they effectively navigate the challenges of this life stage, others experience academic, emotional, and behavioral problems that can have harmful, long-term influence on their health as well as future educational and professional success (Rumberger & Lim, 2008; Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006; Roeser, Eccles, & Sameroff, 1998).

Ecological theory emphasizes that human development occurs not in isolation but within multiple social contexts of reciprocal influence (Bronfenbrenner, 1979; 1989). As individuals experience changing developmental needs, their ability to thrive will be influenced by the congruence between these needs and opportunities afforded to them by the environment (Eccles & Midgley, 1993). Therefore, by conceptualizing adolescent adjustment as the result of dynamic interactions and fit between an individual and social contexts, we may be better able to identify the conditions under which optimal functioning is likely to occur (Bellmore, Witkow, Graham, & Juvonen, 2004; Eccles & Midgley, 1993). Furthermore, by extending support to the contexts in which an adolescent exists, including broader social and political contexts, we may be better able to promote healthy adjustment than by attempting to intervene solely at the individual level (Wang, Selman, Dishion, & Stormshak, 2010).

Among various important contexts in the lives of adolescents, the school setting has been considered an important social environment for providing universal

interventions to youth who are at-risk for negative health outcomes (Dishion & Stormshak, 2007). Although schools traditionally have been concerned with the provision of educational services, current research findings with adolescents demonstrate that schools play a central role in all areas of development (e.g. Eccles & Roeser, 2011) and that socioemotional wellness is integral to academic success (Kopela & Clarke, 2005). Given the interplay between these two components of adolescent well being, schools are urged to give greater consideration to how they promote both areas within the complex conditions of the school environment (Lynch & Cicchetti, 1997; Wentzel & Looney, 2007).

Research findings with youth of all ages demonstrate that positive school environments foster many indices of healthy academic and socioemotional adjustment (Wigfield et al., 2006). More specifically, factors such as teacher support, clear rules, high expectations, and opportunities for academic and extracurricular involvement have been shown to shape optimal conditions for student learning and prosocial interactions (e.g. Bandura, 1977; Connell & Wellborn, 1991; Roth & Brooks-Gunn, 2003; Whitlock, 2006). On the other hand, risk factors such as peer rejection, harassment, and safety concerns have been shown to undermine these developmental processes while also negatively impacting student self-beliefs (Juvonen, Nishina, & Graham, 2000; Wigfield et al., 2006). Findings such as these reinforce the significant influence of school on adolescent wellbeing. However, to better understand differential pathways of adjustment from an ecological perspective, one must simultaneously consider the developmental needs of adolescents and individual protective factors that contribute to resilience (Bronfrenbrenner, 1979; Eccles & Midgley, 1993; Lerner, 2004).

As adolescents transition into secondary school they are faced with the renegotiation of social roles, greater academic rigors, and increasing expectation that they will assume responsibility for managing their own educational experience. In line with these ecological demands, an extensive body of research has identified school connectedness and academic self-efficacy as critical protective factors in adolescence that relate to many indices of healthy adjustment over time (e.g. see Eccles & Roeser, 2011). Early studies of these constructs focused primarily on their separate influence pertaining to academic and socioemotional outcomes. However a growing number of investigations have examined their respective links to school context (e.g. Bandura, 2006; McMahon, Parnes, Keys, & Viola, 2008; Whitlock, 2006) as well as their respective mediational roles in the pathway between school experiences and adjustment outcomes (e.g., Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; McMahon et al., 2008; McMahon, Wemsman, & Rose; 2009).

Considerable progress has been made towards examining school contextual factors, school connectedness, and academic self-efficacy in relation to academic and socioemotional adjustment outcomes of adolescents in the United States (e.g., Bandura et al., 2001; Pajares, 2008; Roeser & Eccles, 2011). While a growing number of international investigations are evaluating the significance of these constructs within the scope adolescent development (e.g. Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Bong, 2001; Caprara, Barbaranelli, Pastorelli, & Cervone, 2003; Waters, Cross, & Shaw, 2010), relatively little is known about how school and individual factors interact to influence student well-being in a variety of cross-cultural populations, including those in developing nations. Furthermore, most investigations to date have examined many of

these constructs only in partial combinations rather than as an entire constellation of influential factors (Cunningham, Werner, & Firth, 2004; Roeser, Midgley, & Urdan, 1996; Uwah, McMahon, & Furlow, 2008). Given the current limitations in the literature, it is evident that future research efforts should continue to explore complex relationships between school and individual factors among diverse samples and in different cultural, national, and political contexts**.**

Latin America is one continent in which exploring the complex relationships between school and individual and social factors among adolescents seems particularly essential, especially given the diverse political contexts represented in the many nations that make up the continent. Throughout Latin America, a significant percentage of adolescents are considered at-risk for a range of academic, psychological, and behavioral concerns (Cunningham, McGinnis, Verdu, Tesiluc, & Verner, 2008; World Bank Group, 2011). In light of these findings, scholars are emphasizing that investment in the wellbeing of young people will be critical to the long-term social and economic welfare of the region (Cunningham et al., 2008).

As a specific example, Chile has historically been viewed as a leader in human development in Latin America (United Nations Human Development Index, 2010). However, vast economic and educational disparities continue to influence the opportunities, beliefs, and behaviors of Chilean youth. The high occurrence of dropout and other salient risks (e.g., substance use, depression, bullying) among Chilean adolescents warrants further examination of school and individual factors that influence multidimensional health outcomes for this population (Fleming & Jacobsen, 2009; Maddaleno & Silber, 1993; Rudatsikira, Muula, & Sizya, 2008; Ventura-Junca,

Carvajal, Undurraga, Vicuna, & Egana; 2010). With the current national focus in Chile on educational reform (Holm-Nielsen, Thorn, & Prawda, 2004; McWhirter & McWhirter, 2012; Raczynski & Muñoz-Stuardo, 2007), findings from research that will inform the development of ecological, cost-effective interventions to sustain academic engagement and wellbeing into adulthood is clearly warranted. Because of this, in the current study I examine the relationship between school context, school connectedness, academic self-efficacy, and health-related outcomes pertaining to adolescent academic and social-emotional functioning in a sample of Chilean high school students. To set the stage for this research study, I next review each of these constructs and, in particular, provide a brief overview of theory and research findings pertaining to school connectedness and academic self-efficacy. I then provide an overview of the cultural context of youth in Chile, current educational reform concerns, and how enhancement of individual protective factors, such as school connectedness and academic self-efficacy, may be important to future national intervention efforts to enhance youth development in Chile.

School Contextual Factors and Adolescent Adjustment

Research with youth of all ages has demonstrated that positive school environments lead to many indices of healthy adjustment such as student motivation, classroom engagement, and general well-being (Eccles & Roeser, 2011; Wigfield et al., 2006). However, some school environments fulfill students' developmental needs and promote their engagement more effectively than others do. Of the numerous aspects of school context examined throughout literature, the following factors are consistently found to contribute to the multidimensional health outcomes of adolescents: (a) teacher support, (b) clear rules and expectations, (c) opportunities for academic and

extracurricular involvement, (d) peer victimization, and (e) school safety (e.g., Lackaye, Margalit, Ziv, & Ziman, 2006; Eccles & Roeser, 2011; Wentzel, Battle, Russel, & Looney, 2010; Whitlock, 2006).

School Protective Factors

Teachers play a central role in adolescent development, serving as a multipurpose social resource. Modeling and supportive communication presented by a teacher can provide students with important information influencing their belief in their competence (Bandura, 1977). At the same time, student-teacher relationship characterized by warmth, respect, and fair treatment may contribute to an adolescent's need for relatedness and affiliation in the school community, leading to classroom engagement, academic success, and prosocial behavior (Wentzel, 2002; Wentzel et al., 2010). Classroom structure is another important factor that has been thought to promote student learning and participation (Connell & Wellborn, 1991; Skinner & Belmont, 1993). Teachers who provide clear, consistent enforcement of rules, age-appropriate expectations, and solicitation of student opinions produce students who are motivated to engage in learning activities and positive social interactions (e.g., Grolnick & Ryan, 1987; Skinner & Belmont, 1993). As adolescent students become less time monitored by familial adults, opportunities for academic or extracurricular activity within the school setting provide young people with safe, nurturing environments in which prosocial adults and peers are able to provide reinforcing support and model effective behaviors (Mahoney, Schweder, & Stattin, 2002; Roth & Brooks-Gunn, 2003). In addition, prosocial extracurricular and academic activities may increase an adolescent's sense of belonging to a personally valued group (Brown & Evans, 2002; Finn, 1989).

School Risk Factors

Although schools can be a source of critical social support for at-risk youth, they can also be the primary context for negative peer interactions that stifle multiple aspects of development. Findings consistently show that peer victimization in both overt (e.g., fighting) and covert (e.g., alienation) forms predicts decreasing levels of psychological adjustment, school engagement, and academic performance (Graham & Bellmore, 2007; Juvonen, Nishina, & Graham, 2000; Nishina & Juvonen, 2005). Victimization also negatively impacts opportunities for social experiences that may promote one's sense of school belonging and affiliation (e.g., Lackaye et al., 2006; Skues, Cunningham, & Pokharel, 2005). Just as peer interactions can undermine or facilitate healthy adjustment, adolescent perceptions of school safety also play an essential role in formation of environments that are conducive to academic and prosocial development (Eccles & Midgley, 1993). When students must think about avoiding harm at school, they divert energy that should be expended on learning and other growth opportunities (U.S. Department of Education, 1993). Given these findings on youth adjustment in school, future research efforts would benefit from further examination of the relationship between school context and individual self-motivating factors such as connectedness and self-efficacy.

School Connectedness

During adolescence, the need to belong and feel connected to one's larger social ecology increases dramatically (Baumeister & Leary, 1995; Roth & Brooks-Gunn, 2003). Given this developmental transition, a growing body of literature has focused on the

impact of school connectedness in relation to adaptive and maladapative outcomes for youth (e.g., Anderman, 2002; Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Karcher, 2003). However, a challenge in studying connectedness is the considerable variance in how researchers label, define, and measure this construct (variously termed bonding, relatedness, belongingness) (Libbey, 2004). School connectedness was empirically developed as a general indictor of a student's perceived acceptance and quality of relationship with others in the school environment (Goodenow, 1993). More recently, however, scholars have asserted that connectedness is not synonymous with feelings of relatedness and belonging; rather connectedness is a behavioral and attitudinal *response* to those feelings (Karcher, 2003). Thus, school connectedness includes the reciprocal experience of caring about school and feeling bonded to those in the school environment (Eccles, Early, Frasier, Belansky, & McCarthy, 1997). A sense of school connectedness also relates to student attitudes toward the importance of school as well as level of personal involvement and commitment (McNeely & Falci, 2004; Resnick al., 1997).

Despite a lack of consistent language or definition across the literature, a strong sense of connectedness to school has been found to be positively related to numerous aspects of adolescent adjustment including achievement (Battistich, Solomon, Watson, & Schaps, 1997; Goodenow, 1993; Roeser et al., 1996), self-regulation (Baumeister, DeWall, Ciarocco, & Twenge, 2005), improved social skills (Anderman, 2002), and commitment to school goals (Finn, 1989). Furthermore, findings suggest that this construct may be one of the most important contributors to sustained motivation and engagement in secondary school, particularly among disadvantaged youth (Battistich, et

al., 1997; Finn, 1989). In contrast, an absence of connectedness to school during adolescence may contribute to social rejection, problem behavior, and psychological health concerns such as depression (Anderman, 2002; Battistich et al., 1997; Bonny, Britto, Klostermann, Homung, & Slap, 2000; Catalano et al., 2004; Loukas, Ripperger-Suhler, & Horton, 2009; Roeser et al., 1996). Given the impact of connectedness in relation to many adolescent developmental outcomes, increasing attention is being devoted to promoting this protective resource within educational settings (Karcher 2004; 2009).

School connectedness is a function of the adolescent need to belong and has been conceptualized as a student's response to interpretation of interactions with his or her environment (Fredricks, Blumenfeld, & Paris, 2004). Thus, schools can facilitate connectedness by implementing conditions that provide opportunity for attachment, interpersonal social support, or group-level experiences of belonging (Karcher, 2004). In 2006, Whitlock used both quantitative and qualitative methods to examine the correlates of connectedness in 8th, 10th, and 12th grade students. Findings from this study suggested that school connectedness is strongly influenced by opportunities for academic and creative engagement, a safe school environment, and meaningful roles given to the students. In another recent investigation, Karcher (2009) found that adolescent involvement in structured interpersonal activities within the school setting, such as cross-age mentoring programs, contributed to greater levels of school connectedness and enhanced self-beliefs. Furthermore, well-structured classroom environments with high expectations for students' behavior have also been associated with increased school connectedness, whereas strict and arbitrary discipline procedures have been shown to

have reverse effects (Furlong et al., 2003; McNeely, Nonnemaker, & Blum, 2002). These links suggest that school connectedness may play a significant mediational role in the relationship between school conditions and differential adolescent health outcomes. Continued examination of such pathways will enhance our understanding of connectedness as a characteristic of resilient youth and inform future interventions aimed at promoting school engagement. At the same time future research would benefit from examining the nature of the relationship between school connectedness and other self-mechanisms of motivation such as self-efficacy (Walker & Greene, 2009).

Academic Self-Efficacy

The construct of self-efficacy has become a major element of educational research, particularly in regard to its influence on many domains of adolescent development and success (Schunk & Meece, 2005; Urdan & Midgley, 2003; Usher & Pajares, 2008). Defined as the belief in one's ability to organize and execute courses of action that are necessary to accomplish a particular task (Bandura, 1977; 1986), self-efficacy differs from other self-beliefs, such as self-concept or self-esteem, as it pertains to a subjective perception of one's *capabilities* rather than *actual skills* to attain a goal. Simply knowing what it takes to meet a specific goal and possessing the necessary skills to succeed, one may still may not get very far if lacking belief in his or her ability to carry out a course of action. Furthermore, individuals' self-efficacy beliefs can vary widely based on specific domains of functioning (Bandura, 1986). For example a student may have high self-efficacy for writing a term paper but simultaneously have low self-efficacy for communicating the same information in a public presentation.

In the context of school, academic self-efficacy is the belief in one's ability to manage one's own educational experiences through academic mastery and self-regulated learning strategies (Bandura et al., 2001). Throughout the literature, academic self-efficacy has been identified as an important predictor of many indices of school functioning including academic achievement, aspirations, (e.g. Pajares, 2008; Schunk, 2001; Zimmerman, Bandura, & Martinez-Pons, 1992), and school retention (Caprara et al., 2008). Students with higher academic self-efficacy have been shown to work harder (Bandura et al., 2001), demonstrate more persistence with challenging tasks (Pajares, 2008), and develop better goal-setting and time-monitoring strategies than other students (Zimmerman, 2000). Adolescents with a strong sense of efficacy for learning are also more resilient to setbacks and better able to resist the adverse influences of low-achieving peers than are those with a weak sense of efficacy (Bandura et al., 1996). Maintenance of high academic self-efficacy can also have positive influence on youth career trajectories and continuing academic performance throughout college (Bandura, 1997; Bandura et al., 2001).

While the role of academic self-efficacy may seem most relevant to the scope of educational outcomes, researchers have found this factor to be significantly related to social-emotional health as well. Students with a strong belief in their capacity to manage their educational experiences may engage in coping strategies that decrease their level of distress (Bandura et al., 1996) and increase their prosocial behavior (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli, 2003), Conversely, people low in academic self-efficacy may be more likely to perceive themselves as incompetent, to overestimate failure, and consequently develop problem behaviors and depressive symptoms (Bandura,

1977; Bandura, Pastorelli, Barbaranelli, & Caprara, 1999). Cross-sectional and longitudinal findings have attested to the role that self-efficacy beliefs play in sustaining positive outcomes and preventing maladaptive outcomes over the course of adolescence (Bandura et al., 1999; Bandura et al., 2003). However, to better understand these pathways of adjustment, factors contributing to the formation of self-efficacy beliefs must also be considered (Bandura, 2006; Usher & Pajares, 2008).

Self-efficacy is grounded in a larger theoretical framework of Social Cognitive theory, suggesting that human functioning is a result of interactions among individual cognitions, emotions, behaviors, and environmental conditions (Bandura, 1977; 1986). Bandura (1977; 1986) hypothesized that self-efficacy beliefs are created and developed as students interpret information from four sources: mastery experience, vicarious experience, social persuasions, and somatic or emotional states. In the process of *mastery experience,* adolescents engage in activities, interpret the results of their actions, and then use these interpretations to develop beliefs about their ability to engage in subsequent activities (e.g., successfully completing a math problem). In addition to interpreting the results of their actions, adolescents form their self-efficacy beliefs through the *vicarious experience* of observing others perform tasks. When individuals are uncertain about their own abilities or when they have limited prior experience, looking to others as models of behavior may be the source of information that they rely on. However, this type of influence is most significant when students can identify with those who are modeling the task (Schunk & Meece, 2005; Usher & Pajares, 2008). Individuals also create and develop self-efficacy beliefs as a result of the *verbal persuasions* they receive from others (e.g., teacher feedback or encouragement to accomplish a task). Lastly, *somatic or*

emotional states such as anxiety also provide information that shape efficacy beliefs. A person who experiences a racing heart when preparing to give a speech may determine that self-efficacy for public speaking is low, regardless of the individual's actual oratory skills. Of these four areas impacting appraisal of self-efficacy, mastery experience is often considered to be most influential (Bandura, 1986*)*. However, research with women enrolled in postsecondary school has shown that verbal persuasion and competent models may also be key influences on female self-efficacy in specific domains such as career pursuit (Zeldin & Pajares, 2000; Zeldin, Britner, & Pajares, 2008).

As the social world of an adolescent rapidly expands, peers and adults within the school setting become vital sources of information concerning the student's capabilities. Furthermore, with the many new academic and relational demands of this period, self-efficacy for managing one's learning experience becomes even more critical to positive adjustment and ongoing success. Despite the evident importance of academic self-efficacy in adolescent development, particularly for those at-risk, U.S. and international research reveals a progressive decline in self-efficacy as students advance through the educational system (Caprara et al., 2008; Midgley, Feldlaufer, & Eccles, 1989; Usher & Pajares, 2008). In light of this trend, continued effort should be made to better illuminate self-efficacy's developmental process and consider how educators can foster adolescents' self-beliefs and prevent school disengagement over time (Usher & Pajares, 2008).

The Relationship Between School Connectedness and Academic Self-Efficacy

Evidence from the literature base on school connectedness and academic self-efficacy has revealed that these protective constructs are independently and positively related to numerous indices of healthy adjustment, including academic performance,

school retention, and reduced depressive symptoms (Roeser et al., 1996). Furthermore, research and theory have revealed these constructs are cultivated by similar conditions and social sources of information from the school environment (Karcher, 2003; 2004; Schunk & Meece, 2005; Usher & Pajares, 2008; Whitlock, 2006). Such findings would suggest that school connectedness and academic self-efficacy are significantly linked in relation to adolescent development. However, few studies have actually examined the nature of the relationship between these self-mechanisms of motivation (e.g., Cunningham et al., 2004; Roeser et al., 1996; Uwah, et al., 2008; Vieno, Santinello, Pastore, & Perkins, 2007). Some researchers have proposed that relationships between components of school connectedness and academic self-efficacy may be reciprocal (Uwah et al., 2008). As students' sense of connectedness and engagement with school increase, they may participate in activities and observations that build their efficacy for managing their own learning and academic performance. Likewise, as students feel more efficacious and successful in accomplishing their goals, they may increasingly care about and commit to school.

Of the studies that have examined both connectedness (or related constructs) and self-efficacy in the school setting reveal some promising findings. For example, Roeser and colleagues (1996) tested a mediational model examining the relationship between teacher–student relationships, belonging in school, academic self-beliefs, and academic achievement in early adolescence. Findings revealed that sense of belonging mediated the association between teacher–student relationships and academic self-efficacy, which in turn predicted student performance. In a more recent study addressing adjustment of students with disabilities, McMahon and colleagues (2008) found support for a model

demonstrating the impact of school conditions (social risk and protective factors) on school belonging as well as on the central role of belonging in explaining how school conditions can affect both academic self-efficacy and feelings of depression. In 2009, McMahon and colleagues furthered their research in this area by examining the impact of classroom environment on school belonging and academic self-efficacy in low-income children. Results revealed differential effects of classroom environment characteristics on sense of belonging and self-efficacy for academic mastery suggesting that student perceptions of the school setting are important to consider in relation to academic outcomes. A more thorough understanding of the role of each self-system in adolescent development requires examination of the relationship between these constructs as well as their potential mediational role in the pathway between school contextual variables and health outcomes (Uwah et al., 2008). Furthermore, given the interplay between academic and socioemotional domains of functioning, future research should continue to test models that include both types of outcomes (McMahon et al., 2009; Roeser et al., 1998).

Cross-Cultural Research on School Context, Connectedness, and Self-Efficacy

While school experiences, connectedness, and self-efficacy have been identified as influential factors promoting health outcomes in U.S. adolescents, it is less clear whether or not these complex relationships are generalizable with youth from other cultures and national contexts (Bandura, 2006; Schunk & Meece, 2005). Research studies have examined the factor structure of youth's perceived self-efficacy (e.g. Pastorelli, Caprara, Barbaranelli, Rola, Rorza, & Bandura, 2001) as well as social connectedness (e.g. Bong, 2001; Karcher & Lee, 2002; Karcher & Sass, 2010) with both individualistic and collectivist populations. Furthermore, a growing body of international

literature is demonstrating the influential role of both school and individual protective factors in the adjustment of middle and high school students (Bandura et al., 1996; Bong 2001; Caprara et al., 2003; Cunningham at al., 2004). Nevertheless, there remains a demand for continued research in different cultural settings that examine the influential role of self-system processes, such as connectedness and self-efficacy, across diverse school contexts and student populations (Schunk, 2005).

Minimal research has focused on the school experiences that influence development of youth in Latin America. However, mental health professionals in this part of the world are hearing the call to work collaboratively with schools by delivering integrated systems of care (Belfer & Rohde, 2005). Additionally, Martinez's (2007) review of adolescent development in Chile calls for increased attention to how daily life contexts, such as the school setting, shape the competencies and skills of adolescents, particularly those at risk for poor psychosocial and educational outcomes. In conjunction with these views, recent investigations in this region have revealed preliminary evidence that protective factors such as connectedness and self-efficacy may be important foci for future intervention efforts with youth. For example, a examination of multidimensional connectedness with a sample Chilean adolescents showed that students with lower connectedness to school, teachers, and peers were also more likely to engage in problem behaviors, and more likely to be perceived by teachers as having attention or emotional difficulties (McWhirter & McWhirter, 2011). In another study, both school connectedness and academic self-efficacy were found to be positively associated with adolescent expectations for the future (McWhirter & McWhirter, 2008). These findings demonstrate that there is a need for continued examination of school-based factors and

individual protective factors that influence the multidimensional health outcomes of Chilean youth (Maddaleno & Silber, 1993). Targeting the school setting as a venue for cost-effective interventions may be particularly critical for at-risk youth in middle, low-income, and impoverished communities who might otherwise have limited access to health services.

Social and Educational Context in Chile

In a comprehensive literature review by McWhirter and McWhirter (2012), the authors examine Chile as a developing nation that has experienced profound changes to its educational system in the last thirty years. During the 1980s, the decentralization of school administration and the market driven privatization of education contributed to significant inequities between public and private schools (Cox, 2006). With shifts in Chile's political climate since the Pinochet dictatorship, successive governments have been making efforts to improve the nation's educational system with attention to increasing resources and conditions in schools, national testing, as well as improving the quality of teaching and curricula. In addition, substantial efforts have been made to address equity and integration with regard to rural, urban poor, and female students (Holm-Nielsen et al., 2004). Two specific laws also have made structural contributions to educational reform. First, a 1997 law required all schools to transition to a full day schedule (Cox, 2004). Second, in 2003 secondary education became mandatory for all youth under the age of 17. As a result of these efforts to increase educational opportunities, more Chilean youth are enrolled in and are completing high school (MINEDUC 2009, 2010), and rates of participation in higher education have also increased (INJUV, 2009; MINEDUC, 2010). Positive changes to this system are also

reflected in the perceptions and values presented by Chilean youth. Even among Chilean young people of lower socioeconomic status, Palacios and Cárdenas (2009) reported that 94.5% agreed that "education is important for growth as a person," and 88.5% agreed that "having a good education helps achieve success in life." Chilean adolescents are also setting high aspirations and expectations of future educational achievement. This is particularly true for women, with a larger proportion of women (65.9%) aspiring to receive a university degree, compared to men (56.9%) (Velasquez, Martinez, & Cumsille, 2004).

Despite achievements of Chile's reform efforts and the rising aspirations of the nation's youth, there remains broad consensus that the school system continues to demonstrate significant social inequalities (Cox, 2006). This is evident in the sense that youth of higher socioeconomic sectors are able to access and complete their educations, while those in lower socioeconomic sectors must prioritize actions that assure personal and family survival, sometimes making it difficult to attend to and complete their studies. This issue is reinforced by research addressing low-income high school students' perceptions about obstacles to fulfilling life goals (Contreras, 2002). Furthermore, despite the implementation of significant curricular adjustments, student learning outcomes measured by national standardized testing remain stratified (Redondo, 2009; Redondo, Descouvieres, & Rojas, 2004). These findings highlight the continued importance of examining the relationship between school conditions and domains of adolescent adjustment. It addition it may be important to consider how protective mechanisms of motivation, such as self-efficacy and school connectedness, may help to buffer against

contextual risk factors at the macro- and microsystemic levels that can hinder academic development (Cox, 2006).

In a recent article on aims of Chilean education policy, Raczynski and Muñoz-Stuardo (2007) asserted the importance of returning reform efforts to focus on improving student learning processes. In conjunction with this discussion, the authors also reviewed research findings on common characteristic of effective schools from low income sectors of Chile. Some of the key commonalities included 1) clear, consistent rules about discipline, 2) high expectations for students, 3) provision of ongoing feedback, and 4) warm, supportive teacher-student relationships. In addition to these characteristics, effective schools were all found to take actions to build an image of the school that underlines its strengths, motivating the pride of all concerned and reinforcing their commitment. Furthermore, a primary concern among teachers was identifying mechanisms that motivate students to learn. By focusing on commonalities of low-income schools, the authors aimed to challenge notions about educational inequity and assert that many school conditions that promote positive student outcomes are amenable to change. This discussion proves to be promising for the future of adolescent research and intervention in Chile due to the fact that many of the issues presented are also closely aligned with the preexisting literature base on the relationship between school, individual protective factors, and adjustment outcomes.

Given the current education reform focus and salient risks faced by Chilean youth, research efforts focused on examining the relationships between school context, school connectedness, academic self-efficacy, and adjustment outcomes for this population are clearly warranted. Furthermore, this constellation of relationships should be tested to

determine if demographic variables that contribute to inequality, such as gender or school placement, have moderating affects on outcomes. Scholars have already begun proposals to evaluate universal, school-based interventions with the aim to improve the socioemotional health of adolescent students from low-income areas of Santiago (e.g., Araya et al., 2011) who may not otherwise receive mental health care (Bethel & Rohde, 2005). Efforts such as these, combined with continued educational reform, will provide educators and policy makers with new information that may serve to promote more positive perceptions of school climate as well and increased empowerment of Chile's youth.

Study Purpose

In light of the Chile's current focus on education reform (Holm-Nielsen et al., 2004; McWhirter & McWhirter, 2012), as well as literature emphasizing the critical role of school in both academic and socioemotional development for youth in the U.S. and elsewhere, I will examine the relationship between school and individual factors that impact multidimensional adjustment outcomes in a sample of Chilean high school students. Specifically, I will examine the complex relationships that have been found elsewhere, to determine if specific school-based risk and protective factors predict educational and socioemotional adjustment outcomes. Furthermore, I will examine the ways in which these relationships are mediated by two individual protective factors: Academic Self-Efficacy and School Connectedness. I seek to determine whether the relationships between school factors and adjustment outcomes are significant as a function of sex. Last, I seek to determine whether the relationships between school factors and adjustment outcomes are significant as a function of school site. The

theoretical mediational model tested in this study is depicted in Figure 1. The visual representation of hypothesized relationships between variables is depicted in Figure 2. By examining the proposed constellation of variables in one model, we may better understand the direct and indirect effects of these co-occurring factors on adolescent adjustment and wellbeing.

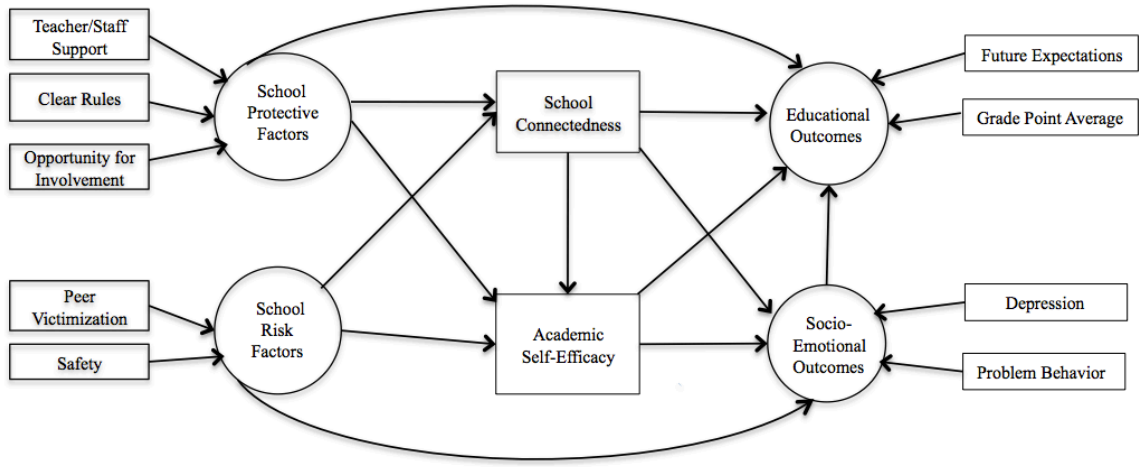

Figure 1. Overall conceptual mediation model.

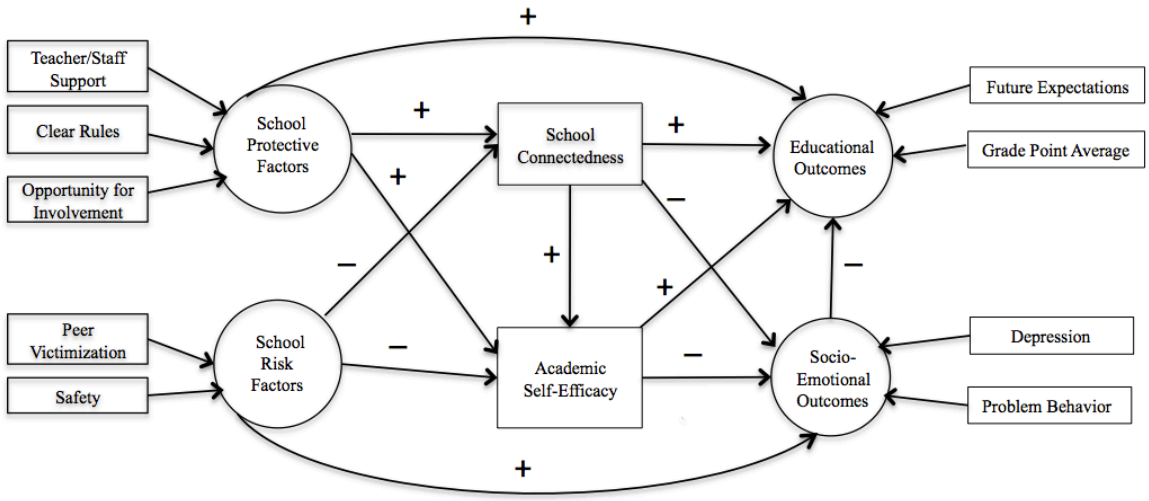

Figure 2. Hypothesized relationships between variables

In order to test the proposed model, I first examined the direct and indirect relationships between the variables. Second, using structural equation modeling, I examined overall model fit. Third, I conducted a multigroup invariance analysis and compare model fit between males and females as well as between the four participating schools. Findings from this study have the potential to contribute to the literature on the influential role of school in adolescent development in Chile, informing future school and classroom interventions that promote student motivation, resilience, and optimal functioning throughout adolescence and into adulthood.

Research Questions

In the present study, the interplay among adverse and protective school contextual factors, school connectedness, academic self-efficacy, and adolescent socioemotional and educational outcomes is examined through the test of a theorized structural equation model, presented in Figure 1. The particular research questions of this investigation are:

1. Does the hypothesized model provide a satisfactory fit to the sample data?
2. What are the direct and indirect influences of perceived school contextual factors on school connectedness, academic self-efficacy, future expectations, academic performance, problem behavior, and depressive symptoms?
3. What are the direct and indirect influences of school connectedness on academic self-efficacy, future expectations, academic performance, problem behavior, and depressive symptoms?
4. What are the direct and indirect influences of academic self-efficacy on future expectations, academic performance, problem behavior, and depressive symptoms?

5. Is the hypothesized model invariant, that is does the model fit consistently, across sex and the four participating schools located in distinct socio-economic settings?

Based on the current body of literature pertaining to the role of school and individual factors in adolescent development, and emerging from these research questions, I propose the following study hypotheses, which are also represented in Figure 2:

1. Perceived protective factors (clear rules and expectations, teacher support, opportunities for academic and extracurricular involvement) will correlate positively with school connectedness, academic self-efficacy, grade point average, and future expectations. These factors will also correlate negatively with depressive symptoms and problem behavior.
2. Perceived risk factors (peer victimization, safety) will correlate negatively with school connectedness, academic self-efficacy, grade point average, and future expectations. These factors will also correlate positively with depressive symptoms and problem behavior.
3. School connectedness and academic self-efficacy will significantly mediate the relationship between school contextual factors and health outcomes.
4. Academic self-efficacy will partially mediate the relationship between school contextual factors and health outcomes.

   The relationship between variables in the structural model will differ as a function of sex and school site. More specifically, the relationship between variables in the model will be more significant for females than males. In addition, the relationship between variables in the model will be more significant for students

in a public school setting (schools A-C) than students in a private school setting (school D).

CHAPTER II

METHODS

Participants

Participants in this study were 893 (428 male and 465 female) 9th through 12th grade students sampled from four distinct high school settings in and around Santiago, Chile. Three of the four schools were identified by the Chile Ministry of Education as "priority" (meaning "high risk") public high schools based on academic achievement, area poverty, local economic prospects, and school demographics (e.g., drop-out rate). School A is a public high school located in a poor, suburban *barrio* of Santiago (n = 205). School B is a public high school located in a poor, semi-urban *barrio* on the outskirts of Santiago (n = 160). School C is a public high school located in a small urban community serving a large rural agricultural area within an hour of Santiago (n = 357). School D is a private Catholic school that is partially subsidized by the government and located in central urban Santiago (n = 171).

Participant information is presented in Table 1. Age of student participants ranged from 12.3 to 20.9 years, with a mean age of 16.6 years (SD = 1.3). Grade distribution across student participants was as follows: 279 (31.2%) were in 9th grade; 277(31.0%) were in 10th grade; 180 (20.2%) were in 11th grade; and 157 (17.6%) of students were in 12th grade. With respect to family structure, 58.3% of the student participants lived with their biological mother and father; 31.0% lived with their biological mother, but not their biological father; 3.6% lived with their biological father, but not their biological mother; 7.1% lived in other family structures without either their biological mother or biological

father. With respect to parents' highest level of education, 57.9% of mothers had less than a high school degree; 26.7% had a high school degree; less than 1% had some technical training; 7.1% completed technical training; 1.3% had some college coursework; less than 1% completed college ("licensed"); 5% received a college degree ("titled"); and less than 1% received a graduate degree. For fathers, 54% had less than a high school degree; 26.4% had a high school degree; 1.7% had some technical training; 6.7% completed technical training; 3.4% had some college coursework; less than 1% completed college ("licensed"); 5.5% received college degree ("titled"); and 1.5% received a graduate degree.

To estimate socioeconomic status, students were asked about their financial circumstances. A total of 124 (13.9%) participants indicated that their family "did not have enough money," 627 (70.2%) participants noted they "had enough money to get by," 67 (7.5%) participants revealed they "only worried about getting additional things," and 75 (8.4%) disclosed they "do not have to worry about money." Thus, the majority of students in this sample appeared to represent a low- to lower-middle socioeconomic class. To further estimate socioeconomic status, we examined our data using an adapted version of a formula developed by Wenk and Slaughter (2011). This approach uses a point system by assigning point levels based on the data (lower points assigned to responses representing lower SES) and combining data on following variables: mother's educational level, father's educational level, number of people living in the house, and household income (as stated qualitatively and noted above). Using Wenk and Slaughter's scale, we estimated that 82.9 % of students in this sample represented a low socioeconomic level, 14.1 % represented a middle socioeconomic level, and 3%

represented a high socioeconomic level (see Appendix A for the original Wenk & Slaughter SES coding system scale). Nationally, about 6% of Chileans are members of indigenous groups and the remainder identify as Mestizo (Martinez, Cumsille, & Thibaut, 2006), though these demographic data were not collected on the current sample and the school locations are not in areas that have high levels of indigenous populations.

Measured Variables

All measures are presented in Appendix B. The current study utilized existing data that was part of a larger multi-agent, multi-method research project conducted in 2007. The 2007 project involved: (a) assessing school, family, community, and individual risk and protective factors related to the school and work success of Chilean adolescent students in poor communities in and near Santiago, Chile that are characterized by limited access to educational resources and severe social inequality; and (b) assessing the feasibility of providing a school-based family intervention for Chilean youth that targets the identified risk and protective factors and enhances educational achievement, access to educational resources, and future social and economic opportunity. Measures in this study have all been successfully used in pilot work with Chilean adolescents, parents, and teachers (e.g., McWhirter & McWhirter, 2008; 2011).

Demographics

Participant students completed a brief, standard demographic survey to assess basic information in a number of areas, including socioeconomic status (SES), family income, parent education and occupation, number of members living in the home, size of the living environment, age, sex, and grade level. Participants also reported the level of education that they would like to attain ("educational aspirations") and the level of

education that they actually expected they would attain ("educational expectations").

Student Perceptions of School Context

Student perceptions of school context were measured using the Child and Family Center Student Self-Report Survey (SSRS; Dishion & Stormshak, 2001). The SRSS assesses numerous constructs relevant to youth development such as problem behavior, substance use, and parenting practices. It was developed from a NIDA-funded intervention trial and then later adapted for continued research by Dishion and Stormshak (2007). For the purpose of this study, I included subscales from the SRSS that assess student perceptions of school context with regard to the following factors: opportunities for student involvement, positive reinforcement from teachers, classroom management, safety, and experiences of bullying from peers. Twenty-six items were rated on a 5-point, Likert-type, response scale to assess the prevalence of or degree to which the student experienced each school factor. Response options range from "1 = Never or almost never" to "5 = Always or almost always." An example item for perceptions of opportunity for student involvement is: "In class I have the opportunity to participate in discussions and activities." An example item for perceptions of positive reinforcement from teachers is: "The teachers let me know when I am doing a good job." An example item for perceptions of classroom management is: "In my high school there are clear rules about what students can and cannot do." An example item for perceptions about experience of bullying is: "I was bothered for no reason." For items where students rate their feeling of safety in various areas of school (e.g., "In school hallways"), response options range from "1 = Not safe" to "5 =Very safe." School context subscales of the SSRS have internal consistency with this sample ranging from $\alpha = .77$ to $\alpha = .88$.

School Connectedness

The Hemingway Measure of Adolescent Connectedness (MAC; Karcher, 2003) is a 78-item, 6-point, Likert-type response measure that assesses connectedness among adolescents in 15 domains most important to their ecology, including connectedness to parents, religion, peers, school, and neighborhood. Response options range from "1 = not at all true" to "5 = very true," with a sixth option of "Not clear" for some questions. A higher score on the MAC indicates a greater feeling of connectedness in a particular domain. This measure has shown strong internal consistency and concurrent validity in U.S. and Taiwanese samples (Karcher & Lee, 2002). It has also demonstrated factorial validity, reliability, and cross-cultural invariance across gender and ethnic groups in the U.S (Karcher & Sass, 2010; Sass, Castro-Villarreal, McWhirter, McWhirter, & Karcher, 2011). For the purpose of this study, we used a modified 57-item Hemingway measure. From that measure, we used a composite variable, "School Connectedness," pertaining to connectedness to one's school experience, teachers, and school peers (16 items). Connectedness to school experience assesses the importance youth place on school and how actively they try to be successful in school (e.g., "I get bored in school a lot"). Connectedness to teachers assesses efforts made to get along with teachers as well as concerns about earning teachers' respect and trust (e.g., "I do not get along with some of my teachers"). Connectedness to peers evaluates feelings about peers and about working with peers in class (e.g., I like working with my classmates). A high degree of factorial and measurement invariance has been demonstrated for the school connectedness factor in a study examining U.S. and Chilean adolescents (Sass et al., 2011). Internal

consistency for the composite variable "school connectedness" with this sample is α = .80.

Academic Self-Efficacy

The Children's Multidimensional Self-efficacy Scale (CSES; Bandura, 2001) is a 55-item, 7-point, Likert-type response measure of children's perceptions of the ease with which they can perform a variety of tasks in nine distinct domains such as academic achievement, self-assertion, and extracurricular activities. All item stems begin with the phrase, "*How easy would it be for you to…",* and response options range from "1 = not as all easy" to "7 = very easy." Youth with higher scores indicate greater levels of self-efficacy in a particular domain.

For the purpose of this study, I use a latent variable "Academic Self-Efficacy" indicated by 2 subscales of the CSES that measure the domains of academic achievement and self-regulated learning (20 items). Perceived efficacy for *academic achievement* pertains to one's belief in the ability to master different areas of coursework. An example item is: "Learn reading, writing, and language skills." Perceived efficacy for *self-regulated learning* (Zimmerman et al., 1992) pertains to one's belief in the ability to structure environments conducive to learning. An example item is: "Arrange a place to study without distractions." These domains of self-efficacy were combined as a composite, latent variable called "academic self-efficacy." The factor structure of perceived self-efficacy subscales has been replicated cross-nationally, and predictive validity has been verified (Bandura et al., 2001; Pastorelli et al., 2001). Internal consistency reliabilities for academic achievement and self-regulated learning with this sample were α = .82 and α = .90, respectively.

Academic Achievement

Academic achievement was measured in the form of a self-reported grade point average (GPA). In Chile, grades are assigned on a scale from 1.0 to 7.0, with 7 being the highest possible grade. School reported grades are available for a portion of the present sample, and for that subset, student-reported grades are significantly correlated with school-reported grades (n = 547; r = .76).

Future Expectations of Work and Educational Attainment

The Future Expectations Scale for Adolescents (FESA; McWhirter & McWhirter, 2008) is a 24-item, 7-point, Likert-type response measure developed in Chile for use with adolescents, that assesses the degree to which the respondent believes a series of statements about his or her own future. The FESA does not assess outcome expectations as defined by Bandura (1997), because the expectations assessed are not the result of performance of specific tasks or behaviors. Items focus on career and educational attainment, expectations for marrying and having children, participation in the community via sports and faith activities, and leadership expectations. All item stems begin with, "When I am an adult....", and response options range from "1 = I do not believe this at all" to "7 = I certainly believe this." High scores on the FESA indicate strong belief in meeting specific expectations about the future. For the purpose of this study, analyses will include only the FESA subscale measuring future expectations for work and education (10 items). Sample items include "I will achieve the level of education that I desire" and "I will find work that I enjoy." Internal consistency for the FESA Work and Education subscale with this sample is α = .88.

Depressive Symptoms

The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1972) is a 20-item, 4-point, Likert-type response measure of depressive symptoms. Respondents report the frequency of depressive symptoms they have experienced in the past week. Responses options range from "0 = less than a day" to "3 = five to seven days." Higher total scores are considered indicative of depression. The CES-D has been used with diverse populations and has shown internal consistency reliability estimates of $\alpha = .85$ and higher with general and clinical samples. Internal consistency for CES-D with this sample is $\alpha = .89$.

Problem Behavior

Student problem behavior was assessed using an 11-item, 6-point, Likert-type subscale of the Child and Family Center Student Self-Report Survey (SRSS; Dishion & Stormshak, 2001). Respondents report the frequency of specific acts they have engaged in within the last month. Response options range from "1 = never" to "6 = more than 20 times." Example items are, "Skipped school without an excuse," "Stole or tried to steal things worth $5 or more," and "Purposefully damaged or tried to damage property." Internal consistency estimates of $\alpha = .83$ or higher have been reported with diverse samples (Stormshak, Dishion, Light, & Yasui, 2005; Véronneau & Dishion, 2011). Internal consistency for the Problem Behavior subscale with this sample is $\alpha = .86$.

Translation and Administration Procedures

While all measures were already available in Spanish, because of national and regional differences in language, our principal research assistant, a student completing his teaching degree in Chile and a native Spanish speaker, reviewed each measure and made

minor modifications to ensure language appropriateness for Chilean Spanish speakers. He consulted with the researchers on the intended meaning of each item, and followed up by consulting with Chileans involved in the educational system on the best way to word phrasing for a few items. The researchers reviewed each modification. A Chilean school guidance counselor at one of the schools then reviewed each item of each measure and approved all items with respect to clarity and comprehension for Chilean youth. Finally, measures were administered to a 7th grade student from another school to assess clarity, and the student reported understanding all aspects of the survey.

Parent consent forms for student participation were presented and completed during a standard parent-teacher meeting that is required monthly by each school. For students with parent consent, informed assent and study measures were administered to students in intact classrooms by five research assistants, each assigned to one of four schools. Students without permission or who did not assent to participate engaged in school-related reading or homework. The student response rate ranged from 73% to 99% across the four schools with an average of 87%. Data entry was completed by the principal investigators and five research assistants, and then checked by two Chilean psychology students with experience in data entry. All entered data were then independently checked for accuracy by the investigators.

Planned Analyses

Preliminary Analyses

First, the data was assessed for significant outliers, missing data, and attrition. It was reviewed to determine if any test assumptions had been violated. After analyzing patterns of missingness, missing data were treated using the Multiple Imputation

procedure (Rubin, 1987). Descriptive statistics and correlation analyses were conducted using Predictive Analytics Software 20.0 (PASW; SPSS Inc., 20011). Means and standard deviations for all variables and measures were described and listed in Table 1. Also, alpha-coefficients and bivariate correlations between variables were calculated and displayed in a correlation matrix in Table 1.

Main Analyses

AMOS 7.0 (Arbuckle, 2006) was used to run structural equation modeling for the proposed model, testing for direct effects, indirect effects, and model fit. Next, separate multiple group analyses were performed to test for model invariance across the two sexes (male and female) as well as the four schools represented within the sample.

The model has two mediators (school connectedness and academic self-efficacy) that will be included in path analyses simultaneously. The advantage of this approach is that one learns if the mediation of one variable is independent of the effect of the other mediators. However, multiple mediators must be conceptually distinct and not too highly correlated.

Model fit was assessed with consideration of the chi-square statistic, the Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA) (Kline, 2005). The fit indices in a multi-group analysis indicate whether the same model can be fit to each of the sex and school groups adequately. When the parameters are estimated, the model is constrained as the structural regression weights (the direct and indirect paths) are forced to be the same for the model in each group. Thus, this is a strict test of the hypothesis that the model fits in each group (Kline, 2005).

Statistical Power and Sample Size

In structural equation modeling, multiple guidelines are found in the literature for estimating the necessary sample size to assure adequate power. Mitchell's (1993) rule of thumb is commonly used and states that there should be 10 to 20 times as many cases as observed variables. It is also suggested that researchers go beyond the minimum sample size recommendations when data are non-normal or incomplete. Based on the upper limit of Mitchell's (1993) rule, a total sample size of 200 is needed to achieve a power of .95.

CHAPTER III

RESULTS

Preliminary Analyses

All preliminary analyses were conducted using Predictive Analytics Software 20.0 (PASW; SPSS Inc., 2011). First, the data was screened to assess for missing values, significant outliers, and violations of test assumptions. Next, descriptive statistics and correlation analyses were conducted for all study variables. Means, standard deviations, and Pearson product correlations for all study variables are presented in Table 1.

Missing Data

Results from the Missing Values analysis in SPSS 20.0 revealed that missing values for each study variable ranged from .01%-9.1%. Patterns of missingness were then assessed for study variables with more than 5% incomplete data. Data can be assumed to be missing at random (MAR) if the pattern of missingness is not related to the variables of interest (Enders & Bandalos, 2001). Results of Little's missing completely at random test using the estimation-maximization method resulted in an insignificant chi-square statistic, (X^2= 119.31, df = 97, p = .06). This result indicates that the data are missing completely at random. Data that is missing at random or missing completely at random can then be handled using the Maximum Likelihood estimation method when performing main structural equation modeling analyses. However, my intention to use bootstrapping procedures for mediational modeling required that the data set be complete prior to analyses. Therefore, I handled the missing data with an automatic multiple imputation method using the linear regression model type available in SPSS 20.0. Variable means

for imputed data did not differ significantly when compared to those from the original data.

Statistical Assumptions

Distributions of each variable in the model were examined with histograms and bivariate scatterplots. Study variables were also examined for normality using Kline's (2005) cutoff value of 3.0 for skewness and 10.0 for kurtosis. The univariate histograms revealed no extreme outliers and roughly normal distributions for each of the variables except for student report of problem behavior (see Figure 3). Non-normality for data in missing completely at random condition does not influence the level of bias in parameter estimates, but the presence of extreme non-normality may increase the rate of model rejection due to inflation of the chi-square statistics (Enders & Bandalos, 2001). An analysis of the assessment of the problem behavior measures showed that outlier cases were the major cause of non-normality. The participants' frequent reports of low levels of problem behavior led to positively skewed leptokurtic distribution (skew = 2.9, kurtosis = 10.1) and, hence, those who reported high levels of problem behavior or peer victimization became outlier cases. Because the deletion of the outlier cases would cause the loss of important information, outliers were not omitted. Instead the problem behavior variable was transformed using the log of the observed factor score produced by principle axis factoring. Inspection of the bivariate scatterplots and correlation coefficients revealed roughly linear relationships between the criterion variables and predictor variables and no multicollinearity among the variables. Finally, the distributions of

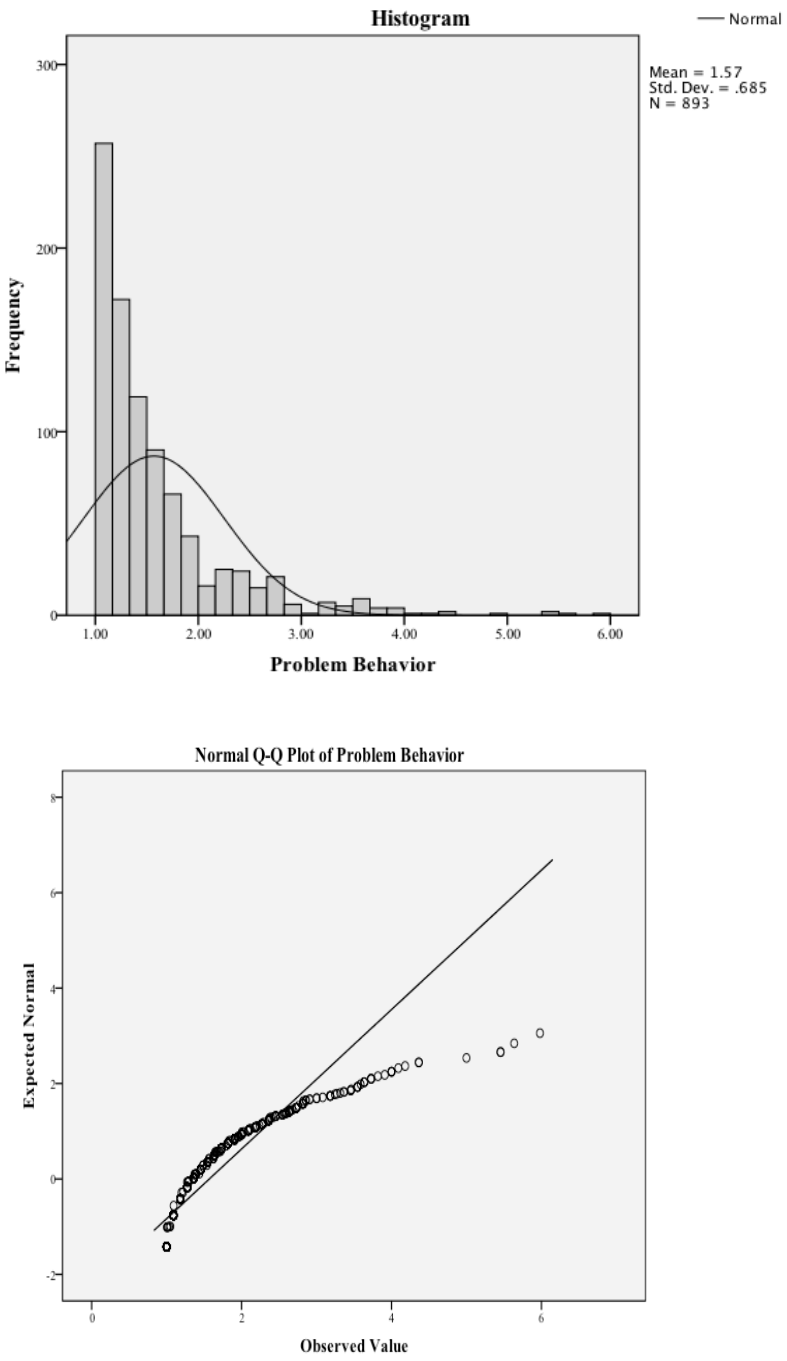

Figure 3. Plotted Tests of Normality for Observed Variable: Problem Behavior

residuals across each study variable demonstrated no evidence of heteroscedasticity with the exception of student report of problem behavior. As stated above, this variable was transformed in an attempt to improve the performance of the models.

Correlation Analyses

Results of a Pearson Product moment correlation (see Table 1) revealed significant relationships between many of the study variables. Teacher support was significant and positively correlated with clear rules at school, opportunities for involvement, and school safety. This protective variable was also significant and positively correlated with GPA and future expectations and significant and inversely correlated with problem behavior. These findings indicate that as perceptions of teacher support increase, perceptions of protective school context increase, positive academic outcomes increase, and problem behaviors decrease. The same relational trends applied to opportunities for involvement, with significant positive correlations existing for school safety, GPA, and future expectations while a significant negative relationship existed between opportunities for involvement and student report of problem behavior and depression.

Academic self-efficacy and school connectedness, the proposed mediating variables, demonstrated significant univariate correlations with all other study variables. The variables most strongly correlated to academic self-efficacy included opportunities for involvement, school safety, and future expectations. The variables most strongly correlated to school connectedness included teacher support, opportunities for involvement, and future expectations. Self-efficacy and school connectedness also shared a significant, positive correlation without demonstrating multicollinearity. These findings

Table 1. Means, Standard Deviations, and Pearson Product Correlations (N =893)

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Teacher support	_										
2. Clear rules and expectations	0.4**	_									
3. Opportunities for involvement	0.50**	0.32**	_								
4. Peer victimization	-0.01	-0.02	-0.12**	_							
5. School safety	0.20**	0.16**	0.33**	-0.22**	_						
6. School connectedness	0.32**	0.13**	0.30**	-0.19**	0.21**	_					
7. Academic self-efficacy	0.31**	0.14**	0.34**	-0.07*	0.28**	0.43**	_				
8. Grade point average	0.09**	-0.01	0.19**	-0.11**	0.09**	0.25**	0.33**	_			
9. Future expectations for work and education	0.14**	0.03	0.18**	-0.14**	0.18**	0.32**	0.39**	0.21**	_		
10. Problem behavior	-0.13**	-0.02	-0.14**	0.30**	-0.07*	-0.14**	-0.09**	-0.14**	-0.09*	_	
11. Depression	0.02	0.08*	0.10**	0.22**	-0.16**	-0.19**	-0.07*	-0.10**	-0.20**	0.14**	_
Mean	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88
Standard deviation	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08

** $p < 0.05$; ** $p<0.01$*

suggest that as academic self-efficacy and school connectedness increase, positive academic outcomes increase while negative socioemotional outcomes decrease. Although the variables in this study were correlated, they all possessed correlation coefficients lower than r = 0.60 and as such could potentially account for unique variance in subsequent structural equation modeling (Pedhazer, 1997).

Main Analyses

Amos 7.0 was used to examine the overall fit of the data to the model, and maximum likelihood estimation (MLE) to calculate path coefficients and model fit indices. I tested a hybrid structural equation model consisting of both latent and observed variables. As suggested by Kline (2005), I first conducted a confirmatory factor analysis of the measurement model for all latent variables. I then conducted a path analysis of the relationships in the structural model. Last, I performed a multi-group analysis to test for invariance of model fit between males and females as well as between public and private schools in the sample.

Model fit was assessed with a variety of goodness-of-fit indices: chi-square value (X^2) and significance, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the standardized root-mean-squared residual (SRMR), and the root-mean-square error of approximation (RMSEA) (Hu &Bentler, 1999). The model is considered a poor fit for the data if the chi square value is statistically significant ($p < .05$) and the ratio of chi square to degrees of freedom (df) is greater than 3 (Mertler & Vannatta, 2002). Although chi-square is the original fit index for structural models, its validity has been questioned because it is likely to be significant with large sample sizes and models with numerous variables and paths, such as in the present study. The CFI is more acceptable as it

approaches values of 1 and values over .9 to .95 are considered indicative of acceptable and good model fit (Hu & Bentler, 1999). Hu and Bentler (1999) also suggest the use of TLI because it balances the effect of model complexity and is less sensitive to sample size and non-normal distribution. For the TLI, values of .95 and higher are considered indicative of good model fit. The RMSEA is an estimate of error due to the approximate fit of the model. Less error is more desirable, so RMSEA values below .06 are considered an indication of good model fit, between .06 and .08 is fair fit, and between .08 and .10 is mediocre fit (Hu & Bentler, 1999; Kaplan, 2000). Lastly, for the SRMR, values below .08 are considered indicative of good model fit.

Measurement Models

A confirmatory factor analysis (CFA) was conducted for four measurement models based on each of the following four latent variables in the proposed structural model: School Protective Context, School Risk Context, Educational Outcomes, and Socioemotional Outcomes. Of the four originally proposed latent variables, only "School Protective Context" had an adequate factor loading, explaining 53%, 29%, and 51% of the variances in the three observed variables (teacher support, clear rules, opportunities for involvement, respectively) with standardized beta weights ranging from .55 to .72.

"School Risk Context" had a poor factor loading, with only 7% of variance in "School Safety" explained by the latent construct. When "School Risk Context" was linked with "School Protective Context" for a simultaneous CFA, the measurement model fit well to the data only when "School Safety" loaded on both latent variables. Thus, school safety was removed from the model. I then created an alternative measurement model for "School Risk Context" in which "Peer Victimization" was split

into two factors identified by exploratory factory analysis: "Overt bullying" and "Avoidance". A CFA demonstrated that this measurement model fit adequately to the data with equally strong loadings explaining 53% and 52% of the variances in the two observed variables (overt bullying and avoidance). When "Peer Victimization" was then linked to "School Protective Factors" for a simultaneous CFA, the combined measurement model also demonstrated an adequate fit to the data (see Figure 4).

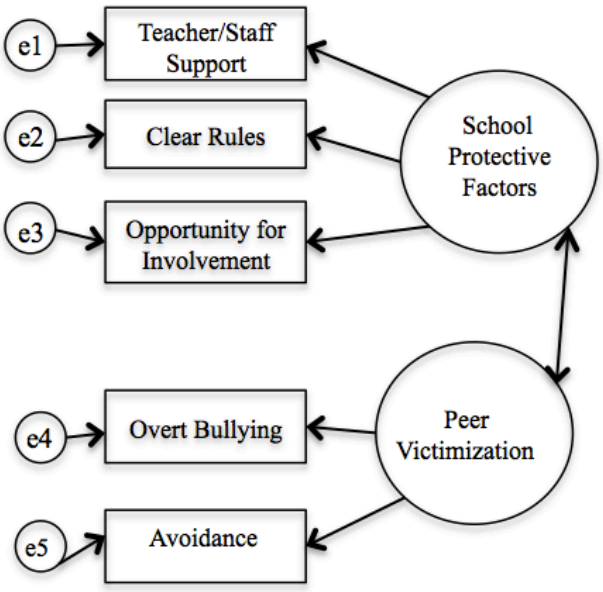

Figure 4. Modified Measurement Model: School Protective Context and Peer Victimization

"Educational Outcomes" had a poor factor loading, with only 2% of variance in "GPA" explained by the latent variable. "Socioemotional Outcomes" also demonstrated a poor factor loading, only explaining 11% and 14% of the variances in the two observed variables (problem behavior and depressive symptoms). In addition, when "Educational Outcomes" and "Socioemotional Outcomes" were linked for a simultaneous CFA, the

combined measurement model demonstrated poor fit to the data. Furthermore when these two latent variables were joined with "School Protective Factors" and "Peer Victimization" for a simultaneous CFA, the unconstrained measurement model fit adequately only when problem behavior cross-loaded onto other latent variables. Given these results, I decided to separate the four outcome variables of interest. I then ran exploratory and confirmatory factor analysis for future expectations for work and education, problem behavior, and depressive symptoms to determine the number of factor loadings for each scale. Future expectations and problem behavior were determined to be single factor observed variables. The depressive symptoms scale, however, loaded three distinct factors from its items. The first factor included items representing sad or upset mood. The second factor included items representing shifts in mood and interests. The third factor included items representing a sense of restlessness, fatigue, or lack of motivation. Given these results, I decided to make "Depressive Symptoms" a latent variable using the aforementioned three factors. CFA results indicated strong loadings explaining 65%, 60%, and 49% of variances in the three observed variables, respectively, with standardized beta weights ranging from .70 to .81.

Last, I examined a final, unconstrained measurement model consisting of 3 latent variables (School Protective Factors, Peer Victimization, and Depressive Symptoms). CFA results revealed that this measurement model demonstrated good fit to the data without cross-loadings ($X^2(18) = 53.26$, $p<.05$, $X^2/df = 2.85$, CFI = .979, SRMR = .033, RMSEA = .047) (see Figure 5). Given the modifications that were made among latent constructs during measurement model testing, a new hypothesized model was developed for continued analyses (see Figure 6).

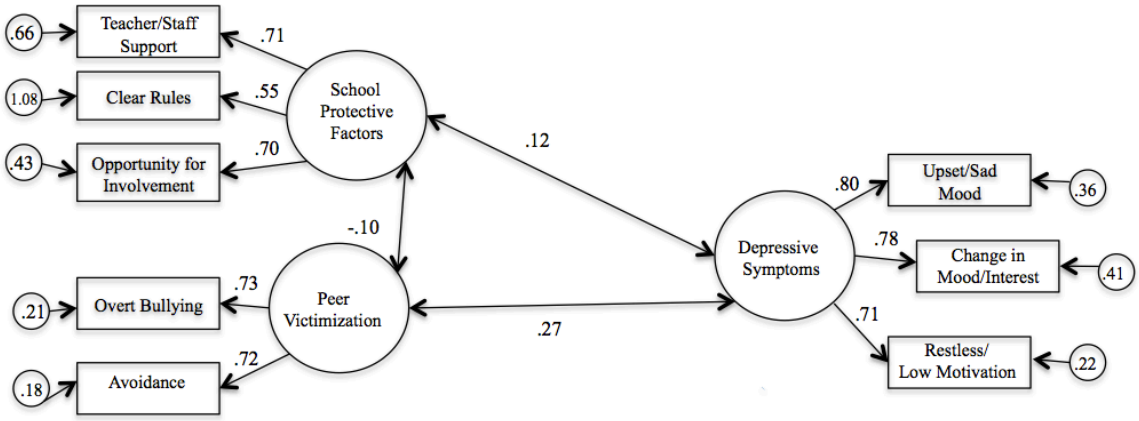

Figure 5. Modified Measurement Model: Latent Variables. All standardized regression coefficients and factor loadings are significant at the p <.05 level.

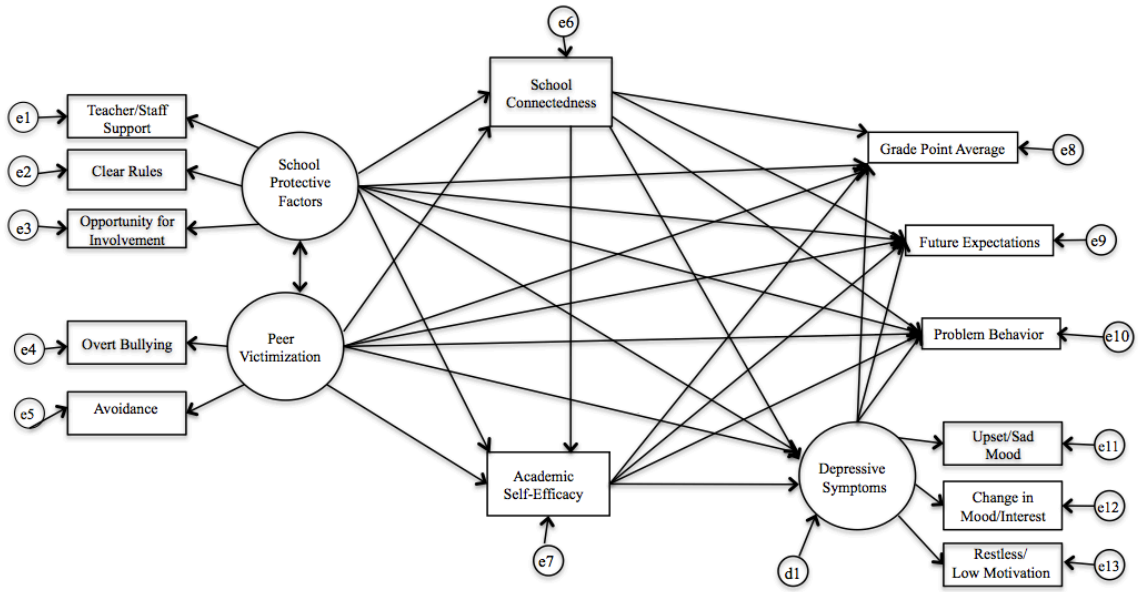

Figure 6. Hypothesized Mediational Model with Modifications

Testing the Hypothesized Structural Model: Direct Effects

In order to examine how students' perceptions of protective school context and peer victimization relate to their educational and socioemotional outcomes, I tested a model

that posited only relationships between predictor and outcome variables. Academic self-efficacy and school connectedness, mediating variables of interest, were not included in this phase of model analysis. The proposed model proved to exhibit a good fit to the data ($X^2(33)= 78.5$, $p <.05$, $X^2/df =2.38$, CFI = .976, SRMR = .028, RMSEA = .039). Upon review of the direct effects in this model, only one path was insignificant: peer victimization to GPA. When a trimmed model was retested, the chi-square comparison was not significant ($\Delta X^2(1) = 0.52$, $p > .05$), suggesting that the trimmed model neither improved upon nor diminished the alternative model fit. Thus, I retained the alternative hypothesized model for continued analyses. Model indices of fit are provided in Table 2.

Table 2. Goodness-of-Fit Indicators for the Hypothesized Model

Model	X^2	*df*	CFI	TLI	SRMR	RMSEA	95% CI for RMSEA
Measurement	53.26	18	0.98	0.97	0.033	0.047	0.037, 0.058
No ASE or SC	78.51	33	0.98	0.96	0.028	0.039	0.031, 0.051
ASE only	107.41	38	0.97	0.95	0.029	0.045	0.035, 0.055
SC only	113.50	38	0.97	0.94	0.029	0.047	0.037, 0.057
ASE and SC	131.85	43	0.97	0.94	0.029	0.048	0.039, 0.058
Trimmed	157.00	55	0.96	0.94	0.034	0.046	0.037, 0.054

Note. ASE = academic self-efficacy; SC = school connectedness; CFI = comparative fit index; TLI = Tucker-Lewis index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation; CI = confidence interval.

Testing the Hypothesized Structural Model: Mediational Effects

In this phase of structural model analysis I introduced individual protective factors (academic self-efficacy and school connectedness) into the model in order to test their hypothesized mediating role between protective and risky school context and educational and socioemotional outcomes. First, I introduced academic self-efficacy into the model

by itself. This model provided a good fit to the data ($X^2(38) = 107.41$, $p < .05$, $X^2/df = 2.83$, CFI = .969, SRMR = .029, RMSEA = .045). Next, I tested an alternative mediation model examining school connectedness in the model by itself. This model also provided a good fit to the data ($X^2(38) = 113.51$, $p < .05$, $X^2/df = 2.98$, CFI = .965, SRMR = .029, RMSEA = .047). Last, I tested a second alternative model examining the mediational effects of academic self-efficacy and school connectedness simultaneously. This model also provided a similarly good fit to the data ($X^2(43) = 131.85$, $p < .05$, $X^2/df = 3.06$, CFI = .966, SRMR = .029, RMSEA = .048). The final mediational model (see Figure 7.1; 7.2) accounted for 14% of the variance in grades, 20% of the variance in future expectations for work and education, 14% of the variance in problem behavior, and 14% of the variance in depressive symptoms for the study sample. The model also accounted for 20% of the variance in school connectedness and 28% of the variance in academic self-efficacy for the study sample.

To test the significance of indirect effects, I followed recommendations by Shrout and Bolger (2002). Specifically, Shrout and Bolger explained that bootstrapping data-resampling procedures produce estimates of the indirect effects as well as measures of standard error and confidence intervals across a large number of samples. Thus, the estimates, standard errors, and confidence intervals are not sample dependent, resulting in more confidence in the findings produced. Bootstrapping procedures are appropriate for moderately large study samples as well as when excessive kurtosis may exist in the data. Using Amos 7.0 software, I generated 1,000 bootstrap samples by random sampling with replacement from the original data set. Indirect effects are significant if the 95% confidence intervals do not include zero (Shrout & Bolger, 2002).

Indirect effect analysis (see Table 3) showed that school protective context demonstrated significant positive indirect effects on grades and future expectations in addition to significant negative indirect effects on depressive symptoms. School protective context did not demonstrate significant indirect effect on problem behavior. Peer victimization demonstrated significant negative indirect effects on grades and future expectations in addition to significant positive indirect effects on depressive symptoms and problem behavior. School protective context demonstrated significant positive relationships with academic self-efficacy and school connectedness (β = .326, β = .386). In contrast, peer victimization only demonstrated a significant negative relationship with school connectedness (β =-.188). When academic self-efficacy and school connectedness entered the structural model, the direct effect of school protective context on GPA and future expectations became insignificant. In addition, the direct effect of peer victimization on future expectations became insignificant. When a directional path was introduced between academic self-efficacy and school connectedness to test the mediational role of academic self-efficacy, results indicated that academic self-efficacy had a significant, partial mediational effect on the relationship between school connectedness and GPA as well as future expectations.

Results provided partial support for study hypotheses (see Figure 7 and 8). Academic self-efficacy played a mediational role in the relationship between school protective context and educational outcomes (GPA, future expectations) but not between school protective context and socioemotional outcomes (problem behavior, depression). School connectedness played a mediational role in the relationship between school protective context and educational outcomes (GPA, future expectations) as well as

Table 3. Standardized Estimates of the Direct, Indirect, and Total Effects of the Exogenous (Predictor) Variables on the Endogenous (Outcome) Variables in the Trimmed Model of the Study

Exogenous Variables	Endogenous Variables	Direct Effect	Indirect Effect	Total Effect
School Protective Factors	School Connectedness	0.388**		0.388**
	Academic Self-Efficacy	0.319**	0.117**	0.436**
	Grade-Point-Average		0.170**	0.170**
	Future Expectations		0.174**	0.174**
	Problem Behavior	-0.153**		-0.153**
	Depressive Symptoms	0.229**	-0.081**	0.148**
Peer Victimization	School Connectedness	-0.189**		-0.189**
	Academic Self-Efficacy		-0.057**	- 0.057**
	Grade-Point-Average		-0.040**	-0.040**
	Future Expectations		-0.095**	-0.095**
	Problem Behavior	0.321**		0.321**
	Depressive Symptoms	0.257**	0.040**	0.297**
School Connectedness	Academic Self-Efficacy	0.302**		0.302**
	Grade-Point-Average	0.129**	0.083**	0.212**
	Future Expectations	0.162**	0.126**	0.288**
	Depressive Symptoms	-0.209**		-0.209**
Academic Self-Efficacy	Grade-Point-Average	0.276**		0.276**
	Future Expectations	0.308**		0.308**
Depressive Symptoms	Future Expectations	-0.159**		-0.159**

Note. ** p<.01

depressive symptoms, but not between school protective context and problem behavior. Contrary to hypotheses, academic self-efficacy did not play a mediational role in the relationship between peer victimization and any educational or socioemotional outcomes. In contrast, school connectedness played a mediational role in the relationship between peer victimization and educational outcomes (GPA, future expectations) as well as depressive symptoms, but not between peer victimization and problem behavior. Problem behavior was influenced only by the direct effects of school protective context and peer victimization.

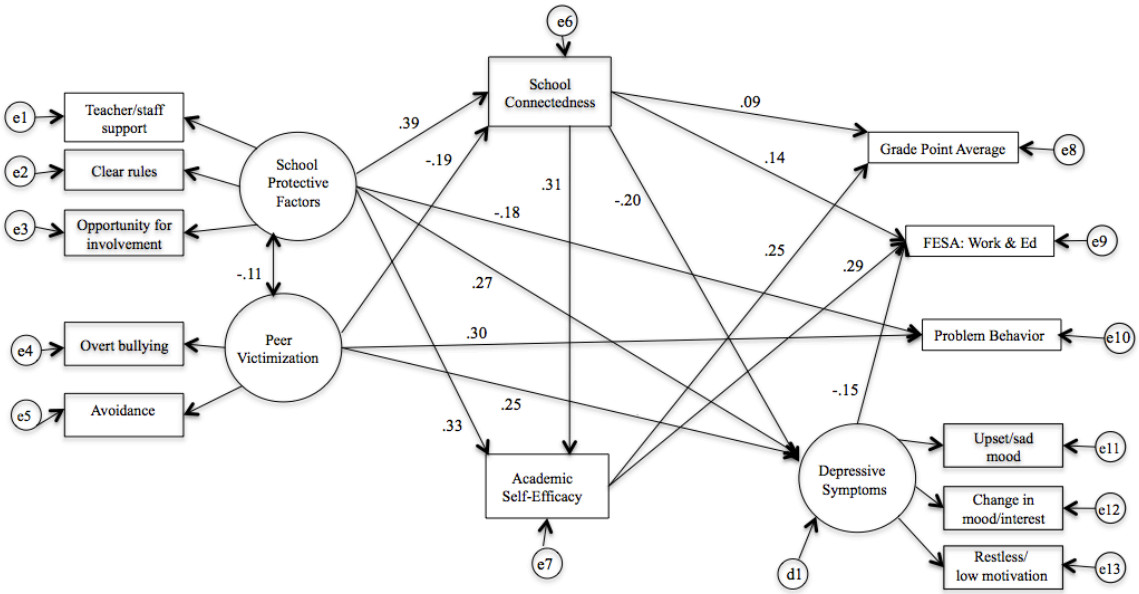

Figure 7. Final Mediational Model with Significant Paths Only

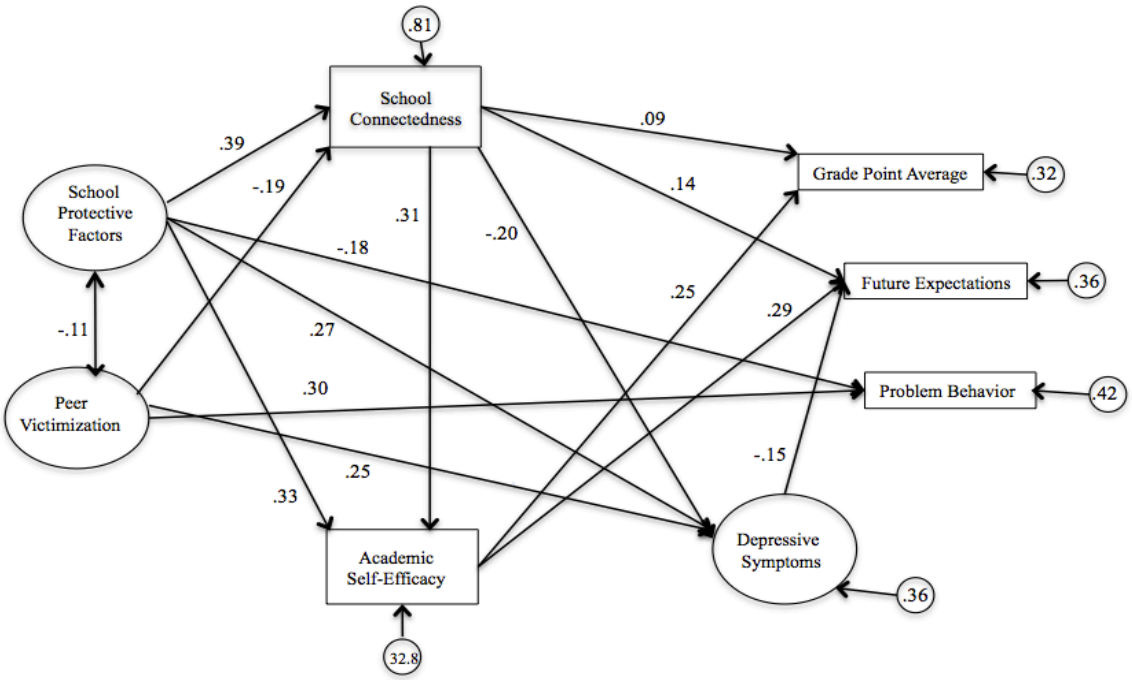

Figure 8. Final Mediational Model (Simplified Depiction of Latent Variables)

Multiple Group Analysis Between Males and Females

The focus of this analysis was to test for the equivalence of model fit across sexes. Using a multiple groups modeling approach, I estimated simultaneously the same pattern of relationships among variables in the two samples of males and females. In this approach, equivalence among different samples is evaluated by constraints that impose identical estimates for the model's parameters (Scott-Lennox & Scott- Lennox, 1995). In the present study the equality constraints were imposed on structural path coefficients and factor loadings across the gender groups.

The fit indices for the invariant model were indicative of a good fit to the data: $X^2(127)= 211.75, p < .05$, CFI = .966, SRMR= .040, RMSEA = .027. Furthermore, the chi-square difference test comparing the constrained and unconstrained models yielded a non-significant result: $\Delta X^2(19)= 21.43, p = .314$. This result suggested that the fit of the model to the data does not differ significantly as a function of sex.

The unconstrained model demonstrated a similarly good fit to the data for males $X^2(54)= 93.72, p < .05$, CFI = .971, SRMR= .035, RMSEA = .040) as well as for females $(X^2(54)= 96.60, p < .05$, CFI = .960, SRMR= .045, RMSEA = .043). The only parameter identified as noninvariant between groups was the direct effect of school protective context on academic self-efficacy. The path coefficient for this relationship was significant and positive for both groups, however the impact was found to be slightly greater for males than it was for females. These findings are contrary to the previously stated hypothesis that the relationships between variables in the structural model would be of greater magnitude for females than for males. They also deviate from prior research suggesting that specific contextual sources of information, such as verbal

reinforcement and modeling, may have more significant influence on self-efficacy for females than for males (Zeldin & Pajares, 2000). However, simple t-test comparisons of means revealed significant differences in "levels" of variables by sex. Group means and standard deviations for all study variables as a function of sex are provided in Table 4.

Table 4. Means and Standard Deviations by Sex

Study Variable	Male			Female		
	n	*M*	*SD*	*n*	*M*	*SD*
Teacher support	465	2.81	1.08	428	2.95	1.10
Clear rules	465	3.47	1.15	428	3.46	1.19
Opportunities for involvement**	465	3.23	1.00	428	3.53	1.02
School safety**	465	3.40	1.05	428	3.16	0.99
Peer victimization**	465	1.59	0.61	428	1.42	0.48
School connectedness**	465	3.36	0.53	428	3.44	0.52
Academic self-efficacy	465	3.73	1.06	428	3.62	1.04
Grade point average**	465	51.93	6.16	428	52.81	6.11
Future expectations for work and education	465	4.20	0.66	428	4.22	0.61
Problem behavior**	465	1.66	0.76	428	1.47	0.58
Depressive symptoms**	465	2.07	0.76	428	2.49	0.81

Note. ** = significantly different means at the p <.05 level.

Multiple Group Analysis Between Public and Private Schools

The focus of this analysis was to test for the equivalence of model fit across school

settings. Using a multiple groups modeling approach, I estimated simultaneously the same pattern of relationships among variables in the two samples of public school and private school students. For the purpose of this analysis, only schools A and B represented the public school sample (N = 365), while school D represented the private school sample (N=171). This decision was made in order to (a) enhance the sample size equivalence between the two groups, and (b) because Schools A and B are more similar to each other (sub-urban poor schools) than to School C (a school in a small urban and poor community serving many rural youth, close to but outside of the Santiago metropolitan area).

The fit indices for the invariant model were indicative of an adequate fit to the data: $X^2(127)= 254.62, p < .05$, CFI = .92, SRMR= .049, RMSEA = .048. However, the chi-square difference test comparing the invariant model to the unconstrained model yielded a significant result: $\Delta X^2(19)= 52.11$, p <.001, suggesting that the overall fit of the model to the data was not invariant as a function of school site. The unconstrained model demonstrated a good fit to the data for public school ($X^2(54)= 104.65, p < .05$, CFI = .956, SRMR= .045, RMSEA = .051) and a poor fit for private school ($X^2(54)= 97.74, p < .05$, CFI = .909, SRMR= .064, RMSEA = .069) when testing each group independently. Upon further review of the imposed equality constraints, several path coefficients were found to be non-invariant. Four path coefficients in the model were found to be significant for public school students only. These included paths from peer victimization to school connectedness, from school connectedness to depression as well as grades, and from depressive symptoms to future expectations for work and education. One path coefficient in the model, from school protective context to depressive symptoms, was

found to be significant for private school students only. Last, the path from academic self-efficacy to grades was found to be significant and positive for both groups, yet with significantly different values. Specifically, the association between academic self-efficacy and grades was slightly greater for private school students. Overall, these findings support the previously stated hypothesis that the structural model would demonstrate a better fit for the public school group than the private school group. Group means and standard deviations for all study variables are provided in Table 5. The meaning and potential implications of these differences will be discussed more fully in the next chapter.

Exploratory Multiple Group Analysis Between Lower and Higher Grade Levels

The focus of this additional exploratory analysis was to test for the equivalence of model fit across grade levels. Using a multiple groups modeling approach, I estimated simultaneously the same pattern of relationships among variables in the two samples of $9^{th}/10^{th}$ grade students (N = 556) and $11^{th}/12^{th}$ grade students (N = 337).

The fit indices for the invariant model were indicative of a good fit to the data: $X^2(86)= 175.40, p < .05$, CFI = .966, SRMR= .032, RMSEA = .034. Furthermore, the chi-square difference test comparing the constrained and unconstrained models yielded a non-significant result: $\Delta X^2(30)= 34.16, p = .274$. This result suggested that the fit of the model to the data does not differ as a function of grade level in school.

The unconstrained model demonstrated a good fit to the data for 9^{th} and 10^{th} graders ($X^2(43)= 107.40, p < .05$, CFI = .959, SRMR= .032, RMSEA = .052) as well as for 11^{th} and 12^{th} graders ($X^2(43)= 68.03, p < .05$, CFI = .975, SRMR= .033, RMSEA = .042).

Table 5. Means and Standard Deviations by School Type

Study Variable	Public			Private		
	n	*M*	*SD*	*n*	*M*	*SD*
Teacher support	365	2.88	1.08	171	2.93	1.09
Clear rules**	365	3.27	1.21	171	4.00	1.02
Opportunities for involvement**	365	3.12	1.00	171	3.87	0.95
School safety**	365	3.01	1.07	171	3.64	0.94
Peer victimization	365	1.54	0.61	171	1.52	0.47
School connectedness	365	3.41	0.50	171	3.42	0.56
Academic self-efficacy**	365	3.61	1.13	171	3.95	0.96
Grade point average**	365	51.83	6.43	171	54.36	4.35
Future expectations for work and education**	365	4.16	0.67	171	4.34	0.61
Problem behavior**	365	1.67	0.76	171	1.53	0.70
Depressive symptoms**	365	2.22	0.82	171	2.45	0.88

Note. ** = significantly different means at the $p<.05$ level.

Upon further examination of model constraints, only two path coefficients were identified as significantly unequal between groups. The first path coefficient identified was the direct effect of peer victimization on problem behavior. In that relationship the path coefficient was significant for 11th and 12th graders and not significant for 9th and 10th graders. The second path coefficient identified was the direct effect of academic self-efficacy on future expectations for work and educational attainment. In that relationship the path coefficient was significant for 9th and 10th graders and not significant for 11th and

12th graders. Given these findings between groups, the model fit was considered to be invariant as a function of grade level.

CHAPTER IV

DISCUSSION

In the current study I explored the complex relationships between environmental and individual factors as they influence multidimensional indices of adjustment among a sample of Chilean adolescents. The first aim was to examine the direct relationships between school contextual factors and both educational and socioemotional outcomes. The second aim was to determine whether or not these direct relationships were mediated by academic self-efficacy and school connectedness. Invariance testing was applied to the full structural model to determine if demographic variables that contribute to inequality, such as sex or school placement, have moderating effects on outcomes. Overall, findings from this study highlight that school contextual assets and stressors have a significant impact on the multidimensional adjustment of Chilean adolescents, both directly and by influencing individual mechanisms of motivation. Direct relationships were found between school contextual factors and both educational and socioemotional outcomes. In addition, results revealed the significant mediating effect of both school connectedness and academic self-efficacy in these relationships, reinforcing the central protective role of such factors in the school engagement and adjustment of youth. Lastly, invariance results revealed significant differences in model fit between groups based on school type but not sex.

First Aim: Direct Effects

The findings of the present study partially support the first and second hypotheses initially proposed. Specifically, tests of direct effects in the structural model

demonstrated that protective school contextual factors appeared to have a significant and positive effect on educational outcomes (grades, future expectations for work and educational attainment) while having a negative relationship to problem behavior and depressive symptoms. Such findings support previous literature from the U.S. and elsewhere addressing the significant impact that a positive, supportive school environment can have on the facilitation of student engagement, socioemotional wellbeing, and academic development (Eccles & Roeser, 2011). In addition, protective school contextual factors (including teacher support, clear rules, and opportunities for involvement) had a significant and positive impact on the mediator variables of academic self-efficacy and school connectedness. This finding suggests that students' have more positive perceptions of the school environment may experience a greater sense of connection to school (Whitlock, 2006) and participate in experiences that enhance belief in their own ability to manage their learning process (Ryan & Patrick, 2001;Usher & Pajares, 2008).

School risk in the form of peer victimization had a significant and negative direct effect on school connectedness as well as a positive relationship with problem behavior and depressive symptoms. This supports prior U.S. and international research suggesting that as students' experiences of overt or covert victimization increase, their sense of connection to school declines (Skues et al., 2005) while risk outcomes pertaining to socioemotional wellbeing increase (Graham & Bellmore, 2007; Fleming & Jacobsen, 2009; Nishina & Juvonen, 2005). At the same time, contrary to expectations, peer victimization did not have a significant, direct impact on either academic self-efficacy or grades. This finding is surprising given that peer victimization has been thought to limit

access to learning experiences that would otherwise provide a student with information that promotes domain specific self-efficacy (Bandura, 1986) and subsequent achievement outcomes (Schunk, 2001). Furthermore, these findings deviate from prior research with U.S. and other populations illuminating the harmful impact of overt bullying and lack of safety on student performance in school (Nishina & Juvonen, 2005). However, further review of path coefficients from the structural model revealed that peer victimization had a significant indirect effect on academic self-efficacy and grades via school connectedness. This seems logical given that the construct of connectedness goes beyond a sense of belonging to represent student commitment and involvement in school in response to their feelings of belonging (Karcher, 2003). While negative peer encounters may not directly weaken personal beliefs about managing one's learning process, an associated decrease in school engagement could still hinder experiences of academic mastery, modeling, and encouragement that help improve self-efficacy and performance (Bandura, 1986).

Second Aim: Mediational Effects

Tests of the mediational model in the present study helped to extend investigations of self-mechanisms of motivation, specifically school connectedness and academic self-efficacy, by showing that such individual protective factors have a mediating role in the relationship between specific school contextual factors and indices of adjustment. The process of examining three versions of the mediational model [school connectedness only, academic self-efficacy only, both academic self-efficacy and school connectedness] revealed important distinctions about the mediating role of each construct and, thus, which aspects of the third and fourth study hypotheses were supported.

School connectedness was initially hypothesized to have partial mediation effects on all direct relationships between school contextual factors and adjustment outcomes. This was found to be true not only for the paths linked to school protective factors but also for those linked to peer victimization. In other words, the impact of school context on student grades, future expectations for work and educational attainment, and depressive symptoms was, in part, influenced by the contribution of school context on one's own sense of connection and commitment to school. This finding supports assertions that school connectedness is critical to multiple dimensions of adolescent wellbeing (e.g. Anderman, 2002; Bonny et al., 2000; Roeser & Eccles, 2011). It also reinforces prior literature identifying teacher support, clear rules, opportunities for involvement, and feelings of safety as potential contributors to school connectedness (Whitlock, 2006; Finn, 1989) while extending evidence of these relationships to Chilean adolescents.

Like school connectedness, academic self-efficacy was also hypothesized to have partial mediation effects on all direct relationships between school contextual factors and adjustment outcomes. Yet, without a significant relationship between peer victimization and academic self-efficacy, academic self-efficacy could not serve to mediate the effect of peer victimization on any educational or socioemotional indices of adjustment. It did, however, demonstrate a significant mediational effect on the path between school protective factors and both educational indices of adjustment. In fact, when academic self-efficacy was included in the structural model, the direct effect of school protective factors on grades and future expectations became insignificant ($p > .05$). This shift in effects suggests that the positive relationship between a supportive school context and

educational outcomes for this sample of Chilean students was significantly influenced by student beliefs in their ability to manage their own learning processes. Such findings align with current cross-cultural research proposing that the cultivation of academic self-efficacy in the school setting enhances student perseverance, aspirations, and overall achievement (Pajares, 2008; Schunk, 2005; Zimmerman et al., 1992).

Academic self-efficacy also partially mediated the relationship between school connectedness and student educational outcomes, partially supporting the fourth study hypothesis. This suggests that a sense of connectedness and commitment to school can influence academic performance and future expectations for educational attainment directly (McWhirter & McWhirter, 2008; Roeser et al., 1996), or by promoting experiences that increase the belief that one can successfully manage his or her own learning process (Bandura et al., 2001). This finding aligns with a small body of previous research examining the significant effect of school connectedness and/or belonging on academic self-efficacy in mediational models (Roeser et al., 1996; McMahon et al., 2008; 2009).

It was surprising that problem behavior was only influenced by the direct effect of protective and risk factors in the school context, without the additional mediating influence of academic self-efficacy or school connectedness. While correlational analyses among study variables revealed significant negative relationships between problem behavior and both individual protective factors (See Table 1), the coefficients for these paths in the structural model were insignificant. With regard to self-efficacy, this finding contrasts with previous cross-cultural research demonstrating that higher academic self-efficacy (Bandura et al., 1996; Bandura, et al., 1999) and efficacy for self-regulatory

behavior (Bandura et al., 2001) both contribute to concurrent antisocial conduct. At the same time it aligns with preliminary research efforts with youth in Chile that found no relationship between academic self-efficacy and self-reported problem behavior (Graves, McWhirter, & McWhirter, 2010). Thus, one might propose that aspects of self-regulated learning may differ from other self-regulatory processes (e.g. ability to turn away from peer pressure) in ways that have less direct influence on the development or decline of problem behavior among Chilean youth. With regard to connectedness, this finding fails to support previous research in both the U.S. and Chile that has identified a relationship between school connectedness and varying forms of risky or problem behavior (Anderman, 2002; Bonny et al., 2000; McWhirter & McWhirter, 2011). In some cases, previous studies with U.S. youth utilized measures that more closely aligned with the definition of belongingness rather than connectedness, and thus it is possible that this difference explains variation among findings. It is also possible that a measure focused on only peer or teacher connectedness may have been more strongly related to problem behavior than the latent variable of school connectedness used in this study, which was derived from a combination of school, teacher, and peer connectedness.

Third Aim: Multiple Group Analyses

In multiple groups analyses with the hypothesized model, the only demographic factor that demonstrated significant non-invariance was school site. In other words, results indicated that student enrollment in public or private school was more important than gender or grade level in determining the fit of the model. Simple comparison of means initially revealed that public school students had significantly worse perceptions of school context pertaining to clear rules and opportunities for involvement (Raczynski &

Munoz-Stuardo, 2007). Furthermore, public school students also reported significantly lower levels of academic self-efficacy, grades, and future expectations for work and attainment. Such findings are consistent with current literature highlighting perceived barriers and academic achievement outcomes of low-income Chilean high school students (Contreras, 2002; Redondo, 2009; Redondo et al., 2004). Additional invariance testing then indicated that the model structure of hypothesized relationships among this particular constellation of factors was a significantly better fit for public school students in the sample than for their private school counterparts. While peer victimization had a significant direct effect on school connectedness for public school students, this relationship was insignificant for private school students. This may suggest that negative encounters with peers at school, whether through overt bullying or avoidance, have less impact on the level of school commitment and involvement put forth by private school students, whereas such problematic experiences might have greater influence on disengagement and disaffiliation for public school students. It was also the case that relationships between school connectedness and grades, future expectations, and depressive symptoms were only significant for public school students, thus speaking to the important role of connectedness in facilitating positive emotional and educational outcomes for disadvantaged youth (Battisch et al., 1997; Cox, 2006; Finn 1989). Given that these relationships were not significant for private school students, one might propose that other contextual or personal factors may be more closely linked to the outcomes of this group. For example, some private schools in Chile may be more likely to employ teachers with higher self-efficacy or better quality training than public schools. They may also hold higher achievement expectations for students or have more resources

available to foster student success and classroom engagement. Future research should examine such variables among both private and public student samples in order to better understand the complexity of differential adolescent school experiences and adjustment outcomes.

It was surprising that the structural model fit did not differ significantly as a function of sex, given research with youth in other regions revealing differential ratings in self-efficacy (Britner & Pajares, 2001; Pajares & Miller, 1994), connectedness (Karcher, Holcomb, & Zambrano, 2008) and perceptions of school support (Wentzel et al., 2010) based on sex, as well as evidence that these protective factors are able to influence differential developmental outcomes between groups (Pajares & Miller, 1994; Roeser et al., 1996; Zimmerman & Martinez-Pons, 1990). Invariance in model fit was also surprising given the history of social and education disparity that has existed between males and females in Chile (Fort, John-Abraham, Orlando, & Piras, 2007; McWhirter & McWhirter, 2012). However, though there were no differences in relationships between variables as a function of sex, there were differences in "levels " of variables by sex (see Table 4). For example, females reported having significantly more positive perceptions about opportunities for school involvement, a greater sense of school connectedness, as well as higher grade point averages. Such findings may be a reflection of the increasing educational aspirations of young women in Chile during the last decade (Velasquez et al., 2004), a period marked by the election of Chile's first female president, Michelle Bachelet (McWhirter & McWhirter, 2012). At the same time, females also reported having significantly greater depressive symptoms, which is consistent with literature examining the occurrence of sex differences in adolescent depression in Chile

and elsewhere (Fleming & Jacobsen, 2009; Hammen & Rudolph, 2003). In addition to these findings, male students reported having significantly better perceptions of school safety while also experiencing more overt and covert peer victimization. It is clear that significant differences exist between male and female Chilean adolescents in the school context that should be addressed in future research. However, the findings from invariance testing would suggest that the proposed structural relationships among school-based and individual constructs do not differ significantly between groups. As with aforementioned mean group differences, this may reflect a slow increase in equity and integration that is occurring for females in the contemporary Chilean education system. Invariance in model fit between groups may also suggest that universal approaches to fostering school-based contextual and personal assets may be similarly beneficial to both males and females.

Implications for School-Based Practice

This study adds to literature on adolescent development in several ways. First, findings support ecological theory by suggesting that both school and individual protective factors have a significant impact on youth adjustment outcomes (Bronfrenbrenner, 1979; Lerner, 2004). Furthermore, this study expands upon preexisting literature by examining a more complex constellation of factors than prior studies, including both school connectedness and academic self-efficacy as well as multidimensional indices of wellbeing (Uwah et al., 2008; Cunningham et al., 2004; Roeser et al., 1996). These findings also align with the past and current emphasis scholars have placed on the necessity for schools to consider how they impact and, specifically, promote positive academic and socioemotional development (Lynch & Cicchetti, 1997;

Wentzel & Looney, 2007). By creating a learning environment congruent with the changing developmental needs of adolescents, schools may be better able to promote healthy adjustment than by attempting to intervene solely at the individual level (Wang et al., 2010).

To our knowledge this is the first study in a Latin American country to reveal that school connectedness and academic self-efficacy both play roles in the relationship between school contextual experiences and the many adjustment outcomes of youth (Cunningham et al., 2008; Velazquez et al., 2004). Identifying student mechanisms of motivation that promote their engagement, learning, and socioemotional wellbeing has been a critical objective of current education reform efforts in Chile (Raczynski & Muñoz-Stuardo, 2007). This effort stems from a national emphasis on moving reform focus away from achievement measurements such as test scores, and returning attention to the improvement of student learning processes. Findings from this study reinforce recent research efforts pertinent to Chilean Educational Policy that have highlighted positive teacher-student relationships, clear rules, high expectations, and opportunities for involvement (both academic and extracurricular) as central aspects of effective low income schools throughout the nation (Raczynski & Muñoz-Stuardo, 2005). These findings also align with previous research in the U.S. and elsewhere demonstrating that positive school environments foster many dimensions of adolescent wellbeing (Wigfield et al., 2006). Such findings are promising for the continued reform efforts of Chile, as they reinforce an existing assertion that national educational disparities can be addressed through school-based organizational and operational change (Raczynski & Muñoz-

Stuardo, 2007). As such, the present study represents a valuable contribution to Chilean educational literatures.

Findings from invariance testing in the present study suggest that the relationships within this specific constellation of predictive, mediational, and outcome variables are particularly salient for public school students more so than their private school counterparts. The group differences highlighted in these analyses reinforce the importance of fostering protective external and internal assets for students in the Chilean public educational system through universal, cost-effective approaches. The lack of structural invariance between groups as a function of sex, while unexpected, also suggests that an emphasis on such assets in future educational reform may be similarly beneficial to both males and females. Continued examination of group differences as a function of school type, sex, and other socio-cultural variables will further enhance our understanding of adolescent student development in Chile from an ecological perspective.

Promoting Self-Efficacy and School Connectedness

Academic self-efficacy and school connectedness are personal assets that are cultivated by similar conditions and social sources of information from the school environment (Karcher, 2004; Usher & Pajares, 2008; Whitlock, 2006). Thus, it is important for educators in Chile and elsewhere to give ongoing consideration to how they promote or hinder both protective factors through their own practices. For example, when a classroom climate emphasizes competition and negative attention, adolescents can experience a decline in their self-beliefs, engagement, and sense of connection to teachers and school peers. In contrast, well-structured classroom environments that place

emphasis on effort, self-improvement, and meaningful learning processes help students maintain positive perceptions of their abilities (Urdan & Midgley, 2003) and their in-school relationships. With these outcomes in mind, an effective instructional strategy might be to create a classroom environment that places greater emphasis on setting short-term goals, fostering mastery of skills, and providing students with ongoing, strength-based feedback on their academic activities. Self-regulatory learning strategies should be continuously practiced and supported in order for them to become habitual and automatic (Pajares, 2008). At the same time, educators should be mindful to adjust instructional practices to meet the different needs of students and to get additional support for developing instructional strategies if necessary (Usher & Pajares, 2008). Such efforts may enhance student self-efficacy as well as the teaching self-efficacy of educators themselves. These recommendations are consistent with observed characteristics of effective teaching in low income sectors in Chile as well as emerging educational reform emphases (Raczynski & Muñoz-Stuardo, 2005; 2007).

In addition to encouraging development of self-regulatory skills and academic confidence in the classroom, school staff can facilitate social opportunities that will honor student voices, encourage involvement, and cultivate supportive relationships within the larger school environment. For example, a cross-age peer mentor program (e.g. CAMP; Karcher, 2009) may be an effective way to promote self-regulated learning, social skills, and connectedness among the larger student population. Peer models who teach skills to others have the opportunity to demonstrate mastery, while simultaneously fostering personal commitment to and engagement in school. At the same time, the self-efficacy of low achievers may be aided from observing similarly achieving students who have

mastered new skills more so than observing students whose level of competency is significantly dissimilar from their own (Schunk & Meece, 2005).

Another school-based practice aimed at enhancing both self-efficacy and connectedness might include providing additional support to students during educational transitions and as well as through ongoing monitoring and interest in their progress. First, such experiences may demonstrate that educational staff members are approachable for a variety of academic and social development concerns, fostering an increase in student self-efficacy to seek out support from adults and engage in self-management. Second, supportive practices with students may also help to foster a greater sense of familiarity and connectedness to school that can contribute to both academic and socially positive outcomes (Battisch et al., 1997; Karcher, 2009; Wentzel et al., 2010). Increased attention to student – teacher relationships has been recommended in fostering better outcomes among Chilean students (Raczynski & Muñoz-Stuardo, 2005; 2007)

Societal systems such as schools and communities are faced with the challenge to engage youth in processes that promote their own development, fostering initiative and enabling them to practice behaviors and decision-making that lead them towards their goals (Pittman, 2000). This may prove to be more challenging when working with marginalized youth, thus those implementing preventative interventions in schools may need to apply a strengths-based approach to helping these youth to respond creatively to their environment and become active contributors to their own growth processes.

Limitations of the Study

When interpreting the findings of the present study, there are several limitations that are important to address. First, the cross-sectional nature of the study design precludes

making causal inferences, exploring the birdirectionality between external and individual factors, or determining how outcomes may change over time. Furthermore, the achieved fit between the hypothesized model and the observed data in the present study does not imply that the given model is the only model explaining the relationships between school and individual factors among Chilean adolescents. Instead, the fit between the hypothesized model and the observed data in the present study only provides *one possible explanation* to the observed phenomena based on theory and previous research findings. In light of such possibilities, other alternative models should be tested as well.

As an additional limitation, data for the current study was based on student perceptions and self-reports. Giving consideration to teachers' perceptions of their own supportiveness or other aspects of school context may have provided important information about possible discrepancies between student and teacher experiences of the environment. Discrepancies could also exist between student and teacher perceptions of student well-being in specific domains such as achievement, mood, or behavior. Thus, the use of teacher report measures could potentially result in different findings for the hypothesized structural model. While sex was ruled out as a moderating factor, other individual differences among students may have affected students' perceptions of teacher behaviors or school environment. These differences could include factors such as achievement level, socio-economic status, and ethnic status. The future consideration and collection of such data may be important for continued examination of the differential adjustment trajectories of youth in Chile and greater Latin America.

Finally, although care was taken to assure the appropriateness of the measures for Chilean youth, it is possible that certain items or measures were assessing something

other than what the researchers intended. Careful attention to translation and language modification will be required for future use of assessment measures in both in Chile and other countries in conjunction with additional assessment for construct validity. It is important to note that the results of this study should not be generalized beyond Chilean adolescents who are enrolled in high school in the urban and suburban surroundings of Santiago. Future investigations should continue to examine the significance of specific school contextual factors on educational and socioemotional development of adolescents in Chile as well as other parts of Latin America. International research efforts may benefit from continued comparisons of the role of school context, connectedness, and efficacious beliefs among adolescents in cultural contexts that differ as a function of social class, collectivistic or individualistic norms, political and economic stability, and educational opportunities.

Conclusion

Self-efficacy and social connectedness are two individual protective factors that have been shown to contribute to healthy functioning, motivation, and performance success in adolescence. In particular, the strength of these factors within the specific context of school may be highly influential on students' adaptive strategies and perseverance in the face of social and educational challenges. Although this study should be interpreted with its limitations and specific cultural, national, and socio-economic context in mind, the results support the potentially critical role of school context, self-efficacy, and social connectedness as protective factors influencing the multi-dimensional adjustment outcomes of youth in Chile. The findings from this study also reinforce previous research that asserts importance of promotion of academic self-efficacy and

connectedness within school settings (e.g. Bandura et al., 2003; Karcher, 2009; Pajares, 2008). Moreover, this study contributes to our limited knowledge of the school experience of Chilean youth which, in turn, will inform instructional and counseling professionals as they implement preventive interventions as part of nation-wide health care initiatives and educational reform (Araya, et al., 2011).

APPENDIX A

EVALUACIÓN DE NIVEL SOCIOECONÓMICO
PROPUESTA WENK Y SLAUGHTER (2011)

Con el fin de evaluar su incidencia en las variables en estudio en la presente investigación, se tomó la decisión de realizar una evaluación unificada del nivel socioeconómico de los participantes, considerando para este fin la información sobre el nivel educacional del padre (o cuidador masculino), además del de la madre (o cuidadora femenina), la cantidad de personas que viven en el hogar y el monto del ingreso mensual del grupo familiar.

De esta manera, se configuró una evaluación de características un tanto distintas de aquellas que habitualmente se manejan en el medio nacional, tal como la Escala de Erika Himmel et at. de 1981, modificada por el criterio de Wenk, E. en la Universidad de Chile en 2006, o las escalas que se usan en el ámbito de la investigación de mercados, AIM o ESOMAR.

Para la asignación de los puntajes, se tomó en consideración el criterio propuesto en la Escala de Himmel - algunos de los cuales se los consultó a investigadores del Departamento de Sociología de la Facultad de Ciencias Sociales - y de la misma forma que en la Escala de Himmel, para la interpretación de los resultados se estableció empíricamente los criterios de corte para los puntajes, a fin de permitir establecer tres categorías de nivel socioeconómico: alto, medio y bajo. De acuerdo con lo anterior, se configura el siguiente criterio interpretativo para los puntajes de esta propuesta:

N.S.E. BAJO : Hasta 11 Puntos

N.S.E. MEDIO : 12 y 13 Puntos

N.S.E. ALTO : 14 Puntos y más

Las preguntas que se formulan y el puntaje asignado a las respectivas respuestas es el siguiente:

¿Cuál es el último nivel de educación alcanzado por tu **padre** (o cuidador masculino)?	Puntaje asignado a la categoría
Educación básica incompleta	1
Educación básica completa	2
Educación media incompleta	2
Educación media completa	3
Educación Técnica, Profesional, Comercial incompleta	3
Educación Técnica, Profesional, Comercial completa	3
Universitaria incompleta	3

Licenciatura	4
Título Profesional	4
Grado de Magister	5
Doctorado (PhD)	6
¿Cuál es el último nivel de educación alcanzado por tu **madre** (o cuidadora femenina)?	Puntaje asignado a la categoría
Educación básica incompleta	1
Educación básica completa	2
Educación media incompleta	2
Educación media completa	3
Educación Técnica, Profesional, Comercial incompleta	3
Educación Técnica, Profesional, Comercial completa	3
Universitaria incompleta	3
Licenciatura	4
Título Profesional	4
Grado de Magister	5
Doctorado (PhD)	6

¿Cuántas personas viven contigo en tu casa? (Incluyéndote a ti mismo y cualquier otra persona que viva en la casa por más de la mitad del tiempo)	Puntaje asignado a la categoría
Hasta 2 personas	4
3 personas	4
4 personas	3
5 personas	3
6 personas	2
7 personas	2
8 personas	1
Más de 8 personas	1

¿Cuál es el ingreso mensual en pesos en tu hogar, incluyendo asignación familiar por niños y cualquier otra ayuda financiera que reciba tu hogar?	Puntaje asignado a la categoría
$99,999 o menos	1
$100,000 a $199,999	1
$200,000 a $299,999	1
$300,000 a $399,999	2
$400,000 a $499,999	2
$500,000 a $699,999	2
$700,000 a $899,999	2
$900,000 a $1,099,999	2
$1,100,000 a $1,299,999	3
$1,300,000 a $1,499,999	3
$1,500,000 a $1,799,999	3
$1,800,000 a $2,099,999	4
$2,100,000 a $2,399,999	4
$2,400,000 a $2,699,999	5
$2,700,000 o mas	5

APPENDIX B

CUESTINARIOS DE ALUMNOS

IRB # C2-129-07F Código: _____

Los cuestionarios que te presentamos a continuación contienen varias preguntas que son importantes para obtener información acerca de los adolescentes y sus familias.

Dado que algunas de las preguntas son de tipo personal, **te aseguramos completa confidencialidad**: tu nombre lo requerimos sólo para tener un orden de los cuestionarios administrados en nuestro estudio y las respuestas que nos entregues no serán compartidas con miembros de tu familia ni del liceo.

Al responder el cuestionario, **lee bien las preguntas y sigue cada una de sus instrucciones**. En la mayoría de ellas tendrás que marcar o pintar el círculo que mejor represente tu respuesta. Algunas de las preguntas se refieren a un periodo de tiempo determinado (por ejemplo, "el último mes") y otras aluden a tus experiencias y actitudes en general.

Si no tienes seguridad de una respuesta, contesta de acuerdo a lo que sientes en este momento. **Si tienes alguna duda, levanta la mano y pregunta al asistente de investigación** que esté administrando el cuestionario.

Recuerda que:

- Es necesario que respondas de forma seria, honesta y responsable.
- Toda la información será tratada confidencialmente.

Por favor, escribe tu nombre y firma este acuerdo como acto de compromiso con lo señalado:

Nombre completo:

_____

(Escribe con letra imprenta)

Firma: _____ Fecha: _____

Sigue al otro lado →

Demografía

Código: _____

INSTRUCCIONES: Este formulario contiene preguntas que son importantes para ayudarnos a entender mejor a las familias en general. Debido a que algunas de estas preguntas son muy personales, te recordamos que tenemos un compromiso de confidencialidad: la información que tú proveas no será compartida con nadie.

1. Fecha de nacimiento (día/mes/año): ☐☐ / ☐☐ / ☐☐☐☐

2. Sexo: ○ Masculino ○ Femenino

3. En este momento, ¿tienes un trabajo remunerado (pagado) fuera de casa? ○ Sí ○ No

4. Si la respuesta a la pregunta 3 fue SI, ¿cuántas horas a la semana estás trabajando? ☐☐

5. En este momento, ¿tienes un trabajo voluntario fuera de casa? ○ Sí ○ No

6. Si la respuesta a la pregunta 5 fue SI, ¿cuántas horas a la semana estás trabajando voluntariamente? ☐☐

7. ¿Cuál es la situación laboral actual de tu padre (o cuidador masculino)?

○ Independiente	○ Desempleado	○ Jubilado
○ Empleado-tiempo completo	○ Discapacitado	○ Estudiante (sin trabajo)
○ Empleado-medio tiempo	○ Despido temporal	○ Otro (describa):
○ De temporada o estacional	○ Dueño de casa	_____

8. ¿Cuál fue el último nivel de educación que completó tu padre (o cuidador masculino)?

○ Educación básica incompleta	○ Universitaria incompleta
○ Educación básica completa	○ Licenciatura
○ Educación media incompleta	○ Título Profesional
○ Educación media completa	○ Maestría
○ Centro de formación técnica o instituto superior incompleta	○ Doctorado
○ Centro de formación técnica o instituto superior completa	

9. ¿Cuál es la situación laboral actual de tu madre (o cuidadora femenina)?

○ Independiente	○ Desempleada	○ Jubilada
○ Empleada-tiempo completo	○ Discapacitada	○ Estudiante (sin trabajo)
○ Empleada-medio tiempo	○ Despido temporal	○ Otro (describa):
○ De temporada o estacional	○ Dueña de casa	_____

Código: _____

10. ¿Cuál fue el último nivel de educación que completó tu madre (o cuidadora femenina)?

- ○ Educación básica incompleta
- ○ Educación básica completa
- ○ Educación media incompleta
- ○ Educación media completa
- ○ Centro de formación técnica o instituto superior incompleta
- ○ Centro de formación técnica o instituto superior completa
- ○ Universitaria incompleta
- ○ Licenciatura
- ○ Título Profesional
- ○ Maestría
- ○ Doctorado

Las siguientes preguntas son acerca de tu hogar…

11. ¿Con quién vives actualmente (*marca todas las opciones que correspondan*)?

- ○ Madre biológica
- ○ Padre biológico
- ○ Madre adoptiva
- ○ Padre adoptivo
- ○ Madrastra
- ○ Padrastro
- ○ Abuela
- ○ Abuelo
- ○ Pareja de la madre (conviviente)
- ○ Pareja del padre (conviviente)
- ○ Pariente (mujer)
- ○ Pariente (hombre)
- ○ Hermana(s)
- ○ Hermano(s)
- ○ Hermanastra(s)
- ○ Hermanastro(s)
- ○ Pololo o Polola
- ○ Otros jóvenes (primos, sobrinos, etc.)

12. ¿Cuántas personas viven en tu casa incluyéndote a ti mismo(a)? ☐☐

13. ¿Actualmente, tienes pololo(a)? ○ No ○ Sí

14. ¿Cuánto dinero tiene tu familia?

- ○ No lo suficiente para seguir adelante
- ○ Lo justo para seguir adelante
- ○ Únicamente nos preocupamos por el dinero para cosas adicionales o diversión
- ○ Nunca tenemos que preocuparnos por el dinero

15. ¿Cuál es el estado actual de tus padres o cuidadores principales?

- ○ casados
- ○ soltera/o
- ○ separados
- ○ viuda/o
- ○ vive con su pareja (no casados)
- ○ otro (describa):____ _____

16. ¿Cuál es tu nota promedio en el liceo actualmente? _____

17. ¿Cuál es el último nivel de educación que tú esperas completar?

- ○ Educación básica incompleta
- ○ Educación básica completa
- ○ Educación media incompleta
- ○ Educación media completa
- ○ Centro de formación técnica o instituto superior incompleta
- ○ Centro de formación técnica o instituto superior completa
- ○ Universitaria incompleta
- ○ Licenciatura
- ○ Título Profesional
- ○ Maestría
- ○ Doctorado

Sigue al otro lado →

18. ¿Qué nivel de educación piensas que vas a completar realmente?

- ○ Educación básica incompleta
- ○ Educación básica completa
- ○ Educación media incompleta
- ○ Educación media completa
- ○ Centro de formación técnica o instituto superior incompleta
- ○ Centro de formación técnica o instituto superior completa
- ○ Universitaria incompleta
- ○ Licenciatura
- ○ Título Profesional
- ○ Maestría
- ○ Doctorado

MAC

Código: _____

INSTRUCCIONES: Lee cada una de las siguientes afirmaciones y marca la alternativa que mejor describa qué tan cierto es esa afirmación acerca de ti. Así, por ejemplo, si la afirmación te representa perfectamente marca la alternativa "absolutamente verdadera", pero si no te representa marca la alternativa "para nada". Si una afirmación no te resulta clara, pide una explicación al aplicador de la encuesta. Si aún te resulta confusa, coloca un signo de pregunta (?).

¿Qué tan cierta es esta afirmación acerca de ti?	**Para nada**	**No real-mente**	**Verda-dera en parte**	**Verda-dera**	**Absoluta-mente verdadera**
1. Me gusta andar po donde vivo (mi barrio).	○	○	○	○	○
2. La mejor parte de mi dia es cuando estoy con mis amigos(as).	○	○	○	○	○
3. Puedo nombrar cinco cosas que a la gente le gustan de mí.	○	○	○	○	○
4. Mi familia y yo nos divertimos juntos.	○	○	○	○	○
5. Me divertito mucho con mi/s hermano/s(as).	○	○	○	○	○
6. Me esfuerzo en el licero.	○	○	○	○	○
7. Mis compañeros(as) me molestan.	○	○	○	○	○
8. Me importa lo que mis profesores(as) piensen de mi.	○	○	○	○	○
9. En el future tendré una buena vida.	○	○	○	○	○
10. Me gusta pasar mucho tiempo con los jóvenes de mi barrio.	○	○	○	○	○
11. Tengo amigos(as) muy cercanos(as) en los que confio plenamente.	○	○	○	○	○
12. Yo no tengo casi nada unico o especial.	○	○	○	○	○
13. Generalmente, me gusta estar con mi familia.	○	○	○	○	○
14. Me agradan todos mis compañeros(as) de curso.	○	○	○	○	○
15. Me desgradan varios profesores(as) de mi liceo.	○	○	○	○	○
16. Me siento cercano a mi/s hermanos(as). *(no contestes esta pregunta si no tienes hermanos)*	○	○	○	○	○
17. Disfruto estar en el liceo.	○	○	○	○	○

¿Qué tan cierta es esta afirmación acerca de ti?	Para nada	No real-mente	Verda-dera en parte	Verda-dera	Absoluta-mente verdadera
18. Tener éxito en el liceo me ayudará a conseguir las cosas que deseo en la vida.	○	○	○	○	○
19. Me llevo bien con la mayoria de los jovenes de mi barrio.	○	○	○	○	○
20. Compartir tiempo con mis amigos(as) es parte importanta de mi vida.	○	○	○	○	○
21. Puedo nombrar tres cosas que a los otros jóvenes les gusta de mí.	○	○	○	○	○
22. Disfruto compartiendo tiempo con mi/s hermanos(as). *(no contestes esta pregunta si no tienes hermanos)*	○	○	○	○	○
23. Me aburro mucho en el liceo.	○	○	○	○	○
24. Me gusta trabajar con mis compañeros(as) de curso.	○	○	○	○	○
25. Yo quiero se respetado(a) por mis professores(as).	○	○	○	○	○
26. Realizo actividades fuera del liceo para prepararme para mi futuro.	○	○	○	○	○
27. A menudo paso tiempo jugando o haciendo cosas en mi barrio.	○	○	○	○	○
28. Mis amigos(as) y yo hablamos abiertamente sobre temas personales.	○	○	○	○	○
29. Realmente me gusta quien soy.	○	○	○	○	○
30. Tengo pasatiempos especiales, habilidades o talentos.	○	○	○	○	○
31. Trato de compartir tiempo con mi/hermano/s(as) cuando puedo. *(no contestes esta pregunta si no tienes hermanos)*	○	○	○	○	○
32. Me va bien en el liceo.	○	○	○	○	○
33. Me llevo bien con los otros estudiantes de mi curso.	○	○	○	○	○
34. Trato de llevarme bien con mis profesores(as).	○	○	○	○	○
35. Hago muchas cosas para prepararme para mi futuro.	○	○	○	○	○

¿Qué tan cierta es esta afirmación acerca de ti?	Para nada	No real-mente	Verda-dera en parte	Verda-dera	Absoluta-mente verdadera
36. A menudo leo cuando tengo tiempo libre.	○	○	○	○	○
37. Paso mucho tiempo con jóvenes en mi barrio.	○	○	○	○	○
38. Paso tanto tiempo como puedo con mis amigos(as).	○	○	○	○	○
39. Trato de no estar con mi/s hermano/s(as). *(no contestes esta pregunta si no tienes hermanos)*	○	○	○	○	○
40. Cuando estoy en el liceo, me siento bien con respecto a mi mismo(a).	○	○	○	○	○
41. Le agrado a mis compañeros(as) de curso.	○	○	○	○	○
42. Siempre me esfuerzo por ganarme la confianza de mis profesores(as).	○	○	○	○	○
43. Pienso constantemente sobre mi futuro.	○	○	○	○	○
44. Casi siempre me gustan mis profesores(as).	○	○	○	○	○
45. Mi barrio es aburrido.	○	○	○	○	○
46. Mis amigos(as) y yo pasamos mucho tiempo conversando.	○	○	○	○	○
47. Tengo intereses o habilidades unicas que me hacen interesante.	○	○	○	○	○
48. Lo que hago ahora no va afectar mi futuro.	○	○	○	○	○
49. Que me vaya bien en el liceo es importante para mí.	○	○	○	○	○
50. Pocas veces peleo o discuto con los otros jovenes en el liceo.	○	○	○	○	○
51. Disfruto compartiendo con mi padre.	○	○	○	○	○
52. Disfruto compartiendo con mi madre.	○	○	○	○	○
53. Mi religión es muy importante para mí.	○	○	○	○	○
54. Mi madre y yo somos muy unidos.	○	○	○	○	○
55. Mi padre y yo somos muy unidos.	○	○	○	○	○
56. Mi padre se preocupa mucho por mí.	○	○	○	○	○
57. Mi madre se preocupa mucho por mí.	○	○	○	○	○

¿Qué tan cierta es esta afirmación acerca de ti?	Para nada	No real-mente	Verda-dera en parte	Verda-dera	Absoluta-mente verdadera
58. Asisto a un servicio religioso (como la iglesia) regularmente.	○	○	○	○	○
59. Mi padre y yo discutimos mucho.	○	○	○	○	○
60. Mi madre y yo discutimos mucho.	○	○	○	○	○
61. Soy una persona religiosa o con fe.	○	○	○	○	○
62. Hablo con mi madrea acerca de cosas y problemas.	○	○	○	○	○
63. Hablo con mi padre acerca de cosas y problemas muy personales.	○	○	○	○	○

Sigue al otro lado →

FESA

Código: _____

INSTRUCCIONES: Para las siguientes preguntas, por favor rellena el círculo que mejor describe tus expectativas.

En el futuro...	**No**	**Podría ser que no**	**No lo sé**	**Podría ser que sí**	**Sí**
1. Lograré el nivel de educación que quiero.	○	○	○	○	○
2. Proveeré a mis hijos(as) de un lugar seguro para vivir.	○	○	○	○	○
3. Me casaré.	○	○	○	○	○
4. Iré a misa u otros servicios religiosos con regularidad.	○	○	○	○	○
5. Tendré una dieta sana.	○	○	○	○	○
6. Encontraré un trabajo bueno.	○	○	○	○	○
7. Encontraré un trabajo estable.	○	○	○	○	○
8. Me casaré antes de los 25 años.	○	○	○	○	○
9. Seré un líder en mi comunidad.	○	○	○	○	○
10. Tendré hijos(as).	○	○	○	○	○
11. Tendré una buena salud.	○	○	○	○	○
12. Lograré alcanzar las metas que quiero para mi vida.	○	○	○	○	○
13. Obtendré las cosas que quiero.	○	○	○	○	○
14. Mi matrimonio durará para siempre.	○	○	○	○	○
15. Haré trabajo voluntario en mi comunidad.	○	○	○	○	○
16. Tendré una vida larga.	○	○	○	○	○
17. Encontraré un trabajo que disfrutaré.	○	○	○	○	○
18. Mis hijos(as) tendrán una vida larga.	○	○	○	○	○
19. Dedicaré tiempo a compartir con mi familia.	○	○	○	○	○

En el futuro...	No	Podría ser que no	No lo sé	Podría ser que sí	Sí
20. Participaré en muchas actividades de la Iglesia.	○	○	○	○	○
21. Participaré en deportes o algún tipo ejercicio regularmente.	○	○	○	○	○
22. Siempre tendré recursos suficientes para vivir y comer.	○	○	○	○	○
23. Mis hijos(as) tendrán paz en sus vidas.	○	○	○	○	○
24. Animaré la fe en mis hijos(as) o obrinos(as).	○	○	○	○	○

Sigue al otro lado →

CSE-S

Código: _____

INSTRUCCIONES: Queremos saber qué cosas o actividades consideras fáciles o difíciles. Por favor, evalúa con qué facilidad realizas cada una de ellas entre 1 a 7 según la siguiente escala, pintando el círculo que representa la mejor opción.

	Nada fácil 1	**No es muy fácil 2**	**Un poco fácil 3**	**Fácil 4**	**Muy fácil 5**	**Bastante fácil 6**	**Completamente fácil 7**
1. ¿Con qué facilidad aprendes matemáticas en general?	○	○	○	○	○	○	○
2. ¿Con qué facilidad aprendes física?	○	○	○	○	○	○	○
3. ¿Con qué facilidad aprendes química?	○	○	○	○	○	○	○
4. ¿Con qué facilidad aprendes biología?	○	○	○	○	○	○	○
5. ¿Con qué facilidad lees, escribes y desarrollas otras habilidades del lenguaje?	○	○	○	○	○	○	○
6. ¿Con qué facilidad aprendes a usar la computadora?	○	○	○	○	○	○	○
7. ¿Con qué facilidad aprendes el inglés?	○	○	○	○	○	○	○
8. ¿Con qué facilidad aprendes ciencias sociales?	○	○	○	○	○	○	○
9. ¿Con qué facilidad aprendes gramática?	○	○	○	○	○	○	○
10. ¿Con qué facilidad terminas a tiempo tus tareas escolares?	○	○	○	○	○	○	○

	Nada fácil 1	**No es muy fácil 2**	**Un poco fácil 3**	**Fácil 4**	**Muy fácil 5**	**Bastante fácil 6**	**Completamente fácil 7**
11. ¿Con qué facilidad estudias cuando hay otras cosas más interesantes para hacer?	○	○	○	○	○	○	○
12. ¿Con qué facilidad te concentras en las materias escolares?	○	○	○	○	○	○	○
13. ¿Con qué facilidad tomas apuntes en clase?	○	○	○	○	○	○	○
14. ¿Con qué facilidad utilizas la biblioteca para obtener información para tu trabajo escolar?	○	○	○	○	○	○	○
15. ¿Con qué facilidad planificas tu trabajo escolar?	○	○	○	○	○	○	○

	Nada fácil 1	No es muy fácil 2	Un poco fácil 3	Fácil 4	Muy fácil 5	Bas-tante fácil 6	Com-pleta-mente fácil 7
16. ¿Con qué facilidad organizas tu trabajo escolar?	○	○	○	○	○	○	○
17. ¿Con qué facilidad recuerdas la información presentada en clase o leída en los textos.	○	○	○	○	○	○	○
18. ¿Con qué facilidad ordenas un lugar para estudiar sin distracciones?	○	○	○	○	○	○	○
19. ¿Con qué facilidad te motivas a ti mismo para realizar el trabajo escolar?	○	○	○	○	○	○	○
20. ¿Con qué facilidad participas de las discusiones en clase?	○	○	○	○	○	○	○

	Nada fácil 1	No es muy fácil 2	Un poco fácil 3	fácil 4	Muy fácil 5	Bas-tante fácil 6	Com-pleta-mente fácil 7
21. ¿Con qué facilidad resistes la presión de tus amigos(as) para hacer cosas que te pueden generar problemas en el liceo?	○	○	○	○	○	○	○_
22. ¿Con qué facilidad contienes la tentación de faltar a clase cuando estás aburrido(a) o molesto(a)?	○	○	○	○	○	○	○
23. ¿Con qué facilidad resistes la presión de tus amigos(as) para fumar cigarrillos?	○	○	○	○	○	○	○
24. ¿Con qué facilidad resistes la presión de tus amigos(as) para beber cerveza, vino o licor?	○	○	○	○	○	○	○
25. ¿Con qué facilidad resistes la presión de otros jóvenes para fumar marihuana?	○	○	○	○	○	○	○ ___
26. ¿Con qué facilidad resistes la presión de otros jóvenes para consumir estimulantes o tranquilizantes?	○	○	○	○	○	○	○
27. ¿Con qué facilidad resistes la presión de otros jóvenes para consumir pasta base?	○	○	○	○	○	○	○
28. ¿Con qué facilidad resistes la presión de tus amigos(as) para tener relaciones sexuales?	○	○	○	○	○	○	○
29. ¿Con qué facilidad controlas tu	○	○	○	○	○	○	○

	Nada fácil 1	No es muy fácil 2	Un poco fácil 3	Fácil 4	Muy fácil 5	Bas-tante fácil 6	Com-pleta-mente fácil 7
30. ¿Con qué facilidad expresas tus opiniones cuando tus compañeros(as) no están de acuerdo contigo?	○	○	○	○	○	○	○
31. ¿Con qué facilidad te defiendes cuando sientes que te han tratado injustamente?	○	○	○	○	○	○	○
32. ¿Con qué facilidad tratas situaciones en las cuales alguien te molesta o hiere tus sentimientos?	○	○	○	○	○	○	○
33. ¿Con qué facilidad te mantienes firme cuando alguien te pide hacer algo no razonable o inconveniente para ti?	○	○	○	○	○	○	○

Sigue al otro lado →

CES-D

Código:_____

Las siguientes preguntas son sobre ti y tus actividades…

¿Te molestó alguno de estos sentimientos durante el ÚLTIMO MES?	**Nunca o casi nunca**	**Pocas veces**	**La mitad de las veces**	**A menudo**	**Siempre o casi siempre**
1. Nerviosismo o preocupación.	○	○	○	○	○
2. Depresión, tristeza.	○	○	○	○	○
3. Falta de esperanza.	○	○	○	○	○
4. Mal humor.	○	○	○	○	○
5. Pérdida de apetito o interés en la comida.	○	○	○	○	○
6. No querer hacer actividades normales.	○	○	○	○	○
7. Capricho.	○	○	○	○	○
8. Miedo.	○	○	○	○	○
9. Dificultad para pensar o concentrarse.	○	○	○	○	○
10. Problemas para dormir.	○	○	○	○	○
11. Lentitud, dificultad para moverse.	○	○	○	○	○
12. Agitación, dificultad para estar sentado quieto.	○	○	○	○	○
13. Demasiado cansancio como para hacer cosas.	○	○	○	○	○
14. Incapacidad.	○	○	○	○	○

Sigue al otro lado →

SSRS

Código:_____

Las siguientes preguntas son sobre tu LICEO y tus PROFESORES…

Por favor, marca la opción que más te identifique o con la que estás de acuerdo:	**Nunca o casi nunca**	**Pocas veces**	**Como la mitad de las veces**	**A menudo**	**Siempre o casi siempre**
1. Hay oportunidades para que los estudiantes de mi liceo hablen con un profesor o profesora a solas.	○	○	○	○	○
2. Hay oportunidades para que estudiantes de mi liceo participen en deportes, clubes y otras actividades escolares dentro y fuera del horario de clases.	○	○	○	○	○
3. En clases tengo oportunidad de participar en discusiones o actividades.	○	○	○	○	○
4. Mis profesores(as) se dan cuenta cuando estoy haciendo un buen trabajo y me lo dicen.	○	○	○	○	○
5. El liceo les hace saber a mis padres cuando hago algo bien.	○	○	○	○	○
6. Mis profesores(as) tratan a unos jóvenes mejor que a otros	○	○	○	○	○
7. Los profesores(as) del liceo nos dan muchas tareas.	○	○	○	○	○
8. En mi liceo hay reglas claras sobre qué pueden y qué no pueden hacer los estudiantes.	○	○	○	○	○
9. Cuando no sigo una regla en el liceo estoy seguro(a) de que seré castigado(a).	○	○	○	○	○
10. Los adultos del liceo dan ánimo o felicitan a los jóvenes cuando hacen algo muy bien.	○	○	○	○	○

En tu liceo, ¿qué tan seguro(a) te sientes generalmente en los siguientes lugares?:	**Nada seguro**	**Sólo un poco seguro**	**Más o menos seguro**	**Bastante seguro**	**Muy seguro**
11. ¿En los pasillos?	○	○	○	○	○
12. ¿En la cafetería o casino?	○	○	○	○	○
13. ¿En la sala de clase?	○	○	○	○	○
14. ¿Justo fuera del liceo?	○	○	○	○	○
15. ¿En el baño?	○	○	○	○	○
16. ¿En el gimnasio o en la cancha?	○	○	○	○	○
17. ¿En el camino de ir o venir entre el liceo y tu casa?	○	○	○	○	○

Indica con cuánta frecuencia en el ÚLTIMO MES te han pasado las siguientes situaciones con otros(as) estudiantes de tu liceo:	**Nunca o casi Nunca**	**Pocas veces**	**Como la mitad de las veces**	**Frecuente-mente**	**Siempre o casi Siempre**
18. Me molestaron sin razón (por ejemplo, con sobrenombres, groserías o insultos).	○	○	○	○	○
19. Me molestaron por cómo me veo o me visto.	○	○	○	○	○
20. Me ignoraron o evitaron estudiantes con los que me hubiese gustado estar.	○	○	○	○	○
21. Me molestaron por el color de mi piel.	○	○	○	○	○
22. Me ignoraron o evitaron por el color de mi piel.	○	○	○	○	○
23. Me molestaron otros jóvenes por ser buen alumno(a).	○	○	○	○	○
24. Me molestaron por ser mal alumno(a).	○	○	○	○	○
25. Tuve problemas con otro u otros estudiantes.	○	○	○	○	○
26. Tuve una pelea (con golpes o empujones).	○	○	○	○	○

Marca cuántas veces hiciste los siguientes actos durante el ÚLTIMO MES.	**Nunca**	**1 o 2 veces**	**3-5 veces**	**6-10 veces**	**11-20 veces**	**Más de 20 veces**
15. ¿Mentiste a tus padres (o a la persona que te cuida) acerca de dónde estabas o con quién estuviste?	○	○	○	○	○	○
16. ¿Estuviste afuera toda la noche sin el permiso de tus padres (o la persona que te cuida)?	○	○	○	○	○	○
17. ¿Intencionalmente pegaste o amenazaste de pegarle a alguien?	○	○	○	○	○	○
18. ¿Faltaste al liceo sin tener una excusa?	○	○	○	○	○	○
19. ¿Robaste o trataste de robar cosas que valían $2.000 (dos mil pesos) o más?	○	○	○	○	○	○
20. ¿Dañaste a propósito o trataste de dañar alguna propiedad?	○	○	○	○	○	○
21. ¿Le pediste dinero a un extraño?	○	○	○	○	○	○
22. ¿Cargaste un arma o una navaja?	○	○	○	○	○	○
23. ¿Pasaste tiempo con pandilleros como amigos?	○	○	○	○	○	○
24. ¿Asististe a eventos a escondidas sin pagar? (cine, conciertos, juegos deportivos)	○	○	○	○	○	○
25. ¿Participaste en una pelea?	○	○	○	○	○	○

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