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A Dual-Factor Model of Mental Health in High School Students: Group Characteristics and Social Functioning

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A Dual-Factor Model of Mental Health in High School Students:

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by

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Dedication

I would like to devote this dissertation to my supportive and nurturing family. Particularly to my mother, Claudia, who is a role model of hard work, ingenuity, patience, and kindness, as well as to my father, Steven, who reminds me daily that with dedication and humor most goals can be accomplished. To my little brother, Zachary, who teaches me to be flexible with life's adventures and to take chances. Lastly, to my best friend, Jason, who gives me confidence, provides me with challenges, and reminds me to keep my life in balance. My life is full thanks to your love, devotion, and generosity.

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Abstract

A dual-factor model of psychological functioning examines the presence of wellness (i.e., subjective well-being; SWB) and psychopathology (i.e., internalizing and externalizing behavior problems) in explaining youth mental health functioning. Using a dual-factor model, previous research has yielded four unique groups of elementary and middle school youth as well as college-age adults with distinct levels of wellness and psychopathology. The present empirical investigation included valid data from 500 adolescents from two high schools (grades 9 to 11). This exploratory study produced four groups of students with unique mental health profiles aligned with previous studies investigating the dual-factor model. Tukey-Kramer comparisons determined that among groups classified as having elevated symptoms of psychopathology, those that also report high levels of SWB (i.e., symptomatic but content youth) are more likely to be rated as having externalizing problems, and those with low levels of SWB (i.e., troubled youth) are more likely to report symptoms of internalizing problems. Evaluation of group differences on positive mental health indicators suggest that differences between groups with elevated SWB versus low SWB were due to differences in life satisfaction and negative affect. Tukey-Kramer comparisons indicated that youth with complete mental health reported optimal functioning in terms SWB. Youth identified as having low levels of SWB, appeared to report similarly low levels of life satisfaction and positive affect, but those that also reported elevated levels of psychopathology, particularly internalizing problems, had greater levels of negative affect. Additional findings from this study

demonstrate the utility of classifying high school students' mental health according to a dual-factor model. Results of a MANCOVA suggest a significant effect for mental health group membership as yielded from a dual-factor model on students' social-functioning. Follow up ANCOVAs and Tukey-Kramer comparisons suggest that high SWB in tandem with low levels of psychopathology (i.e., complete mental health) is associated with a host of optimal functioning in terms of teacher-rated social skills, perceptions of interpersonal relationships, receipt of social support, reduced likelihood of victimization, and high quality romantic experiences. For youth with psychopathology, average to high levels of SWB (i.e., as in symptomatic but content students), may buffer them from experiencing poor social functioning, particularly in terms of perceived social support, peer victimization, general interpersonal relations, and satisfaction with romantic experiences. Overall results from this study support the presence of dual-factor model in high school students and the importance of assessment of positive and negative indicators in order to effectively gain a comprehensive understanding of adolescents' social functioning.

Chapter 1

Introduction

Statement of Problem

Historically, psychology has been a field focused on identifying and remediating individuals' dysfunctions and psychopathologies (Seligman & Csikzenthmihalyi, 2000). Not until recent decades have a sect of psychologists systematically advocated for the study and promotion of indicators of mental well-being, such as hope, self-efficacy, and life-satisfaction, rather than focusing on the presence of disease. However, studies on such constructs have been disproportionately conducted with samples of adults. Of late, the advocacy and study of a positive state of mind in children and adolescents has come to fruition. This paradigm shift has been referred to as positive psychology, which in brief, can be described as the study and promotion of "optimal human functioning that extend[s] beyond the more typical focus . . . [of] 'what goes wrong' in humans" (Huebner, Gilman, & Furlong, 2009, p. 3). Evidence supports the utility of a positive psychology approach in child and adolescent populations, demonstrating that the absence of psychopathology alone, does not stipulate mental health (Froh, Sefick, & Emmons, 2008; Gilman & Huebner, 2006; Park & Peterson, 2006; Suldo & Shaffer, 2008).

Recently, studies (cf. Antaramian, Huebner, Hills & Valois, 2010; Greenspoon & Saklofske, 2001; Suldo & Shaffer, 2008; Suldo, Thalji, & Ferron, 2011) have supported that if only a psychopathology based approach to assessing youth mental health is used, a large proportion of students will be simply overlooked. Psychologists and

school personnel are unlikely to intervene with these youth who may not be experiencing optimal levels of functioning. The dual-factor model of mental health is a term first coined by Greenspoon and Saklofske (2001) usedto describe a model of mental health that supports the notion that wellness and psychopathology are distinct constructs. This model uses modern indicators (i.e. subjective well-being; SWB) in conjunction with traditional indicators (i.e., symptoms of internalizing and externalizing problems) to define youth mental health functioning. Greenspoon and Saklofske (2001) first examined the utility of a dual-factor model of mental health in 407 elementary students. Using measures of wellness and psychopathology, four groups of youth were identified, including children with both elevated SWB and psychopathology, as well as children with low psychopathology but low SWB. The two remaining groups of students included those who are likely identified using traditional measures: children with elevated psychopathology and low SWB, and children without psychopathology and high SWB. Utility for this method of assessment and classification system was also supported in this study, as children who reported low SWB (regardless of their level of psychopathology) had diminished social skills as well as low self-concept related to academic competence, compared to youth with high SWB. This study first supported the utility of the dual-factor model's additive component of SWB.

Greenspoon and Saklofske's (2001) approach to mental health assessment was later replicated by Suldo and Shaffer (2008), who utilized measures of SWB and psychopathology to assess the functioning of 350 middle school students. This methodology again yielded four unique classifications of students. Utility for this model was supported as youth with high SWB and low psychopathology (i.e., youth with

complete mental health) were more academically successful in regards to course grades and reading achievement, compared to peers who had low psychopathology and low SWB (i.e., vulnerable youth). Notably, students who had high SWB and high psychopathology (i.e., symptomatic but content youth) reported being a recipient of more social support from their parents and reported higher quality relations with peers, compared to youth who also had elevated symptoms of psychopathology, but had low SWB (i.e., troubled youth); thus supporting the advantages of high SWB, even in spite of psychopathology.

Predictive implications for the dual-factor model were subsequently supported in a sample of 300 participants from Suldo and Shaffer's (2008) study (Suldo, Thalji, & Ferron, 2011). Data indicated that troubled youth (i.e., low SWB and high psychopathology) declined in their academic performance over a one year period significantly faster than youth without psychopathology. However, youth who had high psychopathology and high SWB (i.e., symptomatic but content youth), did not differ significantly from their peers without psychopathology. Such findings indicate that elevated SWB, despite the presence of psychopathology, may be protective in nature, preventing symptomatic but content youth from experiencing the worst academic outcomes. Additionally, youth with complete mental health had the highest academic achievement and school attendance one year later, supporting the long-term benefits of both low psychopathology and high SWB. At this time no studies have determined if a dual-factor model of mental health exists in an older population, specifically high school students. Additionally, of the three studies examining this model in children and early adolescents there has been no investigation into the types of mental health problems (e.g.,

predominantly externalizing or internalizing in nature) those youth with psychopathology incur. Additionally, no prior studies have determined which aspects of SWB (i.e., high life satisfaction, high positive affect, or low negative affect) differentiate the mental health groups with similar levels of psychopathology from one another.

The current study sought to replicate the dual-factor model of mental health (cf. Suldo & Shaffer, 2008) in an older population of adolescents. Previous research with elementary and middle school students supports concurrent and predictive associations with the dual-factor model and essential social-emotional outcomes in youth (cf. Greenspoon & Saklofske, 2001; Suldo & Shaffer, 2008; Suldo, Thalji, & Ferron, 2011). Further, the current study aimed to investigate the more complicated intricacies of the mental health indicators used in the dual-factor model. Specifically, this study aimed to determine the types of mental health symptoms (i.e., internalizing or externalizing problems) that are associated with the two groups yielded from the dual-factor model of mental health that have clinically elevated symptoms of psychopathology. This is important, as research consistently demonstrates that psychopathology, including anxiety and depression, is related to unsatisfying social relationships, as well as to academic underachievement, risky health behaviors, and self-injury (Bottorff, Johnson, Moffat, & Mulvogue, 2009; Fergusson & Woodward, 2002; Field, Diego, & Sanders, 2001; Galaif, Sussman, Newcomb, Locke, 2007; Gaspar de Matos, Barrett, Dadds, & Shortt, 2003; La Greca & Lopez, 1998; Lewinsohn, Seeley, & Gotlib, 1997; Woodward & Fergusson, 2001). Similarly, negative associations between externalizing problems such as aggression, conduct problems, and hyperactivity have also been linked to poor interpersonal relations, substance use, lower academic achievement, reduced likelihood

of enrolling in higher education, and less successful employment in adulthood (Achenbach, Howell, McConaughy, & Stanger, 1998; Barnes, Welte, Hoffman, & Dintcheff, 1999; Capaldi, 1992; Caspi, Wright, Moffitt, & Silva, 1998; Dubow, Huesman, Boxer, Pulkkinen, & Kokko, 2006; Eisenberg & Schneider 2007; Ingoldsby, Kohl, McMahon, Lengua, & The Conduct Problems Prevention Research Group, 2006; Kokko & Pulkkinen, 2000; Loveland, Lounsbury, Welsh, & Buboltz, 2007; Winters, Stinchfield, Botzet, & Anderson, 2002). However, no previous studies had investigated the specific types of mental health problems that characterize youth classified in the symptomatic but content and troubled mental health groups. Knowing such provides more information about student characteristics within each mental health group yielded by the dual-factor model that may aid in the assessment of mental health, as well as prevention of disorders and promotion of wellness in youth.

Another primary aim of the current study was to investigate the extent to which the three variables that comprise SWB (i.e., life satisfaction, positive affect, and negative affect) differentiate youth in each mental health group from one another. Previous research demonstrated utility for having high life satisfaction during adolescence. Specifically, high life satisfaction is associated with and predicts positive school functioning as well as high self-esteem (Gilman & Huebner, 2006; Suldo & Huebner, 2006; Suldo & Shaffer, 2008; Suldo, Thalji, & Ferron, 2011). Additionally, this construct has been associated with forming positive interpersonal relationships with teachers, family, and peers (Gilman & Huebner, 2006; Huebner, 1991; Huebner, Gilman, & Laughlin, 1999; Nevin, Carr, Shelvin, Dooley, & Breaden, 2005; Suldo & Huebner, 2006). Conversely, low life satisfaction has been related to delinquent behavior in school

as well as risky health behaviors (Huebner & Alderman, 1993; Valois, 2002; Valois, Paxton, Zullig, & Huebner, 2006). Comparatively, much fewer studies have been conducted with youth investigating associations between affect and various domains of functioning. The few existing investigations support many concurrent and predictive gains from frequent experiences of positive emotions. Such advantages include better job and financial security during adulthood (Lyubomirsky, King, & Diener, 2005), as well as positive relationships with teachers and increased levels of perceived support from peers and family members for learning during adolescence (Reschly, Huebner, Appleton, & Antaramian, 2006). Whereas, lowered positive affect is associated with frequent engagement in delinquent activity and aggression (Martin & Huebner, 2007; Windle, 2000). No published study has examined the levels of youth life satisfaction, positive affect, and negative affect as related to their membership in one of the four groups yielded from the dual-factor model. This information may be useful, as previous research demonstrates (i.e., Suldo & Shaffer, 2008; Suldo, Thalji, & Ferron, 2011) that youth with high SWB and low psychopathology have the best outcomes in academic and social domains. Determining which construct of SWB differentiates them from their peers who similarly have low psychopathology, but low SWB, may be advantageous as this information could not only provide researchers with more information regarding the characteristics of youth within these two groups, but it would also inform professionals about which indicator of SWB may be most protective of optimal youth functioning. Additionally, this study aims to explore which indicators of SWB are elevated in youth with high psychopathology, but high SWB, as this may provide important information regarding which aspects of SWB buffer these youth from negative outcomes.

The final aim of the current study was to determine if the dual-factor model holds implications for high school students' social functioning. Developing the skills necessary to form and maintain social relationships during adolescence, as well as the quality of these social experiences, is related to adolescents' academic success and physical wellness. For example, having good interpersonal skills has been related to better academic and mental health outcomes (Smokowski, Mann, Reynolds, & Fraser, 2004). Social support from family members, teachers, and peers is related to better academic, mental and physical health outcomes (Bean, Bush, McKenry, & Wilson 2009; King, Tergerson, & Wilson, 2008; Liebkind, Jasinskaja-Lahti, & Solheim, 2004; Ronen & Seeman, 2007; Suldo & Huebner, 2006). On the other hand, conflict with parents during adolescence is related to diminished life satisfaction and depression (Flouri & Buchanan, 2002; Grossman & Rowat, 1995; Kuhlberg, Peña, & Zayas, 2010; Phinney & Ong, 2002; Shek, 1997; Smokowski & Bacallao, 2007). Support from friends is associated with better academic functioning (Lagana, 2004; Wassef, Mason, Collins, O'Boyle, & Ingham, 1996). Whereas, low quality relationships with peers are associated with poor mental health functioning, including diminished life satisfaction (Cheng & Chan, 2007; Dumont & Provost, 1999; Flaspohler, Elfstrom, Vanderzee, Sink, & Birchmeier, 2009; Garnefski & Diekstra, 1996; Hawker & Boulton, 2000; Holt & Espelage, 2003; La Greca & Lopez, 1998; You, Furlong, Felix, Sharkey, Tanigawa, & Greif Green, 2008). Romantic experiences are also an important aspect of interpersonal relationships during adolescence, as these types of bonds have been associated with feelings of interpersonal competence and decreased symptoms of social anxiety (Furman, Low, & Ho, 2009; La Greca & Harrison, 2005). Since prior research with younger samples has found that the

social functioning of symptomatic but content youth is relatively intact (Antararmian, Huebner, Hills, & Valois, 2011; Greenspoon & Saklofske, 2001; Suldo & Shaffer, 2008), the current study hypothesized that not all high school students with elevated psychopathology would experience diminished social functioning. Instead, the social functioning of symptomatic but content adolescents is likely to be superior to that of their troubled peers, and youth with complete mental health are likely to have better social functioning than their vulnerable peers.

Definition of Key Terms

Dual-factor model. The dual-factor model supports the notion that assessing youth mental health should include indicators of wellness (via subjective well-being [SWB]) in addition to indicators of psychopathology (i.e., internalizing and externalizing behavior problems; cf. Suldo & Shaffer, 2008). Two groups of youth who have historically been identified using traditional measures of mental health include: (1) youth termed "well-adjusted" or with "complete mental health" (high levels of SWB and low levels of psychopathology) and (2) youth termed "distressed" or "troubled" (low levels of SWB and high levels of psychopathology). The two additional groups, who would otherwise not have been identified using the traditional model of mental health in which the absence of symptoms is equated with the presence of wellness, include: (1) youth termed "externally maladjusted" or "symptomatic but content" (high levels of SWB and high levels of psychopathology) and (2) youth termed "dissatisfied" or "vulnerable" (low levels of SWB and low levels of psychopathology). The current study employed the methods of assessment and terms of the dual-factor model created by Suldo and Shaffer (2008).

Psychopathology. Emotional and behavioral problems in youth are typically described across two broadband syndromes, specifically, internalizing problems and externalizing problems (Merrell, 2008). These two broad categories are yielded via a common classification system, termed the behavioral dimensions approach. The behavioral dimensions approach uses statistical procedures to identify clusters of behaviors that are highly intercorrelated to one another into behavioral clusters (i.e., internalizing problems and externalizing problems; Merrell, 2008). In general, youth with internalizing problems (e.g., depression, anxiety, somatic complaints) typically deal with their troubles internally. Conversely, youth with externalizing problems (e.g., aggressive behavior, conduct problems, hyperactivity) typically direct their behavior onto other people or objects within their environment. In the current study, students reported their internalizing symptoms of psychopathology and educators familiar with the students reported students' symptoms of externalizing problems via nationally standardized inventories of mental health problems. Elevated scores on either inventory indicated high psychopathology.

Subjective well-being. In the scientific community, happiness has been conceptualized as SWB. An individual's cognitive appraisal of their satisfaction with their life, in addition to the frequency of their experiences of both positive and negative emotions, determines their SWB (Diener, Lucas, & Oishi, 2005). SWB is comprised of three related, but separate constructs: life satisfaction, positive affect, and negative affect (Diener, 2000). Life satisfaction refers to the evaluation of the satisfaction one has with his or life, determined by the unique set of standards an individual has constructed for him or herself (Diener & Diener, 1996; Diener et al., 2005). This indicator of wellness

can relate to an individual's overall assessment of his or her happiness, which is considered a global assessment of life satisfaction. Or life satisfaction can be domain-specific, referring to one's happiness across self-direct and outer-directed domains, such as an individual's satisfaction with friends, schooling, and family.

The second component of SWB, affective evaluations, refers to the frequency of pleasant or positive emotions, relative to the frequency of negative emotions (Larsen, Diener, & Emmons, 1985). Whereas life satisfaction is considered relatively stable over time, affect is frequently adjusted based upon the different situations an individual experiences (Larsen & Prizmic, 2008). In the current study, students' self-reported SWB was estimated by summing their standardized scores on measures of life satisfaction and positive affect, and subtracting their standardized scores of negative affect.

Social Functioning. In the current study, student functioning within the interpersonal domain was conceptualized using 13 major indicators. The first indicator is a student's mastery of social competence (i.e., social skills), which was assessed by a teacher who completed a nationally standardized measure. Additionally, social functioning included the students' perception of being liked by others in addition to student report of being a recipient of social support from educators, parents, and classmates. Social functioning included unique experiences of adolescence, specifically student report of peer victimization (relational and overt), as well as romantic experiences.

Purpose of Current Study

The current study determined the proportion of high school-age adolescents yielded amongst four categories of mental health profiles identified via a dual-factor

model of mental health. This study also examined the unique characteristics of students within each mental health group (i.e., types of mental health problems; varying levels of life satisfaction, positive affect, and negative affect). Additionally, the current study provided support for the utility of the dual-factor model classification in this population by showing the extent to which student social functioning is related to mental health group membership. Prior to the current study, no published studies determined if the dual-factor model exists in youth enrolled in high school or if it is related to social functioning during middle adolescence, a unique adolescent experience (Little, Card, Preacher, & McConnell, 2009).

The specific research questions addressed in this study include:

1. What is the proportion of high school youth within each mental health group yielded from the dual-factor classification?
2. Which types of mental health problems (i.e., internalizing or externalizing symptoms) are associated with membership in the symptomatic but content and troubled mental health groups?
3. Which indicators of subjective well-being (i.e., life satisfaction, positive affect, or negative affect) differentiate the four mental health groups from one another?
4. Which indicators of social functioning are related to group membership as yielded by the dual-factor classification in high school students?

Hypotheses

Based upon previous studies exploring the presence of the dual-factor model in elementary and middle school age youth (Antaramian, Huebner, Hills, & Valois, 2010;

Greenspoon & Saklofske, 2001; Suldo & Shaffer, 2008), it was anticipated that approximately one-quarter of high school participants in the study would meet the classification requirements to be categorized within the symptomatic but content or vulnerable mental health groups. This prediction was also based upon previous studies which support the fact that life satisfaction, which is considered the more stable indicator of SWB, is a separate construct from psychopathology, often demonstrating only negative moderate correlations with indicators of psychopathology (Huebner, 1991; Huebner, Funk, & Gilman, 2000).

Relevant to the second research question, it was anticipated that youth classified as symptomatic but content would present predominantly with externalizing psychopathology, whereas youth within the troubled mental health group would, on-average, primarily have elevated symptoms of internalizing problems. The rationale for this assumption was based upon two main factors, specifically the nature of the informant of externalizing symptoms and the incongruity between symptoms of internalizing disorders and positive emotions. To begin, it was predicted that youth who report having average to high levels of SWB in the face of high levels of psychopathology (i.e., youth in the symptomatic but content mental health group) meet this classification due in part because their level of psychopathology is determined by another informant besides themselves (i.e., their teacher). Thus, a teacher may perceive that a child has attention problems or is disruptive in the classroom (i.e., symptoms of externalizing psychopathology); however, the student may not be self-aware of their behaviors and its impact on others or their own learning, making it likely that youth within this group may perceive that their life is going well. Conversely, internalizing problems such as

depression and anxiety are characterized as internalizing because they are dealt with internally, thus making it likely that youth, who are the reporters of these difficulties are often times all too aware of these problems and how they affect their day-to-day functioning. Additionally, frequencies of positive and negative emotions are critical components to SWB. Emotions such as sad, frightened, nervous, scared, afraid, blue, gloomy are considered to be hallmarks of internalizing disorders, such as depression and anxiety. Therefore it is likely that youth with internalizing problems have a heightened experience of negative affect, thus make it likely that youth who experiences such internalizing disorders are likely to have diminished SWB, a requirement for categorization in the troubled mental health group.

In regards to the final research question, little is known about many of the social functioning indicators selected and mental health outcomes in general, both as a function of traditional indicators and modern indicators of mental health. Based upon the two previous studies with the dual-factor model (cf. Greenspoon & Saklofske, 2001; Suldo & Shaffer, 2008) it was expected that youth in the troubled mental health group would present with the lowest reports of perceived social support from peers, parents, and teachers. Additionally, because feeling supported is a critical component of all types of relationships, and previous studies found an association between the presence of depression and conflictive parent-child relations, it was anticipated that youth with internalizing problems (e.g., troubled mental health group) would also report unsatisfactory relations with their parents. Similarly, as previous research has found that youth who are victimized by their peers have an increased likelihood of anxiety, depression, and low self-esteem, it is likely that youth in the troubled mental health group

would report being victims of relational and physical aggression, compared to peers within the other three groups (Hawker & Boulton, 2000; Holt & Espelage, 2003). Beyond psychopathology, these predictions about poor quality relationships with peers in the troubled mental health group are due in part to previous findings that indicate that peer support has been found to co-occur with elevated levels of life satisfaction in youth (Vera, Thakral, Gonzales, Morgan, Conner et al., 2008). However, in regards to romantic experiences, previous research provides mixed results in terms of romantic relationships and mental health status, as a function of the types of romantic experiences youth have had (cf. Davies & Windle, 2000), therefore more information regarding the sample's unique characteristics were needed.

Hypotheses about the third research question, exploring which components of SWB (i.e., elevated SWB, elevated positive affect, or low negative affect) are most descriptive of groups of youth identified by a dual-factor model approach, could not be formulated given the complete absence of prior research on the topic. Thus, this research question was exploratory in nature and not hypothesis-driven.

Contributions to the Literature

Three studies have supported the presence of a dual-factor model in children and early adolescents, and one study replicated its presence and utility in young adults (college students). At this time, however, no published studies have examined this model in high school-age youth. The current study contributes to the literature by providing the first examination of the dual-factor model of mental health in this older age group. Additionally, this study provided additional insight into how levels of wellness and types of mental health problems vary among the groups yielded from this model. Differences in

the types of psychopathology (i.e., externalizing versus internalizing psychopathology) found between the two groups of youth with elevated symptoms of psychopathology (i.e., symptomatic but content and troubled youth) provides valuable information regarding the use of this model to assess youth functioning and the types of interventions used to remediate the mental health problems with which these youth present. Additionally, the current study contributes to the literature by providing more detailed information regarding the levels of the indicators that comprise SWB (i.e., life satisfaction, positive affect, negative affect). With respect to the utility of the dual-factor model in high school youth, the identification of a particular group of youth whose social functioning is superior, or whose social functioning may be intact, despite the presence of psychopathology, provides empirical support that psychologists and other school-based mental health professionals should utilize assessments of both psychopathology and wellness when measuring youth mental health.

Chapter 2

Review of the Literature

This chapter first examines the different conceptualizations of mental health, initially including a framework that considers the benefits of wellness in youth. The second model focuses on the presence or absence of psychopathology, and the final model includes measures of wellness and psychopathology. To that end, a brief overview of a modern approach to defining mental health, commonly termed positive psychology, is reviewed, including how the presence or absence of wellness is linked to adolescents' broad functioning in academic, social, and behavioral domains. Next, the implications for adolescent functioning using a traditional approach to defining mental health as psychopathology are delineated. Subsequently, comprehensive models that include both traditional and modern measures to conceptualize mental health are reviewed. Finally, relationships between psychopathology and wellness and social functioning are described. Specifically, relationships between youths' mental health functioning and social skills as well as the levels of social support they receive from others (i.e., teachers, parents, classmates) are explored. Additionally, more complex facets of relations with parents (e.g., conflict) and relationships with peers, including experiences of victimization and romantic relationships, are investigated.

Modern Approaches to Defining Mental Health: Subjective Well-Being

Traditionally, psychology has focused on the presence or absence of disease and dysfunctions in defining mental health (Seligman & Csikszentmihalyi, 2000). In recent

decades, research has emerged which suggests that this methodology to assessing youth's mental health functioning is inadequate at best (Greenspoon & Saklofske, 2001; Keyes, 2005; Seligman & Csikszentmihalyi, 2000; Suldo & Shaffer, 2008). A call for a paradigm shift in psychology has been made which stipulates that absence of psychopathology should not dictate mental health; rather mental health should also include positive indicators, such as an individual's satisfaction with life, hope, and optimism (Keyes, 2007). This paradigm shift in psychology focused on prevention and fostering of individual's strengths, rather than solely on remediation of one's dysfunctions, has been termed positive psychology. Positive psychology has been referred to as "the scientific study of what goes right in life, from birth to death and at all stops in between" (Peterson, 2006, p. 4). This movement is focused on "the recognition and promotion of positive aspects of individuals, groups, and their environments" (Huebner, Gilman, & Furlong, 2009, p. 3). This paradigm shift in psychology has been supported by many health and education initiatives including the World Health Organization (2006), as well as state educational statutes (cf. Levesque, 2009).

In the field of positive psychology, several constructs have been evidenced to measure the presence of positive health in youth. Well-being and satisfaction are related to an individual's perceptions of the past (Seligman, 2005). Experiences of flow and joy tap the presence of wellness in the present, and constructs such as hope and optimism are related to the future (Seligman, 2005). In the current study, the evaluation of subjective well-being, commonly referred to as happiness, will be emphasized. Subjective well-being (SWB), or happiness, has been "defined as a person's cognitive and affective evaluations of his or her life" (Diener, Lucas, & Oishi, 2005, p. 63). Specifically, SWB is

comprised of three related, but separate constructs: life satisfaction, positive affect, and negative affect (Diener, 2000). The meaning of these constructs, as well as their implications for adolescent functioning, is discussed in more detail in the upcoming sections.

Life Satisfaction

Life satisfaction is the "cognitive judgmental process in which individuals assess the quality of their lives on the basis of their own unique set of criteria" (Pavot & Diener, 1993, p. 164). Life satisfaction may be assessed globally or within specific domains of life (Kim-Prieto, Diener, Tamir, Scollon, & Diener, 2005). A global measure appraises an individual's overall assessment of his or her happiness (e. g., "My life is just right"), whereas, domain-specific life satisfaction has been measured as an individual's happiness within self-directed, as well as outer-directed, domains (i.e., family, friends, school, self, and living environment). Research supports a strong relationship between global and domain-specific life satisfaction (Huebner, Gilman, & Laughlin, 1999).

In regards to the assessment of global life satisfaction in youth, the Students' Life Satisfaction Scale (SLSS; Huebner, 1991) is one tool that has been used frequently, and has support for reliability and validity. For instance, in a study by Huebner, Funk, and Gilman (2000), 99 high school students were administered the SLSS, in addition to a traditional indicator of psychological functioning, the Behavior Assessment Scale for Children (BASC; Reynolds & Kamphaus, 1992). The BASC is a norm-referenced self-report measure used to assess behavior and emotional problems (e. g., aggression, anxiety), as well as adaptive behaviors related to healthy development (e. g., self-esteem, interpersonal relationships). Results from this study revealed moderate, positive

correlations between the BASC adaptive scales and life satisfaction (r = .22 to .48), as well as moderate negative correlations between life satisfaction and the scales evaluating problem behavior (r = -.12 to -.56). Additionally, global life satisfaction (i.e., composite SLSS scores) was found to be relatively stable across time, as analyses revealed a one-year test-retest coefficient of r = .53. Taken together, these findings indicate that life satisfaction scores are significantly related to traditional psychopathology-focused mental health factors (e.g., aggression, depression). Additionally, global life satisfaction appears relatively stable over time, with the caveat that life satisfaction fluctuates as a result of stressful events in youth such as homelessness (Bearsely & Cummins, 1999).

Research by Huebner, Drane, and Valois (2000) demonstrated that most high school adolescents report having levels of life satisfaction, both global and domain-specific, that are above the neutral point, but few report the highest levels possible of life satisfaction. High life satisfaction should not be viewed as a luxury, but rather as a necessity, as it has been found to co-occur with good relationships with self and with others, as well as co-occur with and predict positive school functioning (Suldo & Huebner, 2006; Suldo & Shaffer, 2008; Suldo, Thalji, & Ferron, 2011).

In general, research has demonstrated that average to high levels of life satisfaction are associated with relevant aspects of adolescent development, including academic pursuits, interpersonal relationships, and perceptions of self, as well as physical health, and behavior in school. For example, Irish adolescents with high life satisfaction also report more social support from adults, including parents and teachers, as well as better coping strategies, and an optimistic attributional style, compared to their peers who reported low satisfaction with life (Nevin, Carr, Shelvin, Dooley, & Breaden, 2005).

Similar findings emerged among American youth, in that students with the highest levels of life satisfaction report optimal levels of self-esteem, in addition to higher hope and internal locus of control (Gilman & Huebner, 2006). Students with high life satisfaction are also more likely to have access to social resources, including satisfying family relationships, relationships with peers, and positive relationships with teachers, as well as experience healthier levels of social stress (Huebner, 1991; Huebner, Gilman, & Laughlin, 1999; Gilman & Huebner, 2006; Nevin, Carr, Shelvin, Dooley, & Breaden, 2005; Suldo & Huebner, 2006). Life satisfaction has also been correlated with optimal school performance during adolescence (Gilman & Huebner, 2006).

Additional studies have demonstrated predictive associations between low life satisfaction and problematic behaviors in school (Huebner & Alderman, 1993; Valois, Paxton, Zullig, & Huebner, 2006), and low life satisfaction is associated with risky health behavior, including early age of first intercourse and unsafe sexual practices (Valois, 2002). Youth with low satisfaction are more likely to physically assault someone or be a victim of physical abuse by a romantic partner, in addition to experience more relational victimization and diminished prosocial experiences in youth (Martin, Huebner, & Valois, 2008; Valois, 2002). In a cross-sectional study, high life satisfaction was found to form a buffer against the development of mental health problems, specifically depression and anxiety (Huebner & Gilman, 2006). Finally, life satisfaction has been related to indicators of social functioning, including social support from adults and peers, and satisfactory relationships with parents (Greenspoon & Saklofske, 2001; Grossman & Rowat, 1995; Flouri & Buchanan, 2002; Nevin, Carr, Shevlin, Dooley, & Breaden, 2005; Phinney & Ong, 2002; Shek, 1997; Suldo & Huebner, 2006; Suldo & Shaffer, 2008; Young, Miller,

Norton, & Hill, 1995). In sum, life satisfaction should be attended to in youth, as it is related to children and adolescents' successful adaptation, positive mental health functioning, interpersonal functioning, participation in after-school activities, engagement in prosocial endeavors, school success, and healthy self-image (Park, 2004).

Positive and Negative Affect

Moods and emotions comprise the affective component of SWB (Diener, Suh, Lucas, & Smith, 1999). Affective evaluations are conceptualized as positive affect, the frequency of positive emotions, such as "lively" and "proud;" as well as negative affect, the frequency of negative emotions, such as "jittery" and "disgusted." Affect represents the evaluations of the frequency of specific emotions that are tied to specific events. Thus, affect is considered to reflect transitory emotional experience, whereas life satisfaction is considered relatively stable (Kim-Prieto, Diener, Tamir, Scollon, & Diener, 2005; Pavot & Diener, 1993). However, some longitudinal studies have demonstrated that positive affect has a reasonably enduring pattern across the life-span (Charles, Reynolds, & Gatz, 2001), while negative affect declines across the life-span (at least until approximately 60 years of age; Charles et al., 2001). Notably, transitions from one grade level to another may cause fluctuations in these underlying dimensions during adolescence; specifically students in high school may experience negative emotions more frequently than elementary school students (Greene, 1990).

According to Fredrickson's (2001) broaden and build theory, having frequent positive emotions is advantageous as it widens one's awareness and facilitates the acquisition and formation of resources by encouraging an individual to engage in diverse behaviors and thoughts. In other words, positive emotions indicate that life is good at a

specific point in time, and therefore individuals often have the opportunity to develop friendships, learn and perfect new skills, develop optimism, or focus on improving their physical health, for example. A review of the literature reveals few studies conducted with youth exploring correlates of positive affect and functioning. However, the few studies that are present indicate that there are many benefits associated with frequent experiences of positive emotions in youth.

A comprehensive review of affect in youth by Lyubomirsky, King, and Diener (2005), determined that frequent positive emotions in youth were associated with favorable outcomes, including altruistic behavior and being viewed as likable by peers, as well as other desired qualities, including creativity and problem solving skills. Additionally, frequent experiences of positive affect in adolescence were associated with acquisition of a job and financial independence as adults (Roberts, Caspi, & Moffitt, 2003). Different evidence suggests that positive affect may also serve as a buffer between negative affect and substance use during adolescence (Wills, Sandy, Shinar, & Yaeger, 1999). A more specific example has been provided by Reschly, Huebner, Appleton, and Antaramian (2006), who explored the benefits of positive emotions in 293 youth enrolled in grades 7 through 10. The sample consisted of youth who self-identified as belonging to the following ethnic groups: 48% Caucasian, 41% African American, 2.4% Asian and Indian, 1% Hispanic, and 5% other racial group. Approximately 48% of students were from low socioeconomic (SES) backgrounds. Students completed the Positive and Negative Affect Schedule-Children (PANAS-C; Laurent et al., 1999), a tool commonly used to quantify the affective experiences of youth, which has demonstrated good reliability and validity (Hughes & Kendall, 2009; Laurent, Catanzaro, Joiner, Rudolf,

Potter et al., 1999). Students also completed the Self-Report Coping Scale (Causey & Dubow, 1992), and the Student Engagement Instrument (SEI; Appleton et al., 2006). Results indicate that frequent positive emotions during adolescence were associated with higher levels of student engagement within the domains of relationships with teachers, control and perceived reliance of assigned school work, perceived support from peers for learning, future goals, as well as perceived family support for learning. Conversely, negative emotions were associated with lower levels of engagement. Further, positive emotions, but not negative emotions, were associated with adaptive coping (i.e., seeking social support) which, in turn, was further associated with increased student engagement.

Not only does positive affect prove to be advantageous in the present, but Roberts, Caspi, and Moffitt (2003) found that individuals who reported experiencing frequent positive emotions at age 18 reported greater job satisfaction, more financial security, and described their job as intellectually stimulating at the age of 26. In contrast, diminished experiences of positive affect and/or experiences of negative emotions in youth are damaging to relevant developmental outcomes. For example, Windle (2000) found that lowered positive affect is associated with frequent engagement in delinquent activity. Further, Martin and Huebner (2007) determined that negative affect in middle school students was associated with higher levels of both physical aggression as well as relational aggression. In sum, frequent positive emotions in youth have both short-term and long-term benefits, whereas negative emotions are related to worse outcomes.

Traditional Approaches to Defining Mental Health: Psychopathology

Historically, mental health has been defined as the presence or absence of psychopathology. In youth, psychopathology is often conceptualized as referring to two

broad-band syndrome clusters, specifically internalizing disorders (e.g., anxiety, depression) and externalizing disorders (e.g., anger/aggression, rule-breaking behavior, hyperactivity; American Psychiatric Association, 2000). These two broad categories of social, emotional, and behavioral problems are yielded using the behavioral dimensions approach, which employs statistical analysis of symptoms to yield the two categories (Merrell, 2008). In general, youth diagnosed with internalizing disorders typically manage difficulties internally and with minimal effect on the environment. In contrast, externalizing problems are defined by behaviors acted outward, typically toward other people or objects in the environment.

There are several methods commonly utilized to assess and categorize mental health in youth (e.g., rating scales, interviews, checklists of symptom criteria). The most common system in use is the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR; American Psychiatric Association, 2000). This taxonomic tool stipulates that youth must meet a specific number of symptoms for a specific period of time. A benefit of such a system is that it provides a common language for professionals to use during communication; further, the DSM-IV-TR provides a means to determine which youth require the most attention for intervention, and can point practitioners and families into the appropriate direction for effective interventions (Maddux, 2005). Using this diagnostic approach, it has been found that as many as one in five children in the United States has some type of mental health difficulty (Brown, Riley, & Wissow, 2007; Roberts, Roberts, & Xing, 2007). It is not anticipated that the prevalence will diminish, as a study by the World Health Organization suggests that by the year 2020, childhood neuropsychiatric disorders will increase by over 50%

worldwide, becoming one of five most common causes of disease, death, and disability among youth (U.S. Public Health Service, 2000).

Early onset of mental disorders disrupts the education of youth and has grave consequences in adulthood (Kessler, Foster, Saunders, & Stang, 1995; Mash & Dozois, 2003; Maughan & Rutter, 1998). In 2001, the fiscal burden of mental health problems and substance abuse problems on society was estimated at $104 billion, corresponding to 7.6% of the nation's health care spending (Mark, Coffey, Vandivort-Warren, Harwood, King et al., 2005). Many researchers (e.g., Keyes, 2002, 2005; Maddux, 2005; Seligman & Csikszentmihalyi, 2000) have argued that the current means by which we conceptualize and promote mental health is insufficient, announcing that the DSM-IV-TR categories measure "mental illness," rather than "mental health" and that these categories provide a means of maintaining social order between normal and abnormal, rather than promoting mental health. Given these acute outcomes of mental illness and the financial burden they place on society, a shift in the frame of reference used to categorize and promote mental health is warranted, providing the shift ultimately yields a better tool for successful promotion and treatment of mental health. Conceptualizations advanced with the positive psychology movement are aimed at not only identifying individuals' dysfunctions but also promoting their strengths and resiliency (Maddux, 2005). To provide more insight in the utility of the positive psychology movement, an evaluation of outcomes associated with the "mental illness" approach is provided, followed by discussion of a model that partners traditional and modern methods of assessing mental health.

Internalizing Problems

Epidemiological studies have indicated that depression and anxiety are two of the most common childhood internalizing disorders in youth (Albano, Chorpita, & Barlow, 2003; Costello, Egger, & Angold, 2005; Huberty, 2008; Rushton, Forcier, & Schectman, 2002). In fact, recent studies suggest that 4.75% of youth ages 5 to 17 suffer from major depression and 8% of youth have a diagnosable anxiety disorder (Costello, Egger, & Angold, 2005).

A variety of poor developmental outcomes are associated with depression and anxiety. For example, adolescents with major depressive disorder experience more behavior problems at school, have poor academic achievement, and have unsatisfactory relationships with teachers, compared to peers without a psychiatric diagnoses (Puig-Antich, Kaufman, Ryan, Williamson, Dahl et al. 1993). Depressed mood is associated with risky behaviors including self-injury and increased risk for suicide (Galaif, Sussman, Newcomb, Locke, 2007; Laukkanen, Rissanen, Honkalampi, Kylma, Tolmunen et al, 2009; Mash & Barkley, 2003; Ross & Heath, 2002). In addition, youth with depression report using tobacco, marijuana, and alcohol frequently (Bottorff, Johnson, Moffat, & Mulvogue, 2009; Galaif, Sussman, Newcomb, Locke, 2007; Lewinsohn, Seeley, & Gotlib, 1997). In regards to social outcomes, students with depression report poor peer relationships (Field, Diego, & Sanders, 2001; Gaspar de Matos, Barrett, Dadds, & Shortt, 2003), a high degree of emotional reliance on others (Lewinsohn, Seeley, & Gotlib, 1997), and deficits in social problem solving skills (Siu & Shek, 2010). Additionally, unsatisfactory relationships with best friends and romantic interests are associated with depressive symptoms (La Greca & Harrison, 2005). Youth with depression also have low

self-esteem (Lewinsohn, Seeley, & Gotlib, 1997). Problems related to depression in youth are likely to maintain to adulthood if not adequately treated. For example, a longitudinal study found that participants that developed depression during ages 14 to 16 were at increased risk for educational underachievement (i.e., high rates of school dropout, reduced likelihood of enrolling in a university or tertiary level education) at ages 18-21 compared to individuals who were not depressed at ages 14-16 (Fergusson & Woodward, 2002).

Anxiety is also related to negative outcomes during adolescence. For instance, use of tobacco products is associated with social phobia, generalized anxiety, and obsessive compulsive disorder, even after controlling for depressive disorders, in adolescents ages 13-17 (Wu, Goodwin, Fuller, Liu, Comer et al., 2010). Similar to depression, anxiety is associated with self-injurious behavior in youth (Galaif, Sussman, Newcomb, Locke, 2007). Forming meaningful relationships is a key task during adolescence, however, youth with anxiety disorders report receiving less support from classmates and poor social acceptance (La Greca & Lopez, 1998).

These negative developmental associations with anxiety persist throughout adulthood. For example, Woodward and Fergusson (2001) found that only 26% of adolescents who were diagnosed with one anxiety disorder attended college, versus 34% of youth without an anxiety disorder who entered college by age 21. Woodward and Fergusson (2001) also found significant associations between the presence of anxiety disorders in adolescence (ages 14-16) and negative outcomes in adulthood (ages 18-21 years) including: the presence of an anxiety disorder or major depression; tobacco, alcohol, and illicit drug use; attempts of suicide; and early parenthood.

Externalizing Problems

Three of the most common types of childhood externalizing problems include attention deficit/ hyperactivity disorder (ADHD), aggressive behavior, and rule breaking behavior. The median prevalence estimate of any disruptive behavior disorder in youth ages 5 to 17 is 20%; specifically, 12% suffer from conduct disorder and approximately 10% suffer from oppositional defiant disorder (Costello, Egger, & Angold, 2005). The median prevalence estimate for youth 5 to 17 years old with ADHD is 13% (Costello, Egger, & Angold, 2005). These externalizing behaviors have detrimental affects on students' school success, social functioning, and health, as well as problems in adulthood (Masten, Roisman, Long, Burt, Obradovic et al., 2005)

Adolescents with ADHD have significantly poorer school functioning than adolescents without ADHD, including increased risk of failing a grade, frequent school suspensions and expulsions, as well as lower levels of achievement on standardized tests of reading, math, and science (Barkley, 2006; Loe & Feldman, 2007). Additionally, both female and male students with ADHD, in addition to their parents and teachers, have worse perceptions of their academic abilities compared to students without ADHD (Eisenberg & Schneider, 2007). Youth with attention problems, a hallmark symptom of ADHD, are more likely to receive mental health services and exhibit suicidal behavior (Achenbach, Howell, McConaughy, & Stanger, 1998). Students with ADHD typically often have co-morbid communication deficits and engage in aggressive behaviors, further negatively impacting their relationships with others (Dumas, 1998).

Research consistently indicates that the prevalence of disruptive behavior disorders in youth is at least twice as high in males as females (Canino, Polanczyk,

Bauermeister, Rohde, & Frick, 2010). Further, aggressive behavior in youth decreases from childhood to adolescence (Nagin & Tremblay, 2001; Xie, Drabick, & Chen, 2011). Evidence suggests that antisocial or aggressive behavior, a symptom of externalizing disorders, in adolescence undermines student achievement (Herrenkohl, Catalano, Hemphill, & Toumbourou, 2009; Schwartz, Hopmeyer Gorman, Nakamoto, & McKay, 2006). For instance, aggression has been found to account for 16% of the variance in students' achievement (i.e., grade point average; Loveland, Lounsbury, Welsh, & Buboltz, 2007). Youth who exhibit aggressive and delinquent behaviors are more likely to have poorer grades, be less engaged in school, and drop out of school (Achenbach, Howell, McConaughy, & Stanger, 1998; Graham, Bellmore, & Mize, 2006). Youth who are aggressive in childhood and adolescence are also more likely to be unemployed, have lower occupational status, and an unstable career path as adults (Caspi, Wright, Moffitt, & Silva, 1998; Dubow, Huesman, Boxer, Pulkkinen, & Kokko, 2006; Ingoldsby, Kohl, McMahon, Lengua, & The Conduct Problems Prevention Research Group, 2006; Kokko & Pulkkinen, 2000). Relevant to physical health outcomes, aggression is associated with unwed pregnancy for males and females, in addition to substance use by males (Achenbach, Howell, McConaughy, & Stanger, 1998; Capaldi & Stoolmiller, 1999). Of note, developmental problems associated with aggression occur in multiple societies (Lopes, 2007; Seah & Ang, 2008).

Young people who frequently demonstrate delinquent or rule-breaking behavior during adolescence have difficulties in academic pursuits, social relationships, and health domains, as well as problematic gambling and substance use (Achenbach, Howell, McConaughy, & Stanger, 1998; Barnes, Welte, Hoffman, & Dintcheff, 1999; Winters,

Stinchfield, Botzet, & Anderson, 2002). Intuitively, delinquent youth are also involved in the judicial system more frequently (Achenbach et al. 1998; Rosenblat, Rosenblatt, & Biggs, 2000), and youth who enter the juvenile justice system are faced with grim academic trajectories. Chung, Little, Steinberg, and Altschuler (2005) found that after release from the juvenile justice system, only 30% of youth offenders were enrolled in school or were working and only 12% earned their high school diploma or General Equivalency Diploma by young adulthood. Deviant behavior is also related to earlier age of intercourse and poorer perceived physical health (Costa, Jesor, Donovan, & Fortenberry, 1995; Wade, 2001). Delinquency is also associated with poor self-esteem, even when controlling for the influence of parental support, peer relationships, and academic achievement (Donnellan, Trzesniewski, Robins, Mofitt, & Caspi, 2005).

In summary, internalizing and externalizing problems in youth are predictive of negative outcomes. Specifically, the presence of psychopathology in youth is related to poor academic achievement, unsatisfactory social relationships, and poor physical health outcomes. In adulthood, these adolescents are more likely to be faced with unpromising opportunities for higher educational attainment and are less likely to be successfully employed. In the next section, models of psychological wellness that are comprised of positive and negative indicators of mental health functioning are reviewed, including how the mental health categories yielded from these classification systems relate to the context of students' social, behavioral, and academic functioning.

Models that Examine Psychopathology and SWB in Defining Mental Health

In recent years, research with children, adolescents, and young adults has yielded data demonstrating that psychological functioning should not be conceptualized as a

continuum of psychopathology or wellness; instead, combinations of positive and negative indicators provide a more accurate understanding of a youth's mental health (Greenspoon & Saklofske, 2001; Keyes, 2002, 2006; Suldo & Shaffer, 2008). In this section, one model, developed by Keyes, will be reviewed, followed by the dual-factor model. Keyes's model (2002; 2006) focuses on mental health as a "syndrome of positive feelings and positive functioning" (p. 207), as well as acknowledges the presence of symptoms that meet criteria for major depressive disorder as stipulated by the DSM-III-R (American Psychiatric Association, 1987). The dual-factor model of mental health strives to provide a more complete understanding of psychological functioning in youth by examining patterns of modern indicators of wellness (specifically, SWB) as well as traditional indicators of psychopathology (i.e., internalizing and externalizing symptoms of mental disorders).

Keyes (2002)

Keyes (2002) proposed a categorical system of mental health with adults that assessed individuals as "flourishing," "languishing," and "moderately mentally healthy," distinct from simply identifying those with mental illness. The study was comprised of 3,032 adult participants ages 24 to 72 years. Participants completed 11 scales of positive functioning and 13 scales comprised of symptoms of mental health problems. One scale included the Composite International Diagnostic Interview Short Form (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998), which assesses mental illness. Participants also rated their emotional well-being, by indicating the extent to which they experienced six symptoms of positive affect (i.e., "cheerful," "in good spirits," "extremely happy," "calm and peaceful," "satisfied," and "full of life") in the past 30

days, ranging from “all” to “none of the time.” Participants also rated their psychological well-being, by rating how much they believe they are thriving in their life within specific domains of SWB (i.e., self-acceptance, positive interpersonal relationships, personal growth, feeling of purpose in one’s life, ability to manage responsibilities, and ability to influence others) from "poor," to "excellent." Finally, participants rated the extent to which they were thriving in their social life (i.e., social well-being) by rating different aspects of social dimensions (e.g., social contribution, social acceptance). Given the responses on the various rating scales, participants were classified in the following categories: “flourishing,” “languishing,” and “moderately mentally healthy,” and noted the percentage of individuals within each category with mental illness (i.e., major depressive episode during the past 12 months). Adults classified as languishing in life (12.1% of sample), were ranked in the lower level (i.e., lower tertile) on one out of two measures of well-being, and low levels on six out of 11 scales of positive functioning. Participants categorized as flourishing in life (17.2% of sample), reported at least one characteristic that fell within the higher level (i.e., upper tertile) on one out of two measures of well-being and high levels on six out of 11 scales of positive functioning. Participants classified as moderately mentally healthy (56.6% of sample) reported levels of well-being that were in the middle tertile on at least seven of 13 symptom scales, in other words functioning somewhere between those categorized as flourishing and those categorized as languishing. Lastly, there were participants who were categorized as having mental illness (14.1%) based upon the criteria of having one or more types of psychopathology, specifically having major depressive episode.

In regards to implications for group membership, data analysis reveals that participants who are categorized as languishing in life are twice as likely as adults in the moderately mentally healthy group and almost six times as likely as participants in the flourishing category to be at risk for a major depressive episode. This study supports the initiative to evaluate indicators of mental wellness alongside indicators of psychopathology, as they provide a more comprehensive picture of an individual's functioning which sequentially is imperative to the prevention of future illness. It has not been until recently that studies examining the utility of measuring wellness and psychopathology in youth have been conducted. These studies are described in the proceeding sections.

Keyes (2006)

Later, Keyes (2006) explored the application of a similar categorical system of mental health in adolescents. The study consisted of 1,234 youth ages 12 to 18 years. Participants completed 12 items assessing their SWB using a measure adapted from an assessment of the emotional, psychological, and social well-being of adults (Keyes & Magyar-Moe, 2003). Three items from the Child Development Supplement-II (CDS-II) of the Panel Study of Income Dynamics were used to evaluate adolescents' emotional well-being. The CDS-II asks adolescents to report how often they were: (a) happy, (b) interested in life, and (c) satisfied in the past month. Students' social well-being was assessed using the CDS-II across the following five dimensions of social-well-being: social contribution, social integration, social actualization, social acceptance, and social coherence. Finally, psychological well-being was also assessed via the CDS-II across the following four dimensions: environmental mastery, personal growth, positive relations

with others, and autonomy. Using the Children's Depression Inventory (CDI; Kovacs, 1992), students were assessed for symptoms of depression. Adolescents' psychosocial functioning was assessed via the Global Self-Concept Scale (Marsh, 1990). The Global Self-Concept Scale consists of 6-items measuring how often students feel good about their abilities (e. g., "When I do something, I do it well") as well as themselves (e. g., "A lot of things about me are good"). Additionally, five items were used to measure participants' self-determination, a type of self-efficacy (e.g., "Even when a task is difficult, I want to solve it anyway,"). To address closeness in relationships, adolescents were asked to report how "close" they felt toward six individuals (i.e., mother or stepmother, father or stepfather, sibling, friends, teacher, or other adults exclusive of the school setting). Additionally, Keyes assessed the extent to which participants engaged in behaviors indicative of conduct problems through a self-report measure querying the number of times students had been truant from school, arrested, smoked cigarettes, smoked marijuana, used inhalants to get high, and/or used alcohol. Lastly, participants completed four items that assessed perceptions of school integration as well if they felt safe and/or happy to be at school.

Based on these assessments, Keyes used a similar categorical system as he used with his adult participants to classify students as flourishing, languishing, or having moderate mental health. It was determined that 12 to 14 year olds most commonly met the criteria for flourishing (i.e., 48.8% of sample). Among youth ages 15 to 18, moderate mental health was the most common classification (i.e., 54.5% of sample). The proportion of youth that met criteria for languishing was relatively the same among both age groups (i.e., 6% for 12 to 14 years and 5.6% for 15 to 18 years). In regards to

outcomes associated with group membership, youth classified as languishing reported more incidence of arrest, truancy, tobacco and alcohol use, as well as drug use than their peers categorized as moderately mentally healthy or flourishing. Youth in the flourishing group reported better psychosocial functioning, including feeling good about oneself more frequently, feeling close to others, school integration, and self-determination, as compared to students classified as moderately mentally healthy or flourishing. Such results indicate that flourishing youth have better outcomes, and provide evidence for the evaluation and promotion of wellness in children and adolescents. Keyes's (cf. Robitschek & Keyes, 2009) most recent work supports the assessment of wellness in young adults; the presence of the three domains of mental health (i.e., emotional, psychological, and social well-being) was replicated among college-age students.

In summary, Keyes's research provides support for the evaluation of wellness across three broad age groups of individuals. Keyes's studies demonstrate that youth and adults who are flourishing, or report well-being across emotional, psychological, and social domains have the best outcomes across different areas of functioning. Keyes's model is consistent with positive psychology leader Seligman's (2011) recent conceptualization of "well-being theory" as aiming to increase human "flourishing by increasing positive emotion [subjective well-being], engagement, meaning, positive relationships, and accomplishment" (p. 12).

Greenspoon and Saklofske (2001)

Greenspoon and Saklofske (2001) first provided empirical rationale for a model of youth mental health in which indicators of illness and wellness (i.e., psychopathology and life satisfaction) were used together to conceptualize mental health functioning. Their

study provided evidence for the notion that psychopathology and life satisfaction were two distinctive yet interrelated constructs in youth. Their study included 407 Canadian students enrolled in grades 3 through 6. Students completed questionnaires assessing life satisfaction (measured by the Multidimensional Students' Life Satisfaction Scale [MSLSS; Huebner, 1994]), psychopathology (measured via the BASC; Reynolds & Kamphaus, 1992), and outcomes hypothesized to relate to mental health, including personality (i.e., psychoticism, neuroticism, and extraversion), interpersonal relationships, self-concept, locus of control, and temperament (i.e., emotionality, activity, sociability, and shyness). Analysis of participants' scores of psychopathology and life satisfaction revealed four groups of children, two of which were unique: children who reported high life satisfaction but also scored high on indices of psychopathology, and children who scored low on indices of psychopathology and reported low life satisfaction. Data analyses revealed that children in groups with low levels of life satisfaction (i.e., low life satisfaction and low psychopathology, low life satisfaction and high psychopathology) had poorer interpersonal skills as well as low self-concept relevant to academic competence. Additionally, youth with elevated levels of psychopathology (i.e., low life satisfaction and high psychopathology, high life satisfaction and high psychopathology) had increased levels of external locus of control, lower sense of global self-worth, and scored higher on neuroticism. Even students who had elevated scores of psychopathology and high life satisfaction were reported by teachers to be more social than youth with low psychopathology and low life satisfaction, suggesting a protective nature of life satisfaction in that the absence of psychopathology was not sufficient to guarantee optimal social functioning. Findings from Greenspoon's

and Saklofske's (2001) study provided support for the utility of assessing positive indicators of perceived wellness in conjunction with traditional indicators of mental health problems, and suggest that youth with high psychopathology may not be doomed for the worst outcomes (at least in the social domain) if high life satisfaction is present.

Similar to the hypotheses set forth by Greenspoon and Saklofske (2001), it is predicted that youth who maintain high SWB despite high levels of psychopathology (i.e., youth in the symptomatic but content mental health group) fit this profile primarily because their level of psychopathology is determined by another observer (i.e., their teacher) often. Therefore, although an observer perceives that a student has mental health problems in the form of externalizing symptoms of psychopathology (e.g., aggression, conduct problems, attention problems), the student still perceives that their life is going well. An example of such a phenomenon may be illustrated with the positive illusory bias, a common phenomenon in youth with ADHD. This construct refers to inconsistency between self-report of competence and actual competence, such that self-reported competence is inflated (Hoza, Pelham, Milic, Pillow, & McBride, 1993). Researchers have found that youth with ADHD have inflated self-perceptions of their competence across academic, behavioral, social, as well as athletic domains (Evangelista, Owens, Golden, & Pelham, 2008). For youth with other externalizing behavior problems, such as aggression and conduct problems, they may have similar inflated perceptions of other aspects of their functioning, thus engendering them to be satisfied with their life. Additionally, aggressive behavior may be adaptive, as longitudinal investigations with youth from ages 10 to 14 indicated that youth who engaged in relational aggression were perceived as more popular by peers (Cillessen & Mayeux, 2004). However, this

association with membership in the symptomatic but content mental health group cannot be certain, as another study with a sample of college students diagnosed with ADHD indicated that symptoms of ADHD were found to be negatively associated with life satisfaction in both males (r = -0.34) and females (r = -0.50; Gudjonsson, Sigurdsson, Smari, &Young, 2008). Thus far no studies have investigated which specific mental health disorders reach clinical significance for students within the symptomatic but content and troubled mental health groups. This information could be valuable as it may inform interventions if data indicate that there is a differentiating pattern regarding the types of mental health problems students within each of these unique groups experience.

Suldo and Shaffer (2008)

A study by Suldo and Shaffer (2008) later replicated and extended the findings of Greenspoon and Saklofske (2001) to provide additional support for a dual-factor model of mental health in youth. This investigation included 350 middle school students in grades 6 to 8. Students were administered measures to assess SWB, specifically the SLSS (Huebner, 1991) and the PANAS-C (Laurent et al., 1999). The Youth Self-Report Form of the Child Behavior Checklist (YSR; Achenbach & Rescorla, 2001) was completed by students to assess internalizing psychopathology; students also completed measures of social functioning, physical health, and attitudes towards school. Participants' teachers completed the Teacher Report Form of the Child Behavior Checklist (TRF; Achenbach & Rescorla, 2001) to assess participants' symptoms of externalizing psychopathology. Suldo and Shaffer's (2008) study duplicated Greenspoon and Saklofske's (2001) research in an older cohort of youth, again yielding four distinct groups of youth based upon their mental health functioning. Participants were categorized within the following groups:

57% were classified as having "complete mental health" (i.e., high SWB and low psychopathology), 13% were classified as "vulnerable" (i.e., low SWB and low psychopathology), 13% were classified as "symptomatic but content" (high SWB and high psychopathology), and lastly 17% were classified as "troubled" (i.e., low SWB and high psychopathology). The four mental health groups yielded from the dual-factor model of mental health are depicted in Table 1.

Table 1

Mental Health Groups Yielded from a Dual-Factor Model of Mental Health

	High SWB	Low SWB
High Psychopathology	*Symptomatic but Content*	*Troubled*
Low Psychopathology	*Complete Mental Health*	*Vulnerable*

In regards to relevant developmental outcomes, students in the complete mental health group had higher grade point averages, scored higher on a state assessment of reading, and attended school more frequently than their vulnerable peers. Youth with complete mental health also had better attitudes towards school, indicated valuing school more, and reported more motivation and self-regulation of their behavior within the classroom setting than students in the vulnerable mental health group. These results demonstrating that the absence of psychopathology alone is not sufficient to guarantee optimal academic outcomes. Advantages of complete mental health also extended to students' physical health, as these students reported better general health (e.g., rarely being sick, positive perceptions of their health), and reported that their health status made them able to engage in activities with their family, compared to students in the three other

mental health groups. Benefits of SWB also extended to youth with elevated scores of psychopathology. Youth classified as symptomatic but content perceive better physical health than youth within the troubled group, who perceive the worse physical health. Additionally, these students identified as symptomatic but content perceived more positive interpersonal relationships with peers and more social support from their parents, compared to troubled youth, who perceived the lowest levels of social support from parents. Such results underscore the possible benefits of SWB even among youth with mental health problems. This study provided support for the dual-factor model of mental health in early adolescents, and extended the benefits of complete mental health to include physical health and objective indicators of academic achievement. However, limitations of this study include the lack of specificity regarding the types of mental health problems (i.e., internalizing or externalizing symptoms) students in the troubled and symptomatic but content groups have as well as which construct of SWB (i.e., life satisfaction, positive affect) engenders high SWB among youth in the complete mental health and symptomatic but content mental health groups.

Longitudinal implications of the dual-factor model of mental health were later explored by Suldo, Thalji, and Ferron (2011). Their empirical investigation examined the utility of the dual-factor model in predicting students' subsequent academic achievement and in-school behavior. In this study, the dataset used in the investigation by Suldo and Shaffer (2008; i.e., Time 1) was analyzed, along with participants' data from the subsequent school year (i.e., Time 2). The longitudinal sample included 300 participants who were in grades 6-8 at Time 1. At both Time 1 and Time 2 data from student records were collected that included student grades (i.e., GPA), performance on statewide

standardized tests of reading and math achievement, absences, as well as office disciplinary referrals. Data analysis revealed student mental health group membership was related to academic functioning across time. Specifically, students' GPAs in the troubled mental health group declined at a rate that was significantly faster than youth without psychopathology. Notably, the change in GPA of students in the symptomatic but content group was not significantly different from the change in GPA of peers with low psychopathology, suggesting that having average/high SWB protected these adolescents from experiencing the greatest declines in GPA, despite their clinical levels of psychopathology. Further, at Time 2, students with the best school attendance and school grades had both average/high SWB and had low psychopathology the prior school year, a finding that underscores the long-term benefits of complete mental health. This study not only provided support for the utility of dual-factor model in predicting student functioning one year later, but because students with complete mental health evidenced the best school functioning outcomes, it underscored the importance of attending to students' SWB in addition to their symptoms of psychopathology. However, the existence and utility of a dual-factor model has yet to be explored among high school age youth.

Antaramian, Huebner, Hills, and Valois (2010)

Further support for the presence and utility of a dual-factor model in middle school students was recently provided by Antaramian, Hubner, Hills, and Valois (2010). The sample was comprised of 764 students in grades 6 to 8. Regarding assessment of SWB, students completed the SLSS (Huebner, 1991) and the PANAS-C (Laurent et al., 1999). Students also self-reported their symptoms of psychopathology via the

Internalizing and Externalizing subscales of Self-Report Coping Scale (Causey & Dubow, 1992). Students also completed several measures assessing their behavioral and cognitive engagement in school, and perceived support for learning from key individuals. Students' academic performance was measured via students' grades and their performance on a standardized computer-based academic achievement test that assessed math, science, and language. Participants were categorized as having high psychopathology if they presented with a *T*-score meeting a cutoff at a *T*-score of 60 or higher. Next, Antaramian et al. created a composite variable of SWB using similar procedures to Suldo and Shaffer (2008). Youth with a SWB *T*-score of 40 or lower were identified as having low SWB, and youth with a SWB *T*-score of 41 or higher were classified as having average to high levels of SWB. Students were then classified into the following groups: 66.9% had "positive mental health" (high SWB and low psychopathology), 8.1% were "vulnerable" (low SWB and low psychopathology), 17.3% were "symptomatic but content" (high SWB and high psychopathology), and 7.7% were "troubled" (low SWB and high psychopathology). Of note, all *T*-scores were seemingly created based on the distribution of the scores in the sample, not a national norm group (i.e., as in commercially-available measures of psychopathology).

Regarding academic outcomes that differed by mental health group, youth with positive mental health had the highest levels of student cognitive and emotional engagement. Results also provided further support for the protective nature of SWB, as symptomatic but content students had higher levels of emotional and behavioral engagement than their troubled peers; vulnerable and troubled youth reported the lowest levels of engagement. Students with positive mental health youth had the highest GPA;

there was not a similar effect of mental health status on students' standardized test scores. Overall, this study replicated the presence and utilization of the dual-factor model in middle school age adolescents by demonstrating that youth with the optimal mental health functioning (i.e., average to high levels of SWB in combination with low levels of psychopathology) have the best academic functioning in terms of GPA and engagement in schooling.

Eklund, Dowdy, Jones, and Furlong (2011)

Another recent study provided empirical support for use of a dual-factor model in young adults (Eklund et al., 2011). The sample was comprised of 240 college students (18-25 years old; 79% of sample was female). Participants completed the BASC-2 College Form (Reynolds & Kamphaus, 2004) in order to assess their levels symptoms of emotional problems as well as positive adjustment with self and others, and maladaptive behaviors. Participants also completed indicators aligned with a positive psychology perspective, including measures of life satisfaction, hope, gratitude, persistence, as well a measure tapping well-being in social, emotional, and psychological domains. Participants were assigned to four mental health groups based upon their high (or low) levels life satisfaction and symptoms of psychopathology as well as their adjustment. High psychopathology was indicated by a *T*-score greater than 60 on a composite assessing emotional problems and/or a composite variable assessing personal adjustment problems featuring a *T*-score less than 40, whereas high life satisfaction was indicated by a cut-score of greater than 4 out of 7 possible points. Proportions of individuals categorized in each mental health group were as follows: 78% were "well-adjusted" (high life satisfaction and low psychopathology and high levels of adjustment with self and others;

akin to complete mental health), 9% were categorized as "at-risk" (low life satisfaction and low psychopathology and high levels of adjustment with self and others; akin to vulnerable), 4% were categorized as "ambivalent" (high life satisfaction and high psychopathology and low levels of adjustment with self and others; akin to symptomatic but content), and lastly 9% were categorized as "distressed" (low life satisfaction and high psychopathology and low levels of adjustment with self and others; akin to troubled).

Results investigating participants' functioning across multiple domains suggest that young adults classified as well-adjusted demonstrated the most optimal levels of psychological, emotional, and social well-being and lowest levels of attention difficulties. Groups without psychopathology reported the most adaptive locus of control. Ambivalent young adults were similar to well-adjusted individuals, and better than their at-risk and distressed peers, on indicators of gratitude and hope. Distressed young adults reported the lowest levels of gratitude. Groups did not differ on their alcohol use, hyperactivity, or persistence. Overall, findings from this study promote the inclusion of an assessment of life satisfaction when evaluating college age students' mental health. Specifically, results indicate that high life satisfaction in tandem with low levels of psychopathology is associated with optimal psychological, emotional, and social well-being. Furthermore, adults with high levels of life satisfaction, regardless of their levels of psychopathology, had superior levels of hope and gratitude, which may serve protective functions.

In summary, studies that have applied a dual-factor model to youth have yielded results that suggest the dual-factor model is effective in assessing children and early adolescents', and young adults', level of psychological functioning. Using this model,

two unique groups of students who are typically overlooked using traditional methods of psychological assessment have been identified (i.e., students who are vulnerable or symptomatic but content). These studies have further illustrated how mental health group membership may relate to a student's current and future levels of relevant developmental functioning (i.e., academic achievement, in-school behavior, interpersonal relationships, physical health; Antararmian et al., 2011; Eklund et al., 2011; Greenspoon & Saklosfe, 2001; Suldo & Shaffer, 2008; Suldo, Thalji, & Ferron, 2011). However, no studies to date have examined the existence of the dual-factor model in older adolescents (i.e., students in high school). Further, previous research has examined the benefits of average to high life satisfaction and positive affect, in addition to low levels of psychopathology. However, no studies have examined the types of psychopathology, or the specific levels of life satisfaction, positive affect, and negative affect, that characterize students in each of the four groups yielded from the dual-factor model of mental health (Suldo & Shaffer, 2008). The current study intentionally examined these additional intricate facets of this model. The final objective of this current study was to determine the relationships between mental health group membership, as yielded from the dual-factor model, and social functioning among high school students. Similar to findings in previous work with this model (e.g., Suldo & Shaffer, 2008), it was predicted that having high life satisfaction, despite clinical levels of psychopathology, would buffer youth in the symptomatic but content mental health group, enabling them to have superior social functioning, in yet another age group. The exploration of these associations is important, due to the limited research between wellness in youth and links to relationships unique to adolescence (i.e., romantic relationships). Also knowing which indicators of social

relationships are associated with optimal functioning can drive efforts on behalf of mental health professionals and school personnel to ensure the most favorable developmental outcomes in high school students. Subsequent sections of this chapter explore important relationships during adolescence and unique associations between the quality and nature of these relationships with student academic performance, physical health indicators, as well as mental health functioning.

Social Functioning

Adolescence is a period marked by numerous developmental milestones aimed to prepare youth for a successful transition to an autonomous adult. Most unique of this age group are changes in social roles that children acquire during adolescence (cf. Lerner & Steinberg, 2004). In Western cultures these social transitions fall within four major domains: interpersonal relationships, changes in grade level and completion of formal schooling, legal responsibilities, and increased financial freedoms and responsibilities (Schulenberg, Bryant, & O'Malley, 2004). These social transitions adolescents experience bear many clinical implications. For example, in terms of schooling, the transition from eighth grade to ninth grade has been linked to diminished self-esteem and academic achievement (Roeser, Eccles, & Freedman-Doan, 1999). Additionally, changes in social support from peers as well as key adults occur during adolescence which appear to have impactful effects (Barber & Olsen, 2004; Bean, Bush, McKenry, & Wilson, 2009; de Valle, Bravo, & López, 2010; Garnefski & Doets, 2000; Kuhlberg, Peña, & Zayas, 2010). Thus, successful social functioning is an important feature of a healthy adolescent. In brief, social functioning refers to "a broad concept that contains all of the complexity of the social relationships involved in social interaction" (Johnson, 2010, p. 51). In this

review of literature, skills necessary for adequate social functioning during adolescence are summarized, as well as the attainment and maintenance of social relationships with three critical sources, including relations with educators, bonds with parents and family members, and interactions with peers.

Social Skills and Social Support

The development of social skills during childhood and adolescence is an essential developmental task that is associated with the successful development and maintenance of meaningful relationships with both peers and adults (Gresham, 2002). Another critical aspect of interpersonal relationships is the perception of social support from other individuals (Hearney & Israel, 2002). Given the significance of these two constructs in various dyadic relationships, these terms are explored in more detail.

According to Eisenberg and Sheffield Morris (2004), children require a new set of improved social skills during their transition from childhood to adolescence, as everyday social situations become increasingly complicated and require advance thought and action (i.e., social perspective taking, role-taking). Social skills have been classified into four major domains, including: self-management, interpersonal relations, academic, and compliance (Greshman, 2002). These necessary interpersonal skills are related to multiple domains of functioning. For instance, having good peer social skills in sixth and seventh grade has been linked to acquisition of a high diploma or General Equivalency Diploma, as well as diminished likelihood of arrest and depression during high school and early adulthood (Smokowski, Mann, Reynolds, & Fraser, 2004). Social self-efficacy (the belief that one can successfully perform tasks needed to manage social situations) in high school youth has been associated with self-reported beliefs of self-worth and self-

esteem, as well as cognitive and physical competence (Connolly, 1989). Social self-efficacy has also been significantly associated with life satisfaction in students ages 10-15 (Fogle, Huebner, & Laughlin, 2002).

According to Tardy (1985), social support can be defined by four broad categories of behaviors aimed to meet the needs of others. These four categories include emotional support, instrumental support, informational support, and appraisal support. Emotional support refers to the expression of empathy as well as perceptions of love, trust, and care. Instrumental support refers to tangible aide and assistance. Informational support refers to the provision of advice, information the person can use to solve problems, and recommendations. Finally, appraisal support refers to the provision of information that is useful for self-evaluation purposes, such as constructive feedback, affirmation, or social comparison.

Researchers have focused on three main sources of social support for adolescents, including support from family members or parents, teachers, and peers (Malecki & Demaray, 2003). It is these individuals who provide the necessary support that assists adolescents to successfully navigate the different role transitions and increased responsibilities that mark adolescence (cf. Steinberg & Laurence, 2004). In fact, garnering support from these individuals provides many desirable benefits during adolescence, including enhanced psychological well-being (Ronen & Seeman, 2007; Suldo & Huebner, 2006), abstinence from risky sexual behaviors and substance use (Sullivan, Childs, & O'Connell, 2010), and decreases the negative effects associated with stressful life events (Maschi, 2006; Stevenson, Maton, & Teti, 1999). More research regarding the effects of social support from significant others is reviewed in more detail

in subsequent sections. Additionally, the unique characteristics of relationships with these key personnel and the developmental outcomes associated with these relationships are explored.

Relations with Educators

Adolescents spend a respectable proportion of their time in school, placing educators as key role models and sources of support for students. Positive teacher student-relationships have been conceptualized as "the degree to which students feel supported, respected, and valued by their teacher" (Doll, Zucker, & Brehm, 2004, p. 6). Research demonstrates that positive teacher-student relationships are necessary for academic achievement, as well as desired behavioral and social-emotional functioning (Hamre & Pianta, 2006). Researchers have identified social support as the main indicator in defining student-teacher relations (cf. Hamre & Pianta, 2006). Teachers who display positive social support likely make time to talk to students about topics unrelated to their academic performance, consistently display positive regard for student's perspectives on academic and non-academic topics, and use behavior management strategies that communicate expectations for the classroom and learning with a caring approach. Although perceived support from teachers is believed to be predominantly associated with academic adjustment, it is also associated with high self-efficacy, less physical distress, diminished aggressive behavior, and reduced psychological distress among ethnically diverse high school students (Benhorin & McMahon, 2008; Close & Solberg, 2008; Walsh, Harel-Fisch, & Fogel-Grinvald, 2010).

Transitions to new schools are a normative stressful event of childhood. Students transitioning from middle school to ninth grade are likely to experience diminished social

support from teachers, a perception that unfortunately has been found to be related to increased symptoms of depression (Barber & Olsen, 2004). This diminished sense of social support is particularly problematic during this transition, as social support from educators may also help protect youth who experience peer victimization in the school building from negative mental health outcomes (Yeung & Leadbeater, 2010). Peer victimization refers to repetitive acts of physical violence, relational aggression, and verbal attacks, and is associated with both internalizing and externalizing problems (Yeung & Leadbeater, 2010). This may be particularly important during high school, as reports of bullying have been shown to increase from 8th grade to 9th grade (Pepler, Craig, Connolly, Yuile, McMaster et al., 2006). Finally, social support from teachers is also associated with increased well-being in adolescents (Natvig, Albrektsen, & Qvarnstrom, 2003; Van Petegem, Aelterman, Van Keer, & Rosseel, 2008). In fact, teacher support was found to account for 16% of the variance in middle school students' SWB (Suldo, Friedrich, White, Farmer, Minch et al., 2009).

Relations with Parents and Family Members

Adolescence is a time of change for family interactions and dynamics. In fact, a great shift occurs in the amount of time adolescents spend engaged in activities with their family members, which may be associated with more opportunities for the adolescent to participate in activities outside of the home (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). Adolescence is also marked by changes in power, particularly during middle adolescence, when youth are granted more responsibilities (Collins & Laursen, 2004). However, research indicates that parents and their adolescents may have different perceptions of the extent of parental influence on the child's behaviors during this period

(Boykin McElhaney, Porter, Thompson, & Allen, 2008). Despite these differences in opinion it is evident that parent-child dynamics have a huge impact on adolescent psychosocial functioning (Bean, Bush, McKenry, & Wilson, 2009; Garnefski & Doets, 2000; Kuhlberg, Peña, & Zayas, 2010; Nevin, Carr, Shevlin, Dooley, & Breaden, 2005; Suldo & Huebner, 2006). Key components of parent-child relationships during adolescence and their associations with developmental outcomes are reviewed more extensively in this section.

Social support. Parental support has been defined as "behavior manifested by a parent toward a child that makes the child feel comfortable in the presence of the parent and confirms in the child's mind that he is basically accepted and approved as a person by the parent" (Rollins & Thomas, 1979, p. 320). Youth who report high levels of parental support tend to have optimal levels of functioning, compared to youth who report low levels of support from parents. In fact, parental support is related to reductions in the expression of anger and increased self-esteem (Bean, Bush, McKenry, & Wilson, 2009; Benhorin & McMahan, 2008). Parental support is also associated with many positive schooling experiences, including improved behavior at school, positive feelings towards school, and academic achievement (Bean, Bush, McKenry, & Wilson, 2009; Liebkind, Jasinskaja-Lahti, & Solheim, 2004). Students with positive perceptions of parental support may also have better physical health outcomes, as receiving social support from parents to engage in physical activity significantly affects adolescents' perceptions and engagement in moderate and vigorous exercise (King, Tergerson, & Wilson, 2008).

Low levels of parental support are associated with increased mental health problems in youth. Including increased symptoms of depression, anxiety, and conduct

disorders (Garnefski & Diekstra, 1996; Garnefski & Doets, 2000; McCarty, Vander Stoep, Kuo, & McCauley, 2006; Stadler, Feifel, Rohrmann, Vermeiren, & Poustka, 2010; Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000). This link between depression and social support from parents appears to be very complex. For instance, deficits in parental support, versus peer support, predicted increases in depressive symptomoloy in approximately 500 ethnically diverse adolescent females (Stice, Ragan & Randall, 2004). Notably, participants who had symptoms of major depression and those who met criteria for major depression at baseline perceived lower levels of perceived peer support but not parental support two years later, indicating that parental support may be more consistent. A study by Needham (2008) further explored this relationship between caregiver support and depression in 10,800 adolescents at three time points separated by six years. Findings supported the notion that there is a transactional relationship between symptoms of depression in youth and the social support they receive. Specifically, parent support during adolescence was inversely associated with initial symptoms of depression in both males and females. However, females were significantly more prone to developing symptoms of depression in the face of low levels of parental support compared to males (Needham, 2008). Further, youth who began this study with more symptoms of depression reported less parental support in adulthood, demonstrating a transactional association. Depression also serves as a risk factor for suicide in youth, which is the second leading cause of death among adolescents (Centers for Disease Control and Prevention, 2010). However, support from family members may protect youth from suicidal ideation during adolescence (Cheng & Chan, 2007; Dubow, Kausch, Blum, Reed, & Bush, 1989).

Beyond psychopathology, social support is also related to optimal levels of wellness in youth. Adolescents who report the highest levels of life satisfaction also report more perceived social support from significant adults, including parents (Nevin, Carr, Shevlin, Dooley, & Breaden, 2005; Suldo & Huebner, 2006; Young, Miller, Norton, & Hill, 1995). Benefits of family support have been extended to diverse cultural groups; for instance, family support has been associated with high life satisfaction in Mexican-American adolescents (Edwards & Lopez, 2006). Benefits of support from caregivers for youth who experience major life stressors, such as pregnancy, include increased levels of life satisfaction (Stevenson, Maton, & Teti, 1999).

Parent-child relations: Conflict and quality. Having healthy interpersonal relationships with peers and adults is associated with many advantageous outcomes for youth as they navigate adolescence (Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer 2007). Nurturing and responsive parent-child relationships are a key component of healthy development for adolescents. During adolescence, a shift occurs in the parent-child dynamics, as one of the major tasks for parents during this critical developmental period is to be receptive to their children's increased need for autonomy, decision-making, and their increased desire for responsibility, while maintaining a high degree of supervision of their children's behavior and ensuring that they set age-appropriate expectations for their children (American Psychological Association, 2002). Youth who are not granted the appropriate levels of autonomy to explore new responsibilities and roles that mark adolescence tend to have less than optimal functioning (Fuligni & Eccles, 1993; Gutman & Eccles, 2007).

Although conflict between adolescents and their parents is a collective experience as offspring vie for more independence (Fuligni, 1998), in most families conflict is typically characterized by mild arguments and quarrels (Steinberg, 1990). Actually, experts propose that these arguments are a vital tool in fortifying the parent-child relationship (Cooper, 1988; Steinberg, 1990). However, when arguments are intense and sustaining they have damaging effects on the parent-adolescent relationship, and possibly lead to depression and lowered self-esteem in the adolescent (Kuhlberg, Peña, & Zayas, 2010; Smokowski & Bacallao, 2007). Additionally, youth who run away from home report a history of conflict with their parents (Adams, Gullotta, & Clancy, 1985) and adolescents' perceptions of hostility from their parents is associated with not being well-liked or popular as reported by their teacher, as well as described as inconsiderate by a sibling (Paley, Conger, & Harold, 2000).

Contrary to popular belief, the conflict that is experienced between parent and adolescents is not significantly higher than the frequency of conflicts during middle childhood (McGue, Elkins, Walden, & Iacono, 2005). However, a closer examination of the features of the relationship between children and their parents during puberty reveals changes in the quality of the relationship (Gutman & Eccles, 2007; Steinberg, 1988). For example, a cross-sectional study by Kim, Conger, Lorenz, and Elder (2001), with 317 families, determined that adolescents' negative affect (i.e., hostility, coercion, and antisocial behavior) towards their parents increased between ages 12 to 15 years, but diminished from ages 15 to 17. This relationship was found to be reciprocal, as parents' negative affect towards the child also increased and then declined when the child was in late adolescence. Other research reveals that poor quality relationships with caregivers

has aversive mental health outcomes, including increased likelihood of depression, anxiety (Gutman & Eccles, 2007; Grossman & Rowat, 1995; McLeod, Weisz, & Wood, 2007a,b), self-injury (Laukkanen, Rissanen, Kylmä, Tolmunen, & Hintikka, 2009), and suicide (Kuhlberg, Peña, & Zayas, 2010). Finally, negative interactions with parents also have a significant effect on the frequency of adolescents' delinquent and antisocial behavior (Gutman & Eccles, 2007; Shek & Ma, 2001). Conversely, adolescents who report that interactions with their parents encourage them to be competent and autonomous as well as instills a feeling of being understood by their caregiver leads to use of desirable active coping behaviors, opposed to avoidant coping behaviors (Zimmer-Gembeck & Locke, 2007).

Associations between parent-child relationships during adolescence and modern indicators of mental health are a relatively undeveloped area of research. Preliminary findings include that youth who report unsatisfactory relationships with parents have diminished life satisfaction (Grossman & Rowat, 1995; Flouri & Buchanan, 2002; Phinney & Ong, 2002; Shek, 1997). Additionally, a qualitative study by Joronen and Åstedt-Kurki (2005) with 19 students enrolled in seventh and ninth grade provided an in depth perspective on the qualities of parent-child relationships that are associated with different levels of SWB. The presence of hostility among family members, illness or death in the family, and being dependent upon caregivers was associated with low SWB. Whereas, reporting that one's home was comfortable, perceiving the environment as loving, and feeling supported in being able to maintain relations with others outside the family were associated with high SWB. Further, having open communication, family involvement, and feeling like one played a significant role in family decision making was

also associated with increased levels of SWB. In general, more information regarding SWB and the unique characteristics of parent-child relationships during middle adolescence is needed. If new research supports the assumption that high school students with the highest levels of life satisfaction also report feeling supported, receiving help from their parents and report feeling close to their parents it may inform family-focused interventions aimed to promote wellness in youth. Further, promoting interpersonal relations outside of the school building that are associated with high SWB is advantageous as high SWB is associated with superior academic achievement (Suldo, Shaffer, & Riley, 2008).

Relations with Peers

Forming relationships with peers is a central feature of adolescence, which is marked by increased time spent with friends and a decline in time spent with family members (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). Friendships with peers become more complex and integral in forming one's identity, a key developmental task of this time period (Brown, 2004). Most adolescents want to have friendships and the majority of adolescents claim to have at least one friend or a group of peers as friends (Bukowski, Motzoi, & Meyer, 2009). However, it should be noted that there is variability in peer relationships across cultural contexts. Some cultures, such as traditionally oriented Mexican-American families, limit the intensity of interactions with peers, whereas the structure of other cultures, particularly European American and Western European cultures, encourage and foster friendships with peers (Graham, Taylor, & Ho, 2009). Key aspects and developmental associations of peer relations, including social

support, experiences of victimization, and romantic experiences are reviewed in this section.

Social support. The receipt of social support in a relationship is a critical component of friendship, which has been conceptualized as a strong bond featuring positive affect that exists between two persons and formed to promote and satisfy social-emotional needs (Hartup & Stevens, 1997). Forming friendships during adolescence is critical, as research suggests that emotional support from mothers and fathers steadily declines from age 12 to age 17, and adolescents rely mostly upon the emotional support received from friends (de Valle, Bravo, & López, 2010).

Having close relationships with peers engenders many benefits across academic, psychological, and physical health domains. Social support from peers is associated with with more school compliance during adolescence (Wang & Eccles, 2012). Youth in economically impoverished communities experience chronic stressors which are associated with poor social-emotional functioning (Simons, Murry, McLoyd, Lin, Cutrona, & Conger, 2002). For these youth, having supportive friendships appears to protect them from engaging in risky health behaviors (Brady, Dolcini, Harper, & Pollack, 2009). Peer support is associated with lower school drop-out rates for inner-city adolescents (Lagana, 2004) and youth who have a best friend who places emphasis on academic achievement are also more likely to have adaptive achievement motivation (Nelson & DeBacker, 2008). Further, a peer support program developed for high school students with emotional difficulties or behavior problems was associated with decreased rates of high school dropout and substance use (Wassef, Mason, Collins, O'Boyle, &Ingham, 1996).

Beyond academic indicators, peer support is also associated with critical mental health consequences. High school students who report that the social support they receive from friends is of poor quality are at increased risk for developing depression, anxiety, as well as suicide (Cheng & Chan, 2007; Dumont & Provost, 1999; Garnefski and Diekstra, 1996; La Greca & Lopez, 1998). Conversely, high quality relationships with peers, including those with best friends, are associated with diminished levels of social anxiety and depression in adolescents (de Matos, Barrett, Dadds, & Shortt, 2003; La Greca & Harrison, 2005). Regarding the specific qualities of these relationships, youth who report more intimacy, companionship, as well as support from close friendships are more likely to have reduced symptoms of social anxiety, compared to youth who report low quality close friendships (La Greca & Lopez, 1998). Notably, although there are many benefits to forming relationships with peers, negative interactions in best friendships are associated with social anxiety (La Greca & Harrison, 2005). Additionally, the characteristics of peers with whom students is also important to consider, as association with delinquent or antisocial friends may make youth more susceptible to engagement in this type of negative behavior (Monahan, Steinbuerg, & Cauffman, 2009).

There is very limited research on the impact of peer support on life satisfaction of high school age adolescents. Studies with younger students have demonstrated a critical link between high peer support and elevated levels of subjective well-being (Suldo & Shaffer, 2008). However, studies with youth in middle adolescence demonstrate mixed results. For example, a study with 105 Israeli youth ages12 to 18 living in a residential treatment area yielded data which indicates that peer support did not contribute to one's life satisfaction, although support from family did (Lipschitz-Elhawi, Itzhaky, & Michal,

2008). A study conducted with 150 urban adolescents identified as Latino, Asian American, African American, or Biracial (ages 12-15) yielded significant associations between peer support, life satisfaction, and positive affect, but to a lesser extent than family support (Vera, Thakral, Gonzales, Morgan, Conner et al., 2008). An additional study with a sample of 118 adolescent mothers, ages 13 to 18 years, suggested that support from peers was positively associated with well-being (Kissman & Shapiro, 1990). Finally, a study with adolescents in Hungary ages 14-20, determined that perceptions of having caring peers was associated with increased life satisfaction for females, but this association did not hold true for male participants (Piko & Hamvai, 2010). In general, more research exploring the relationship between peer support and positive indicators of mental health in high school adolescents is needed. However, initial studies demonstrate a multitude of benefits to receiving social support from peers, teachers, and parents.

Experiences of victimization. Nationwide, approximately 20% of high school students report being bullied at school (Centers for Disease Control and Prevention, 2010). Certain minority groups, such as youth who report having same-sex and both-sex attraction, may be more likely to be victims of violence, compared to heterosexual youth, even to the extent that subsequent injuries require medical attention (Hershberger & D'Augelli, 2005; Russell, Franz, & Driscoll, 2001). Although this problem affects a large proportion of students, many school personnel underestimate the prevalence of this issue (Bradshaw, Sawyer, & O'Brennan, 2007). This is unfortunate because peer victimization is associated with negative mental health and academic outcomes. Consequences of being victimized by peers in high school include increased likelihood of anxiety, depression,

and low self-esteem (Hawker & Boulton, 2000; Holt & Espelage, 2003). However, one study with urban low-income predominantly Hispanic and African American middle school and high school students suggests that being a victim of bullying may only be associated with internalizing symptoms of psychopathology (e.g., depression, anxiety) for females, not males (Fleschler Peskin, Tortolero, Markham, Addler, & Baumler, 2007). In younger students victimization is also associated with poor academic achievement and lowered academic competence (Ma, Phelps, Lerner, & Lerner, 2009).

Research also suggests significant associations between being a victim of bullying and positive indicators of mental health. A study with adolescent males from Britain found negative associations between life satisfaction and peer victimization (Flouri & Buchanan, 2002). Similarly, inverse relationships were found in victims of bullying for youth in grades 3 to 12 (Flaspohler, Elfstrom, Vanderzee, Sink, & Birchmeier, 2009; You, Furlong, Felix, Sharkey, Tanigawa, & Greif Green, 2008). Given the negative associations between mental health functioning and experiences of victimization, it would be advantageous to understand the associations between mental health and victimization using a more comprehensive framework of mental health functioning (i.e., the dual-factor model). Studies have yet to examine if average to high SWB, even in the presence of psychopathology, may protect youth from experiences of victimization. Data from this type of research would further underscore the utility of promoting wellness in youth.

Romantic relationships. According to Collins, Welsh, and Furman (2009), romantic relationships refer to "mutually acknowledged ongoing voluntary interactions commonly marked by expressions of affection and perhaps current or anticipated sexual

behavior" (p. 632). This definition also includes mixed-gender and same-gender romantic relations. Additionally, experts advise that romantic relationships should not be conceptualized narrowly as ongoing dyadic partnerships (e.g., "going steady"), rather they should be considered as experiences, which includes more brief companionship, such as "fantasies," "crushes," "dating," and "hooking up" (Brown, Feiring, & Furman, 1999). These experiences encompass unique cognitive, behavioral, and emotional dimensions that may differentially affect adolescents; however, research on these experiences is rather limited. Most studies, including the majority of those highlighted in this section, have conceptualized romantic relationships as the traditional ongoing partnerships.

Forming and navigating romantic relationships is a relatively common developmental experience of adolescence. In fact, approximately 25% of youth ages 13-15 and 40-50% of youth ages 15-17 report having had a romantic relationships in the last 18 months (Carver, Joyner, & Udry, 2003; Davies & Windle, 2000; Connolly, Furman, & Konarski, 2000). Both female and male adolescents report that their ideal romantic partner should have a good personality, be intellectual, and physically attractive (Regan & Joshi, 2003; Roscoe, Diana, & Brooks, 1987). Youth who are identified as popular reported having more dates than peers who were not classified as popular (Franzoi, Davis, & Vasque-Suson, 1994), but for adolescents in general, romantic relationships increase as youth age (Carver, Joyner, & Udry, 2003). Additionally, high school youth report spending more time with romantic partners than with their friends, siblings, or parents (Laursen & Williams, 1997). This may be why adolescents' self-reported

academic performance is similar to their romantic partners' earned course grades (Giordano, Phelps, Manning, & Longmore, 2008).

The amount of romantic relationships an adolescent has as well as the characteristics of these relationships are linked to the psychosocial development of youth (Collins, Welsh, & Furman, 2009). For example, youth who date report decreased symptoms of social anxiety (La Greca & Harrison, 2005). Additionally, having romantic competence in early adolescence may be related to one's overall competence, which refers to being able to perform necessary developmental tasks (e.g., forming meaningful relationships, navigating academic requirements), during late adolescence, which may positively affect one's ability to perform additional tasks such as in the workplace or school setting (Masten, Coatsworth, Neeman, Gest, Tellegen et al., 1995). A study with college age youth found that participants with satisfactory romantic relationships reported the highest levels of happiness, even after controlling for personality (Demir, 2008). One study by Furman, Low, and Ho (2009) found that more romantic experiences one had was concurrently associated with higher perceptions of being socially accepted by peers, sexual behavior, as well as more competence in one's ability to form and manage friendships and romantic relationships. This study also indicated that romantic experiences may be related to risky behavior longitudinally, as these experiences were also significantly associated with, sexual and delinquent behaviors, as well as substance use, one year later. Additional research investigating the relationship between depression and romantic experiences suggests that depression may be an impetus for unsatisfying romantic experiences. Vujeva and Furman (2011) found that 10th grade students with depression had less satisfying romantic relationships across a five year time period.

Romantic relationships during adolescence have been viewed as both a critical and important task to interpersonal development by some experts, but these relationships have also been associated with risk. For example, females with romantic involvement may be at higher risk for developing depression than female counterparts who report that they do not have a romantic partner, but this trend does not appear to affect male adolescents (Davila, Steinberg, Kachadourian, Cobb, & Fincham, 2004; Joyner & Udry, 2000; Haydon, Halpern, & Tucker, 2010). Additional research indicates a positive association between romantic experiences, engagement in sexual behaviors, delinquency, and substance use (Furman, Low, & Ho, 2009).

A deeper review of the types of romantic relationships experienced by 10th and 11th grade students by Davies and Windle (2000) revealed that casual dating may be related to sexual activity and substance use (but maintenance of a satisfactory same-sex close friendship). Whereas, steady romantic relationships are associated with discord in close friendships, but decreased incidence of sexual activity, alcohol use and symptoms of depression, compared to those who casually date (Davies & Windle, 2000). However, compared to youth who are not dating, those who casually date or are in a steady relationship engage in more alcohol consumption and sexual activity (Davies & Windle, 2000). This is important, because research consistently indicates that sexual intercourse during early and middle adolescence is related to increased risk of pregnancy, sexually transmitted diseases, symptoms of conduct disorder, and substance use (Coley & Chase-Lansdale, 1998; Resnick, Bearman, Blum, Bauman, Harris et al., 1997; Tubman,Windle, &Windle, 1996).

In general, the link between adolescents' mental health functioning and their romantic experiences warrants further exploration. Research demonstrating links between mental health functioning and certain types of romantic experiences may aid in the prevention of mental health problems and promotion of wellness in youth. For example, research demonstrating links between optimal mental health functioning and dating experiences may inform which experiences are developmentally appropriate when consulting with teens and their families.

Conclusions and Purpose of the Current Study

The dual-factor model of mental health (cf. Greenspoon & Saklofske, 2001; Suldo & Shaffer, 2008) examines positive indicators of mental health functioning (i.e., SWB) as well as indicators of psychopathology (i.e., internalizing and externalizing behavior problems), providing a more complete picture of youth psychological functioning. Prior studies have replicated the dual-factor model in elementary age and middle school age youth. However, no studies have examined the utility or presence of this model with high school adolescents. Additionally, although the model yields information regarding the presence or absence of mental health in youth, the types of mental health problems and levels of indicators associated with SWB in each group are unknown. This study aimed to close these two gaps by first exploring the presence of the dual-factor model in a sample of high school students. Second, this study investigated which types of mental health problems (i.e., internalizing versus externalizing symptoms) are associated with membership in the symptomatic but content mental health group and troubled mental health group. Additionally, the study evaluated which components of SWB (i.e., life

satisfaction, positive affect, or negative affect) characterize and differentiate youth within each mental health group yielded from a dual-factor model approach.

Another purpose of the current study was to determine if the dual-factor model of mental health has implications for high school students' social functioning. As previously reviewed more information is needed regarding mental health functioning and associations with significant interpersonal relationships. Given the critical role social skills play in forming relationships and the positive outcomes related to the receipt of social support from teachers, parents, and peers, it is critical to know which group(s) of youth yielded from the dual-factor model of mental health have high social competence and reported elevated perceptions of care from these individuals. Additionally, the current study contributed to the limited research on the extent of adolescents' romantic experiences in general, as well as provided valuable information on the associations between optimal mental health functioning (i.e., complete mental health) and types of romantic experiences. As mentioned, peer victimization is a relatively common experience in school age youth. Another aspect of the current study's purpose was to determine if certain aspects of mental health functioning (i.e., SWB, psychopathology) protect youth from experiences of victimization on school grounds. This information may provide additional rationale to promote prevention of this experience at schools.

In summation, the current study aimed to provide evidence for the utility of the dual-factor model of mental health in middle adolescents. Data that indicate that SWB protects students from negative aspects of social relations (e.g., conflict with parents, experiences of victimization) and promotes aspects of positive interpersonal relations

(e.g., garnering peer support, quality parent-child relations) may provide further support for the promotion of wellness in youth.

Chapter 3

Method

The current study set out to determine the presence and utility of a dual-factor model of mental health (cf. Greenspoon & Saklofske, 2001; Suldo & Shaffer, 2008; Suldo, Thalji, & Ferron, 2011) in high school students. After determining that this model exists in the adolescent sample, the study explored which types of mental health problems (i.e., internalizing or externalizing symptoms) are associated with membership in the symptomatic but content and troubled mental health groups. Next, the study determined which components of SWB (i.e., life satisfaction, positive affect, or negative affect) are most characteristic of students within each mental health group produced by a dual-factor model approach to classification. Finally, the study investigated the associations between mental health groups yielded from the dual-factor model classification and students' social functioning. This chapter provides an explanation of the research design and information regarding study participants. Procedures for data collection and analyses are summarized.

Research Design

The current study utilized a non-experimental design in order to determine the presence as well as utility of the dual-factor model of mental health in high school students. Non-experimental research refers to the process of gathering evidence to support associations between two or more naturally occurring variables. In other words,

there is no manipulation or control of the independent variable of interest (i.e., mental health functioning) as well as no random assignment to groups on behalf of the research team. The purpose of a descriptive research study is to simply describe the characteristics of naturally occurring phenomena. Given that the primary purpose of the current study was to determine if middle adolescents' mental health functioning illustrates proportions of youth yielded from a dual-factor model and which mental health indicators (i.e., mental health group, psychopathology, and SWB) and social functioning constructs co-occur with one another, a non-experimental research design is the most appropriate approach.

Procedures

Setting

Participants in the current study were recruited from two high schools located within a large, urban school district in the Southeastern United States. The specific schools were selected as part of a larger longitudinal research project, and school leadership expressed interest in understanding and promoting their students' mental health. The school district in which the schools reside is comprised of 254 schools that range from kindergarten to twelfth grade. Specifically, these schools are categorized as follows: 142 elementary schools, 44 middle schools, 2 kindergarten-8, 27 high schools, 9 career and technical schools, and 60 are classified as other educational centers (e.g., Exceptional Student Education, charter schools, early childhood). During the 2010-2011 academic year (the time period during which students were recruited and data collected), 177,109 youth were enrolled in the district schools. These students' ethnic backgrounds are as follows: 41.5% Caucasian, Non-Hispanic; 20.5% African American; 29.2%

Hispanic; 0.3 % American Indian or Alaskan Native; 3.5% Asian or Pacific Islander; and 5.0% multi-racial. Additionally, 55.94% of students in the district qualified for free or reduced price lunch and 1.0% were identified as migrant students.

School A. In the 2010-2011 school year, one of the schools from which participants were recruited consisted of 1876 students from a rather rural community. The school population was comprised of the following ethnic groups: 54.1% Caucasian, Non-Hispanic; 29.7% Hispanic; 11.9% African American; 2% Asian, and 2.1% were identified as multi-racial. Of this population, 47% were economically disadvantaged (i.e., receive free or reduced-price school lunch), and 2.3% of students were identified as migrant students. In the study, sampling from each grade level (i.e., 9th, 10th, and 11th) was used in order to yield representation of diverse school grade levels.

School B. The second school from which participants were recruited consisted of 2282 students in the 2010-2011 school year. This school population was located in an urban community and its population was comprised of the following ethnic groups: 42.9% Caucasian, Non-Hispanic; 40.4% Hispanic; 7.7% African American; 4.3% Asian; 0.5% Indian; 4.1% multiracial. Of this population, 40% were economically disadvantaged (i.e., receive free or reduced-price school lunch). As with School A, sampling from School B occurred at each grade level (i.e., 9th, 10th, and 11th) in order to yield representation of diverse school grade levels.

Overview of Dataset

The dataset analyzed in the current study is part of a larger longitudinal research project investigating SWB and psychopathology in relation to educational outcomes, social functioning, identity formation, behavioral engagement, and physical health among

high school students. For the current study, the sample consisted of a final sample of complete and valid data from 500 adolescents recruited from two large high schools (total enrollment 4158 students) residing in a large southeastern city. This sample size yields adequate statistical power, which refers to the probability that a particular test of statistical significance will accurately lead to the rejection of a false null hypothesis (Gall, Gall, & Borg, 2007). Cohen (1992) has suggested that researchers should strive to obtain a power of .80 in their experiments**.** Using Cohen's power tables to establish the sample needed to yield a medium effect size ($\alpha = .05$), a sample size of 280 should yield the desired effect size with four groups. In the study, sampling from each grade level (i.e., 9^{th}, 10^{th}, and 11^{th}) was used in order to yield representation of diverse school grade levels. Participation from 12^{th} grade students was not requested as this study is part of a larger longitudinal study and it was anticipated that students in 12^{th} grade would not be enrolled the subsequent school year (and thus unable to provide self-report data during the second year of the larger two-year study). Additionally, students taught in self-contained classrooms via Exceptional Student Education and those with limited English proficiency were not recruited for the current study due to the fact that self-report questionnaires were used. This form of data collection requires a reading level of at least third grade and may have caused undue distress for students who cannot read at the desired level.

Recruitment of Participants and Participant Demographics

It was anticipated that approximately 50% of recruited students would return completed parent consent forms. Beyond distributing parent consent materials to students, teachers of participating students at School A were asked to take part in the current study by providing information on student functioning.

School A. To recruit students for the larger study, members of the research team provided information to teachers at School A explaining the purpose of the study, their role in the study, as well as associated incentives for their assistance and participation (see Appendix B). English teachers were provided a script to read to students (see Appendix C) explaining the purpose of the current study as well as participation requirements. Students were also informed of the incentives offered for participation (i.e., enrollment in a lottery for a $50 gift card to the local mall; a pre-paid movie ticket following completion of self-report data). A total of eight classroom teachers distributed consent forms (see Appendix D) to all of the students in different sections of their English classes (2 to 7 sections per teacher). Total students per teacher ranged from 50 (2 sections) to 162 (7 sections), with an average of 118 students (in 4 to 5 sections) per teacher. In total, participation was sought from 941 students. Return rates per teacher ranged from 11% to 62%; the average return rate by teacher was 31.50%. A total of 272 students returned signed consent forms, for a response rate of 28.91% for School A. Fourteen of these students with parent consent did not participate for the following reasons: seven students withdrew from school during the time frame after consent forms were collected and before data collection occurred; three students refused assent (i.e., did not want to participate); two students were chronically absent on the days self-report data was collected; and one student had limited English proficiency and withdrew assent during completion of self-report data. In sum, a total of 258 students from School A participated, for a total participation rate of 27.42%.

A total of 45 teachers from School A participated in the current study by completing the BASC-2 TRS-A on at least one participating student. The mean number

of students teachers from School A reported on was 5.78 students (range 1 to 12 students). At School A the majority of teachers who provided student data via the BASC-2 TRS-A were female (64.44%). Regarding race, three (6.67%) identified themselves as Hispanic; regarding ethnicity, the majority (97.78%) identified as Caucasian. Teachers reported an average of 16.38 years of experience teaching (range: 1 to 37 years).

School B. Members of the research team explained the study to school personnel (see Appendix B) and then randomly selected half of School B's homeroom classrooms for students in grades 9-11. In these homerooms, teachers of these classrooms were provided with a script to read to students (see Appendix C) explaining the overarching purpose of the current study in addition to participation requirements. Students were also notified of the incentives offered for participation. A total of 35 homeroom teachers participated in recruiting students by distributing consent forms to all students in their homeroom class. Class sizes ranged from 17 to 37 students. Response rate per teacher averaged 24.58% (approximately 7 students per teacher), ranging from 1 to 15 students (3.23% to 60% of participating students in a given classroom) recruited per participating classroom. Of note, two teachers recruited only one student to participate. Of a total of 1066 students invited to participate in the study, 257 students returned consent forms, for a total response rate of 24.11% for School B. Eleven of these students who returned parent consent did not participate for the following reasons: four parents indicated on the consent form that they did NOT want their child to be enrolled in the study; five students withdrew from school during the time frame after consent forms were collected and before data collection occurred; and two students withdrew assent during completion of self-report data due to (a) limited English proficiency, and (b) lack of interest in the

study. In sum, a total of 246 students from school A participated by completing self-report rating scales, for a total participation rate of 23.08%.

A total of 42 teachers from School B also participated in the current study by completing a BASC-2 TRS-A for one or more student participant. The mean number of students teachers from School B reported on was 6.46 students (range 1 to 12 students). At School B the majority of teachers who provided student data were female (76.19%). Regarding race, 6 (14.29%) identified themselves as Hispanic; regarding ethnicity, the majority (88.10%) identified as Caucasian and 4 teachers (9.52%) identified as African-American. Teachers reported an average of 11.79 years of experience teaching (range: 1 to 35 years).

In sum, a total of 2007 students were recruited from Schools A and B, and 529 returned consent forms, for a total response rate of 26.36%. Parents of 525 of the students who returned signed parent consent forms indicated permission for the child to participate in the study, while four students' parents wrote that their child was not permitted to participate. Four of the 525 students with parent consent refused to assent. A total of 506 of the remaining 521 students were present at school on the day(s) the self-report surveys were administered (school records indicated 12 of the 14 absent students had withdrawn from the school in the few weeks between the collection of parent consent forms and administration of survey data). Two participants had incomplete self-report data; they were withdrawn from the study during the self-report data collection procedures due to language barriers ($n = 2$). Complete self- and teacher-report data was obtained from 504 participants. This corresponds to a final participation rate of 25.11% (i.e., 504 / 2007).

For reasons described in the next chapter, data from four of these participants was excluded from the final dataset analyzed in the current study.

Summary data in the form of frequencies and proportions for the total sample in regards to participant grade level, gender, ethnicity, socio-economic status (SES), and parent marital status were computed (see Table 2). Notably, SES was conceptualized as students' report of receiving free or reduced-price school lunch, and the highest level of education attained by their mother and father separately. Data indicates that 49% of students in the sample qualified for free or reduced-price lunch. Additionally, approximately 37% of student participants' mothers and 41% of student participants' fathers had a college degree; the mean education level of parents corresponded to "some college (did not complete)."

Data Collection

In September of 2010, approval to conduct the larger study was obtained from the University of South Florida Institutional Review Board as well as the school district in which School A and School B are located. During the first nine-week grading period of the 2010-2011 academic year, students in the targeted classrooms were read a verbal description of the study accompanied by copies of the informed consent form. Signed parent consent forms (see Appendix D) were collected by identified school personnel for a limited time period. Approximately three months after the start of the school year (during the second nine-week grading period), students with parent consent to participate were called to a large space, the auditorium at school A and the cafeteria at school B, in groups of 50-70 students to complete a packet of questionnaires. Before students responded to items within the packet, a member of the research team read the student

Table 2

Demographic Characteristics of Participants

Demographic Variable	School A (n = 256) %	School B (n = 244) %	Total Sample (N = 500) %
Gender			
Male	37.50	44.26	40.80
Female	62.50	55.74	59.20
Grade			
9	52.34	34.02	43.40
10	38.28	34.43	36.40
11	9.38	31.56	20.20
Ethnicity			
American Indian	0.00	0.82	0.40
Asian	1.56	3.69	2.60
African American	8.59	7.79	8.20
Hispanic/Latino	26.56	41.39	33.80
White	53.52	33.20	43.60
Multi-Racial	8.59	11.48	10.00
Other	1.17	1.64	1.40
Free or Reduced-Price Lunch			
Eligible	49.61	48.35	48.99
Not Eligible	50.39	51.65	51.00
Parent Education Status			
Father: Less than College Degree	72.40	52.13	62.60
Father: College Degree or Beyond	27.60	47.86	37.40
Mother: Less than College Degree	68.62	49.79	59.48
Mother: College Degree or Beyond	31.37	50.21	40.52
Family Composition			
Married Parents	44.53	48.35	42.60
Parents not Married	55.47	51.65	57.40

assent form (see Appendix E) aloud to all students. Students were informed that they were free to withdraw from the study at any point during data collection procedures and that this decision would not affect their relationship with the school or any school personnel. After students assented, they completed the following: demographic questionnaire (see Appendix F); practice questions that are similar in format to other items within the packet (see Appendix F); then all surveys described next, which were presented in counterbalanced order. The questionnaires were counterbalanced in order to control for possible order effects. The research team responded to student questions with standard responses and monitored students to ensure that they are responding independently. When a student completed a packet, one member from the research team visually inspected each measure in the packet, to guarantee that all items were completed and to detect errors in responding. In the event an error was discovered, the student was asked to complete or correct the item(s). After the packet had been completed, checked for errors, and returned to a member of the research team, the student was compensated with a pre-paid movie ticket (worth a monetary amount of approximately $7.00).

After the collection of students' self-report data, a teacher who was familiar with the student (i.e., had known the student for at least two months, for example the teacher of the student's English course), was asked to provide additional information about participants' externalizing symptoms of psychopathology, by completing a behavior rating scale (i.e., BASC-2 TRS-A). Teachers were first required to consent (see Appendix G) to participate in the study. Once teachers consented to participate (see Appendix G), they received a list of student participants and were asked to complete a BASC-2 TRS-A for each student on the list. Teachers were capped at completing 10-15 rating scales each

in order to not overburden teachers, thus increasing the likelihood of quality responses. For each BASC-2 TRS-A completed, a teacher received a $5 gift card to a local store.

Measures

The current study includes predictors in the form of indicators of mental health functioning, and outcomes pertinent to social functioning. The research questions this study aimed to answer are as follows:

1. What is the proportion of high school youth within each mental health group yielded from the dual-factor classification?
2. Which types of mental health problems (i.e., internalizing or externalizing symptoms) are associated with membership in the symptomatic but content and troubled mental health groups?
3. Which indicators of subjective well-being (i.e., life satisfaction, positive affect, or negative affect) differentiate the four mental health groups from one another?
4. Which indicators of social functioning are related to group membership as yielded by the dual-factor classification in high school students?

As an advanced organizer, Table 3 provides a summary of the relevant indicators and predictors associated with the current study, organized via the current study's research questions, as well as the measures used to quantify these constructs.

Table 3

Summary of Predictor and Outcome Variables and Respective Indicators by Research Question

RQ	Predictor Variables	Outcome Variables and Indicators
1	Psychopathology (Int. BASC-2 SRP-A; Ext. BASC-2 TRS-A) and SWB (SLSS; PANAS-C)	Dual-Factor Model of Mental Health: 1. Vulnerable MHG (SWB ≤ 21st *P* and Int. *T*-score < 60 and Ext. *T*-score < 60) 2. Troubled MHG (SWB ≤ 21st *P* and Int. *T*-score ≥ 60 or Ext. *T*-score ≥ 60) 3. Complete MHG (SWB > 21st h *P* and Int. *T*-score < 60 and Ext. *T*-score < 60) 4. Symptomatic but Content MHG (SWB > 21st *P* and Int. *T*-score ≥ 60 or Ext. *T*-score ≥ 60)
2	Symptomatic But Content MHG or Troubled MHG	Mental Health Problems: 1. Clinical Levels (*T*-score>60) of Internalizing Problems Composite (BASC-2 SRP-A) 2. Clinical Levels (*T*-score>60) of Externalizing Problems Composite (BASC-2 TRS-A)
3	MHG Membership	Indicators of SWB: 1. Scores of Life Satisfaction (SLSS) 2. Scores of Positive Affect (PANAS-C) 3. Scores of Negative Affect (PANAS-C)
4	MHG Membership	Social Functioning: 1. Social Skills: Social Skills Scale (BASC-2 TRS-A) 2. Feeling Liked by Others: Interpersonal Relations Scale (BASC-2 SRP-A) 3. Relations with Parents: Relations with Parents Scale (BASC-2 SRP-A); Social Support from Parents Scale (CASSS) 4. Relations with Teachers: Social Support from Teachers Scale (CASSS); Attitude to Teachers Scale (BASC-2 SRP-A) 5. Relations with Peers: Social Support from Classmates Scale (CASSS); Experiences of Overt Victimization (SEQ-S: Overt Victimization Scale); Experiences of Relational Victimization (SEQ-S: Relational Victimization Scale) 6. Romantic Relationships: Romantic Experiences (DHQ-SF); Romantic Relationship Quality (NRI-SF)

Note. RQ = research question; MHG = mental health group; SWB = SWB composite; *P* = percentile; Int.= internalizing composite; Ext. = externalizing composite

Demographics form. This questionnaire contained items assessing student grade level, age, gender, socioeconomic status (SES), race/ethnicity, as well as their current family structure (e.g., "my biological parents are married," "my biological parents are divorced;" see Appendix F). Additionally, this form featured sample questions in Likert scale form (e.g., "I go to the beach"), which was similar in format to subsequent scales used in the questionnaire packet. These practice items were used to teach students how to complete Likert-type questions.

Students' Life Satisfaction Scale (SLSS; Huebner, 1991). The SLSS is a measure designed to assess global life satisfaction in children in grades 3 to 12 (see Appendix H). The SLSS is comprised of seven items in which students are asked to indicate the extent to which they endorse general statements about their life (e.g., "My life is just right," "I would like to change many things in my life") on a Likert scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Composite scores are calculated by reverse-scoring two items that are negatively worded, summing the responses, and then dividing the sum by the number of items (i.e., seven) to yield an overall score of global life satisfaction. For interpretation, higher mean scores represent higher levels of global life satisfaction.

The SLSS has been used successfully with diverse youth populations, including young people with emotional handicaps as well as students diagnosed with a learning disability, and children from diverse ethnic and language backgrounds (Huebner, 1995; Huebner & Alderman, 1993; Marques, Pais-Ribeiro, & Lopez, 2007). The SLSS has demonstrated high internal consistency (coefficient alpha = .82) and high test-retest reliability (r = .74 and r = .68) in a sample of 202 youth at 1- and 2-week intervals

(Huebner, 1991). This measure has established moderate stability across a four week period (r = .64; Gilman & Huebner, 1997). The SLSS demonstrates moderate convergent validity (Huebner, 1991) with other measures of SWB, including the Happiness and Life Satisfaction subscale of the Piers-Harris (r = .53; Piers, 1984) and one item assessing life satisfaction from the Andrews and Withey Life Satisfaction Scale (r =.62; Andrews & Withey, 1976). Convergent validity has also been evidenced by comparing children's SLSS scores and parent ratings of their children's happiness (r = .54; Gilman & Huebner, 1997). The SLSS has also exhibited divergent validity, as demonstrated by its negative correlations with measures of depression and loneliness (Huebner & Alderman, 1993). Finally, the SLSS has yielded a small, non-significant correlation with a measure of social desirability (r = .05; Huebner, 1991).

Positive and Negative Affect Scale for Children (PANAS-C; Laurent, Catanzaro, Joiner, Rudolph, Potter et al., 1999). The PANAS-C is a 27-item self report scale (see Appendix I) used to assess the frequency of positive and negative emotions in youth. Specifically, twelve of the items measure the frequency of positive affect and 15 items assess the frequency of negative affect. Students indicate the extent to which they have felt a 27-item list of moods or feelings, featured as words such as "scared," "calm," and "miserable," in the past few weeks on a Likert scale, ranging from 1 (*very slightly* or *not at all*) to 5 (*extremely*).

The PANAS-C was adapted for children and adolescents from a measure designed to assess positive and negative affect in adults (i.e., Positive and Negative Affect Scale; Watson, Clark, & Tellegen, 1988). The PANAS-C has demonstrated a negative small correlation (r = -.16) between its positive affect and negative affect

subscales (Laurent et al., 1999). This measure also exhibits high internal consistency for the positive affect and negative affect subscales (alpha coefficients of .90 and .94, respectively; Laurent et al., 1999). Comparison of the PANAS-C to measures which assess different, but related constructs, indicate that the PANAS-C has good construct validity (Seligson, Huebner, & Valois, 2005). In particular, the PANAS-C demonstrates good convergent validity (positive affect, r = -.20) and discriminant validity (negative affect, r = .62; Laurent et al., 1999) when compared to the Trait Anxiety Scale of the State-Trait Anxiety Inventory for Children (Spielberger, 1973). Similarly, when compared to the Children's Depression Inventory (Kovacs, 1985), the PANAS-C again demonstrates good construct validity (positive affect, r = -.42; negative affect, r = .59; Laurent et al., 1999).

Self Report of Personality Form of the Behavior Assessment System for Children- Adolescent Version, 2nd Edition (BASC-2 SRP-A; Reynolds & Kamphaus, 2004). The BASC-2 SRP-A (which is not included in appendices due to copyright restrictions) is a scale measuring different areas of psychopathology and adaptive functioning in youth ages 12 to 21. This measure features 176 items, 69 of which are written in *true* and *false* form, and the remaining 107 are on a four point scale range from 1 (*never*) to 4 (*almost always*). Twelve clinical subscales are yielded by this measure, including: anxiety, attention problems, attitude to school, attitude to teachers, atypicality, depression, hyperactivity, locus of control, sensation seeking, sense of inadequacy, social stress, and somatization. Four adaptive scales are also included on the BASC-2 SRP-A: interpersonal relations, relations with parents, self-esteem, and self-reliance. For the purpose of this study, only clinical scales that load on the Internalizing Composite from

the BASC-2 SRP-A (i.e., atypicality, locus of control, social stress, anxiety, depression, sense of inadequacy, and somatization), the Attitude to Teachers scale, and two indicators of adaptive functioning (Interpersonal Relations scale and Relations with Parents scale), were analyzed.

The BASC-2 SRP-A has been found to be a reliable and valid measure to assess youth psychopathology and adaptive functioning across different populations. Specifically, the BASC-2 SRP-A has demonstrated acceptable internal consistency on the Internalizing Problems composite (α =.96), as well as on the scales of interest: atypicality (α =.83); locus of control (α =.81); social stress (α =.84); anxiety (α =.86); depression (α = .86); sense of inadequacy (α =.79); somatization (α =.68); interpersonal relations (α =.78); relations with parents (α =.88); and attitude to teachers (α =.82). The Internalizing Problems composite has demonstrated good test reliability across approximately a 20-day period (r = .82), as has the Relations with Parents scale (r = .80), and Interpersonal Relations scale (r = .75). Studies have indicated that the Internalizing Composite of the BASC-2 SRP-A has moderate to strong construct validity with other measures of psychopathology, including the total score of the Child Depression Inventory (r = .69; Kovacs, 1992) and with the Internalizing Syndrome Scale of the Achenbach System of Empirically Based Assessment Youth Self-Report (r = .80; [ASEBA] Achenbach & Rescorla, 2001).

Teacher Rating Scale Form of the of the Behavior Assessment System for Children- Adolescent, 2nd Edition (BASC-2 TRS-A; Reynolds & Kamphaus, 2004). Similar to the BASC-2 SRP-A, the BASC-2 TRS-A (which is not included in appendices due to copyright restrictions) measures multiple types of psychopathology as well as

adaptive functioning in youth ages 12 to 21. The BASC-2 TRS-A includes 139 items featured in a checklist format to be completed by a teacher who has known the student for at least two months. The 139 items are scored on a 4-point scale, ranging from 1 (*never*) to 4 (*almost always*). The BASC-2 TRS-A yields ten clinical subscales, including: aggression, anxiety, attention problems, atypicality, conduct problems, depression, hyperactivity, learning problems, somatization, and withdrawal. The adaptive subscales include: adaptability, leadership, social skills, study skills, and functional communication. For clinical subscales, only those that form the Externalizing Composite (i.e., aggression, conduct problems, hyperactivity) were analyzed in the current study. For the adaptive functioning subscales, only the Social Skills scale was analyzed.

The TRS had demonstrated high internal consistency on the Externalizing Problems composite (α =.96)as well as the scales which comprise this composite: hyperactivity (α =.91); aggression (α =.90); conduct problems (α =.91); social skills (α =.92). The Externalizing Problems composite and Social Skills scale have also demonstrated good test reliability (r = .89 and r = .74, respectively). Finally, the Externalizing Problems composite of the BASC-2 TRS-A has yielded moderate to strong construct validity with other measures of externalizing psychopathology, including the Externalizing Syndrome Scale of the ASEBA (r = .76; Achenbach & Rescorla, 2001).

Child and Adolescent Social Support Scale (CASSS; Malecki, & Demaray, 2002). The CASSS (see Appendix J) is a self-report measure aimed to tap young people's perceptions of social support from five sources: parent(s), teacher(s), classmate(s), a close friend, and school administrators. The CASSS is appropriate for students in grades 3 to 12. This scale is comprised of 60 items. For each subscale (i.e. parents, teachers,

classmates, close friend, school administrators), 12 items measure four different types of social support (i.e., emotional, instrumental, appraisal, and informational). Students rate the extent to which they perceive each type of support is provided by a given source (e.g., "*My parent(s) show me they are proud of me*," "*My teacher(s) care about me*", and "*My classmates treat me nicely.*"). Items are rated using a Likert scale that range from 1 (*never*) to 6 (*always*). In the current study, only the parent, teacher, and classmate subscales were analyzed.

Regarding reliability, evidence was found for high 8 to 10 week test–retest reliability (r = .78). High internal consistency of the subscales of interest (i.e., parent, teacher, and classmate) is supported by alpha coefficients ranging from .92 to .95 (Malecki & Demaray, 2003). Additionally, the CASSS (2000) parent, teacher, and classmate subscales were significantly correlated with the parent, teacher, and classmate scales from Harter's (1985) Social Support Scale for Children (r = .56, .48, and .36, respectively).

Social Experiences Questionnaire-Self Report (SEQ-S; Crick & Grotpeter, 1996). The SEQ-S (see Appendix K) is a self-report measure of students' experiences of victimization and prosocial behaviors in the school setting. The measure consists of 15 items on a Likert scale ranging from 1 (*never*) to 5 (*all the time*) that measure the frequency ofelational victimization, overt victimization, and prosocial behaviors. Relational Victimization scale assesses adolescents' reports of the frequency in which others attempt to threaten or harm their relationships (e.g., "*How often does a classmate tell lies about you to make other kids not like you anymore?*"). The Overt Victimization scale measures the extent to which other adolescents threaten to harm or attempt to harm

their physical well being (e.g., "*How often do you get hit by another kid at school?").* Finally, the Prosocial Behaviors scale measures the frequency in which other adolescents express care for the student (e.g., ''*How often does another kid give you help when you need it*?''). Student ratings are summed for each scale, with higher scores on the Overt and Relational Victimization scales indicating greater experiences of victimization. Similarly, higher scores on the Prosocial Behaviors scale indicate perceiving more care from peers. For the purpose of the current study, only items assessing overt victimization (5 items) and relational victimization (5 items) were analyzed.

The SEQ-S has demonstrated high 4 week test-retest reliability ($r = 0.90$; Crick & Grotpeter, 1996). Research indicates that this measure yields good internal consistency; alpha coefficients for the scales of interest, Overt Victimization and Relational Victimization, range from .60 to .78 (Storch, Crisp, Roberti, Bagner & Masia-Warner, 2005).

Dating History Questionnaire-Short Form (DHQ-SF; Furman & Wehner, 1992). The DHQ is a self-report questionnaire tapping multiple facets of youth romantic experiences. Students can endorse up to 18 types of dating experiences (e.g., "*have a 'crush' on someone*," "*have a serious relationship*") as well as the timing of such experiences (i.e., during what grade level this experience occurred). Additionally, the measure can be used to differentiate these experiences into two categories: short term dating experiences (e.g., identifying oneself as a "player") and long term romantic experiences (e.g., typical length of relationships). This measure also assesses youths' satisfaction with their romantic experiences on a five point Likert scale ranging from 1 (*very dissatisfied*) to 5 (*very satisfied*). Only the 14 items assessing romantic experiences

that had been commonly endorsed in previous work with high school students (cf. Furman, Low, & Ho, 2009) and a single item from the DHQ assessing satisfaction with romantic experiences were used in the current study (see Appendix L).

Analyses by Furman, Low, and Ho (2009) indicate that the DHQ demonstrates high internal consistency in regards to the romantic experiences scale derived from the 14-item measure ($\alpha = .86$). The construct validity of a 16-item version of the DHQ romantic experiences scale has been demonstrated via concurrent associations with perceived social acceptance, friendship and romantic competence, as indicated by significant standardized regression weights of .48, .23, and .74, respectfully (Furman, Low, & Ho, 2009). Since the youth satisfaction with romantic experiences is assessed with only one item, internal consistency does not pertain. This single item assessing romantic life satisfaction has been significantly associated with report of romantic support as yielded from the Network of Relationships Inventory ($r = .51$; Furman & Buhrmester, 1985; Furman & Winkles, in press).

Romantic Partner subscale of the Network of Relationships Inventory- Short Form (NRI-SF; Furman & Buhrmester, 1985). The NRI-SF is a 30-item self-report measure of students' perceptions of their relationships with eight significant people (i.e., mother figure, father figure, sibling, relative, same-sex friend, boyfriend/girlfriend). Students rate items that correspond to the amount of support (e.g., companionship, intimacy, nuturance) and negative interactions (e.g., conflict, punishment) on a 5-point Likert scale ranging from 1 (*little or none*) to 5 (*the most*). Most studies that have used the NRI utilize the measure that includes 30 items per each significant person. However, Furman indicates that it is acceptable to include "only a limited number of relationships

or scales" (p. 3). Therefore, only the 13-item boyfriend/girlfriend subscale was administered in the current study to tap the relationship quality with their current or past romantic partner (see Appendix M). Students who reported they have not yet had a girlfriend/boyfriend were directed to skip this measure (i.e., *If you haven't started dating you may stop here and proceed to the next page).*

The romantic partner subscale of the NRI-SF has demonstrated high internal consistency ($\alpha > .83$; La Greca & Mackey, 2007). Youth who report being in serious relationships (versus casual) report higher mean scores on the positive interactions factor of the NRI-SF, demonstrating construct validity (Kuttler & La Greca, 2004). Construct validity of the NRI-SF romantic partner subscale has also been supported via inverse associations with dating anxiety (La Greca & Mackey, 2007).

Data Entry and Screening

Data was entered into SPSS by the author of this dissertation, as well as a team of trained graduate research assistants. After data from questionnaire packets were entered, responses featured on every fifth questionnaire packet were compared to the data entered within SPSS. When a discrepancy between the two was detected, the questionnaire packets prior to and after that fifth questionnaire packet were also compared to the data entered within SPSS to check for answers. If any errors were identified within any of these additional questionnaire packets, the same procedures were taken. Additionally, once data was entered it was screened for data points that were outside the possible range of scores (i.e., the minimum and maximum) that are featured on an indicator.

The dataset was checked for missing data. Missing data was handled via participant-specific mean item imputation. Finally, the skewness and kurtosis of variables

were reviewed. If non-normal data were yielded, data was transformed and relationships between variables explored.

Overview of Data Analysis Plan

Preliminary Analyses

After data were entered and screened for errors, steps were taken to provide an empirical rationale for combining data from the two samples in a single dataset. Specifically, two correlation matrices were created, and corresponding values compared via Fisher's *r*-to-*Z* transformations. These statistical analyses were intended to be used to determine the level of equivalence between the two samples.

Correlational Analyses

Correlations among all continuous variables are provided in the next chapter. To determine the relationships between predictor (i.e., positive affect, negative affect, life satisfaction, internalizing, and externalizing variables) and outcome variables (e.g., social support, social skills, attitude to teachers) within the sample of students, Pearson product-moment correlation coefficients were calculated between all variables.

Dual-Factor Model

To answer research question one (i.e., determining the proportion of high school youth within each mental health group yielded from the dual-factor classification), students were classified into mental health groups based on national norms provided for the commercially-available measures of psychopathology (i.e., BASC-2 SRP-A and BASC-2 TRS-A) and norms derived from the current study's sample for the indictors of SWB (i.e., life satisfaction, positive affect, and negative affect). Consistent with previous research (i.e., Suldo & Shaffer, 2008), an aggregate SWB variable was created by first

standardizing and summing scores for life satisfaction and positive affect, then subtracting standardized negative affect scores. Students' scores on the aggregate SWB variable and their scores of psychopathology were used to determine the existence of the four proposed mental health groups, specifically by examining the number of students categorized within each separate group. In order to determine mental health group membership, participants were classified according to the presence of mental illness first (i.e., levels of internalizing psychopathology and externalizing psychopathology). As directed by the published norms for the BASC-2 (Reynolds & Kamphaus, 2004), high psychopathology was defined as having scores within the "at-risk" or "clinical" level (i.e., at or above a T-score of 60) on internalizing and/or externalizing problems. Conversely, students whose scores are in the normal range of symptoms on both internalizing and externalizing problems (i.e., below a T-score of 60) were classified as having low psychopathology. Student self-report of symptoms that are internalizing in nature are considered the most valid index of internalizing problems (Loeber, Green, & Lahey, 1990), so the Internalizing Composite of the BASC-2 SRP-A was used to index internalizing issues. Because students' ability to accurately report their own externalizing problems is questionable (Merrell, 2008), the Externalizing Composite of the BASC-2 TRS-A was used to index students' externalizing behaviors.

At this time, clinical published norms for SWB have not been created. Consequently scores corresponding to "high" and "low" SWB were developed for the current study based upon the distribution of scores yielded during classifying participants' scores of psychopathology. This procedure is aligned with previous research examining the dual-factor model of mental health (cf. Suldo & Shaffer, 2008). This

method permits youth who are defined as having high psychopathology to also be categorized as having low scores of SWB, in line with assumptions of traditional clinical psychology.

After students were assigned to one of the four mental health groups depicted in Table 4, descriptive analyses were conducted to provide more information regarding student demographic information as related to mental health group membership. In the event that a demographic variable(s) was differentially represented among the mental health groups, it was considered for inclusion as a covariate in consequent analyses to control for effects of the potential influences of the demographic variables upon the dependent variables of interest. This procedure is also similar to previous studies investigating the dual-factor model of mental health (i.e., Suldo & Shaffer, 2008; Suldo, Thalji, & Ferron, 2011).

Table 4

Criteria for Mental Health Group Membership as Yielded from a Dual-Factor Model of Mental Health

		Level of SWB	
		Low	Average to High
Level of psychopathology	Low	**Vulnerable** SWB composite ≤ 21st *P* and Internalizing *T*-score < 60 and Externalizing *T*-score < 60	**Complete Mental Health** SWB composite > 21st *P* and Internalizing *T*-score < 60 and Externalizing *T*-score < 60
	High	**Troubled** SWB composite ≤ 21st *P* and Internalizing *T*-score ≥ 60 or Externalizing *T*-score ≥ 60	**Symptomatic but Content** SWB composite > 21st *P* and Internalizing *T*-score ≥ 60 or Externalizing *T*-score ≥ 60

Note. *P* = percentile; Internalizing = internalizing composite; Externalizing = externalizing composite

Mental Health Group Membership and Mental Health Problems

To answer research question two, in other words, to determine which type of broad-band mental health problems are associated with membership in the symptomatic but content and troubled mental health groups, first frequencies of at-risk or clinical level of symptoms related to specific composites featured on the BASC-2 measures were noted (i.e., internalizing problems from the BASC-2 SRP-A and externalizing problems of the BASC-2 TRS-A). Next, ANCOVAs to test for the effect of mental health group membership (i.e., Symptomatic but Content or Troubled) on the T-scores of each composite featured on the BASC-2 measures were conducted. Finally, Tukey HSD tests were employed to compare the mean levels of symptoms for scales and composites utilized from the BASC-2.

Mental Health Group Membership and Indicators of SWB

In order to evaluate research question three, specifically, which variables of SWB (i.e., life satisfaction, positive affect, or negative affect) differentiate youth in the mental health groups, multivariate analysis of covariance (MANCOVA) utilizing the GLM Method I (Type III; adjusts for unequal sample sizes within cells) was used to test for the effect of group membership in relation to ratings of life satisfaction, positive affect, and negative affect. In the case of a significant multivariate effect, univariate analyses were conducted (ANCOVAs). Then, follow up Tukey HSD tests were employed to determine how mental health groups differ from one another on the indicators of SWB.

Mental Health Group Membership and Social Functioning

Finally, in order to answer the fourth research question, MANCOVA utilizing the GLM Method I (Type III) was used to determine if mental health groups differ on social

functioning after controlling for the influences of covariates on the outcomes. The MANCOVA was used to determine if mental health group membership is related to the various indicators of social functioning (refer to Table 5).

Table 5

Indicators of Social Functioning and Measures

Domain	Measure
Social Skills	1. Social Skills Scale (BASC-2 TRS-A)
Relations with Teachers	1. Social Support from Teachers Scale (CASSS) 2. Negative Attitude to Teachers Scale (BASC-2 SRP-A)
Feeling Liked by Others	1. Interpersonal Relations Scale (BASC-2 SRP-A)
Relations with Parents	1. Relations with Parents Scale (BASC-2 SRP-A) 2. Social Support from Parents Scale (CASSS)
Relations with Peers	1. Social Support from Classmates Scale (CASSS) 2. Experiences of Overt Victimization (SEQ-S: Overt Victimization Scale) 3. Experiences of Relational Victimization (SEQ-S: Relational Victimization Scale)
Romantic Relationships	1. Total Dating Experiences (DHQ-SF) 2. Satisfaction with Romantic Experiences (DHQ-SF) 3. Romantic Relationship Quality (NRI-SF)- Supportive Factor* 4. Romantic Relationship Quality (NRI-SF)- Negative Interaction Factor*

Note. *This measure was not included in the MANCOVA, rather separate ANCOVAs were conducted on this indicator's subscales.

In the case of a significant multivariate effect, univariate analyses were conducted. Specifically, a series 13 separate one-way analyses of covariance (ANCOVA), between subjects design was used due to the fact that there are 13 dependent variables (different indicators of social functioning). Finally, Tukey HSD tests were used to identify the extent of differences between mental health groups yielded from the dual-factor model of

mental health and indicators of social functioning. As a note, the Romantic Partner subscales of the NRI-SF were not included in the MANCOVA due to previous research which suggests that only 25%-50% of middle adolescents have had a romantic relationships in the last 18 months (Carver, Joyner, & Udry, 2003; Davies & Windle, 2000; Connolly, Furman, & Konarski, 2000). It was anticipated that the sample size for respondents would be drastically reduced for completion of this measure. Therefore a separate ANCOVA was conducted for indicators derived from this measure.

Ethical Considerations

In order to ensure participants' safety and well-being, the research team followed specific guidelines and protocol. One of the first steps taken involved the acquisition of written approval from the Institutional Review Board (IRB) at the University of South Florida (USF) to conduct the research study (see Appendix A). Additionally, approval from the school district's Department of Assessment and Accountability as well as the approval from participating high schools was secured.

It was not anticipated that the data collection procedures would cause harm to students recruited to participate. As previously mentioned, students who may have experienced distress due to limited proficiency in the English written language (i.e., students identified as Limited English Proficient) and students with severe impairments (i.e., students serviced by Exceptional Student Education within self-contained classrooms) were not recruited for participation in the current study. Additionally, students as well as their parents were required to consent to participate, and they were informed that they were free to withdraw from the study at anytime. Also, when participants completed their questionnaire packets, members of the research team were

present to monitor students and speak to them about their ability to withdraw if they appeared to be upset (e.g., tearful, mad). Across all data collection sessions, no students were observed to have a negative change in affect or become distraught.

The confidentiality of student psychosocial functioning was maintained. Students were assigned a code number for use in an electronic database, and their names were not attached to this number within the electronic file. A list of participants' names and their corresponding code numbers are only stored within a locked cabinet located in the Principal Investigator's office, and on a password-protected computer file. Only the Principal Investigator, the author of this dissertation, and trained members of the research team have access to these two forms of records. All of the completed measures that were part of the questionnaire packet and those completed by teachers are also stored in a locked cabinet. Participants' individual responses to the questions have not been shared with school staff.

Chapter 4

Results

This chapter contains the results of the analyses conducted to satisfy the research questions posed in the current study. First, procedures used to ensure the validity of data collected are described. In terms of preliminary statistics, descriptive statistics and correlations among variables are provided in order to illustrate the relationships between mental health (i.e., subjective well-being, psychopathology, and the combination of these variables in regards to mental health group membership) and social functioning variables (e.g., relational aggression, parent support, dating experiences). To address the first research question, results identifying the proportions of adolescents in each mental health group yielded from a dual-factor model are described. Next, results concerning details of each group's mental health profiles in terms of psychopathology and positive indicators are provided. Finally, results pertinent to the relationships between mental health group and participants' social functioning are presented.

Preliminary Analyses

Validity of Data

To determine the validity of survey data, the 504 students' scores on the BASC-2 SRP-A *V* (validity) index were examined. The *V* index contains five "nonsensical items that may be marked because of carelessness or a failure to understand the questions or cooperate with the assessment process" (p. 71). The BASC-2 SRP-A advises that a sum score of 3 is in the "caution" range, while scores of 4 or above denote "extreme caution."

Thirteen participants had scores of 3. The research team manually inspected all raw protocols and all appeared valid (i.e., lacked evidence of haphazard responding), so all 13 of these participants were retained. Six participants had scores of 4 to 7. A visual inspection of the protocols indicated that three participants should be removed from the sample because they endorsed an impossible item (e.g., "I have just returned from a 9-month trip on an ocean liner"), and appeared to respond in a haphazard manner on at least one additional measure. The remaining three participants were retained because their pattern of responses on the BASC-2 SRP-A was similar to the items they endorsed on other measures, and none of these three participants endorsed any of the impossible items on the V index. Finally, one additional participant was removed because the BASC-2 TRS-A for this individual was not completed in a valid manner (specifically, the teacher endorsed "Never" for 121 of the last 122 items, including those items that were negatively phrased and thus would logically merit a response such as "Almost Always"). This validity check resulted in a final sample of 500 participants available for data analysis.

Accuracy of Data Entry

Student self-report. Student self-report and teacher report data was hand-entered into a SPSS database by the author of this dissertation and four other graduate student members of the USF Positive Psychology research team. Every 5th student survey packet was checked for data entry errors by a member of the research team. In the event a data entry error was detected, the survey packets that immediately preceded and followed that survey packet were also checked for errors, until an error-free packet was uncovered. This process resulted in checking a total of 206 student survey packets (40.87% of the

504 student self-report packets). Each survey packet contained 338 variables (data entry points). A total of 227 errors were detected in the 206 packets (69,628 total possible data points), yielding an accuracy rate of 99.67%.

Teacher report. Every 10th teacher survey packet (teacher demographic form, BASC-2 TRS-A) was checked for data entry errors by a member of the research team. In the event a data entry error was detected, the survey packets that immediately preceded and followed that survey packet were also checked for errors, until an error-free packet was uncovered. This process resulted in checking a total of 92 teacher survey packets (18.25% of the 504 teacher-report packets). Each survey packet contained 164 variables (data entry items). A total of 49 errors were detected in the 92 packets (15,088 total possible data points), yielding an accuracy rate of 99.68%.

Handling of Missing Data

Missing student self-reported data. A total of 265 of the 504 participants skipped at least one item on the student self-report packet. Conversely, 239 participants had zero missing data points. Of the 265 students with missing data, the average number of missing items was 1.89 (range: 1 to 21, mode = 1). The measure that most commonly contained missing data was the BASC-2 SRP (64 students skipped at least one item; the distribution of missing data on this scale was as follows: 54 students skipped one item, six students skipped two items, three missed three items, and one missed 18 items). The PANAS-C also had a relatively high rate of students missing a small number of data, as 47 students missed 1, 2, 3, or 4 items (n = 30, 11, 3, and 3, respectively).

Missing data were handled via participant-specific mean item imputation. Specifically, if a participant had data for at least 80% of the items on a given subscale

from a measure (e.g., DHQ-SF), then the participant's mean score on items completed within that subscale or measure was calculated and rounded to the nearest whole number. That mean value for the measure was then substituted for the data point formerly coded as missing. Missing data on the BASC-2 SRP were handled in a slightly different manner, according to procedures specified in the BASC-2 technical manual. Specifically, in situations in which 1 or 2 items were missing from a particular scale (e.g., Anxiety, Social Stress), the constant score for that specific scale (as specified in the BASC-2 manual) was inserted in place of the formerly missing data point. A constant score refers to the most frequently endorse response within the normative sample from the BASC-2.

Missing data on the NRS-SF should be viewed in light of the fact that participants were directed to skip that entire measure if it did not pertain to them. Specifically, if the student had yet to experience a serious romantic relationship during high school, it was impossible to rate the quality of one's most recent romantic relationship. A total of 323 students (64.6%) reported having had a boyfriend and/or girlfriend during high school as indicated by their report on the NRI-SF. Therefore, information pertaining to experiences of supportive or negative romantic interactions is only reported for these 323 students. The data points coded as "missing data" for the remaining 177 participants should be viewed as *purposefully* missing.

Missing teacher-reported data. A total of 41 of the 504 participants were missing at least one item on the BASC-2 TRS-A. Conversely, 463 participants had zero missing data points. Of the 41 students with missing data, the average number of missing data points was 1.10 (range: 1 to 5, mode = 1). On the BASC-2 TRS-A, 34 students were missing data on one item, four students were missing data on two items, two students

were missing three items, no student missed four items, and one student was missing five items. Missing data on the BASC-2 TRS-A were addressed as instructed in the BASC-2 manual, as described in the section above. For example, if a teacher skipped one or two items that loaded on the BASC-2 TRS-A Hyperactivity scale, a value of zero (the constant value that the BASC-2 manual specified should be used for the Hyperactivity scale) was substituted for the missing data point.

Data Screening

This revised (valid and complete) dataset (N = 500) was then screened using Statistical Analysis Software, version 9.1 to detect the presence of univariate and multivariate outliers. Univariate outliers were defined as participants scoring equal to or larger than four standard deviations from the group mean on a predictor variable of interest (i.e., life satisfaction, positive affect, negative affect, internalizing problems, and externalizing problems). This process yielded 7 students out of 500 who were identified as extreme univariate outliers. All of these students were identified as being extreme outliers due to their score on the Externalizing Problems composite as rated by their teacher respondent on the BASC-2 TRS-A. As a follow-up to this univariate screening method, Cook's distance values were calculated for each participant. A Cook's distance value is the measurement of the parameter estimate change in analysis with that observation compared with the estimate without that observation. A larger value indicates that the observation is significantly different from the remaining observations in the dataset. All Cook's distance values were <1.0 and therefore students initially identified as univariate outliers were retained, as Cook's distance values indicated that they were not significantly influencing the outcomes associated with the dataset (Stevens, 2009).

Eight participants out of 500 were identified as multivariate outliers. Specifically, the relationships between their scores on life satisfaction, positive and negative affect, and indicators of psychopathology exceeded the $p < .001$ criterion (χ^2 [5] = 20.52) for Mahalanobis distance (Tabachnick & Fidell, 2006). A review of the mental health characteristics of the identified multivariate outliers yielded some participants with mental health profiles that were expected, and some that were unique. Four out of eight multivariate outliers presented with mental health indicators in a way that would be expected. Specifically, three of these outliers reported low levels of life satisfaction and positive affect, coupled with moderate to high levels of negative affect as well as high internalizing and/or externalizing problems, indicating a psychological profile consistent with the "troubled" mental health group. The fourth student endorsed mental health indicators in a fashion aligned with the profile of youth categorized as symptomatic but content. The remaining four observed multivariate outliers had unusual mental health profiles. Specifically, one participant's profile had moderate levels of life satisfaction and positive affect, low levels of psychopathology, but included high levels of negative affect. A second participant reported low life satisfaction, but also high positive affect, with the remaining indicators consistent with "troubled" mental health (in line with the low life satisfaction). A third participant's ratings would place him or her within the vulnerable group, due to moderately high life satisfaction coupled with relatively low positive affect. A fourth participant reported low life satisfaction, but moderate levels of both positive affect and negative affect.

Despite being identified empirically as multivariate outliers, these eight participants were retained in the dataset (N= 500) for all subsequent analyses for several

reasons. First, it was not suspected that these participants' mental health profiles were a result of invalid responses due to the examination of the BASC-2 validity index, followed by careful review of rating scales in questionnaire packets that were elevated on the validity index. Students and teachers that appeared to complete the measures of psychopathology in an invalid method were removed from the dataset. Additionally, data were carefully screened and checked to ensure accurate data entry, greatly minimizing the possibility of a data entry error. Moreover, these eight observations identified as multivariate outliers are considered to be naturally occurring variances in adolescents' mental health profiles and therefore are of particular interest to this current investigation. In addition to the validity checks and data entry procedures, sensitivity analyses were employed as part of all subsequent data analyses featured in this current study. Specifically, research questions were evaluated by employing a dataset that included the multivariate outliers (N= 500) and then statistical analyses were repeated using a dataset that excluded the eight multivariate outliers (N= 492). A summary of the results from these sensitivity analyses are provided in Table 6. Overall, results from these sensitivity analyses indicated that removal of these eight students would not have had a significant impact on the results of the research questions featured in this document. The only differences between findings yielded with datasets with or without multivariate outliers occur when examining proportions or mean levels of indicators, due to the loss of the 8 students identified as multivariate outliers. Because of the similarities in patterns of results for most research questions, for the duration of this chapter results are reported using the largest sample (N = 500).

Table 6

Results of Sensitivity Analyses Comparing Datasets With and Without Multivariate Outliers

Research Question	Findings Comparable between Datasets?	Notable Findings with the Dataset Without Outliers (N = 492)

RQ1. Proportion of youth in mental health groups yielded from dual factor model	No	• 25.81% of student had at-risk or elevated symptoms of psychopathology; 25.81st percentile of SWB used as cut-off point
		• Proportions of youth classified in each mental health group differed:
		  • Complete Mental Health (n = 309)
		  • Vulnerable (n = 56)
		  • Troubled (n = 71)
		  • Symptomatic but Content (n = 56)

RQ2. Mental health group membership and mental health problems	Yes	• Standard deviations and mean levels of symptoms of psychopathology vary slightly • Proportions of students with at-risk to elevated symptoms of each mental health problem (e.g., anxiety, depression) is slightly less in some instances due to removal of 8 students • Patterns of differences of group mean levels of symptoms of psychopathology remain the same.
RQ3. Mental health group membership and indicators of SWB: vulnerable and complete mental health youth	Yes	• Standard deviations and mean levels of indicators of SWB (life satisfaction, positive affect, negative affect) vary slightly. • Patterns of differences of group mean levels of indicators of SWB remain the same.
RQ4. Mental health group membership and indicators of SWB: symptomatic but content and troubled youth	Yes	• Standard deviations and mean levels of indicators of SWB (life satisfaction, positive affect, negative affect) vary slightly. • Patterns of differences of group mean levels of indicators of SWB remain the same.
RQ5. Mental health group membership and social functioning	Yes	• MANCOVA indicates that a significant effect for mental health group membership on youth social functioning still present. • In the 13 follow-up ANCOVAs, resulting F values varied somewhat, but conclusions regarding significance of the univarate tests did not change (i.e., ANCOVA that did not yield a significant effect with the larger dataset also did not yield a significant effect with the reduced dataset)

Descriptive Statistics

Descriptive statistics for the predictor and outcome variables of interest are reported in Table 7. To assess univariate normality, skewness and kurtosis of each of the 18 variables were calculated.

Table 7

Means, Standard Deviations, Ranges, Skew, and Kurtosis of Raw/Non-Transformed Variables (N = 500)

Variable	*N*	*M*	*SD*	Range	Skewness	Kurtosis
Predictor						
Life Satisfaction	500	4.24	1.04	1.0-6.0	-0.52	-0.19
Positive Affect	500	3.61	0.79	1.1-5.0	-0.58	0.09
Negative Affect	500	1.88	0.73	1.0-4.5	1.06	0.58
Internalizing Problems	500	42.66	28.2	0-150.0	0.75	0.11
Externalizing Problems	500	5.67	9.22	0-50.0	2.15	4.35
Outcome						
Social Skills Scale	500	11.97	6.57	0-24.0	0.15	-0.94
Interpersonal Relations Scale	499	16.09	2.95	2.0-19.0	-1.57	2.98
Relations with Parents Scale	499	18.25	6.99	0-29.0	-0.37	-0.66
Social Support from Parents Scale	500	4.09	1.20	1.0-6.0	-0.19	-0.88
Social Support from Teachers Scale	500	4.24	1.20	1.0-6.0	-0.34	-0.34
Attitude to Teachers Scale	500	7.62	4.73	0-23.0	0.50	-0.30
Social Support from Classmates Scale	500	4.14	1.04	1.0-6.0	-0.15	-0.37
Overt Victimization Scale	500	1.37	0.55	1.0-4.8	2.56	8.53
Relational Victimization Scale	500	1.57	0.65	1.0-4.8	1.73	4.24
Dating Experiences	499	25.06	20.29	4.0-11.4	0.10	-0.16
Romantic Satisfaction	496	3.52	1.03	1.0-5.0	0.54	-0.17
Negative Interactions: Romantic Relationships*	323	1.73	0.69	1.0-4.8	1.36	2.06
Supportive Interactions: Romantic Relationships*	323	3.56	0.94	1.0-5.0	-0.53	-0.34

Note. Higher scores reflect increased levels of the construct indicated by the variable name. * Notably only participants who endorsed having had a boyfriend and/or girlfriend during high school completed a questionnaire featuring these scales

Twelve variables had a normal distribution (skewness and kurtosis between -1.0 and +1.0) and six variables demonstrated values of skew and kurtosis that were outside normal limits. These six variables include: negative affect (skew = 1.06, kurtosis = 0.58), externalizing problems (skew = 2.15, kurtosis = 4.35), interpersonal relations (skew = -1.57, kurtosis = 2.98), overt victimization (skew = 2.56, kurtosis= 8.53), relational victimization (skew = 1.73, kurtosis = 4.24), and negative interactions as related to romantic relationships (skew = 1.36, kurtosis = 2.06). Due to these violations of normality, variance of residuals was evaluated to determine the extent to which the spread of the residuals were approximately equal for the predicted dependent variable scores. Results of these analyses suggest that although there may be some violation of normality, the data are fairly homoscedastic. Notably, Kline (2010) asserts that skew and kurtosis values smaller than 3 and 10, respectively, are within acceptable limits.

To further evaluate the potential influence of non-normal data, sensitivity analyses were employed with transformed versions of the non-normal dependent variables. Specifically, in line with recommended procedures by Tabachnick and Fiddell (2006), the four dependent variables that did not meet criteria for normal distribution were transformed. All four of these transformed variables then evidenced distributions that approximated normal distributions (i.e., skew and kurtosis values near the range of -1 to +1). These four variables and the results of their transformations are as follows: overt victimization (transformed by taking the inverse of the raw variable; skew = -0.79, kurtosis = -0.42), relational victimization (transformed by taking the logarithm of the raw variable; skew = 0.71, kurtosis= -.41), interpersonal relations (transformed by taking the square root of the raw variable; skew = .69, kurtosis = .15), and negative interactions in

romantic relationships (transformed by taking the square root of the raw variable; skew = .89, kurtosis = .51).

These transformed versions of the variables were then employed in analyses relevant to social functioning (i.e., correlational analyses, MANCOVA to determine the extent to which mental health group membership predicted students' social functioning and ANCOVAs to evaluate changes in specific indicators of social functioning as a function of mental health group membership). Results from analyses with transformed variables were compared to analyses that employed the raw versions of the four aforementioned variables. In terms of correlational analyses, the magnitude and significance of relationships between pairs of variables remained relatively the same regardless if the transformed or raw version of the variables were used. However, three relationships out of 72 possible relationships did change in terms of the statistical significance (*p*-values) associated with the relationship. First, with regard to the relationship between overt victimization and negative affect, the absolute value of the correlation was .14 between raw variables and .17 with transformed variables; the probability changed from .002 to <.001. Second, the absolute value of the correlation between overt victimization and social skills changed from .10 to .07 once transformed variables were employed, and the *p*-value changed from .02 to .10. Finally, the absolute value of the relationship between negative romantic relationships and classmate support went from .10 (raw variables) to .11 (transformed variables), and the probability of the relationship changed from $p = .06$ to $p = .04$.

Regarding results of the MANCOVA, the same pattern of relationships between mental health group membership and social functioning emerged regardless if the

original/raw or the transformed variables were employed in analyses. The results from the four follow-up ANCOVAs conducted with the transformed variables were the same (in terms of significance of findings) compared to ANCOVAs conducted with non-transformed variables were employed in the analyses. Given that relationships between mental health indicators and social functioning outcomes were similar in the vast majority of sensitivity analyses comparing results obtained using transformed versus raw/non-transformed variables, results of the analyses conducted with the raw/non-transformed versions of variables are reported in the remainder of analyses in the current study.

Comparison of Data from Students at Separate Schools

The dataset analyzed in the current study was designed to include youth attending large, public high schools from different community types (i.e., rural, urban). In order to provide an empirical rationale for combining data from two separate schools into a single dataset, statistical analyses were employed to determine if it is defensible to combine the data from these two groups. First, two correlations matrices were calculated and compared. One matrix features relationships between mental health indicators and social functioning indicators of participants from School A. The other matrix contains the correlation coefficients for these relevant variables for the sample of youth from School B. Next, Fisher's *r*-to-*Z* transformations were employed to evaluate whether or not the magnitude of the relationships between the variables of interest were similar for students from these two schools. Fisher's *r*-to-*Z* transformations were used to determine the significance of the difference between Pearson product moment correlation coefficients ($z > \pm 1.96$, $p < .05$, two tailed test). These analyses indicate if the correlation coefficients

among variables endorsed by youth in the School A subsample were significantly different from correlations among variables obtained for youth in school B. Correlations between predictor variables (i.e., SWB, psychopathology) and the outcome variables of interest (i.e., social functioning indicators), as well as the *p*-values associated with the Fisher's *r*-to-*Z* transformation, are presented in Table 8.

The direction and magnitude of the correlations obtained for the sample of participants in School A ($n = 256$) and the participants recruited from School B ($n = 244$) were comparable in all but 14 cases out of 60. Although these schools may present with some differences that are statistically significant (e.g., a stronger association between parent support and life satisfaction among students at School A [$r = .69$] as compared to School B [$r = .56$]), the differences in magnitude are not necessarily clinically significant. As in the aforementioned example, both associations are in the "large" range. The differences in the magnitude of some relationships is also not surprising given that the participating locations/schools were purposefully selected for recruitment of student participants because the schools themselves differed from one another in terms of geographic location and ethnic diversity. Nonetheless, due to the finding that these comparisons did not yield statistically similar situations between *all* predictor variables (i.e., SWB, psychopathology) and outcome variables for the two schools, subsequent analyses employed the discrete variable "school" as a covariate.

Table 8
Intercorrelations and results from Fishers r-to-Z transformations (N = 500)

Scale	Social Skills Scale	Interpersonal Relations	Relations with Parents	Attitude to Teachers	Social Support: Classmates	Social Support: Teachers	Social Support: Parents	Overt Victimi-zation	Relational Victimi-zation	Total Dating Experiences	Satisfaction with Dating Experiences	Negative Interactions: Romantic Relations[1]	Supportive Interactions: Romantic Relations[1]
School A participants (*n*= 256)													
LS	0.12	0.39**	0.64**	-0.33**	0.32**	0.29**	0.69**	-0.12*	-0.15*	-0.10	0.45**	-0.24*	0.24
PA	0.18	0.45**	0.49**	-0.39**	0.50**	0.43**	0.47**	-0.24**	-0.19*	0.16*	0.43**	-0.17*	0.35**
NA	-0.08	-0.40**	-0.34**	0.35**	-0.23**	-0.22**	-0.35**	0.17*	0.27**	0.10	-0.38**	0.28**	0.22*
Int.	-0.13*	-0.54**	-0.55**	0.59**	-0.34**	-0.34**	-0.58**	0.38**	0.42**	0.14*	-0.34**	0.34**	-0.21**
Ext.	-0.13*	-0.04	-0.09	0.14*	-0.00	-0.00	-0.02	0.01	0.06	-0.10	0.04	-0.10	-0.06
School B participants (*n*=244)													
LS	0.17*	0.36**	0.57**	-0.35**	0.35**	0.28**	0.56**	-0.09	-0.21**	0.09	0.38**	-0.20*	0.03
PA	0.06	0.42**	0.35**	-0.21**	0.51**	0.28**	0.40**	-0.14*	-0.16*	-0.04	0.29**	-0.17*	0.26**
NA	-0.07	-0.26**	-0.33**	0.17*	-0.13*	-0.04	-0.29**	0.11	0.28**	-0.07	-0.21*	0.31**	0.10
Int.	-0.07	-0.50**	-0.51**	0.45**	-0.37**	0.29**	-0.52**	0.18*	0.40**	-0.09	-0.29**	0.32**	0.07
Ext.	-0.35**	-0.05	-0.06	0.24**	-0.06	-0.20*	-0.05	0.05	0.11	-0.11	-0.02	0.08	-0.05
p-values from Fishers r-to-z Transformations													
LS	0.57	0.70	0.22	0.80	0.70	0.90	0.02*	0.73	0.49	0.03*	0.35	0.32	0.02
PA	0.18	0.68	0.06	0.03*	0.88	0.06	0.34	0.25	0.74	0.03*	0.07	1.00	0.27
NA	0.91	0.08	0.90	0.03*	0.25	0.04*	0.46	0.50	0.90	0.06	0.04*	0.71	0.00*
Int.	0.50	0.54	0.54	0.03*	0.70	0.54	0.34	0.02*	0.79	0.01	0.54	0.80	0.00*
Ext.	0.01*	0.91	0.73	0.25	0.50	0.02*	0.74	0.66	0.58	0.91	0.50	0.04*	0.91

Note. LS = life satisfaction; PA = positive affect; NA = negative affect; Int. = internalizing problems; Ext. = externalizing problems. The notation of 1 indicates that the sample size for this correlation is $n = 168$ for school A and $n = 155$ for school B, due to the fact that not all students had yet had a boyfriend or girlfriend during high school and therefore were not able to complete the measure.
*$p < .05$, **$p<.001$

Measure Reliability

Alpha coefficients, an index of reliability, were obtained for each scale administered to provide information on measurement error. Specifically, these alpha coefficients are used to evaluate the "percent of variance in an observed variable that is accounted for by true scores underlying the construct" (O'Rourke, Hatcher, & Stepanksi, 2005, p. 157). Nunnally (1978) has recommended that alpha coefficients of .70 or above are indicative of adequate reliability with respect to internal consistency.

With the present sample of 500 youth, internal consistency of the SLSS is high with a coefficient alpha of .89. The PANAS-C also demonstrated high internal consistency for the positive affect and negative affect subscales (α = .90 and .91, respectively). The BASC-2 SRP-A demonstrated acceptable internal consistency on the Internalizing Problems composite (α= .96), as well as on the specific scales administered: atypicality (α = .85), locus of control (α = .81), social stress (α = .85), anxiety (α =0.89), depression (α =.89), sense of inadequacy (α = 0.83), somatization (α = 0.71), interpersonal relations (α = .78), relations with parents (α= .91), and attitude to teachers (α = .81). The BASC-2 TRS-A demonstrated high internal consistency on the Externalizing Problems composite (α =.95), as well as the individual scales which constitute this composite: hyperactivity (α = .93), aggression (α =.84), conduct problems (α =.88), and social skills (α = .93). Subscales of the CASSS that were administered yielded good coefficient alphas on each subscale: Parent (α =.95), Teacher (α =.94), and Classmate (α =.94). Similarly, the two scales of interest on the SEQ-S had good internal consistency: Relational Victimization (α =.80) and Overt Victimization (α =.81). The DHQ-SF also yielded good internal consistency (α = .88). Due to the fact that

participants' satisfaction with their romantic experiences was assessed with only one item, internal consistency could not be calculated. Finally, the NRI-SF indicated high internal consistency on items loading onto the Support Factor (α = .87), as well as for items that loaded onto the Negative Interaction Factor (α = .88). In sum, in the current sample all scales demonstrated adequate reliability, with estimates ranging from .71 (Somatization scale of the BASC-2 SRP-A) to .95 (Externalizing Problems composite of the BASC-2 TRS-A; Parent subscale of the CASSS). Therefore, it is likely that bias attributed to measurement error in subsequent analyses was rather limited.

Correlational Analyses

To determine the nature and strength of relationships between predictor and outcome variables within the entire sample of students, Pearson product-moment correlation coefficients were calculated between all variables. Correlations among all continuous variables included in analyses are presented in Table 9. Statistical significance was determined using an alpha level of .05. As expected, life satisfaction was positively related to positive affect (r = .49; p <.001), and inversely correlated with negative affect (r= -.52, p <.001) and internalizing problems (r = .66; p <.001). The other indicator of psychopathology, teacher-rated externalizing problems, was not significantly related to any other indicator of mental health examined in the current study (i.e., life satisfaction, positive affect, negative affect, or internalizing problems). Notably, a review of the mean and range of externalizing psychopathology was within the expected range (i.e., in accord with the raw scores obtained in the norm sample, as reported in the manual). Positive affect was inversely related to negative affect and internalizing problems (r = -.27, p <.001 and r = - .39, p <.001, respectively).

Of particular interest are relationships between mental health indicators and social functioning. Life satisfaction was correlated in a positive direction with the following social functioning indicators: social skills ($r = .16$, $p < .001$), interpersonal relations ($r = .38$, $p < .001$), relations with parents ($r = .61$, $p < .001$), social support from classmates ($r = .33$, $p < .001$), social support from teachers ($r = .28$, $p < .001$), social support from parents ($r = .63$, $p < .001$), satisfaction with romantic experiences ($r = .41$, $p < .001$), and supportive romantic relations ($r = .16$, $p < .05$). Life satisfaction was inversely associated with the following negative indicators of social functioning: (negative) attitude to teachers ($r = -.33$, $p < .001$), overt victimization experiences ($r = -.12$, $p < .001$), relational victimization experiences ($r = -.18$, $p < .001$), and negative interactions in romantic relationships ($r = -.20$, $p < .001$). Life satisfaction did not demonstrate a significant relationship with cumulative number of dating experiences.

Positive affect was significantly correlated in a positive direction with the following social functioning indicators: social skills ($r = .13$, $p < .05$), interpersonal relations ($r = .44$, $p < .001$), relations with parents ($r = .43$, $p < .001$), social support from classmates ($r = .50$, $p < .001$), social support from teachers ($r = .36$, $p < .001$), social support from parents ($r = .44$, $p < .001$), satisfaction with romantic experiences ($r = .36$, $p < .001$), and supportive romantic relations ($r = .16$, $p < .05$). Positive affect was significantly correlated in a negative direction with the following social functioning indicators: attitude to teachers ($r = -.30$, $p < .001$), overt victimization ($r = -.20$, $p < .001$), relational victimization ($r = -.17$, $p < .001$), total dating experiences ($r = -.10$, $p < .05$), and negative interactions in romantic relationships ($r = -.17$, $p < .001$).

Negative affect was significantly correlated in a positive direction with the

following social functioning indicators: attitude to teachers ($r = .27$, $p < .001$), overt victimization ($r = .14$, $p < .05$), relational victimization ($r = .27$, $p < .001$),and negative interactions in romantic relationships ($r = .29$, $p < .001$). Negative affect was significantly correlated in an inverse direction with the following social functioning indicators: interpersonal relations ($r = .-34$, $p < .001$), relations with parents ($r = -.33$, $p < .001$), social support from classmates ($r = -.18$, $p < .001$), social support from teachers ($r = -.14$, $p < .001$), social support from parents ($r = -.32$, $p < .001$), and satisfaction with romantic experiences ($r = -.29$, $p < .001$). Negative affect was not significantly related to social skills or supportive interactions in a romantic relationship.

Internalizing problems (raw total internalizing symptoms composite) co-occurred with higher scores on the following social functioning indicators: (negative) attitude to teachers ($r = .50$, $p < .001$), overt victimization ($r = .27$, $p < .001$), relational victimization ($r = .40$, $p < .001$), and negative interactions in romantic relationships ($r = .31$, $p < .001$). Internalizing problems were significantly correlated in a negative direction with the following social functioning indicators: interpersonal relations ($r = .-52$, $p < .001$), relations with parents ($r = -.54$, $p < .001$), social support from parents ($r = -.56$, $p < .001$), social support from classmates ($r = -.34$, $p < .001$), social support from teachers ($r = -.31$, $p < .001$), and satisfaction with romantic experiences ($r = -.31$, $p < .001$). Internalizing psychopathology was not significantly related to the following variables: social skills, total dating experiences, or supportive interactions in a romantic relationship.

Externalizing problems were significantly correlated in a positive direction with only one social functioning indicator, (negative) attitude to teachers ($r = .18$, $p < .001$).

Externalizing problems were significantly correlated in a negative direction with the following social functioning indicators: social skills (r = .-24, p < .001), social support from teachers (r = -.09, p < .001), and the number of romantic relationships (r = -.11, p < .001). Externalizing problems were not significantly related to 9 of the 13 social functioning indicators, including: interpersonal relations, relations with parents, social support from classmates, parents, and teachers, experiences of overt and relational victimization, satisfaction with romantic experiences, and finally the nature of interactions in romantic relationships (i.e., supportive or negative interactions).

Dual-Factor Model

In order to address the first research question, participants' scores on indicators of SWB and psychopathology were combined to yield the four proposed mental health groups. First, students' levels of internalizing and externalizing problems were calculated according to published norms for the BASC-2 SRP-A and BASC-2 TRS-A, respectively (Reynolds & Kamphaus, 2004). Using these procedures, students' *T*-scores were normed based upon their age and gender at the time they completed the BASC-2 SRP-A. Students with high psychopathology were defined as having scores within the "at-risk" or "clinical" range of symptoms (i.e., at or above a *T*-score of 60) on Internalizing and/or Externalizing Problems composite(s). Conversely, students who had scores that were within the "normal" range of symptoms on self-reported Internalizing Problems and teacher-rated Externalizing Problems (i.e., below a *T*-score of 60) were classified as having low psychopathology. Using this dichotomized psychopathology variable, 26.4% of participants (n = 132) were classified as having high levels of psychopathology.

Table 9

Correlations between Predictor and Outcome Variables (N = 500)

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Life Satisfaction	-																	
2. Positive Affect	.49**	-																
3. Negative Affect	-.52**	-.27**	-															
4. Internalizing Problems	-.66**	-.39**	.67**	-														
5. Externalizing Problems	-.06	.03	.01	.05	-													
6. Social Skills Scale	.16**	.13*	-.07	-.08	-.24**	-												
7. Interpersonal Relations	.38**	.44**	-.34**	-.52**	-.05	.04	-											
8. Relations with Parents	.61**	.43**	-.33**	-.54**	-.06	.11*	.35**	-										
9. Attitude to Teachers	-.33**	-.30**	.27**	.50**	.18**	-.19**	-.28**	-.36**	-									
10. Social Support:: Classmates	.33**	.50**	-.18**	-.34**	-.04	.04	.55**	.32**	-.36**	-								
11. Social Support: Teachers	.28**	.36**	-.14**	-.31**	-.09*	.12*	.26**	.33**	-.64**	.47**	-							
12. Social Support: Parents	.63**	.44**	-.32**	-.56**	-.02	.09	.37**	-.79**	-.33**	.43**	.38**	-						
13. Overt Victimization	-.12*	-.20**	.14*	.27**	.09	-.10*	-.30**	-.15**	.21**	-.29**	-.18**	-.17**	-					
14. Relational Victimization	-.18*	-.17**	.27**	.40**	.08	-.00	-.36**	-.17**	.27**	-.34**	-.23**	-.19**	.63**	-				
15. Total Dating Experiences	-.01	-.10*	.01	.03	-.11*	.07	-.18**	-.03	-.09*	-.08	.08	.01	-.00	.01	-			
16. Satisfaction with Romantic Experiences	.41**	.36**	-.29**	-.31**	.01	.05	.34**	.24**	-.18**	.34**	.22**	.27**	-.12*	-.16**	-.17**	-		
17. Negative Interaction: Romantic Relations[1]	-.20**	-.17*	.29**	.31**	-.01	.03	-.13*	-.01	.20**	-.10	-.18*	-.08	.05	.09	.01	-.04	-	
18. Supportive: Romantic Relations[1]	.16*	.31**	-.07	-.09	-.06	.06	.19**	.15	-.09	.30**	.22**	.18*	-.15*	-.10	-.07	.42**	-.15*	-

Note. The notation of 1 indicates that the sample size for this correlation is $n = 323$ due to the fact that not all students have yet had a boyfriend or girlfriend during high school and therefore were not able to complete the measure.

*$p < .05$, **$p < .001$

Following this step, an aggregate variable for SWB was created by standardizing and summing scores for life satisfaction and positive affect, and subsequently subtracting standardized negative affect scores. Due to the absence of published norms for clinical levels of SWB, aligned with previous research, SWB cut-points corresponding to "average to high" and "low" SWB were developed based upon the distribution of scores of psychopathology with the current sample (cf. Suldo & Shaffer, 2008). Utilizing this approach, a cut point corresponding to the 26.4th percentile for the raw composite SWB variable was selected (SWB = -1.29), which mathematically allows youth with high psychopathology to also be categorized as presenting with low SWB. Using this method, 73.6% of participants (n = 368) were classified as having average to high SWB; conversely 26.4% of participants (n = 132) were categorized as having low SWB. Based upon their dichotomized levels of SWB and psychopathology, students were then categorized into one of four mental health groups. A summary of the cut-point scores used to assign participants to mental health groups as well as the number of students categorized amongst the four groups is illustrated in Table 10.

The complete mental health group is comprised of 311 adolescents (62.0% of sample) who self-reported low symptoms of internalizing psychopathology and average to high levels of SWB, as well as had teacher-rated symptoms of externalizing psychopathology in the normal range (i.e., $T < 60$). Analyses identified 75 children (15% of the sample) as troubled, or presenting with high levels of psychopathology and low levels of SWB. In the current sample, 57 adolescents (11.4% of participants), were identified as vulnerable, reporting low levels of psychopathology as well as low levels of SWB scores were low. Finally, 57 students (11.4% of participants) emerged as

symptomatic but content, with elevated symptoms of psychopathology in tandem with average to high levels of SWB.

Table 10

Participants Mental Health Group Membership as Yielded from a Dual-Factor Model of Mental Health (N = 500)

		Level of SWB	
		Low	Average to High
Level of Psychopathology	Low	**Vulnerable** **11.4%** **(*n* = 57)** SWB composite ≤ 26.4th *P* and Internalizing *T*-score < 60 and Externalizing *T*-score < 60	**Complete Mental Health** **62.0%** **(*n* = 311)** SWB composite > 26.4th *P* and Internalizing *T*-score < and Externalizing *T*-score < 60
	High	**Troubled** **15.0%** **(*n* = 75)** SWB composite ≤ 26.4th *P* and Internalizing *T*-score ≥ 60 or Externalizing *T*-score ≥ 60	**Symptomatic but Content** **11.4%** **(*n* = 57)** SWB composite > 26.4th *P* and Internalizing *T*-score ≥ 60 or Externalizing *T*-score ≥ 60

Note. P = percentile; Internalizing = internalizing composite; Externalizing = externalizing composite

Because the school from which participants' were recruited may influence the extent to which they experience different predictor and outcome variables, students' categorization into mental health groups is also presented by school in Table 11.

Descriptive statistics for each mental health group are presented in Table 12. For categorical variables, chi-square tests were conducted to determine if a given demographic variable was overrepresented in a mental health group (i.e., complete mental health, vulnerable, symptomatic but content, or troubled). In the event of a significant chi-square statistic ($p < .05$), a z-ratio and associated two-tail probability was calculated to determine the significance of the differences between proportions of youth identified in a given mental health group in comparison to other mental health groups on

each categorical demographic variable that yielded a significant chi-square test.

Table 11

Participants Mental Health Group Membership as Yielded from a Dual-Factor Model of Mental Health by School (N = 500)

		Low		Average to High	
Level of Psychopathology	Low	***Vulnerable***		***Complete Mental Health***	
		School A **12.89%** (*n* = 33)	*School B* **9.84%** (*n* = 24)	*School A* **58.98%** (*n* = 151)	*School B* **65.57%** (*n* = 160)
	High	***Troubled***		***Symptomatic but Content***	
		School A **16.80%** (*n* = 43)	*School B* **13.11%** (*n* = 32)	*School A* **11.33%** (*n* = 29)	*School B* **11.48%** (*n* = 28)

SES is represented by a composite variable derived by averaging participants' standardized scores on three variables: students' report of receiving free or reduced-price lunch, highest level of education attained by their mother, and highest level of education attained by their father. Given the continuous nature of this variable, an ANOVA with follow-up Tukey tests was conducted to test for pairwise differences in SES.

The ANOVA results indicated a significant univariate effect for mental health group membership on students' composite SES, F (3,496) = 6.04, p =0.0005. In addition to the significant effect of SES, omnibus tests indicated between-group differences in gender (χ^2 [3, 500] = 22.05, $p < .0001$), and family composition (χ^2 [3, 500] = 10.40, p = 0.016). Pairwise comparisons indicated that youth in the complete mental health group were more likely to come from high SES homes and have married parents. Youth in the vulnerable mental health group were disproportionately of low SES. Students identified as symptomatic but content were more likely to have unmarried parents. Troubled

students were more likely to be female and low SES. Mental health groups did not differ specifically with respect to student ethnicity (χ^2 [18, 500] = 20.90 , p = 0.28) or grade level (χ^2 [6, 500] = 3.80, p = 0.70).

Table 12

Demographic Characteristics of Participants by Mental Health Groups (N = 500)

Demographic variable	Mental Health Group				Total Sample (N = 500) %
	Complete Mental Health (n = 311) %	Vulnerable (n = 57) %	Sympto-matic but Content (n = 57) %	Troubled (n = 75) %	
Gender					
Male	44.37_a	40.35_a	52.63_a	17.33_b	40.80*
Female	55.63_a	59.65_a	47.37_a	82.67_b	59.20
Ethnicity					
American Indian	0.32	0	1.75	0	.40
Asian	3.22	3.51	0	1.33	2.60
African American	9.00	5.26	7.02	8.00	8.20
Hispanic/Latino	33.12	29.82	38.6	1.33	33.80
White	43.73	57.89	35.09	38.67	43.60
Multi-Racial	9.00	3.51	17.54	13.33	10.00
Other	1.61	0	0	0	1.40
SES (mean composite)	0.10_a	-0.22_b	-0.01_{ab}	-0.26_b	-0.00*
Family Composition					
Married Parents	47.91_a	38.60_{ab}	29.82_b	33.33_b	42.60*
Parents not Married	52.09_a	61.40_{ab}	70.18_b	66.67_b	57.40
Grade Level					
9	43.41	43.86	36.84	48.00	43.40
10	36.66	40.35	35.09	33.33	36.40
11	19.94	15.79	28.07	18.67	20.20

Note. LS = life satisfaction. For all but SES, Z-tests were employed to conduct pairwise comparisons between proportions of participants in each mental health group. Significant differences between group proportions (p < .05) are indicated by different letters. Proportions having the same subscript are not significantly different. For SES, between-group differences were identified via follow-up Tukey tests. Significant differences between group means (p < .05) are indicated by different letters. Means having the same subscript are not significantly different.
*p < .05 for omnibus tests (χ^2 for gender and family composition; ANOVA for SES)

Mental Health Group Membership and Mental Health Problems

To answer research question two, to determine which type of broad-band mental health problems are associated with membership in the symptomatic but content and troubled mental health groups, descriptive analyses of symptoms related to specific composites featured on the BASC-2 measures were conducted (see Table 13). *T*-scores greater than 60 indicate at-risk or clinical level of externalizing and/or internalizing problems. Notably, although ranges for some scales are in the at-risk to clinical range for youth in groups who are identified as symptomatic, the internalizing or externalizing composite was not elevated and therefore these youth were categorized into one of two groups without elevated symptoms of psychopathology (i.e., Complete Mental Health or Vulnerable) despite their relatively high score on a specific type of internalizing or externalizing psychopathology.

Next, proportions of youth within each mental health group with elevated symptoms of psychopathology (T-score $\geq$ 60) on each composite and subscale of the BASC-2 were identified (see Table 14). A review of mental health indicators by group suggests that 94.67% of youth within the troubled mental health group report experiencing internalizing problems and 17.33% of these youth exhibit externalizing problems as reported by their teachers. The top three elevated internalizing problems subscales for troubled youth included: depression (76.00%), sense of inadequacy (65.33%), and locus of control (62.67%). For troubled youth, teachers reported that 22.67% of students in this group had clinical levels of symptoms associated with hyperactivity, 13.33% of students in this group had elevated symptoms of aggression, and 14.67% of students had elevated symptoms of conduct problems.

Table 13

Means, Standard Deviations, and Ranges of Mental Health Indicators by Mental Health Group

	Complete Mental Health			Vulnerable			Symptomatic but Content			Troubled		
	M	*SD*	Range	*M*	*SD*	Range	*M*	*SD*	Range	*M*	*SD*	Range
Internalizing	43.73_a	6.45	32.0-59.0	52.32_b	5.35	40.0-59.0	57.40_c	11.78	35.0-80.0	66.45_d	7.57	45.0-93.0
Anxiety	44.94_a	8.74	29.0-72.0	53.61_b	9.95	34.0-71.0	55.72_b	13.92	32.0-86.0	61.93_c	9.61	40.0-82.0
Depression	43.75_a	5.08	39.0-62.0	54.58_b	7.28	41.0-73.0	54.23_b	11.86	39.0-85.0	68.45_c	10.69	49.0-92.0
Somatic Complaints	47.16_a	7.72	39.0-78.0	51.60_b	9.65	39.0-78.0	56.95_c	11.05	39.0-82.0	60.33_c	11.77	39.0-82.0
Locus of Control	47.16_a	8.55	36.0-76.0	52.32_b	10.51	36.0-78.0	58.30_c	12.62	37.0-85.0	63.45_d	9.38	40.0-82.0
Atypicality	45.63_a	5.67	40.0-80.0	49.02_a	6.19	40.0-72.0	56.09_b	12.09	40.0-91.0	57.79_b	12.19	41.0-100.0
Social Stress	42.29_a	7.46	33.0-70.0	50.79_b	7.61	36.0-64.0	50.63_b	10.54	33.0-78.0	62.20_c	9.02	47.0-92.0
Sense of Inadequacy	44.96_a	7.83	34.0-80.0	50.37_b	7.68	36.0-65.0	58.21_c	11.57	37.0-81.0	64.61_d	12.39	41.0-92.0
Externalizing	45.37_a	4.51	41.0-59.0	45.00_a	3.86	41.0-57.0	55.54_b	11.40	41.0-81.0	50.32_c	11.98	41.0-89.0
Aggression	45.13_a	3.32	42.0-62.0	45.07_a	3.34	42.0-60.0	52.05_b	8.08	43.0-69.0	49.16_c	10.25	42.0-92.0
Conduct Problems	45.26_a	4.51	41.0-79.0	45.42_a	3.34	42.0-60.0	53.32_b	11.45	42.0-85.0	49.81_c	11.30	41.0-103.0
Hyperactivity	46.80_a	6.78	41.0-75.0	45.63_a	5.81	41.0-65.0	60.23_b	15.90	41.0-99.0	52.05_c	14.08	41.0-105.0
Subjective Well-Being	1.28_a	1.31	-1.3-4.4	-2.69_b	1.18	-6.3- -1.3	0.40_c	1.26	-1.3-3.3	-3.59_d	1.55	-9.1-1.3
Life Satisfaction	4.74_a	0.72	2.7-6.0	3.22_b	0.87	1.4-5.0	4.25_c	0.73	-.3-3.3	2.92_b	0.79	1.0-4.7
Positive Affect	3.90_a	0.59	2.1-5.0	2.81_b	0.81	1.1-4.9	3.88_a	0.64	3.0-5.9	2.85_b	0.71	1.4-4.7
Negative Affect	1.55_a	0.45	1.0-4.5	2.39_b	0.74	1.1-3.9	1.84_c	0.56	1.0-3.1	2.87_d	0.68	1.3-4.5

Note. Values for composites and clinical scales comprising internalizing and externalizing problems are *T*-Scores assigned according to age and gender norms. Tukey-Kramer comparisons were employed to analyze group means in cases of significant F-tests. Significant differences between group means ($p < .05$) are indicated by different letters. Means having the same subscript are not significantly different. Unadjusted means are presented in the table. The following covariates are consistently controlled for across indicators: school, parent marital status, SES, and gender.

Table 14

Proportions of Youth with T-Scores within the At-Risk to Clinically Elevated Range of Symptoms of Psychopathology by Mental Health Group

	Mental Health Group							
	Complete Mental Health (n = 311)		Vulnerable (n= 57)		Symptomatic but Content (n= 57)		Troubled (n = 75)	
	n	%	*n*	%	*n*	%	*n*	%
Internalizing	0	0%	0	0%	31	54.39%	71	94.67%
Anxiety	20	6.43%	20	35.09%	20	35.09%	45	60.00%
Depression	5	1.61%	13	22.81%	16	28.07%	57	76.00%
Somatic Complaints	26	8.36%	11	19.30%	25	43.86%	43	57.33%
Locus of Control	32	10.29%	14	24.56%	24	42.11%	47	62.67%
Atypicality	10	3.20%	4	7.02%	17	29.82%	31	41.33%
Social Stress	10	3.22%	9	15.79%	14	24.56%	44	58.67%
Sense of Inadequacy	18	5.79%	9	15.79%	23	40.35%	49	65.33%
Externalizing	0	0%	0	0%	28	49.12%	14	18.66%
Aggression	2	0.64%	1	1.75%	12	21.05%	10	13.33%
Conduct Problems	4	1.29%	2	3.51%	14	24.56%	11	14.67%
Hyperactivity	22	7.07%	3	5.26%	28	49.12%	17	22.67%

Note. Frequencies are determined by a T-score $\geq$ 60. T-Scores assigned according to age and gender norms.

For youth within the symptomatic but content mental health group, 54.39% of these students experience internalizing problems, and 49.12% experience externalizing psychopathology. Commonly elevated internalizing subscales included: somatic complaints (43.86%), locus of control (42.11%), and sense of inadequacy (40.35%). The most commonly elevated externalizing subscale reported by teachers of students in the symptomatic but content group was hyperactivity (49.12%), followed to a lesser extent by conduct problems (24.56%) and aggression (21.05%).

To determine the reliability of the aforementioned between-group differences on indicators of psychopathology, a MANCOVA utilizing the GLM Method I (Type III; adjusts for unequal sample sizes within cells) was employed. Adjustment was made for four covariates (school, SES, gender, and parent marital status) to control for their potential influences on the dependent variables. School was included as a covariate due to aforementioned differences in 14 correlation coefficients among variables endorsed by youth in the school A versus youth at school B. SES, gender, and parent marital status were included as covariates because they were disproportionately represented amongst mental health groups. Review of the Wilk's Lambda criterion suggests a significant multivariate effect for mental health group membership upon the combined dependent variables, F (7,492) = 23.84, $p < .0001$.

Follow up ANCOVAs for each indicator of psychopathology reached statistical significance ($p < .0001$), indicating that traditional indicators of mental health functioning differ among adolescents with different mental health profiles. Results of follow-up analyses with Tukey-Kramer tests are included in Table 13, and discussed next.

Although both youth with symptomatic but content and troubled are identified as having at-risk or clinically elevated symptoms of psychopathology, a comparison of average levels of symptoms across composites and clinical scales featured on the BASC-2, indicate relatively different profiles. Specifically, troubled youth reported higher symptoms of internalizing problems compared to symptomatic but content youth. Specific clinical scales troubled youth presented as significantly more elevated on average, than symptomatic but content youth include: anxiety, depression, locus of control, social stress, and sense of inadequacy. Symptomatic but content youth presented

with higher levels of each type of externalizing problem (aggression, conduct problems, and hyperactivity), compared to troubled youth

Although complete mental health and vulnerable youth were both identified as having clinically low levels of psychopathology on the internalizing or externalizing composite, there were several sub-clinical differences between mean levels of clinical scales. Specifically, in comparison to students in the complete mental health group, vulnerable youth reported significantly higher levels of internalizing problems across six out of seven clinical scales, including: anxiety, depression, somatic complaints, locus of control, social stress, and sense of inadequacy (see Table 13). Although the composite internalizing score for the vulnerable students was statistically higher than for students with complete mental health, it was significantly lower than for either of the high-psychopathology groups (i.e., symptomatic but content; troubled). Mean levels of internalizing symptoms were similar between vulnerable and symptomatic but content students on three of seven internalizing indicators, but lower for the other four forms of internalizing psychopathology. Also notable, students in the vulnerable and complete mental health groups had similar levels of externalizing symptoms for each type.

Mental Health Group Membership and Indicators of SWB

When determining which variables of SWB differentiate youth mental health groups, descriptive analyses (means, standard deviations) for the SWB composite and its components were first examined (see Table 13). Next, a between-groups MANCOVA using the GLM Method I (Type III) was conducted to determine if youth in mental health groups differed in regards to overall level of SWB, and the components comprising this indicator. As with the previous analysis, adjustment was made for four covariates (i.e.,

school, SES, gender, and parental marital status) to control for their potential influence on the dependent variables.

Review of the Wilk's Lambda criterion suggests a significant multivariate effect for mental health group membership upon the combined dependent variables (SWB, life satisfaction, positive affect, and negative affect), F (7,492) = 81.04 , $p < .0001$. Follow up ANCOVAs for each positive mental health indicator reached statistical significance ($p < .0001$), indicating that positive indicators of mental health functioning differ among adolescents with different mental health profiles. Results of follow-up analyses with Tukey-Kramer tests are shown in Table 13.

Although both complete mental health youth and symptomatic but content youth are identified as having high SWB, youth with complete mental health have substantially higher levels of SWB compared symptomatic but content peers. Specifically, youth in the complete mental health group report higher life satisfaction and less negative affect. Youth in the complete mental health group and symptomatic but content group reported similar levels of positive affect.

Additionally, the mean composite SWB of the youth in the troubled group is substantially lower than their peers in the vulnerable group despite their same categorization of "low SWB." Troubled youth have more frequent experiences of negative affect compared to vulnerable peers. Troubled youth and vulnerable youth report similar mean levels of life satisfaction and positive affect. Further, troubled youth have the lowest levels of SWB and its components, compared to youth identified as high SWB (see Table 13).

Mental Health Group Membership and Social Functioning

In order to address the final research question, a between-subjects MANCOVA GLM method tested the main effect of mental health group on social functioning. Adjustment was made for four covariates (school, SES, gender, and parental marital status) to control for their potential influences on the dependent variables. School was included as a covariate due to aforementioned differences in 14 correlation coefficients among variables endorsed by youth in the school A versus youth at school B. SES, gender, and parent marital status were included as covariates because they were disproportionately represented amongst mental health groups. Wilk's Lambda criterion, indicated that the combined dependent variables used to conceptualize social functioning (refer to Table 2) were influenced by group membership $F(7, 485) = 9.42$, $p < .0001$.

To determine which variables to include as covariates in follow-up ANCOVAs due to significant relationships with the given outcome, statistical analyses were employed to determine which demographic variables were significantly related to each specific measure of social functioning. The demographic variables examined included those that were significantly related to mental health groups as determined in prior chi-square and ANCOVA analyses (i.e., SES, gender, parent marital status). Specifically, *t*-tests were utilized to test for effects of gender and parent marital status (intact vs. non-intact) on students' social functioning. Given the continuous nature of the composite SES variable, Pearson product-moment correlation coefficients were calculated between all social functioning variables and the SES composite variable in order to determine if a statically significant relation exists between a social functioning variable and youth SES. In the case that a demographic variable was found to relate to a social functioning

variable, that variable was controlled for in the subsequent ANCOVA. As with the MANCOVA, school was employed as a covariate in each of the 13 separate one-way ANCOVAs due to differences in significance of coefficients among some variables endorsed by youth in the School A versus youth at School B. A summary of covariates included per indicator is featured in Table 15 below.

Table 15

Measures of Social Functioning and Covariates Analyzed in Follow-Up ANCOVAs

Domain	Measure	Covariates (Associations between Demographic Variable and Outcome)
Social Skills	1. Social Skills Scale (BASC-2 TRS-A)	SES, gender , school
Relations with Teachers	1. Social Support from Teachers Scale (CASSS)	school
	2. Negative Attitude to Teachers Scale (BASC-2 SRP-A)	school
Feeling Liked by Others	1. Interpersonal Relations Scale (BASC-2 SRP-A)	SES, school
Relations with Parents	1. Relations with Parents Scale (BASC-2 SRP-A)	SES, parent marital status, school
	2. Social Support from Parents Scale (CASSS)	SES, parent marital status, school
Relations with Peers	1. Social Support from Classmates Scale (CASSS)	gender, school
	2. Experiences of Overt Victimization (SEQ-S: Overt Victimization Scale)	gender, school
	3. Experiences of Relational Victimization (SEQ-S: Relational Victimization Scale)	parent marital status, school
Romantic Relationships	1. Total Dating Experiences (DHQ-SF)	SES, school
	2. Satisfaction with Romantic Experiences (DHQ-SF)	school
	3. Romantic Relationship Quality (NRI-SF)- Supportive Factor	school
	4. Romantic Relationship Quality (NRI-SF)- Negative Interaction Factor	parent marital status, school

After adjustment for respective covariates, univariate ANCOVA tests for all but one social functioning indicator, cumulative frequency of romantic experiences, reached statistical significance. This suggests that many facets of social functioning differ among adolescents with different mental health profiles. Results pertaining to each specific indicator are elaborated upon in the next section. Comparisons between two sets of groups were of particular interest. First, differences between youth with complete mental health and their vulnerable peers may support the notion that an absence of psychopathology is insufficient to ensure wellness. Second, differences between troubled and symptomatic but content youth may support the notion that intact SWB protects children with mental illness from experiencing the most deleterious outcomes.

Mental Health Group Differences in Social Skills

Results from a one-way ANCOVA indicated a significant effect for mental health group membership, $F(6, 493) = 12.85$, $p < .0001$ (see Table 16). As depicted in Table 29, follow up Tukey-Kramer tests indicate that teachers rated youth identified as symptomatic but content as just as able to navigate social situations (i.e., have high social skills) as youth without psychopathology. In contrast, troubled youth were rated as having significantly worse social skills compared to youth with complete mental health. There were not significant differences in social skills between students with complete mental health and vulnerable students, nor between symptomatic but content and troubled students.

Table 16

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Social Skills

Source	*df*	*SS*	*MS*	*F*
Between Subjects	6	2904.22	484.04	12.85*
Mental Health Group	3	498.58	166.19	4.41*
SES	1	515.77	515.77	13.69*
Gender	1	669.09	669.09	17.76*
School	1	772.89	772.89	20.51*
Within Subjects	493	18574.20	37.68	
Total	499	21478.42		

Note. $N = 500$
*$p < .05$

Mental Health Group Differences in General Interpersonal Relationships

A one-way ANCOVA, revealed a significant effect for mental health group membership, $F(5, 493) = 26.27$, $p<.0001$, on students' perceptions of feeling liked by peers and adults (see Table 17). As displayed in Table 29, follow up Tukey-Kramer tests indicate that participants in the complete mental health group reported having the best perceptions of their interpersonal skills, even compared to vulnerable students (i.e., also no psychopathology). Troubled youth had significantly worse perceptions of their interpersonal relations compared to adolescents in the three other mental health groups, including students who also had high psychopathology but reported high SWB (i.e., symptomatic but content group).

Table 17

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Interpersonal Relations

Source	*df*	*SS*	*MS*	*F*
Between Subjects	5	910.60	182.12	26.27*
Mental Health Group	3	856.42	285.47	41.18*
SES	1	3.81	3.81	0.55
School	1	0.00	0.00	0.00
Within Subjects	493	3417.52	6.93	
Total	498	4328.12		

Note. $N = 500$
*$p < .05$

Mental Health Group Differences in Teacher-Student Relationships

Examining student reported perceptions of social support from teachers, a one-way ANCOVA revealed a significant effect for mental health group membership, $F(4, 495) = 12.46$, $p<.0001$ (see Table 18). Follow up Tukey-Kramer tests indicated that participants in the complete mental health group report feeling more supported by their teachers than troubled or vulnerable youth (see Table 29), thus teacher support differentiated students with similar levels of psychopathology but differences in SWB. Also of particular interest, youth identified as symptomatic but content reported feeling more support from teachers than troubled youth. Their reports were similar to that of vulnerable students. Mean levels of teacher support for students in the complete mental health and symptomatic but content groups were statistically similar.

Table 18

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Experiences of Social Support from Teachers

Source	*df*	*SS*	*MS*	*F*
Between Subjects	4	49.44	12.36	12.46*
Mental Health Group	3	46.87	15.62	15.76*
School	1	4.33	4.33	4.37*
Within Subjects	495	490.86	0.99	
Total	499	540.30		

Note. $N = 500$
*$p < .05$

Examining students' negative attitudes to teachers, a one-way ANCOVA revealed a significant effect for mental health group membership, $F(4, 495) = 24.61$, $p<.0001$ (see Table 19). Follow up Tukey-Kramer tests indicate that participants in the complete

Table 19

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Attitudes to Teachers

Source	*df*	*SS*	*MS*	*F*
Between Subjects	4	1853.83	463.46	24.61*
Mental Health Group	3	17585.74	595.25	31.61*
School	1	118.63	118.63	6.30*
Within Subjects	495	9321.73	18.83	
Total	499	11175.56		

Note. $N = 500$
*$p < .05$

mental health group had the most positive attitudes towards teachers, even among other students with low psychopathology (vulnerable group; see Table 29). Vulnerable youth reported more positive attitudes than troubled youth and were similar to symptomatic but content youth. Symptomatic but content and troubled students reported statistically similar levels of negative attitudes towards teachers.

Mental Health Group Differences in Parent-Child Relationships

The results from a one-way ANVOCA pertaining to participants' perceptions of the quality of their relationship with their parent(s) indicate a significant effect for mental health group membership, $F(6, 492) = 23.70$, $p<.0001$ (see Table 20). Next, follow up

Table 20

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Relations with Parents

Source	*df*	*SS*	*MS*	*F*
Between Subjects	5	5459.12	909.85	23.70*
Mental Health Group	3	4354.78	1451.59	37.82*
SES	1	121.62	121.62	3.17
Parental Marital Status	1	161.99	161.99	4.22*
School	1	11.75	11.75	0.31
Within Subjects	492	18884.53	38.38	
Total	498	24343.65		

Note. $N = 500$
*$p < .05$

Tukey-Kramer tests demonstrate that participants in the complete mental health group reported having more positive relations with their parents in comparison to youth in the remaining mental health groups, including vulnerable students (Table 29). Symptomatic but content youth reported a higher quality of parent relations than troubled students, who reported having the poorest quality relationships.

Regarding perceptions of social support from parents, a one-way ANCOVA revealed a significant effect for mental health group membership, $F(6, 493) = 25.37$, $p<.0001$ (see Table 21). Follow up Tukey-Kramer tests demonstrate that youth in the

Table 21

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Experiences of Social Support from Parents

Source	*df*	*SS*	*MS*	*F*
Between Subjects	6	170.43	28.41	25.37*
Mental Health Group	3	123.38	41.13	36.73*
Parental Marital Status	1	3.42	3.42	3.06
SES	1	14.02	14.02	12.52*
School	1	0.11	0.11	0.10
Within Subjects	493	551.98	1.12	
Total	499	722.42		

Note. $N = 500$
*$p < .05$

complete mental health group reported feeling more supported by their parents than adolescents categorized in the other three mental health groups, including vulnerable students (refer to Table 29). Youth identified as symptomatic but content reported the next greatest level of support by their parents (significantly higher than troubled youth).

Mental Health Group Differences in Peer Relationships

A one-way ANCOVA revealed a significant effect for mental health group membership, $F(5, 494) = 13.10$, $p<.0001$ on students' perceptions of social support from classmates (see Table 22). Follow up Tukey-Kramer tests demonstrate that participants in the complete mental health group report feeling more supported by their classmates than troubled and vulnerable youth (see Table 29). Youth with low levels of SWB (i.e., vulnerable and troubled youth) reported the lowest levels of social support from peers. Furthermore, youth identified as symptomatic but content reported similar levels of social support from peers compared to complete mental health and vulnerable youth. Compared to troubled students, the classmate support levels of symptomatic but content students were significantly higher.

Table 22

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Experiences of Social Support from Classmates

Source	*Df*	*SS*	*MS*	*F*
Between Subjects	5	62.67	12.53	13.10*
Mental Health Group	3	54.45	18.15	18.97*
Gender	1	17.24	17.24	18.02
School	1	0.25	0.25	0.26
Within Subjects	494	472.77	0.96	
Total	499	535.44		

Note. $N = 500$
*$p < .05$

Examining student experiences of overt victimization, a one-way ANCOVA, reveals a significant effect for mental health group membership, $F(5, 494) = 8.17$, $p<.0001$. The sample means are displayed in Table 23. Follow up Tukey-Kramer tests demonstrate that participants in the complete mental health group and the vulnerable mental health group reported significantly fewer experiences of overt victimization than did youth in the troubled mental health group (see Table 29). Although youth in the symptomatic but content mental health group reported similar experiences of overt victimization as youth in the troubled group, their experiences of overt victimization were no different than groups of youth with low levels of psychopathology. In sum, mean levels of overt victimization did not different between groups with similar levels of psychopathology.

Table 23

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Experiences of Overt Victimization

Source	*df*	*SS*	*MS*	*F*
Between Subjects	5	11.72	2.34	8.17*
Mental Health Group	3	7.31	2.44	8.50*
Gender	1	5.43	5.43	18.94*
School	1	0.77	0.77	2.67
Within Subjects	494	141.71	0.29	
Total	499	153.43		

Note. $N = 500$
*$p < .05$

A one-way ANCOVA conducted to determine the effect of mental health group membership on student experiences of relational victimization revealed a significant effect for mental health group membership, $F(5, 494) = 11.04$, $p<.0001$ (see Table 24). Follow up Tukey-Kramer tests demonstrate that participants in the complete mental health group, vulnerable mental health group, and symptomatic but content mental health group reported significantly fewer experiences of relational victimization than youth in the troubled mental health group (refer to Table 29). This indicates that high SWB may protect students with psychopathology from the worst peer social experiences, with regard to relational aggression.

Table 24

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Experiences of Relational Victimization

Source	*df*	*SS*	*MS*	*F*
Between Subjects	5	21.06	4.21	11.04*
Mental Health Group	3	17.47	5.82	15.26*
Parental Marital Status	1	1.47	1.47	3.85
School	1	0.67	0.67	1.77
Within Subjects	494	188.56	0.38	
Total	499	209.62		

Note. $N = 500$
*$p < .05$

Mental Health Group Differences in Romantic Relationships

To determine the effect of mental health group membership on the extent of students' dating experiences, a one-way ANCOVA was utilized (see Table 25). Results

suggests that group membership did not have a significant effect on the cumulative frequency of youth dating experiences, $F(5, 493) = 1.00$, $p = 0.42$.

Table 25

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Total Dating Experiences

Source	*df*	*SS*	*MS*	*F*
Between Subjects	5	8.49	1.70	1.00
Mental Health Group	3	0.61	0.21	0.12
SES	1	7.19	7.19	4.24*
School	1	0.96	0.96	0.57
Within Subjects	493	836.16	1.70	
Total	498	844.65		

Note. $N = 500$
*$p < .05$

In order to determine the effect of mental health group membership on the extent of students' satisfaction with their dating experiences, a one-way ANCOVA was utilized (see Table 26). Results suggests that group membership had a significant effect on the satisfaction of dating experiences, $F(4, 491) = 21.43$, $p < .0001$. As shown in Table 29, follow up Tukey-Kramer tests indicated that complete mental health youth and symptomatic but content youth reported the highest levels of satisfaction with their romantic relationships, and their levels of dating satisfaction were similar to one another. Troubled youth reported the lowest levels of satisfaction among the groups. In both

comparisons of interest, high SWB was associated with superior dating satisfaction among students with similar levels of psychopathology.

Table 26

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Satisfaction with Dating Experiences

Source	*df*	*SS*	*MS*	*F*
Between Subjects	4	77.85	19.46	21.43*
Mental Health Group	3	77.42	25.81	28.41*
School	1	1.70	1.70	1.87
Within Subjects	491	445.90	0.91	
Total	495	523.76		

Note. $N = 500$
*$p < .05$

Two indicators of social functioning, supportive and negative romantic relationship quality, were not included in the aforementioned MANCOVA due to the fact that only 323 students out of the sample ($N = 500$) were able to complete the NRI-SF. The distribution of these students across the mental health groups is as follows: $n = 200$ complete mental health (64.31% of entire subgroup), $n = 31$ vulnerable (54.39% of entire subgroup), $n = 40$ symptomatic but content (70.18% of entire subgroup), $n = 52$ troubled (69.33% of entire subgroup). A one-way ANCOVA indicated that mental health group membership had a significant effect on participants' perceptions of support in their romantic relationships, $F(4,318) = 2.55$, $p = 0.04$ (see Table 27). Follow-up Tukey-Kramer tests indicate that youth with complete mental health reported more positive interactions with their romantic partner than troubled youth (see Table 29). Complete

mental health youth and vulnerable youth reported similar positive levels of supportive interactions with a romantic partner; differences were also not observed between symptomatic but content and trouble students.

Table 27

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Supportive Interactions in Romantic Relationships

Source	*df*	*SS*	*MS*	*F*
Between Subjects	4	8.78	2.20	2.55*
Mental Health Group	3	8.43	2.81	3.26*
School	1	0.18	0.18	0.21
Within Subjects	318	274.05	0.86	
Total	322	282.83		

Note. $N = 323$
*$p < .05$

A one-way ANCOVA indicated that mental health group membership had a significant effect on participants' experiences of negative interactions with a romantic partner, $F(5, 317) = 6.35$, $p<.0001$ (see Table 28). Similar to the pattern of findings for supportive romantic interactions, follow-up Tukey-Kramer tests indicate that youth with complete mental health reported fewer negative interactions in a romantic relationship than troubled youth (see Table 29). Reports of negative interactions with a romantic partner were similar for youth with complete mental health youth and vulnerable youth, as well as between symptomatic but content and troubled students.

Table 28

ANCOVA Summary Table for Investigating the Relationship of Student Mental Health Group Membership and Negative Romantic Interactions

Source	*df*	*SS*	*MS*	*F*
Between Subjects	5	14.01	2.80	6.35*
Mental Health Group	3	8.41	2.80	6.36*
Parental Marital Status	1	0.87	0.87	1.98
School	1	4.46	4.46	10.11*
Within Subjects	317	139.82	0.44	
Total	322	153.83		

Note. $N = 323$
*$p < .05$

Table 29

Mean Levels of Social Functioning by Mental Health Group and Results from Follow Up Tukey-Kramer Tests (N = 500)

	Mental Health Group							
	Complete Mental Health (n = 311)		Vulnerable (n = 57)		Symptomatic But Content (n = 57)		Troubled (n = 75)	
Dependent variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Social Skills[2,3]	12.87_a (12.75)	6.57	$10.37_{a,b}$ (10.82)	6.50	$10.60_{a,b}$ (10.88)	6.78	10.45_b (10.39)	5.80
Social Support from Teachers	4.44_a (4.45)	0.98	4.06_b (4.05)	1.09	$4.18_{a,b}$ (4.18)	0.93	3.60_c (3.59)	1.06
Attitude to Teachers Scale	6.27_a (6.24)	4.27	8.37_b (8.43)	4.79	$9.82_{b,c}$ (9.82)	4.36	11.00_c (11.06)	4.40
Interpersonal Relations [2,3]	17.03_a (17.02)	2.10	15.16_b (15.18)	3.02	15.51_b (15.51)	2.70	13.35_c (13.38)	3.93
Relations with Parents[1,2]	20.58_a (20.44)	6.03	$14.39_{b,c}$ (14.60)	6.98	17.16_b (17.31)	6.54	12.45_c (12.75)	6.22
Social Support from Parents[1,2]	4.48_a (4.45)	1.07	$3.44_{b,c}$ (3.49)	1.15	3.91_b (3.93)	1.12	3.07_c (3.14)	1.00
Social Support from Classmates[3]	4.33_a (4.34)	0.98	$3.85_{b,c}$ (3.85)	1.09	$4.20_{a,b}$ (4.25)	0.97	3.52_c (3.43)	1.01
Experiences of Overt Victimization[3]	1.31_a (1.30)	0.50	$1.32_{a,b}$ (1.31)	0.53	$1.45_{a,b,c}$ (1.43)	0.58	1.60_c (1.65)	0.69
Experiences of Relational Victimization [1]	1.47_a (1.48)	0.57	1.49_a (1.49)	0.58	1.55_a (1.54)	0.65	2.03_b (2.01)	0.79
Total Dating Experiences[2]	7.49 (7.50)	1.35	7.61 (7.58)	1.31	7.43 (7.43)	1.19	7.55 (7.52)	1.17
Satisfaction with Romantic Experiences	3.76_a (3.76)	0.87	3.16_b (3.15)	1.01	3.68_a (3.68)	1.04	2.71_c (2.70)	1.15
Romantic Relationship Quality - Supportive *	3.65_a (3.65)	0.90	$3.47_{a,b}$ (3.47)	1.02	$3.61_{a,b}$ (3.61)	1.00	3.21_b (3.21)	0.92
Romantic Relationship Quality- Negative *[1]	1.61_a (1.61)	0.59	$1.75_{a,b}$ (1.74)	0.68	$1.85_{a,b}$ (1.84)	0.82	2.05_b (2.05)	0.83

* *Note.* Only participants who endorsed having had a boyfriend and/or girlfriend during high school completed these scales, therefore the sample size for these indicators is n = 323. Twelve out of 13 ANCOVAS reached statistical significance ($p < .05$). Tukey-Kramer comparisons were employed to analyze group means in cases of significant F-tests. Significant differences between group means are indicated by different letters. Means having the same subscript are not significantly different. Adjusted means are presented in parentheses. The covariate school is controlled for across all indicators.

[1]Dependent variables significantly related to the covariate parent marital status

[2]Dependent variables significantly related to the covariate SES

[3]Dependent variables significantly related to the covariate gender

Chapter 5

Discussion

The current study examined the presence of a dual-factor model of mental health in high school students, with a focus on the unique mental health characteristics amongst students in the four mental health groups yielded in the dual factor model. The utility of a dual-factor model of mental health was also determined by examining between-group differences in students' social functioning. Specifically, research questions evaluated: (1) the proportion of high school youth within each mental health group yielded from the dual-factor classification, (2) common symptoms of psychopathology experienced by youth within each group, (3) which variables of SWB differentiate categories of youth, and (4) which indicators of adolescent social functioning are associated with group membership. The following discussion elaborates on the findings of this study, and integrates these findings with the relevant literature. Additionally, contributions to the literature and implications of the findings for practice are provided. Finally, limitations of the study and recommendations for future research are expressed.

Assessment of Mental Health with a Dual-Factor Model

Historically, mental health has been assessed by the presence or absence of psychopathology. In recent years, research with children, adolescents, and young adults has indicated that the assessment of psychopathology alone limits the understanding of

mental health functioning (Antaramian, Huebner, Hills & Valois, 2010; Eklund, Dowdy, Jones, & Furlong, 2011; Greenspoon & Saklofske, 2001; Keyes, 2006; Suldo & Shaffer, 2008). Specifically, this research advocates for a comprehensive assessment of youth psychological functioning, by examining modern indicators of wellness in tandem with traditional indicators of psychopathology. A dual-factor model of mental health assesses youth happiness (i.e., subjective well-being) as well as the presence of symptoms of psychopathology.

In the current study, satisfactory youth SWB was conceptualized as average to high levels of life satisfaction, frequent experiences of positive emotions, and infrequent experiences of negative emotions. Psychopathology was operationalized as clinically significant levels of internalizing problems and/or externalizing problems as measured by a standardized rating scale (i.e., BASC-2). At this time, studies have supported the presence of a dual-factor model in children, early adolescents, and young adults, but none have examined proportions of youth yielded by a dual-factor model in high school-age youth. A dual-factor model identifies two categories of individuals that are commonly classified with traditional or psychopathology-based measures of mental health functioning (i.e., complete mental health and troubled youth). However, the dual-factor model surpasses this traditional approach by also distinguishing two additional groups of youth (i.e., vulnerable and symptomatic but content youth), by attending to students' SWB.

Findings from the current study support the existence of the four mental health groups that emerged from a dual-factor model in high school age adolescents, as a sizeable number of youth were in each hypothesized cell. In the current study, 62% of

students were identified as having "complete mental health" (i.e., average to high levels of SWB and low levels of psychopathology). Contrast to this, 15% of youth were identified as "troubled" (i.e., low levels of SWB along with at-risk or clinical levels of symptoms of self-reported and teacher-reported psychopathology). Youth that do not experience elevated symptoms of internalizing or externalizing psychopathology, but nevertheless experience relatively low levels of SWB (referred to as "vulnerable") were found to account for 11.4% of the current sample. Finally, youth who report average to high levels of SWB in tandem with at-risk to clinically significant levels of psychopathology (deemed "symptomatic but content") also accounted for 11.4% of the current sample.

A summary of proportions of youth identified per group in relation to previous studies is presented below in Table 30. As shown below, across studies the largest proportion (57%-78%) of youth are consistently identified as having high SWB in conjunction with low psychopathology (i.e., complete mental health). Similar to findings from an analogous study of middle school students (Suldo & Shaffer, 2008), the second largest group in the current study entailed troubled students, deemed so due to their low SWB and high levels of mental health problems. Across studies proportions of this group of students range from approximately 8% to 15%. The two studies with fewer troubled students were unique in the approach to conceptualizing psychopathology and wellness in participants. Specifically, Eklund et al. (2011) only assessed life satisfaction, rather than also including an assessment of participants' experiences of positive and negative affect to produce a measurement of SWB. Additionally, they utilized a cut-score of higher than 4 out of 7 possible points of life satisfaction, rather than developing a cut-score based on

the proportion of youth who present with psychopathology to indicate (relatively) average to high levels of life satisfaction. Furthermore high psychopathology was conceptualized as including elevated symptoms of emotional difficulties as well as low levels of positive personal adjustment behaviors that correspond to set *T*-scores. The fact that only college age individuals participated may suggest that in general this sample may have higher functioning as they were able to successfully complete required schooling and enroll in college. Additionally, since Eklund et al. only utilized self-report data to assess psychopathology, participants may have underreported symptoms. Antaramian and colleagues (2010) also utilized only a self-report measure to assess psychopathology, which may have under-identified students with externalizing concerns who may not be cognizant of the disruptiveness of their acting out behaviors. Across studies, the vulnerable group includes 8% to 13% of samples, illustrating that a small but reliable subgroup of youth is relatively unhappy in spite of a lack of mental health problems. In contrast, symptomatic but content comprised the second largest group in the study by Antaramian and colleagues. This pattern may be due to the fact that these researchers utilized a sample-specific *T*-score approach, rather than basing their cut-scores from national norm samples. In the current study, the proportion of youth presenting as symptomatic but content was similar to that obtained by Suldo and Shaffer (2008), who employed the same strategy for creating cut-points for high vs. low SWB, used identical measures of SWB, and similar measures of psychopathology (i.e., teacher-rated externalizing and youth-reported internalizing symptoms on nationally-normed measures). These findings are aligned with the proposed hypothesis that approximately one-quarter of the sample would meet the classification requirements to be categorized

within the symptomatic but content or vulnerable mental health groups. A review of previous studies suggests that across these four empirical investigations symptomatic but content students have comprised approximately 4% to 17% of the samples. Overall, although there may be slight patterns of differences between the proportions of youth presented across these studies, it should be acknowledged that these studies feature youth who are different in regards to age, geographic location, and other relevant demographic variables. Furthermore, assessment measures varied across studies and may therefore have impacted how psychopathology or SWB were operationalized.

Table 30

Proportions of Participants Yielded via a Dual-Factor Model by the Current Study Compared to Previous Research

	Research Study			
	Current Study (*N*= 500)	Suldo & Shaffer (2008) (*N*= 350)	Antaramian et al. (2010) (*N*=765)	Eklund et al.* (2011) (*N*=246)
Profile	Grades 9-11	Grades 6-8	Grades 7-8	College Students
High SWB/LS* Low PTH	62%	57%	66.9%	78%
Low SWB/LS* High PTH	15.0%	17%	7.7%	9%
High SWB/LS* High PTH	11.4%	13%	17.3%	4%
Low SWB/LS* Low PTH	11.4%	13%	8.1%	9%

Note. SWB = Subjective well-being; LS = Life Satisfaction; PTH = psychopathology
* Only life satisfaction, rather than a SWB composite, was assessed in the study by Eklund et al.

Mental Health Group Membership: Further Evaluation of Mental Health Profiles

Psychopathology in youth is typically defined using the behavioral dimensions approach, which employs statistical analysis of symptoms to yield two broad-band syndrome clusters, specifically internalizing disorders (e.g., anxiety, depression) and externalizing disorders (e.g., anger/aggression, rule-breaking behavior, hyperactivity;

American Psychiatric Association, 2000). Psychopathology is a critical area of mental health assessment in adolescence as previous research has found that the presence of mental illness during youth is associated with concurrent poor academic outcomes as well as negative outcomes during adulthood (Kessler, Foster, Saunders, & Stang, 1995; Mash & Dozois, 2003; Maughan & Rutter, 1998; Woodward & Fergusson, 2001).

This study aimed to provide the first evaluation of types of mental health problems associated with membership in the mental health groups yielded from a dual-factor model. Mental health problems were operationalized as elevated or at-risk symptoms of psychopathology (i.e., *T*-scores above 60 by types of mental health problems) across all four groups. In the current study it was hypothesized that approximately 21% of participants would meet criteria for "at-risk" or "clinically significant" on internalizing and/or externalizing symptoms of psychopathology, based upon previous research (cf. U.S. Department of Health and Human Services, 1999). Rates obtained in the current study were slightly higher (26.4% of participants), although in the expected range since the threshold set in the current study was rather low (*T*-score of 60) and the 21% in previous literature refers to a diagnosable disorder. The current study's inclusion of youth with at-risk and clinical levels of symptoms in the "high" psychopathology group is aligned with ethical guidelines for evaluating youth mental health in the schools (cf. Merrell, 2008).

In terms of group characteristics, results suggest that youth categorized as troubled experienced significantly greater symptoms of internalizing problems (*T*-score $M = 66.45$) than symptomatic but content youth (*T*-score $M = 57.40$). Conversely, teachers reported that symptomatic but content youth exhibited significantly more

symptoms of externalizing problems (*T*-score *M* = 55.54) than troubled youth (*T*-score *M* = 50.32). These findings confirm the proposed hypotheses and are also aligned with assumptions communicated by Greenspoon and Saklofske (2001). Specifically, symptomatic but content youth appear able to maintain average to high levels of SWB, despite high levels of psychopathology, because their rated symptoms of psychopathology are primarily evaluated by another observer (i.e., teacher). In other words, although the observer perceives that a student presents with externalizing symptoms of psychopathology (e.g., aggression, conduct problems, attention problems), the student still perceives that their life is going well. As highlighted in previous literature, the phenomenon of illusory bias (i.e., inflated perceptions of competencies; Evangelista, Owens, Golden, & Pelham, 2008) occurs frequently with youth who are identified as having ADHD. In the current student, nearly half (49%) of symptomatic but content youth presented with clinically elevated levels of hyperactivity, a key symptom of ADHD. Also of note, with regard to the 21% of youth in the symptomatic but content mental health group who were rated as aggressive by teachers, these youth may experience their aggressive behavior to be adaptive as relational aggression is associated with increased popularity (Cillessen & Mayeux, 2004).

In reference to troubled youth, aligned with hypotheses, the vast majority of this subgroup (roughly 95% of the adolescents) was characterized by clinically elevated levels of internalizing problems. Specifically, 76% presented with elevated symptoms of depression and 60% presented with elevated symptoms of anxiety. The low subjective well-being evidenced by these youth may reflect their awareness of their distress (i.e., youth with anxiety and depression are typically much more aware of the negative impact

of their emotional problems). Conversely, the finding may be an artifact of the overlap in shared symptoms between components of SWB and the specific forms of psychopathology that afflict troubled youth. Specifically, emotions such as sadness and worry are hallmarks of internalizing disorders (namely depression and anxiety), as well as reflected in the emotions assessed to measure two components of low SWB—frequent negative affect (i.e., gloomy, scared, nervous) and infrequent positive affect (i.e., joyful, energetic, calm).

Interestingly, although vulnerable youth are under the threshold set for clinically elevated *overall* or *total* psychopathology, they presented with statistically similar mean levels of anxiety, depression, and social stress as compared to symptomatic but content youth (a high psychopathology subgroup). However, symptomatic but content youth presented with elevated symptoms across all other scales as well as on the broadband composites of internalizing and externalizing forms of psychopathology. Taken together, these findings suggest that it may be erroneous to describe vulnerable youth as completely "symptom-free." Instead, vulnerable youth tend to have more internalizing problems than their peers with complete mental health, but a similar virtual absence of externalizing problems.

In addition to identifying mental health problems experienced by groups of adolescents yielded by the dual-factor model, the current study provided the first investigation of the extent to which components of SWB differentiated youth in the different mental health groups. In line with the composite and cut scores that dictated how groups were formed, complete mental health and symptomatic but content youth had higher scores on each component of SWB (affect and life satisfaction), compared to the

vulnerable and troubled groups of students. The finding that vulnerable youth had lower levels of SWB and its components, compared to youth identified as having high SWB (including symptomatic but content youth) further supports the notion that the absence of clinical levels of psychopathology composites does not presume that an adolescent is mentally well.

Further investigation of SWB components (i.e., life satisfaction, positive affect, and negative affect) provides insightful information into group characteristics. Within pairs of groups identified as having high or low SWB, mean levels of life satisfaction and affect differed significantly between groups. Specifically, youth in the complete mental health group had higher mean levels of SWB than students classified as symptomatic but content, suggesting that only the former group may have optimal functioning. The pair of groups deemed high SWB did not differ in their mean levels of positive affect. This suggests that symptomatic but content youth experience similar levels of positive emotions as complete mental health youth despite their elevated symptoms of psychopathology. Most between-group differences were due to disparities in life satisfaction and negative affect, with the complete mental health group having superior mean scores on each. These may be the indicators of SWB most sensitive to the presence of psychopathology symptoms, or most impacted by the same circumstances that cause elevated internalizing or externalizing distress.

Whereas the vulnerable youth appeared somewhat similar to the symptomatic but content students on several indicators of psychopathology, they were definitely lower in terms of positive indicators of mental health. Vulnerable youth reported significantly lower levels of life satisfaction and positive affect, and significantly more frequent

experiences of negative affect, compared to all students with high overall SWB levels (including those with high psychopathology—symptomatic but content youth). Further, the vulnerable students were comparable to troubled youth with respect to similarly low levels of positive affect and life satisfaction. Troubled students were distinguished by particularly high levels of negative affect, which may be an artifact of the shared symptoms of the PANAS-C negative affect scale and BASC-SRP-A internalizing composite (e.g., common items such as guilty, nervous, sad). In sum, comparisons within pairs of subgroups (e.g., those with high SWB) indicate that positive affect levels appear unaffected by the presence of high psychopathology, negative affect levels correspond to high/low psychopathology levels, and the highest life satisfaction levels are evidenced by youth without psychopathology.

Youth Social Functioning

Successful social functioning is a critical task of adolescence. In the current study, social functioning refers to the attainment and maintenance of social relationships with peers and adults. The current study explored students' mental health in relation to the following five domains of social functioning: social skills and perceptions of interpersonal relationships, relations with teachers, relations with parents, and relations with peers. Mental health indicators were analyzed in their continuous forms (in correlations with social outcomes) as well as dichotomized in accordance with the dual-factor model, which afforded between-group differences in social functioning.

Social Skills and Self-Perceptions of Interpersonal Relationships

The two general indicators of social functioning (i.e., not specific to person/source such as relations with teachers or parents) analyzed in the current study involve teacher-

rated social skills as displayed at school, and students' perceptions of the quality of their interpersonal relations across different youth and adults. Bivariate correlations obtained in the current study suggest that better social skills are associated with high levels of life satisfaction and positive affect, as well as inversely related to externalizing problems. Unlike a previous study by Smokowski, Mann, Reynolds, and Fraser (2004) that found social skills were inversely related to depression, an internalizing disorder, the current study did not yield a significant correlation between internalizing problems and teacher-rated social skills. Students' perceptions of interpersonal relations were associated with frequent experiences of life satisfaction and positive affect.

With regard to between-group differences in social skills, youth with complete mental health were rated as having the best social skills (albeit not significantly different from their vulnerable peers) and reported the greatest perceptions of interpersonal skills, which underscores the benefits of high levels of SWB in tandem with low levels of psychopathology. As illustrated by the significant differences in interpersonal relations between youth identified as complete mental health versus vulnerable, the simple absence of psychopathology does not appear sufficient to ensure optimal social functioning. Also notably, symptomatic but content youth (high psychopathology and high levels of SWB) were rated as presenting with similarly high levels of social skills as complete mental health and vulnerable youth, and were rated as far superior at navigating interpersonal relationships compared to their troubled counterparts. The latter finding in particular (differences in social outcomes between group groups of students with clinically elevated levels of psychopathology, which typically indicates impaired functioning) illustrates the

protective nature of SWB, as symptomatic but content students reported better perceptions of interpersonal relations than troubled students.

Relations with Educators

In the current study, students who reported poor attitudes towards teachers and perceived less teacher support were rated as having more externalizing problems by teachers, and self-reported more symptoms of internalizing psychopathology and negative affect. In contrast, high life satisfaction and positive affect co-occurred with better perceptions of student-teacher relations.

Youth with complete mental health reported well-adjusted perceptions of teachers, even compared to vulnerable youth, indicating that they are the most likely students to feel that teachers are fair and understanding, and perceive the highest levels of teacher support. Additionally, for youth with elevated symptoms of psychopathology, those who also reported average to high levels of SWB indicated more positive perceptions of teacher support.

Students' positive relationships with their teachers (in terms of perceived social support) appeared more closely tied to SWB, rather than psychopathology, as complete mental health and symptomatic but content youth reported similar levels of teacher support, whereas students with complete mental health perceived higher mean levels of teacher support than their vulnerable peers. These findings are consistent with previous research evaluating adolescent relationships with teachers, suggesting that perceived support from educators is associated with increased life satisfaction and positive affect, as well as inversely related with negative affect and psychopathology (Benhorin & McMachon, 2008; Ronen & Seeman, 2007; Hamre & Pianta, 2006; Natvig, Albreksten,

& Qvarnstrom, 2003; Suldo & Huebner, 2006; & Van Petegem, Aelterman, Van Keer & Rosseel, 2008). These findings mirror those in the current study, as students with complete mental health reported superior teacher support compared to vulnerable peers, just as symptomatic but content students reported being the recipient of more support than their troubled counterparts.

Relations with Parents

In the current study, positive relationships with parents co-occurred with greater life satisfaction and fewer internalizing symptoms; correlations were strong in magnitude regardless of the indicator of parent-child relationships examined (i.e., CASSS Parent Support or BASC-SPR-A Relations with Parents). Correlations with the affective components of SWB were moderate and in the expected directions. Interestingly, positive parent-child relations were not associated with students' levels of externalizing behaviors, as rated by teachers. Given the robust link in the literature between the presence of externalizing behavior (as reported by student self-report) and negative parent-child relations (e.g., Fanti, Henrich, Brookmeyer, & Kuperminc, 2008; White & Renk, 2012), the lack of a significant correlation in the current study may be attributed to many variables, including: (1) potential inaccuracy of teacher reports of students' externalizing behaviors, (2) children's age and thus diminished levels of aggressive behavior, (3) increased covertness of externalizing behavior in high school age populations.

Regarding differences between mental health groups, youth with complete mental health reported the highest levels of parental social support and more positive relationships with their parents. Symptomatic but content youth reported perceiving more

parental support and having more satisfying relations with their parents compared to their peers who also had high psychopathology but in tandem with low SWB. Notably, troubled youth reported the poorest perceptions of relations with, and support from, their parents. In sum, findings support the notion that youth with optimal mental health functioning (as indicated by high SWB *and* no psychopathology; the absence of psychopathology without the presence of high SWB was not sufficient) report the most satisfying relationships with their caregivers. Furthermore, it suggests that average to high levels of SWB may somehow prevent youth who experience psychopathology (primarily externalizing problems) from having the worst social outcomes, with respect to poor relations with their parents. The potential buffering effect of SWB is aligned with previous research (cf. Suldo & Huebner, 2006) and should be attended to as parental support is associated with reductions in problematic behavior, increased self-esteem, and better academic outcomes (Bean, Bush, McKenry, & Wilson, 2009; Benhorin & McMahan, 2008, Liebkind, Jasinskaja-Lahti, & Solheim, 2004). Additionally, the fact that troubled youth reported the lowest levels of parent support and lowest relationship quality with their parents is aligned with research exploring the transactional relationship between depressive symptoms and parent-child relationships (cf. Needham, 2008).

Relations with Peers

Exploring mental health features associated with positive peer relationships is important given that during adolescence, youth spend increased amounts of time with their peers and this transition also appears to be mitigate adolescents' formation of their identity (Brown, 2004). Indicators of peer functioning examined in the current study

include perceived support from peers, reported experiences of victimization by classmates, and students' romantic experiences.

Support from peers. In the current study, bivariate correlations indicated that perceived social support from classmates was positively associated with greater levels of positive affect in particular, as well as a moderate positive correlation with life satisfaction. Classmate support was inversely associated with internalizing problems and, to a lesser extent, negative affect. These findings are aligned with previous research (Suldo & Shaffer, 2008; Vera, Thakral, Gonzales, Morgan, Conner et al., 2008). In terms of group differences, youth with complete mental health reported higher perceptions of support from classmates than their vulnerable peers, once again illustrating that the simple absence of psychopathology was insufficient to ensure optimal social outcomes. Notably, symptomatic but content youth reported similarly high perceptions of support from peers as youth with complete mental health, highlighting the potential protective nature of SWB in this population. Troubled students reported the lowest levels of support, suggesting that high levels of psychopathology and low levels of SWB put students particularly at risk for negative peer relationships. This finding is particularly germane to high school age adolescents as peer support is associated with lower school drop-out rates (Lagana, 2004, Wassef, Mason, Collins, O'Boyle, &Ingham, 1996).

Bullying. Relationships between mental health functioning and youth victimization experiences were also explored in the current study, in part due to the current prevalence of the problem (approximately 20% of students in our nation's schools are estimated to experience bullying; Centers for Disease Control and Prevention, 2010). Aligned with previous literature, in the current study overt and relational victimization

were associated with a host of poor mental health outcomes, including lower life satisfaction and positive affect, and higher levels of negative affect and internalizing problems (Flaspohler, Elfstrom, Vanderzee, Sink, & Birchmeier, 2009; Flouri & Buchanan, 2002; You, Furlong, Felix, Sharkey, Tanigawa, & Greif Green, 2008). Regarding bivariate links with psychopathology, in the current study being a victim of bullying was only associated with greater internalizing symptoms (and not teacher-rated externalizing problems). This link between victimization and internalizing symptoms of psychopathology has also been supported by previous investigations (cf. Fleschler Peskin, Tortolero, Markham, Addler, & Baumler, 2007, Hawker & Boulton, 2000; Holt & Espelage, 2003). With regard to between group differences in overt victimization, youth without psychopathology (i.e., students identified as complete mental health and vulnerable) reported the least amount of these types of bullying experiences. However, complete mental health, vulnerable, and symptomatic but content youth reported similarly low levels of relational victimization. These findings suggests that average to high SWB, even in the presence of psychopathology, may protect youth from experiences of relational victimization, but not overt victimization. The combination of low SWB and high psychopathology was associated with the most frequent experiences of relational aggression, while the combination of intact SWB and low psychopathology co-occurred with the most desirable (i.e., fewest) overt victimization levels.

Romantic experiences. Previous research provides very limited or mixed information regarding associations between youth psychological functioning and romantic relationships during adolescence (cf. Davies & Windle, 2000). Therefore, the current sample's mean level of romantic experiences (including the nature/frequency of

their romantic experiences and their satisfaction with romantic relationships) were explored. In the current study, students reported that on average the most intense type of dating experiences they have had fell between attending dances/parties where both girls and boys were attending to having close friends of the opposite sex that were not of romantic interest. Correlational analyses revealed that the more romantic experiences an adolescent had, the less satisfied he or she was his or her romantic or dating life. The mean level of satisfaction reported was between "neither satisfied nor dissatisfied" to "satisfied" in the current sample, suggesting mild levels of satisfaction with one's current level of romantic experiences.

In terms of relationships between student mental health and dating experiences, correlational analyses revealed that the total number of dating experiences students had was significantly and inversely related with positive affect and externalizing problems. These findings suggest that the more dating experiences a student has, the fewer positive emotions he or she has (indicating worse poor mental health) but the fewer symptoms of externalizing problems his or her teachers perceive (indicating better mental health). These mixed results, considered along with the lack of significant associations with the other indicators of mental health (life satisfaction, positive affect, internalizing symptoms), suggest that students' psychological functioning is unrelated to their most intense level of dating experience. The current literature on youth romantic experiences is very limited. Furman, Low, and Ho (2009) found that the more romantic experiences one had was concurrently associated with higher perceptions of being socially accepted by peers, more competence in one's ability to form and manage friendships and romantic relationships, and high rates of delinquent behaviors. However, in the current study more

dating experience was associated with poorer self-perceptions of interpersonal relations and fewer externalizing problems.

Categorical analyses also did not indicate a significant effect for mental health group membership as a function of dating experiences. Although there is limited research on this topic, similarities between groups may be due to the fact that this one indicator only evaluated the number of experiences, rather than the quality or nature of these romantic experiences (romantic relationship variables that did yield associations with mental health). Case in point, the one item indicator of global satisfaction with dating experiences indicated that youth with complete mental health reported the most satisfaction in this domain, including in comparison to their vulnerable peers (supporting the notion that simple absence of psychopathology is insufficient to ensure optimal functioning in the area of romantic relations). Also notable, symptomatic but content students reported greater satisfaction with their romantic experiences than troubled and vulnerable peers. In sum, youth with high levels of SWB (regardless of level of psychopathology) reported being more satisfied with their dating/romantic life as compared to youth with low levels of SWB, suggesting that this indicator of social functioning is more tied to SWB than psychopathology.

In the current study, approximately 65% of participants reported having had a boyfriend or girlfriend at some point since entering high school. This proportion is somewhat higher than expected given that 25% of youth ages 13-15 and 40-50% of adolescents 15-17 years old reported having a romantic relationship in the last 18 months (Carver, Joyner, & Udry, 2003; Connolly, Furman, & Konarski, 2000; Davies & Windle, 2000). This discrepancy in rates may be due to the difference in timelines for the

relationship, specifically allowing any student to report on this indicator if they had a boyfriend or girlfriend during their high school career in the current study, rather than only allowing those to report who have had a serious relationship within the past 18 months.

Youth in the complete mental health group who reported having had a boyfriend or girlfriend during high school also reported that their romantic relationship had the greatest levels of supportive features and fewest negative characteristics, particularly in relation to the mean perceptions of troubled students. These results suggest that the combination of high SWB and low psychopathology is associated with the most positive qualities in romantic relationships, and that the presence of psychopathology must be coupled with low SWB to co-occur with the greatest dissatisfaction in romantic relationships. Aligned with this finding that suggests the important role of SWB is that life satisfaction and positive affect were positively correlated with supportive romantic relationships. Internalizing problems and negative affect were positively associated with negative interactions in romantic relationships (and inversely correlated with satisfaction with romantic experiences).The link with internalizing problems is aligned with longitudinal research associating depression symptoms and romantic relationships characterized by negative interactions (Vujeva & Furman, 2011)

In summary, results suggest that frequent positive emotions, satisfaction with life, and low levels of psychopathology and negative affect co-occur with a host of optimal social outcomes. Students with complete mental health had the highest levels of: social skills and positive interpersonal relations; social support from teachers, parents, and classmates; adaptive attitudes towards teachers; the fewest experiences of overt peer

victimization; more satisfaction with romantic experiences; and more supportive interactions with a romantic partner coupled with infrequent negative interactions. Additionally, youth who report average to high levels of SWB, even in the presence of psychopathology, may be protected from experiencing poor social functioning. Specifically, compared to troubled youth, symptomatic but content students reported: greater perceptions of social support from teachers, parents, and classmates; better relations with their parents, better self-rated overall interpersonal relations; fewer experiences of relational victimization; and more satisfaction with romantic experiences.

Contributions to the Literature

This is the first study that establishes the presence and utility of a dual-factor model of mental health in high school age youth. This current study also contributed to the literature by providing insight into the types of mental health symptoms youth amongst the four groups yielded by the dual-factor model experience. These exploratory analyses with the dual-factor model indicated that youth with psychopathology who report satisfactory levels of SWB are likely to be identified by others as having externalizing problems. In contrast, youth with clinically elevated symptoms of internalizing psychopathology may be particularly at-risk for experiencing low levels of SWB.

Additionally, the current study contributed to the literature on positive psychology by investigating how mental health groups vary based on SWB and its components. Overall the findings suggest that even groups identified as having high versus low composite SWB, between-group differences on negative affect vary according to level of psychopathology. Further, complete mental health youth demonstrate the most optimal

levels of life satisfaction. Positive affect appeared separable from psychopathology level.

The current study also suggests that complete mental health was associated with the most adaptive outcomes with regard to social functioning. Notably, the finding that symptomatic but content students scored higher on many indicators of healthy social functioning compared to troubled youth suggesting that average to high levels of SWB, even in the presence of psychopathology, may protect youth from the worst outcomes. In conclusion, this study provided empirical support for the need and utility to adopt a dual-factor model of mental health in assessing the psychological functioning of high school students, and also provided additional information regarding the characteristics of groups yielded from such a model.

Implications for School Psychologists

The current study contributes to the growing empirical support for a novel, comprehensive approach to mental health assessment of youth. Specifically, this research and previous studies validate that youth with average to high levels of SWB in tandem with low levels of psychopathology demonstrate superior functioning across various developmental domains. This information makes evident that it is necessary to assess students' SWB in addition to the assessment of symptoms of psychopathology in order to obtain a valid and effective understanding of youth mental health functioning. Additionally, this study advocates that school psychologists take a preventative approach to students' mental health, due to findings that average to high levels of happiness (i.e., SWB) may buffer students from experiencing the worst outcomes (e.g., in terms of social functioning), even for youth with psychopathology (see Doll, 2008, for a similar discussion).

For example, when assessing a student's mental health via the dual-factor model, results from student and teacher report may indicate that a student may present with low SWB in tandem with low levels of psychopathology (i.e., vulnerable). Next, a practitioner may administer a more comprehensive assessment of life satisfaction (i.e., Multidimensional Students' Life Satisfaction Scale [MSLSS]; Huebner, 2001). This tool assesses rater's self-perceptions of their satisfaction within the five following domains: family, friends, school, living arrangement, and self. Information gathered from the MSLSS can direct treatment goals and behavioral interventions when formulating a treatment plan for counseling. For example, a practitioner may find that an adolescent is unsatisfied with their friendships and therefore able to gather more information via interviews to determine if the adolescent is experiencing peer rejection and why or if the child is struggling to determine which peer group they want to participate in.

Additionally, the dual-factor model of mental health is aligned with a community approach to prevention, treatment, and promotion of wellness in youth. Specifically, results from this study suggest that youth from low SES homes may be susceptible to having lower levels of SWB, and if these youth are female they may also be likely to present with increased levels of internalizing psychopathology. Additionally, youth with unmarried parents may be likely to report satisfaction with their life, but may present with externalizing problems. Given that certain demographics may place youth at risk, it may be advantageous to take a multiple gating approach (cf. Merrell, 2008) utilizing the dual-factor model to assess youth who may be at risk to fall within the vulnerable, troubled, or symptomatic but content mental health groups. A multiple gating approach aims to narrow down a large population of individuals who are likely to exhibit the

behavioral syndromes of concern (i.e., high psychopathology, low SWB). Multiple gating may feature three gates or stages of procedures involving assessment. In the beginning criteria that results in many false negatives should be used (e.g., a T-score of 55 on a rating scale, life satisfaction score of 4 or less). The second screening should involve more lengthy rating scales that again use a specified cut-off score. The final stage should utilize an established decision point, and should involve more time-intensive procedures, such as structured interviews with parents and/or behavioral observations at home and/or school. At this point, these children or adolescents are referred for additional assessment, classification, and intervention.

Furthermore, knowledge of youth mental health functioning via this comprehensive model may prove imperative when dealing with difficulties germane to adolescent social functioning. Given that formation of satisfying interpersonal relationships is a key task of adolescence, assessments of mental health that include positive indicators (in addition to traditional indicators of mental illness) will provide school psychologists with additional information regarding students who are particularly at-risk in terms of social functioning, as well as students whose social functioning may not be as at-risk as would be expected based on their high psychopathology due to their intact SWB.

Limitations and Delimitations

The current study provided empirical support for the presence and utility of a dual-factor model with high school students. However, there are several factors that may limit the validity of the study's findings. Ecological validity refers to the ability of a researcher to generalize the findings of a study to other settings (Tashakkori & Teddlie,

2003). A violation to ecological validity occurs when a researcher makes inferences about a population that is different than the one under study, based upon the findings of the population under study. First, this study used convenience sampling; thus students who agreed to participate in this current study may be different from students who chose not to participate. This may ultimately limit the unique characteristics of the sample; therefore researchers should be cautious when applying this study's findings to other populations, even including the high school population from which the sample was drawn. Additionally, this study's population only consisted of high school youth in grades 9 to 11 due to the longitudinal nature of the larger study. Therefore the extent to which this model can be applied to 12th grade students is currently unknown. Because the majority of youth in the current study (79.80%) were enrolled in 9th and 10th grades, results of the current study are likely more applicable to this age group than the 11th grade students who only comprised 20.20% of the current sample. Participants in the current study were selected from two high schools in one school district, thus application of findings to youth of other geographic locations should be done so with caution. Furthermore, the sample was drawn from two high schools from relatively lower SES communities, therefore researchers and practitioners should cautiously apply these findings to youth from more affluent communities. Moreover, in the current study, although there was not a significant effect of ethnicity upon mental health indicators, 43.60% of students in the current study were white; therefore extending the findings from the current study to students of other ethnicities should be done prudently.

An unanticipated limitation of the current study entails the extreme non-normal distributions of four criterion variables and two independent variables. Employing

variables with large skewness and/or kurtosis in the analyses may have reduced the power to detect a significant effect in the event(s) that a significant effect actually existed. Additionally, due to the fact that only 323 students reported having had a romantic relationship, an indicator pertaining to romantic relationship quality was not included in the MANCOVA in the current study. Although this indicator is conceptualized as a critical component of youth social functioning, it was analyzed separately to preserve the sample size.

Also notable, students from the two schools from which the current sample was drawn appear to vary in terms of associations between mental health indicators and social functioning indicators in one-quarter of bivariate associations. Due to these differences, the school from which a participant was drawn from was controlled for by employing school as a covariance. Controlling for school may have inadvertently impacted the size of the effect of social functioning indicators, particularly those that may naturally vary due to a school's culture, such as the level of teacher support.

Another limitation is that the extent to which teachers accurately reported students' externalizing problems is uncertain. Specifically, in the current study only 13.5% ($n = 42$) of participants were rated as having at-risk or clinical levels of externalizing problems. According to literature approximately 10% of youth have a diagnosable disruptive disorder (U.S. Public Health Service, 2000). Therefore it would be anticipated that those who be at-risk would likely be a higher percentage. Additionally, previous literature has demonstrated significant bivariate associations between externalizing problems and other mental health and social indicators that were not replicated in the current study. This may further be associated with the underreporting of

externalizing symptoms on behalf of teacher participants. In the future, it may be advantageous to collect data from teachers regarding student functioning during the latter half of the school year as to allow teachers to become even more familiar with students. Or alternatively, have other adults knowledgeable of student participants (i.e., parents, more than one teacher) complete rating scales evaluating their perceptions of students externalizing problems.

It should also be noted that the dual-factor model, like psychopathology based approaches to diagnosing mental health, takes a categorical, rather than continuous, approach to assessing students symptoms of psychopathology and happiness (cf. Doll, 2008). Although this approach is often seen as necessary when allocating precious resources, it may differentiate students into categories that perhaps are not too different in terms of their levels of symptoms.

The current study also features notable delimitations. For example, this study examined the utility of the dual-factor model as related to social functioning, thereby excluding other key tasks of adolescence, such as academic achievement. This in part is due to the interest of the author of this dissertation in interpersonal relations during this developmental period. Finally, the study purposefully only sampled students in grades 9-11 due to the longitudinal design (i.e., two-year study) of the larger research project, thus, experiences of students in 12th grade were not determined in the current study.

Summary and Future Directions

The current study has contributed to the literature by providing the first examination of a dual-factor model of mental health in high school age adolescents. This study supplied insight regarding the unique mental health profiles of the four groups of

students in terms of both traditional and positive mental health indicators. Specifically, results from the current study suggests that even amongst groups of students identified as having high SWB, there appears to be slight differences in terms of levels of life satisfaction and negative affect. Additionally, among youth identified as having clinically elevated psychopathology, those that have average to high levels of SWB appear to be more likely to present with externalizing problems, whereas those with low SWB in tandem with at-risk to clinical levels of psychopathology are likely to have internalizing problems. Additionally, findings support that the lack of psychopathology alone is insufficient in order to guarantee the best social functioning in middle adolescents. Specifically, students who had low psychopathology coupled with average to high SWB had the best outcomes in terms of social skills, interpersonal relations, social support from key individuals, fewer experiences of being bullied, more positive attitudes towards teachers, satisfaction with romantic experiences, and more supportive interactions with a romantic partner coupled with infrequent negative interactions. Furthermore, findings support the notion that SWB may act as a protective factor, as youth who present with psychopathology and also endorse having average to high levels of SWB compared to trouble youth, have more social support from teachers, parents, and classmates, perceive having better interpersonal relations, fewer experiences of relational victimization, and more satisfaction with romantic experiences.

Although the dual-factor model has now evidenced utility across different age groups of individuals, additional research is needed in order to inform the most appropriate methods to assess mental health in youth; for instance, would similar proportions of youth be deemed troubled or symptomatic but content if students' self-

reported their externalizing behaviors? Second, more research is needed to explore youth outcomes, as a function of mental health group, in areas beyond the social domain (e.g., academic performance, physical health, occupational goals and attainment). Additional between-group differences in other areas may broaden the empirical support for the utility of the dual-factor model. Third, given that little is known in terms of the stability of positive indicators of mental health in children and adolescence, logical next steps involve investigating the stability of group membership among each of the four groups, as well as indentifying factors that predict stability and change in mental health categories. Such information would contribute to intervention and prevention methods aimed to promote satisfactory well-being and advantageous developmental outcomes for youth.

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Appendices

Appendix A

Institutional Review Board Approval

DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-5618

September 8, 2010

Shannon Suldo, PhD
Psychological and Social Foundations
4202 East Fowler Ave., EDU 105

RE: **Expedited Approval** for Initial Review
IRB#: Pro00001693
Title: Predictive Utility of a Dual-Factor Model of Adolescent Psychological Well-Being

Dear Shannon Suldo:

On 9/7/2010 the Institutional Review Board (IRB) reviewed and **APPROVED** the above referenced protocol**.** Please note that your approval for this study will expire on 9-7-11.

Approved Items:
Protocol Document(s):

Study Protocol	8/10/2010 9:18 AM	0.04

Study involves children and falls under 45 CFR 46.404: Research not involving more than minimal risk.

Consent/Assent Document(s):

Parent Consent.pdf	9/8/2010 10:28 AM	0.01
Student assent.pdf	9/8/2010 10:28 AM	0.01
Teacher consent.pdf	9/8/2010 10:28 AM	0.01

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Appendix A (Continued)

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

(5) Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis).

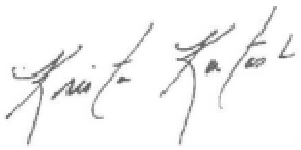
(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Please note, the informed consent/assent documents are valid during the period indicated by the official, IRB-Approval stamp located on the form. Valid consent must be documented on a copy of the most recently IRB-approved consent form.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-9343.

Sincerely,



Krista Kutash, PhD, Chairperson
USF Institutional Review Board

Cc: Various Menzel, CCRP
USF IRB Professional Staff

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Appendix B

Recruitment Script for Teachers

What research team said to teachers:

We (the USF research team) are requesting your assistance in recruiting students for participation in a study to understand how students' psychological wellness predicts their school performance, physical health, social relationships, and sense of self. We aim to recruit approximately 325 students who are currently in grades 9 through 11 at your school, so approximately 110 students in the grade level you teach. The administrative team at your school has selected your classroom for participation. Students in your identified classroom will be asked to take part this year by filling out a packet of paper-and-pencil surveys on one occasion. Next year, they will be asked to complete the same surveys so that we can track change in students' behavior over time. The USF research team will administer the surveys to large groups of students in a private location at the school (such as a media center). These surveys will ask students questions about their thoughts, behaviors, and attitudes towards school, family, and life in general, as well as physical health and after-school activities. Please follow the following steps to recruit students for participation in the survey. First, share the brief verbal description of the study (provided below) with the students. Then, distribute two copies of the parent consent forms to all students in your identified classroom. Ask the students to keep one copy of the form for their family's records; the second copy should be signed by parents/guardians and returned to you. Later in the school year, you will be asked to complete a questionnaire(s) about the behavior of each of your students who is a participant in the study. Completion of the questionnaire(s) is expected to take between 10 and 15 minutes. You will receive a $5 gift card for each student that you rate. THANK YOU for your help with this important research study!

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Appendix C

Recruitment Script Teachers Were Instructed to Read to Students

What teachers said to students:

Researchers from the University of South Florida want to find out more about the links between students' psychological wellness and their school performance, physical health, social relationships, and sense of self. You are being asked to participate because you are a student in this class. Participation will involve completing a packet of surveys during regular school hours on one occasion (during one class period) this year. The surveys ask questions about your thoughts, behaviors, and attitudes towards school, family, and life in general, as well as physical health and after-school activities. All responses to the survey will be kept confidential; because the USF research team is interested in general trends among teenagers, your responses will be combined with the surveys completed by all other students who take part in the study- you will not be identified by name. Next year, we will ask you to complete the same surveys so that we can track change in student behavior over time. It is your choice whether or not you want to participate. ***All students who return completed parent consent forms (whether or not your parent gives you permission to participate) will be included in one of several drawings for $50 gift cards to a local mall.*** *Also,* ***each student who completes the surveys will receive a pre-paid movie ticket****. Only students with written parent permission can participate, so please bring these consent forms home to your parents or guardians. Your parent should keep one copy for the family's records, and complete the other copy. Please return the copy that is completed by your parent or guardian to me as soon as possible.*

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Appendix D

Parent Consent Form

Dear Parent or Caregiver:

This letter provides information about a research study that will be conducted in your high school by investigators from the University of South Florida. We are conducting the study to determine the links between students' psychological wellness and their school performance, physical health, social relationships, and sense of self.

- ✓ Who We Are: The research team is led by Shannon Suldo, Ph.D., a professor in the School Psychology Program at the University of South Florida (USF). Several graduate students in the USF College of Education are also on the team. We are planning the study in cooperation with the principal of your child's school to make sure that the study provides information that will be useful to the school.

- ✓ Why We are Requesting Your Child's Participation: This study is being conducted as part of a project entitled, "Subjective Well-Being of High School Students." Your child is being asked to participate because he or she is a student at a high school within Hillsborough County Public Schools (HCPS).

- ✓ Why Your Child Should Participate: We need to learn more about what leads to happiness and health during the teenage years! The information that we collect from students may help increase our overall awareness of the importance of monitoring students' happiness during adolescence. In addition, group-level results of the study will be shared with the teachers and administrators at your high school in order to increase their knowledge of the relationship between specific school experiences and psychological wellness in students. Please note neither you nor your child will be paid for your child's participation in the study. However, all students who participate in the study will be entered into a drawing for one of several gift certificates.

- ✓ What Participation Requires: If your child is given permission to participate in the study, he or she will be asked to complete several paper-and-pencil questionnaires. These surveys will ask about your child's thoughts, behaviors, and attitudes towards him/herself, school, teachers, classmates, family, and life in general. The surveys will also ask about your child's physical health and involvement in after-school activities. Completion is expected to take your child between 45 and 60 minutes. We will administer the questionnaires during regular school hours, to large groups of students who have parent permission to participate. Participation will occur during one class period this school year. If your child is enrolled in a HCPS high school next year, he or she will be asked to complete the same surveys again so that we can examine change over time. In addition to completing surveys, a small number of students selected due to their specific mental health profile will be asked to participate in one brief (30 minutes or less) interview. The interview will occur during regular school hours and consist of us asking students additional questions about the thoughts and behaviors that affect their happiness. In total, participation will take about 60 to 90 minutes of your child's time each year for the next two years. Another part of participation involves a review of your child's school records. Under the supervision of school administrators, we will retrieve the following information about your child: grade point average, FCAT scores, attendance, and discipline referrals. Finally, one of your child's teachers will be asked to complete a rating scale about your child's behavior at school.

- ✓ Please Note: Your decision to allow your child to participate in this research study must be completely voluntary. You are free to allow your child to participate in this research study or to withdraw him or her at any time. Your decision to participate, not to participate, or to withdraw participation at any point during the study will in no way affect your child's student status, his or her grades, or your relationship with HCPS, USF, or any other party.

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix D (Continued)

- ✓ Confidentiality of Your Child's Responses: There is minimal risk to your child for participating in this research. We will be present during administration of the questionnaires in order to provide assistance to your child if he or she has any questions or concerns. Additionally, school guidance counselors will be available to students in the unlikely event that your child becomes emotionally distressed while completing the measures. Your child's privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, the USF Institutional Review Board and its staff, and other individuals acting on behalf of USF may inspect the records from this research project, but your child's individual responses will not be shared with school system personnel or anyone other than us and our research assistants. Your child's completed questionnaires will be assigned a code number to protect the confidentiality of his or her responses. Only we will have access to the locked file cabinet stored at USF that will contain: (1) all records linking code numbers to participants' names, and (2) all information gathered from school records. All records from the study (completed surveys, information from school records) will be destroyed in four years. Please note that although your child's specific responses on the questionnaires will not be shared with school staff, if your child indicates that he or she intends to harm him or herself, we will contact district mental health counselors to ensure your child's safety.

- ✓ What We'll Do With Your Child's Responses: We plan to use the information from this study to inform educators and psychologists about the relationships between students' psychological wellness (particularly their subjective well-being, also referred to as happiness) and optimal development with respect to academic achievement, physical health, social relations, identify formation, and engagement in meaningful activities. The results of this study may be published. However, the data obtained from your child will be combined with data from other people in the publication. The published results will not include your child's name or any other information that would in any way personally identify your child.

- ✓ Questions? If you have any questions about this research study, please contact Dr. Suldo at (813) 974-2223. If you have questions about your child's rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the USF at (813) 974-9343.

- ✓ Want Your Child to Participate? To permit your child to participate in this study, please complete the attached consent form and have your child turn it in to his or her designated teacher.

Sincerely,

Shannon Suldo, Ph.D.
Associate Professor of School Psychology
Department of Psychological and Social Foundations

Consent for Child to Take Part in this Research Study

I freely give my permission to let my child take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

_____	_____
Printed name of child	Grade level of child

_____	_____	_____
Signature of parent of child taking part in the study	Printed name of parent	Date

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix D (Continued)

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

_____	_____	_____
Signature of person obtaining consent	Printed name of person obtaining consent	Date

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Appendix E

Student Assent Form

Today you will be asked to take part in a research study by filling out several surveys. Our goal in conducting the study is to determine the links between students' psychological wellness and their school performance, physical health, social relationships, and sense of self.

- ✓ Who We Are: The research team is led by Shannon Suldo, Ph.D., a professor in the School Psychology Program at the University of South Florida (USF). Several graduate students in the USF College of Education are also on the team. We are working with your principal to make sure this study will be helpful to your school.

- ✓ Why We Are Asking You to Take Part in the Study: This study is part of a project called, "Subjective Well-Being of High School Students." You are being asked to take part because you are a student at a high school within Hillsborough County Public Schools (HCPS).

- ✓ Why You Should Take Part in the Study: We need to learn more about what leads to happiness and health during the teenage years! The information that we collect may help us better understand why we should monitor students' happiness. In addition, results from the study will be shared with your high school to show them how happiness is related to school grades and behavior, physical health, social relationships, and identity. You will not be paid for taking part in the study.

- ✓ Filling Out the Surveys: These surveys will ask you about your thoughts, behaviors, and attitudes towards school, family, and life in general. The surveys will also ask about your physical health and after-school activities. It will probably take between 45 and 60 minutes to fill out the surveys. We will also ask you to complete these surveys again one year from now. A few months later, some students will be asked to participate in one brief (30 minutes or less) interview. If you take part in the interview, we will ask you additional questions about thoughts and behaviors that influence your happiness.

- ✓ What Else Will Happen if You Are in the Study: If you choose to take part in the study, we will look at some of your school records- grades, discipline record, attendance, and FCAT scores. We will gather this information under the guidance of school administrators.

- ✓ Please Note: Your involvement in this study is voluntary (your choice). By signing this form, you are agreeing to take part in this study. Your decision to take part, not to take part, or to stop taking part in the study at any time will *not* affect your student status or your grades; you will not be punished in any way. If you choose not to take part, it will not affect your relationship with HCPS, USF, or anyone else.

- ✓ Privacy of Your Responses: Your school guidance counselors are also on hand in case you become upset. Your privacy and research records will be kept confidential (private, secret) to the extent of the law. People approved to do research at USF, people who work for the Department of Health and Human Services, the USF Institutional Review Board, and its staff, and other individuals acting on behalf of USF may look at the records from this research project. However, your individual responses will not be shared with people in the school system or anyone other than us and our research assistants. Your completed surveys will be given a code number to protect the privacy of your responses. Only we will have the ability to open the locked file cabinet stored at USF that will contain: (1) all records linking code numbers to names, and (2) all information gathered from school records. All records from the study (completed surveys, information from school records) will be destroyed four years after the study is done. Again, your specific responses will not be shared with school staff. However, if you respond on the surveys that you plan to harm yourself, we will let district counselors know in order to make sure you are safe.

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix E (Continued)

What We'll Do With Your Responses: We plan to use the information from this study to let others know about how students' happiness is related to school grades, physical health, social relationships, identity development, and engagement in meaningful activities. The results of this study may be published. However, your responses will be combined with other students' responses in the publication. The published results will not include your name or any other information that would identify you.

✓ Questions? If you have any questions about this research study, please raise your hand now or at any point during the study. Also, you may contact us later at (813) 974-2223 (Dr. Suldo). If you have questions about your rights as a person who is taking part in a research study, contact a member of the Division of Research Compliance of the USF at (813) 974-9343. Also call the Florida Department of Health, Review Council for Human Subjects at 1-850-245-4585 or toll free at 1-866-433-2775.

Thank you for taking the time to take part in this study.

Sincerely,

Shannon Suldo, Ph.D.
Associate Professor of School Psychology
Department of Psychological and Social Foundations

Assent to Take Part in this Research Study

I give my permission to take part in this study. I understand that this is research. I have received a copy of this letter and assent form.

_____	_____	_____
Signature of child taking part in the study	Printed name of child	Date

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

_____	_____	_____
Signature of person obtaining consent	Printed name of person obtaining consent	Date

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix F

Demographic Form

Birthdate: _____- _____- _____
(month) (day) (year)

PLEASE READ EACH QUESTION AND CIRCLE **ONE** ANSWER PER QUESTION:

1. I am in grade: 9 10 11 12

2. My gender is: Male Female

3. Do you receive free or reduced-price school lunch? Yes No

4. My race/ethnic identity is:
   a. American Indian or Alaska Native
   b. Asian
   c. Black or African American
   d. Hispanic or Latino
   e. Native Hawaiian or Other Pacific Islander
   f. White
   g. Multi-racial (please specify):_____
   h. Other (please specify):_____

5. My biological parents are:
   a. Married
   b. Divorced
   c. Separated
   d. Never married
   e. Never married but living together
   f. Widowed

6. I live with my:
   a. Mother and Father
   b. Mother only
   c. Father only
   d. Mother and Step-father (or partner)
   e. Father and Step-mother (or partner)
   f. Grandparent(s)
   g. Other relative (please specify): _____
   h. Other (please specify): _____

7. My father's highest education level is:
   a. 8th grade or less
   b. Some high school, did not complete
   c. High school diploma/GED
   d. Some college, did not complete
   e. College/university degree
   f. Master's degree
   g. Doctoral level degree (Ph.D, M.D.) or other degree beyond Master's level

8. My mother's highest education level is:
   a. 8th grade or less
   b. Some high school, did not complete
   c. High school diploma/GED
   d. Some college, did not complete
   e. College/university degree
   f. Master's degree
   g. Doctoral level degree (Ph.D, M.D.) or other degree beyond Master's level

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix F (Continued)

Sample Questions:

	Never	Almost Never	Sometimes	Fairly Often	Very Often
1. I go to the beach	1	2	3	4	5

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
2. Going to the beach is fun	1	2	3	4	5

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix G

Teacher Consent Form

Dear Teacher:

This letter provides information about a research study that will be conducted in your high school by investigators from the University of South Florida. We are conducting the study to determine the links between students' psychological wellness and their school performance, physical health, social relationships, and sense of self.

- ✓ Who We Are: The research team consists of Shannon Suldo, Ph.D., a professor in the School Psychology Program at the University of South Florida (USF), and several doctoral students in the USF College of Education. We are planning the study in cooperation with the principal at your school to make sure that the study provides information that will be useful to the school.

- ✓ Why We are Requesting Your Participation: This study is being conducted as part of a project entitled, "Subjective Well-Being of High School Students." You are being asked to participate because you are a teacher of at least one student who is a participant in the project.

- ✓ Why You Should Participate: We need to learn more about what leads to happiness and health during the pre-teen years! The information that we collect from teachers may help increase our overall awareness of the importance of monitoring students' happiness. In addition, information from the study will be shared with you and other staff at your school in order to increase your knowledge of the relationship between students' mental health and their educational performance, physical health, and social relationships. Please note that you will be compensated $5 for each rating scale you complete.

- ✓ What Participation Requires: You will be asked to complete a questionnaire(s) about the behavior of each of your students who is a participant in the study. Completion of the questionnaire(s) is expected to take between 10 and 15 minutes.

- ✓ Please Note: Your decision to participate in this research study must be completely voluntary. You are free to participate in this research study or to withdraw from participation at any time. If you choose not to participate, or if you withdraw at any point during the study, this will in no way affect your relationship with HCPS, USF, or any other party.

- ✓ Confidentiality of Your Responses: There is minimal risk for participating in this research. Your privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, the USF Institutional Review Board and its staff, and other individuals acting on behalf of USF may inspect the records from this research project, but your individual responses will not be shared with school system personnel or anyone other than the USF research team. Your completed questionnaire(s) will be assigned a code number to protect the confidentiality of your responses. Only the USF research team will have access to the locked file cabinet stored at USF that will contain all records linking code numbers to participants' names.

- ✓ What We'll Do With Your Responses: We plan to use the information from this study to inform educators and psychologists about the relationships between students' psychological wellness (particularly their subjective well-being, also referred to as happiness) and optimal development with respect to academic achievement, physical health, social relations, identify formation, and engagement in meaningful activities. The results of this study may be published. The results of this study may be published. However, the data obtained from you will be combined with data from other people in the publication. The published results will not include your name or any other information that would in any way personally identify you.

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix G (Continued)

- ✓ Questions? If you have any questions about this research study, please raise your hand now or at any point during the study. Also, you may contact us later at (813) 974-2223 (Dr. Suldo). If you have questions about your rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the USF at (813) 974-9343, or the Florida Department of Health, Review Council for Human Subjects at 1-850-245-4585 or toll free at 1-866-433-2775.

- ✓ Want to Participate? To participate in this study, please sign the attached consent form.

Sincerely,

Shannon Suldo, Ph.D.
Associate Professor of School Psychology
Department of Psychological and Social Foundations

Consent to Take Part in this Research Study

I freely give my permission to take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

_____	_____	_____
Signature of teacher	Printed name of teacher	Date

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

_____	_____	_____
Signature of person obtaining consent	Printed name of person obtaining consent	Date

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix H

Students' Life Satisfaction Scale (Huebner, 1991)

We would like to know what thoughts about life you've had during the past several weeks. Think about how you spend each day and night and then think about how your life has been during most of this time. Here are some questions that ask you to indicate your satisfaction with life. In answering each statement, circle a number from (**1**) to (**6**) where (**1**) indicates you **strongly disagree** with the statement and (**6**) indicates you **strongly agree** with the statement.

	Strongly Disagree	**Disagree**	**Slightly Disagree**	**Slightly Agree**	**Agree**	**Strongly Agree**
1. My life is going well	1	2	3	4	5	6
2. My life is just right	1	2	3	4	5	6
3. I would like to change many things in my life	1	2	3	4	5	6
4. I wish I had a different kind of life	1	2	3	4	5	6
5. I have a good life	1	2	3	4	5	6
6. I have what I want in life	1	2	3	4	5	6
7. My life is better than most kids'	1	2	3	4	5	6

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix I

Positive and Negative Affect Scale for Children (PANAS-C; Laurent et al., 1999)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then circle the appropriate answer next to that word. Indicate to what extent you have felt this way during the past few weeks.

	Feeling or emotion:	**Very slightly or not at all**	**A little**	**Moderately**	**Quite a bit**	**Extremely**
1.	Interested	1	2	3	4	5
2.	Sad	1	2	3	4	5
3.	Frightened	1	2	3	4	5
4.	Excited	1	2	3	4	5
5.	Ashamed	1	2	3	4	5
6.	Upset	1	2	3	4	5
7.	Happy	1	2	3	4	5
8.	Strong	1	2	3	4	5
9.	Nervous	1	2	3	4	5
10.	Guilty	1	2	3	4	5
11.	Energetic	1	2	3	4	5
12.	Scared	1	2	3	4	5
13.	Calm	1	2	3	4	5
14.	Miserable	1	2	3	4	5
15.	Jittery	1	2	3	4	5
16.	Cheerful	1	2	3	4	5
17.	Active	1	2	3	4	5
18.	Proud	1	2	3	4	5
19.	Afraid	1	2	3	4	5
20.	Joyful	1	2	3	4	5
21.	Lonely	1	2	3	4	5
22.	Mad	1	2	3	4	5
23.	Disgusted	1	2	3	4	5
24.	Delighted	1	2	3	4	5
25.	Blue	1	2	3	4	5
26.	Gloomy	1	2	3	4	5
27.	Lively	1	2	3	4	5

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Appendix J

Child and Adolescent Social Support Scale (CASSS, Malecki & Demaray, 2002)

On this page, please respond to sentences about some form of support or help that you might get from either a parent, a teacher, or classmates. Read each sentence carefully and respond to them honestly. **Rate how often you receive the support described**. Do not skip any sentences. Thank you!

	My Parent(s)	Never	Almost Never	Some of the Time	Most of the Time	Almost Always	Always
1	… show they are proud of me.	1	2	3	4	5	6
2	… understand me.	1	2	3	4	5	6
3	… listen to me when I need to talk.	1	2	3	4	5	6
4	… make suggestions when I don't know what to do.	1	2	3	4	5	6
5	… give me good advice.	1	2	3	4	5	6
6	… help me solve problems by giving me information.	1	2	3	4	5	6
7	… tell me I did a good job when I do something well.	1	2	3	4	5	6
8	… nicely tell me when I make mistakes.	1	2	3	4	5	6
9	… reward me when I've done something well.	1	2	3	4	5	6
10	… help me practice my activities.	1	2	3	4	5	6
11	… take time to help me decide things.	1	2	3	4	5	6
12	… get me many of the things I need.	1	2	3	4	5	6
	My Teacher(s)	Never	Almost Never	Some of the	Most of the	Almost Always	Always
13	… cares about me.	1	2	3	4	5	6
14	… treats me fairly.	1	2	3	4	5	6
15	… makes it okay to ask questions.	1	2	3	4	5	6
16	… explains things that I don't understand.	1	2	3	4	5	6
17	… shows me how to do things.	1	2	3	4	5	6
18	… helps me solve problems by giving me information.	1	2	3	4	5	6
19	… tells me I did a good job when I've done something well.	1	2	3	4	5	6
20	… nicely tells me when I make mistakes.	1	2	3	4	5	6
21	… tells me how well I do on tasks.	1	2	3	4	5	6
22	… makes sure I have what I need for school.	1	2	3	4	5	6
23	… takes time to help me learn to do something well.	1	2	3	4	5	6
24	… spends time with me when I need help.	1	2	3	4	5	6

Note. This appendix has been modified in font size to comply with margin requirements.

Appendix J (Continued)

	My Classmates	Never	Almost Never	Some of the	Most of the	Almost Always	Always
25	… treat me nicely.	1	2	3	4	5	6
26	… like most of my ideas and opinions.	1	2	3	4	5	6
27	… pay attention to me.	1	2	3	4	5	6
28	… give me ideas when I don't know what to do.	1	2	3	4	5	6
29	… give me information so I can learn new things.	1	2	3	4	5	6
30	… give me good advice.	1	2	3	4	5	6
31	… tell me I did a good job when I've done something well.	1	2	3	4	5	6
32	… nicely tell me when I make mistakes.	1	2	3	4	5	6
33	… notice when I have worked hard.	1	2	3	4	5	6
34	… ask me to join activities.	1	2	3	4	5	6
35	… spend time doing things with me.	1	2	3	4	5	6
36	… help me with projects in class.	1	2	3	4	5	6

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Appendix K

Social Experiences Questionnaire-Self Report (Crick & Grotpeter, 1996)

Here is a list of things that sometimes happen to kids your age at school. How often do they happen to you at school?

	How many of your friends:	**Never**	**Almost Never**	**Sometimes**	**Almost All the Time**	**All of Time**
1	How often does another kid give you help when you need it?	**1**	**2**	**3**	**4**	**5**
2.	How often do you get hit by another kid at school?	**1**	**2**	**3**	**4**	**5**
3.	How often do other kids leave you out on purpose when it is time to play or do an activity?	**1**	**2**	**3**	**4**	**5**
4.	How often does another kid yell at you and call you mean names?	**1**	**2**	**3**	**4**	**5**
5.	How often does another kid try to cheer you up when you feel sad or upset?	**1**	**2**	**3**	**4**	**5**
6.	How often does a kid who is mad at you try to get back at you by not letting you be in their group anymore?	**1**	**2**	**3**	**4**	**5**
7.	How often do you get pushed or shoved by another kid at school?	**1**	**2**	**3**	**4**	**5**
8.	How often does another kid do something that makes you feel happy?	**1**	**2**	**3**	**4**	**5**
9.	How often does a classmate tell lies about you to make other kids not like you anymore?	**1**	**2**	**3**	**4**	**5**
10.	How often does another kid kick you or pull your hair?	**1**	**2**	**3**	**4**	**5**
11.	How often does another kid say they won't like you unless you do what they want you to do?	**1**	**2**	**3**	**4**	**5**
12.	How often does another kid say something nice to you?	**1**	**2**	**3**	**4**	**5**
13.	How often does a kid try to keep others from liking you by saying mean things about you?	**1**	**2**	**3**	**4**	**5**
14.	How often does another kid say they will beat you up if you don't do what they want you to do?	**1**	**2**	**3**	**4**	**5**
15.	How often do other kids let you know that they care about you?	**1**	**2**	**3**	**4**	**5**

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Appendix L

Dating History Questionnaire- Short Form (Furman & Wehner, 1992)

The next questions ask about "dating." By "dating," we mean times you go out with, spend time with or encounter someone you are seeing. Examples of this might include going to the movies, a game, a party, meeting at a party or hanging out at home. It doesn't have to be a formal date or something you planned in advance and it may be with a small group. The term "date" includes both one-time dates and time together as part of long-term relationships.

	When did you <u>FIRST</u> do each of the following? (if you have)	**Grade**	**I Haven't Yet**
1.	Become romantically interested in boys/girls		
2.	Have a "crush" on someone		
3.	Feel at the time that you were "in love" with someone you were dating		
4.	Hang around with both boys and girls		
5.	Went to movie, concert, sports, activities, and places with both boys and girls (but not as a date)		
6.	Meet or go out with a group of boys and girls at night		
7.	Went to dances or parties where there were both boys and girls		
8.	Had close friends of the opposite sex whom you <u>were not</u> romantically involved with		
9.	Dated or went out with someone, but with a group of friends		
10.	Dated or went out with someone, just the two of you		
11.	Dated or saw a few different people over the year		
12.	Dated or went out with one person on a fairly regular basis for at least one month		
13.	Had a boy/girlfriend		
14.	Have a serious relationship		
15.	How satisfied have you been with your romantic or dating life (or not dating, if you don't)		

Very Dissatisfied	Dissatisfied	Neither Dissatisfied Nor Satisfied	Satisfied	Very Satisfied

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Appendix M

Romantic Partner subscale of the Network of Relationships Inventory- Short Form (Furman & Buhrmester, 1985)

Everyone has a number of people who are important in his or her life. These questions ask about your relationships with your romantic partner. We would like you to choose a boy/girl friend whom you are dating or dated. You may choose someone you are seeing now, or someone you went out with earlier in high school. If you choose a past boy/girl friend, please answer the questions as you would have when you were in the relationship.

Boy/Girl Friend's First Name (*an initial is fine*) _____ or

I have not had a boy/girl friend _____

*******If you haven't started dating you may stop here and proceed to the next page*******

How long is/was the relationship? ____ years ____ months *(please fill in numbers)*

Are you seeing this person now? ____Yes *or* ____ No

		Little or None	Somewhat	Very Much	Extremely Much	The Most
1.	How much does this person treat you like you're admired and respected?	**1**	**2**	**3**	**4**	**5**
2.	How sure are you that this relationship will last no matter what?	**1**	**2**	**3**	**4**	**5**
3.	How much do you play around and have fun with this person?	**1**	**2**	**3**	**4**	**5**
4.	How much does this person help you figure out or fix things?	**1**	**2**	**3**	**4**	**5**
5.	How much do you share your secrets and private feelings with this person?	**1**	**2**	**3**	**4**	**5**
6.	How much does this person really care about you?	**1**	**2**	**3**	**4**	**5**
7.	How much do you take care of this person?	**1**	**2**	**3**	**4**	**5**
8.	How much do you and this person get upset with or mad at each other?	**1**	**2**	**3**	**4**	**5**
9.	How much do you and this person get on each other's nerves?	**1**	**2**	**3**	**4**	**5**
10.	How much do you and this person disagree and quarrel?	**1**	**2**	**3**	**4**	**5**
11.	How much do you and this person get annoyed with each other's behavior?	**1**	**2**	**3**	**4**	**5**
12.	How much do you and this person argue with each other?	**1**	**2**	**3**	**4**	**5**
13.	How much do you and this person hassle or nag one another?	**1**	**2**	**3**	**4**	**5**

Note. This appendix has been modified in font size to comply with margin requirements.