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Subjective Well-Being of Inner City Resilient and Non-Resilient Young Adolescents

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LOYOLA UNIVERSITY CHICAGO

SUBJECTIVE WELL-BEING OF INNER-CITY
RESILIENT AND NON-RESILIENT YOUNG ADOLESCENTS

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

DEPARTMENT OF PSYCHOLOGY

BY

LYNDA L. CAFASSO

CHICAGO, ILLINOIS

JANUARY, 1998

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DEDICATION

This work is dedicated to my parents Dr. Fred A. Cafasso and Lousie M. Cafasso, M.A.

Their influence on this work began in my childhood in which they stimulated my intellect and developed my self-confidence. Throughout the years their endless gifts of time, love, support, encouragement, advice and intellectual dialogue made it possible for me to peruse my dreams. With their presence in my life I have always had role models of both superior professionals and superior people.

The words of Sir Isaac Newton apply to this dissertation: "If I have seen far, it has only been from standing on the shoulders of giants."

Mom and Dad, Thank you.

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INTRODUCTION

Within the discipline of developmental psychopathology, a great deal of attention has been given to the characteristics of and pathways towards resilience in children thought to be at-risk for psychiatric disorder. Resilience has been defined as "... the process of, capacity for or outcome of successful adaptation despite challenging or threatening circumstances" (Masten, Best, & Garmezy, 1990; p.426). Sroufe and Rutter (1984) state:

Within prospective, longitudinal risk research one examines not only the different developmental course of risk subjects and controls, but especially, the development of those at-risk subjects who do not develop the disorder... By thoroughly understanding factors that pull subjects toward or away from increased risk at various age periods, one not only acquires a deeper understanding of development (one goal of this field) but also gains valuable information for primary prevention. Thus, individuals who never show clinically disordered behavior may offer as much to our inquiry as those who are severely maladapted. (p. 19).

Much of the early research concerning childhood resiliency focused on defining risk situations and differentiating resilient and non-resilient children. As knowledge in the field progressed, factors which promoted resiliency were identified. Recent work has focused on manifestations of resiliency across domains of functioning and has opened up a Pandora's box of definitional problems as traditional definitions of resiliency are challenged. The impetus of the current rethinking of central constructs was research

findings suggesting that there may be an emotional cost associated with resiliency in children. Inner-city resilient adolescents have been found to suffer from internalizing symptomology such as anxiety and depression. Thus, while functioning well overtly, some resilient adolescents are suffering psychologically.

The purpose of the proposed research is to examine the subjective well-being of inner-city resilient young adolescents and in so doing expand the range of adaptational outcomes researched on this population. To date, resiliency research focused on psychological functioning has primarily investigated indicators of negative adaptation. However, the most widely accepted model of subjective well-being asserts that well-being is comprised of a cognitive component and two affective components, one positive and one negative. The goal of this research is to examine the three components of subjective well-being in a population of resilient young adolescents.

CHAPTER 1

A REVIEW OF RESILIENCY RESEARCH

“Stress-resistant”, “invulnerable”, and “resilient” are terms which have been used to describe children who experience extreme amounts of stress but are free of resulting psychosocial and psychological disorders. Research concerning resilient children represents a shift in focus away from examinations of mentally ill populations towards populations that are “mentally healthy”. Ironically, it was only through research on children thought to be at risk for poor adaptation or mental illness that the concept of resiliency was first formulated. Anthony (1974) introduced the label of “invulnerable child” to describe children who obtained psychological health despite experiencing psychological distress, severe chronic stressors early in life, and had a parent who was manic-depressive or schizophrenic. Garmezy (1984) longitudinally studied children who had been determined to be at high risk of developing adult schizophrenia as a consequence of a parents’ diagnosis of the disorder. He found that 88-90% of the children did not become schizophrenic and that only 10-12% developed any mental health problems as adults. Emmy Werner’s longitudinal study of the children of Kauai, Hawaii (Werner and Smith, 1977) was of seminal importance in highlighting the existence of resilient children among children who had been considered “vulnerable”. In Werner’s

study vulnerable children experienced problems such as: birth complications, living in poverty, homes with family discord, low levels of parental support, low parental education, or parents with mental illness. One out of three of these “vulnerable children” did not suffer from behavior problems or overt forms of mental illness. These “resilient children” developed into successful adolescents and young adults. They did not drop out of school, they obtained jobs, became productive members of society, many enjoyed a family life involving marriage and parenthood and they appeared to be confident individuals. Werner coined the phrase “vulnerable but invincible” to describe this group of children (Werner & Smith, 1982).

Research has shown children demonstrating resiliency within populations of children living in war zones (Garbarino, 1991), in poverty (Garmezy, 1991), within dysfunctional families (Werner & Smith, 1982), children who suffered from birth complications (Sameroff, 1986) and chronic illness (Hauser, Vieyra, Jacobson & Wertlieb, 1985), victims of child abuse (Mzarek & Mzarek, 1987), institutionalization (Rutter & Quiton, 1984), and children whose parents suffer from psychiatric disorders (Beardslee & Podoresfsky, 1988).

Acknowledgment of Risk Situations

Early research in the area of children's psychiatric disorders focused on single variables as causes for poor functioning. However, the discovery of resilient children in the various populations listed above has produced an appreciation for the numerous

negative events and influences which confront resilient children in each of these situations. That is, resilient children are not exposed solely to one stressor but to an accumulation of stressors which together constitute a risk situation within which the children must live. Acknowledgment of risk situations has produced lists of environmental risk factors which have been shown to be associated with children's socio-emotional and cognitive development (Sameroff, Siefer, Barocas, Zax, & Greenspan, 1987). These risk factors are: chronic maternal mental illness; high maternal anxiety; rigidity or flexibility in the attitudes and beliefs mothers had with reference to their child's development; lack of spontaneous positive maternal interactions with the child during infancy, occupation of head of household (semiskilled or less considered high risk), low maternal education (lack of high school degree considered high risk), disadvantaged minority status, low family support (absence of father in home considered high risk), stressful life events, and a family size greater than four or more children (Sameroff & Fiese, 1990; p. 121). Other risk factors have been identified by Rutter (1979; 1981), Garmezy (1991), and Werner (1993): marital discord, maternal psychiatric disorder, low socioeconomic status, urban residency, chronic discord in the family, paternal criminality, and admission of the child into the care of local authorities.

Research concerning risk factors found that the type of risk factor the child is exposed to is not the key element. Rather, negative outcomes were best predicted by the number of cumulative risk factors. Sameroff (Sameroff et al., 1987) investigated the

relationship between the accumulation of risk factors and preschool children's verbal intelligence as measured by the WPPSI. One or two risk factors did not have serious detrimental effects on children's verbal intelligence. A threshold of accumulation of risk was reached, however, when the number of risk factors increased from two to four, and a decrease in IQ score was observed. This threshold effect was again reached when the number of risk factors reached six or greater. A similar pattern of results emerged from Rutter's (1979) Isle of Wight study of resilience in children. It was found that the simultaneous existence of two or more risk factors was related to an increased probability of later psychiatric disorder, however, the existence of one risk variable "in isolation" of other risks did not have a detrimental effect on future functioning.

To capture the landscape of stressors and risk factors experienced by resilient children, Sameroff's (Sameroff & Chandler, 1975) transactional model has been utilized. The transactional model posits that an individual and his/her environment engage in bi-directional influence through a dynamic process during development. To adequately measure the stressful environment within which the resilient child is functioning, assessments of variables at various levels of an ecological model (Bronfenbrenner, 1986) is necessary. Resiliency researchers (Garmezy, Masten & Tellegen, 1984; Luthar, 1991) have found that assessment of risk via the transactional model provides a better index for prediction of adaptation than does the linear life events model traditionally used in stress and coping research (Lazarus & Folkman, 1984). Luthar and Zigler (1991) reviewed the

research on these differing methodologies and report that the life events method results in correlations between stress and adjustment in the range of .30-.40. In contrast, research conducted with multiple measures of risk consisting of environmental and life event variables obtained multiple correlations of .60-.80 between risk and adjustment.

Given that children living in situations of high risk are confronted with multiple stressors the question which arises is: Why do some children manage to cope successfully with severe adversity while other children are detrimentally affected?

Protective Factors

Early work in the field of resiliency focused on identification of personal attributes and types of interpersonal relations which are commonly observed among resilient children. These factors have been labeled “protective factors” and were defined by Rutter (1985) as those which “modify, ameliorate, or alter a person’s response to some environmental hazard that predisposes to a maladaptive outcome.” (p.600). Garmezy (1985) organized the disparate findings of numerous researchers into three categories of protective factors:

Factor 1: Positive Dispositional Attributes of the Child

Werner (Werner & Smith, 1982) identified four characteristics of resilient children hypothesized to play a role in their adaptational success: they take an active problem-solving approach to difficulties, they have an ability and a tendency to reframe their challenges in a constructive manner, they obtain attention from others and this

attention is almost exclusively of a positive nature, and they have a strong sense of faith. Additionally, Werner and her colleagues noted that resilient children tended to be independent and have well-developed social skills. Rutter (1987) found that resilient children have a temperament which draws people towards them rather than away from them. Other protective factors were a positive self-concept (Garmezy, 1991), a good sense of humor (Masten, 1982), and an internal locus of control (Luthar, 1991; Murphy & Moriarty, 1976). Beardslee et al. (1988) noted that resilient children have the ability to realize that they did not cause their parent's illness. As a result, resilient children are able to detach themselves from their parents periodically, manifesting the independence noted by other researchers.

Factor 2: Supportive and Warm Family Situation

Werner (Werner & Smith, 1982) found that at least one caregiver was present to provide the resilient children in her study with a close emotional bond. During the first two years of life resilient children, as compared to non-resilient children, had a positive bond with their mothers and did not experience significant periods of bond disruption. It was also found that, as they entered early adolescence, resilient children were required to perform a socially desirable task to help others such as working part-time, caring for younger siblings or managing the house. This “required helpfulness” has been noted by resiliency researchers to have protective effects against chronic and severe stress (Anthony, 1974; Clark, 1983). Other investigations noted the close relationship with one

parent (Rutter, 1985), the clear and distinct roles of parent and child which provided structure, the cleanness of the home, and the presence of books (Garmezy, 1991).

Resilient children have also been found to plan their family lives as adults (Rutter & Quinton, 1984; Werner & Smith, 1992). Choice of spouse, living environment, career path, and childrearing were issues resilient adults report carefully planning so as to reduce the probability of creating a risk environment for themselves.

Factor 3: Sources of Support that are External to the Family

One of the richest sources of social support outside the family is the school environment. Rutter (1987) stated that schools which foster participation and responsibility among the students could serve as protective factors. It is important for a child to receive a sense of achievement due to accomplishing a task or performing well on an assignment (Garmezy, 1991). This achievement causes school to become a positive environment for children and can lead to increases in their self-esteem. School ties may buffer the negative effects of home-based stress (Dubois, Felner, Brand, Adam, & Evans, 1992). A close relationship with a teacher may serve as a role model for resilient children (Werner & Smith, 1982) and the impact of classmates as sources of social support and friendship is also beneficial. In fact, resilient children have been found to rely on informal forms of social support more frequently than professional services (Werner & Smith, 1992) and to seek out these supports on their own (Murphy & Moriarty, 1976).

Each of these factors operating alone can have beneficial effects on the psychosocial and psychological functioning of resilient children. However, an interaction of adaptive behaviors and characteristics in all three domains serves to enhance functioning for most resilient children (Garmezy, 1987; Rutter, 1985). If a resilient child experiences difficulties in one domain, coexisting positive factors within the other two domains are available to protect the child from negative impact (Radke-Yarrow & Brown, 1993). The presence of these three factors would be beneficial to any child, resilient or non-resilient. However, the three factors described above only exhibit a protective effect when they occur in combination with one or more risk factors; protecting the child from the negative effects of risk. Thus, it is not simply the presence of these protective factors which gives rise to resilience, but the interaction of these personal variables with environmental risk variables (Rutter, 1987).

In early resiliency research protective factors were assumed to operate in only an additive fashion with higher levels of a factor being associated with better adjustment. For example, a child experiencing high stress and a high level of social support from a consistent caregiver was expected to function better than a child experiencing a similar level of stress and no social support. However, as theoretical work in resiliency has developed so too has a more sophisticated understanding of how protective factors interact with stress to influence adjustment. Rutter (1990) has suggested that research designed solely to increase the list of known protective factors is of limited utility.

Instead Rutter suggests that the “processes” and/or “mechanisms” through which these variables impact upon a child’s functioning be examined. To clarify this point Rutter (1990) stated:

Many vulnerability or protective processes concern key turning points in people’s lives, rather than long-standing attributes or experiences as such... the turning point arises because what happens then determines the direction of trajectory for the years that follow. It seems helpful to use the term “protective mechanism” when a trajectory that was previously a risk one is changed in a positive direction to one with a greater likelihood of an adaptive outcome...Conversely, the process will be labeled a vulnerability process when a previously adaptive trajectory is turned into a negative one...The point of emphasizing the turning points that change a developmental trajectory is to focus attention on the process involved. (p.187)

Resilience is not considered to be a static characteristic of an individual but rather a dynamic process shaped at key points (e.g. turning points) in development (Egeland, Carlson & Sroufe, 1993). An example of the dynamic nature of resilience is illustrated in Werner’s (Werner & Smith, 1982) finding that boys appeared to be more vulnerable than girls to cumulative life stress during childhood, while girls exhibited more vulnerability than did boys during adolescence. In a similar vein, Masten and colleagues (Masten, Garnezy, Tellegen, Pellegrini, Larkin & Larsen, 1988) found that many children who were considered resilient in middle childhood, experienced adjustment difficulties upon entry into adolescence and were not considered to be resilient adolescents. Age and gender differences in resilience may reflect differences in the types of risks and stressors experienced and the form of the coping strategies utilized by the child (Masten, et al.,

1990). The appropriateness of a coping strategy is dependent upon the developmental level of the child and the controllability of the stressor (Compas, 1987). Thus, coping strategies that were effective in handling the stressors experienced during middle childhood may not be effective in handling the stressors experienced during adolescence. Rutter's (1990) argument for consideration of protective and vulnerability processes rather than protective and vulnerability factors takes into account two important points: 1) the manifestation of protection or vulnerability is context-dependent (Luthar, 1991; Werner & Smith, 1982) and 2) the dynamic nature of resilience throughout development (Egeland, Carlson, & Sroufe, 1993).

Definition of Successful Adaptation

Given that whether a child is classified as resilient can change during development, does the definition of resilience change according to a child's developmental level?

Resilience has been defined in terms of "successful adaptation" (Masten, et al., 1990) and adaptation and competence have been defined as "...effective functioning in the environment as reflected in developmental tasks..." (Garmezy & Masten, 1991; p. 156). Thus, resilience can be considered to be defined in a flexible manner and may be classified as a developmentally appropriate construct. However, what has traditionally not been flexible in resilience research are the domains of adaptation within which resilience has been defined.

Typical indicators of resilience across developmental levels are social competence, academic achievement (Luthar & Zigler, 1991; Luthar, 1993) and the lack of a clinically diagnosed mental health disorder (Radke-Yarrow & Sherman, 1990). A child who was exposed to a risk situation who was not clinically diagnosed as having a mental health problem and who exhibited developmentally appropriate levels of social competence and academic achievement was considered resilient. In general, these indicators of resilience consist of overt, observable forms of functioning. Early research in the area (Anthony, 1974; Rutter, 1987) noted that resilient children presented themselves as happy, well-functioning children who performed at average or above average levels in school and were able to manage their responsibilities. An interesting new line of research has recently developed, however, which suggests that although resilient children are functioning well overtly, they are paying a price emotionally (Luthar & Zigler, 1991; Luthar, 1993)

The work of Luthar (1991; Luthar, Doernberger, & Zigler, 1993) has been of extreme importance in highlighting the emotional distress experienced by many resilient adolescents. Luthar's sample consisted of 144 ninth-grade students in an inner-city public school. Students were classified as resilient if they reported high stress, were rated high in at least one domain of competence by their peers or teachers, and satisfied other inclusion criteria (high stress/high competence). Resilient adolescents were compared to two other groups: those reporting high life stress who were rated very low in one social

competence domain (high stress/low competence), and those reporting low life stress who were rated high in social competence (low stress/high competence).

Luthar found that resilient adolescents experienced levels of depression and anxiety that were greater than their non-resilient peers. That is, adolescents who experienced high stress yet exhibited high social competence (i.e. resilient children) suffered from psychological distress at rates greater than children who were highly competent and experienced low stress (low stress/high competence). It was also found that the levels of depression and anxiety reported by resilient adolescents were similar to those of adolescents who also experienced high stress but exhibited low competence (high stress/low competence). Therefore, although resilient adolescents do not suffer from externalizing symptoms of poor mental health, resilient adolescents have been found to suffer from internalizing symptomology. In fact prospective analyses (Luthar, et al., 1993), revealed that when compared to their non-resilient peers (low stress/high competence), the levels of internalizing symptoms experienced by resilient adolescents increased over a 6 month period.

The implication of this work is that competence in one domain does not guarantee competency in other domains of functioning. Resilient adolescents who demonstrate strength in a domain of social competence may experience difficulty in psychological functioning manifested as depression and/or anxiety. In light of these findings it may be advisable to alter the manner in which resilience is conceptualized (Luthar, 1991; 1993).

The traditional definition of resiliency is based on overt manifestations of global social competence. This definition is limited in that it neglects attention to the psychological functioning of the resilient child/adolescent. Given that resilient adolescents have been found to suffer from psychological distress, discussions of resiliency in children or adolescents should incorporate information about both their overt behavior and their internal emotional state.

Luthar's (1991; 1993) investigations of resilience have contributed greatly to our understanding of resiliency. However, to date only indices of negative psychological functioning have been examined within a population of adolescents. Given that some of the factors that caught the attention of early resiliency researchers were the optimism, humor, positive self-concept, and easy temperament of resilient children, a research focus limited to indicators of distress is analogous to taking a "glass half empty" approach to a glass that may be more than half full. Expanding the range of psychological constructs studied could significantly contribute to our understanding of resilience in children and adolescents.

CHAPTER 2

DESCRIPTION OF PROPOSED RESEARCH:

SUBJECTIVE WELL-BEING OF INNER-CITY RESILIENT

AND NON-RESILIENT YOUNG ADOLESCENTS

A great deal of attention has been paid to the negative aspects of psychological functioning in both adult and child populations. In fact studies of psychological distress, such as depression, anxiety, and other clinical disorders have dominated the psychological literature (Diener, 1984). It is well-known and well-documented, however, that in addition to negative situations, individuals also experience positive events and positive emotions throughout their lifespan (Bradburn & Caplovitz, 1965; Deiner, 1984; Diener, Colvin, Pavot & Allman, 1991; DeLongis, Coyne, Dakof, Folkman & Lazarus, 1982; Kanner, Feldman, Weinberger & Ford, 1987; Wilson, 1967). It is widely accepted that the processes that lead to positive psychological functioning are separate from the processes leading to negative psychological functioning (Bryant & Veroff, 1982; Reich & Zatura, 1981; Ryff, 1989; Veit & Ware, 1983; Zatura & Reich, 1983). An interesting corollary of these findings was the determination that positive psychological functioning was, by definition, more than the absence of negative psychological functioning (Bryant & Veroff, 1984). A non-depressed individual, for example, is not necessarily a happy

individual (Bryant, 1993). Distress and happiness have been found to be separate, but related, dimensions of mental health.

A great deal of research on these topics has occurred in the field of subjective well-being (SWB). Research with adults has identified three independent but interrelated factors of SWB: Positive affect, negative affect, and life satisfaction (Andrews & Withey, 1976; Diener, 1984). Positive and negative affect represent the affective component of SWB, and life satisfaction comprises the cognitive component, representing an individual's cognitive appraisals of their life quality (Bryant & Veroff, 1982; Veit & Ware, 1983) (see Figure 1). Positive and negative affect are often thought of as opposite ends of the same continuum, however, their independence has been demonstrated empirically across studies (Andrews & Withey, 1976; Bradburn, 1969; Costa & McCrae, 1980; Diener & Emmons, 1985) and they have been found to be inversely correlated. It is the relative balance of positive affect, negative affect and life satisfaction which produces an individual's level of SWB. High SWB has been defined as

“.. a preponderance of positive thoughts and feelings about one's life. At the cognitive level, SWB includes a global sense of satisfaction with life, fed by specific satisfactions with one's work, marriage, and other domains. At the affective level, people with high SWB feel primarily pleasant emotions, thanks largely to their positive appraisal of ongoing events. People with low SWB appraise their life circumstances and events as undesirable, and therefore feel unpleasant emotions such as anxiety, depression, and anger. (Myers & Diener, 1995; p.11).

Investigations into the correlates of SWB have found that demographic variables, such as age, gender, or income contribute little to the prediction of SWB (Diener, 1984; Myers & Diener, 1995; Wilson, 1967). However, many personality factors, such as extroversion, an internal locus of control, high self-esteem (Emmons & Diener, 1985), and the tendency to be emotionally involved with people instead of emotionally isolated (Wilson, 1967), have been found to be strongly related to high SWB.

Psychological distress, or poor mental health is often considered to be related to an individual's inability to cope effectively with negative experiences, but the relationship between positive experiences and psychological well-being has not received equal attention. If coping is seen as mediating the impact of stress upon SWB, what is the comparable process that mediates the impact of pleasant events on SWB?

The role of Savoring Beliefs in the promotion of Positive Subjective Well-Being

An answer to this question can be found in the work of Bryant (1989), who proposed the concept of savoring as one component in a four-factor model of perceived control. Bryant's four factors, avoiding and coping with negative experiences and obtaining and savoring positive experiences, arise from crossing primary control (over events) and secondary control (over emotional response to events) with positive and negative experiences (see Figure 2). Savoring beliefs reflect an individual's perceived control over positive feelings, or their perceived ability to derive enjoyment from positive events. Calling a friend to share the good news when you find out you got a new job can

enhance the benefits of positive outcomes (Langston, 1994); or looking at pictures to rekindle the happy feelings from your last vacation may help one savor positive outcomes retrospectively.

Three correlated subtypes of savoring beliefs exist which embody different temporal orientations to positive experience. People have beliefs about their capacity to derive pleasure through: (1) anticipating future positive events (2) savoring positive events in the moment, and (3) reminiscing about positive events in the past (Bryant, 1993). When individuals actively savor, they engage in thoughts and/or actions which generate, intensify, or prolong positive experiences (Bryant, 1993) and as a result, enhance emotional responses. Individuals who suffer the absence of positive psychological functioning may be unable to manage and maximize (cf. Langston, 1994) positive experiences in life through savoring, just as individuals who experience negative psychological functioning are unable to manage negative experiences in life through adaptive coping (Lazarus & Folkman, 1984). For example, adults who perceive they have personal control over positive events and respond expressively to those events experience greater positive affect than individuals who experience positive events but did not engage in expressive responses (Langston, 1994). This suggests that the perceived ability to control positive experiences is positively correlated with positive subjective well-being. Supporting this hypothesis, savoring beliefs have been found to have a strong positive relationship with indicators of positive psychological functioning (e.g. self-

esteem, optimism, internal locus of control, happiness, and life satisfaction) and a weaker negative relationship with indicators of subjective distress (e.g. hopelessness, negative affect, neuroticism and depression) in adult and adolescent populations (Bryant, 1989, 1992, 1993; Meehan, Durlak, & Bryant, 1993).

Research Concerning the Subjective Well-Being Dimensions and Savoring Beliefs in Young Adolescents

Although a great deal is currently known about the structure of SWB and the relationship between Savoring Beliefs and psychological functioning in adult populations, less attention has been given to investigation of these constructs in child or adolescent populations. Recently Huebner (1991a; 1994) has developed a children's measure of SWB which assesses the three factors identified in adult SWB research. This research suggests that there are parallels between adult and child populations in the structure and the correlates of SWB. Replicating the structure of adult SWB, Huebner (1991a) found three independent, but related, factors which represented children's SWB: Positive affect, negative affect and life satisfaction. Global life satisfaction was found to have a moderately strong positive relationship to positive affect ($r = .66$), and a small inverse relationship to negative affect ($r = -.13$, $r = -.33$). Also replicating findings in the adult literature (Myers & Diener, 1995), demographic variables such as age/grade, gender, parent's occupation, and parent's marital status were not significantly related to children's global life satisfaction (Huebner, 1991b). Children's life satisfaction, like that

of adults, was found to be significantly related to personality characteristics: Positive correlations were reported between global life satisfaction and self-esteem, internal locus of control, and extroversion, and negative correlations were reported between neuroticism, external locus of control, and anxiety and global life satisfaction. Huebner (1991b) stated:

“ These strong association between satisfaction and internal personality variables (e.g., self-esteem, locus of control) and the weak associations with demographic variables, suggest that objective circumstances (e.g., parents’ occupational status/SES) may have only an indirect effect on children’s well-being, and this effect may be mediated by individual personality differences. In other words, children’s global life satisfaction may be determined more by how they perceive their lives than the objective circumstances they encounter” (p. 109)

Savoring Beliefs of Young Adolescents

Young adolescents have been found to perceive the ability to control their positive emotional responses to positive events via savoring. Extending Bryant’s (1992; 1993) findings with adults, early adolescent’s savoring beliefs were found to be positively related to positive well-being (Cafasso & Bryant, 1996). The savoring beliefs of young adolescents are best described by one global savoring factor, while in adults savoring beliefs can be clearly differentiated with respect to temporal orientation to positive experiences (Bryant, 1992). The temporally undifferentiated savoring beliefs of young adolescents suggest that children in this age range do not make differing assessments of their ability to manage their positive emotions based on the time at which the antecedent positive experience occurred. In addition to demonstrating the salience of savoring

beliefs for young adolescents, research (Cafasso & Bryant, 1996) suggests that the developmental pattern of savoring beliefs in young adolescents may differ for boys and girls. A gender difference in the pattern of savoring beliefs was found in that mean levels of savoring beliefs remained stable across grades 5-8 for boys, while rising from grades 5 to 8 for girls. Savoring beliefs scores were significantly greater for girls than for boys in two of the grade levels examined: the 6th and 8th grades. Evidently, girls' perceptions of greater savoring ability emerge in grade 6, are dampened somewhat in grade 7, and then rise again in grade 8; boys' perceptions of lower savoring ability, in contrast, remain stably lower across grade levels. The gender differences found in the savoring beliefs of young adolescents are consistent with prior work of Bryant and his colleagues (1989, 1992) who observed similar gender differences in college-aged and older adult populations. Additionally, the correlates of young adolescents' savoring beliefs are similar to those of adults. Positive correlations were found between young adolescents' savoring beliefs and indicators of positive psychological functioning (e.g., positive affect, self-esteem, and well-being) and negative correlations were found between savoring beliefs and indicators of psychological distress (e.g., negative affect, depression, and anxiety).

Summary

Research concerning the structure of adult SWB has 1) identified three independent, but related, factors which comprise SWB (positive affect, negative affect,

and life satisfaction), and 2) suggested that positive psychological functioning is best conceptualized as more than the mere absence of distress. Savoring beliefs have been found to be important in promoting positive well-being in adults. Recently, both lines of research have been expanded to include children or young adolescents. The structure and correlates of children's SWB was found to be similar to that of adults, and savoring beliefs were found to be salient for young adolescents and positively correlated with indicators of positive psychological functioning.

Description of Proposed Research

The purpose of the proposed study is to integrate findings from two fields of research to further our understanding of the psychological functioning of resilient children. From the field of SWB research a multi-dimensional model of SWB has emerged. From the field of developmental psychopathology we have learned that some resilient adolescents suffer from internalizing symptomology. The synthesis of these two findings suggests that investigation of a wider range of mental health variables may be a fruitful area of research with a resilient population.

Specifically, the proposed study will examine the three factors of SWB (positive affect, negative affect, and life satisfaction) in a population of resilient young adolescents and in so doing expand the range of adaptational outcomes studied in this population. The importance of studying all three SWB factors is indicated by the following:

1) Distress and happiness have been found to be separate, but related, dimensions of mental health, with the absence of negative psychological functioning not implying the presence of positive psychological functioning (Diener & Emmons, 1985). Consequently it can be expected that knowledge of mean levels of positive psychological functioning in resilient and non-resilient individuals would be important information to ascertain in trying to understand the nature of resiliency.

2) A three-factor model of SWB has been discovered to be reliable for grade-school children (Huebner, 1991a) indicating that children's well-being is comprised of a cognitive and two affective components. Given that negative functioning has been studied in a resilient population this leads one to ask how important a role positive affect and life satisfaction play in resiliency.

3) Superior functioning on external indicators of social competence have been found to not be paralleled by superior psychological functioning for some resilient adolescents (Luthar, 1991). Thus the need to examine the psychological functioning of resilient individuals has been established.

The savoring beliefs of resilient and non-resilient young adolescents will also be examined. The positive relationship between savoring beliefs and indices of positive psychological functioning (Cafasso & Bryant, 1996) suggests that savoring is beneficial to young adolescents. Additionally, it is possible that savoring beliefs serve as a protective factor for resilient young adolescents. Protective factors are considered to be

factors "...either internal or external to the developing child [that] can exacerbate or diminish risk expression"(Rolf, Masten, Cicchetti, Neuchterlein, & Weintraub, 1990; p. 50) . Resilient young adolescents, are, by definition, exposed to multiple risks. If proximal risk and savoring beliefs significantly interact to influence positive affect or life satisfaction within a resilient population, it would suggest a protective effect of savoring (i.e. savoring diminishes the expression of risk).

Rationale for Studying an Inner-City Population

Previous research has defined inner-city residency as a risk factor for children and adolescents (Garnezy, 1991; Rutter, 1981; Luthar, 1991). Numerous known risk factors are associated with the economic disadvantage suffered by many families living in the inner-city (Sameroff, et al, 1987; Garnezy, 1983). Both direct and indirect negative effects of economic disadvantage upon children and adolescents have been found: The indirect effect of poverty is mediated by parental behaviors such as disruptions in effective parenting and marital discord (Conger, Conger, Elder, Lorenz, Simons & Whitbeck, 1992; Elder, Van Nguyen & Caspi, 1985), while direct effects of poverty include school quality and numerous stressful life events (McLoyd, 1990; Rutter, 1981). Stressful life events associated with inner-city residency are thought to be more prevalent for ethnic minority, than for majority, group members (Kessler, 1979). Stressful life events have been considered to be an index of proximal environmental experiences (Luthar, 1991; 1993) and it has been found that proximal experiences are an important

mediator of the effects of poverty on psychosocial functioning (Felner, Brand, DuBois, Adan, Mulhall, & Evans, 1995; McLoyd, 1990).

Rationale for Studying Resilient and Non-Resilient Young Adolescents

Resilience is considered to be a dynamic process shaped at key points in development (Egeland, et al., 1993; Rutter, 1990). This suggests that a child who demonstrates resiliency in one developmental period may not maintain the resilience in a later period (Werner & Smith, 1982). Thus it is important to understand the nature and correlates of resiliency within a single developmental period before contrasts and comparisons can be made between periods or before changes in resiliency can be understood as a function of time. The proposed study involves young adolescents for the following reasons:

1) Early Adolescence is an important developmental period.

As Barber & Crockett (1993) state:

Adolescence today is broadly perceived as a more difficult and dangerous period than in previous decades. Those holding this view point to increases in teenage pregnancy and childbearing, sexually transmitted diseases, alcohol abuse, drug addiction, juvenile arrests, depression, and suicide as indicators of changing conditions. Although uncommon in childhood, these problems increase in early adolescence, and they can lead to greater likelihood of negative developmental trajectories. (p. 311)

Young adolescents simultaneously remain within the family context (in contrast to older adolescents who are more autonomous) and are increasingly exposed to experiences external to the family, such as influences from school, peers, neighborhoods etc. Their

involvement with the family exposes young adolescents in the inner-city to the damaging effects of family economic disadvantage (Bolger, Patterson, Thompson, & Kupersmidt, 1995). Their involvement outside the family exposes young adolescents to the non-normative experiences (Larson & Ham, 1993) described above, such as drug use and sexual involvement. However, in addition to non-normative experiences, early adolescence is also a time within which numerous normative life changes occur. For example, the onset of pubertal changes (Tobin-Richards, Boxer & Peterson, 1983), and the strains that may accompany transition to Junior High School (Connell, 1985; Koizumi, 1995) are normative life changes that have been found to be associated with increases in psychological distress (Compas, Banez, Malcarne, & Worsham, 1991). Given this state of flux experienced by young adolescents, movement from adaptive to maladaptive trajectories (Rutter, 1990), or vice-versa, may be prevalent during this period.

2) Available materials are applicable to young adolescents.

Research concerning SWB in child or adolescent populations is limited. To date, only Huebner (1991a; 1994) has presented reliable and valid instruments assessing all three SWB factors. Huebners' scales were developed to be readable for children in the third to fifth grades and the proposed study will test the applicability of the scales to young adolescents in the 6th to 8th grades. The use of Huebner's scales with this population is appropriate given that students in the proposed study have reading scores averaging two

grades below grade level. Additionally, the Early Adolescent Savoring Beliefs Scale (YASBS) was found to be a reliable and valid measure of the savoring beliefs of young adolescents (Cafasso & Bryant, 1996).

3) This study will extend Luthar's (1991) classification method to an early adolescent population.

Luthar classified inner-city ninth grade students into four groups (high/low stress and high/low competence). Resilient adolescents were those subjects in the high stress/high competence group. The proposed study will apply Luthar's system to a younger age group. Utilizing a consistent methodology to define resilience among adolescents, young adolescents, or children will facilitate drawing meaningful comparisons among studies.

Specific Research Questions to be Addressed:

Question 1: What is the factor structure of SWB for young adolescents?

Question 2: Do resilient young adolescents differ from non-resilient young adolescents in absolute levels of the SWB factor(s)?

Question 3: Do resilient young adolescents differ from non-resilient young adolescents in savoring beliefs?

Question 4: Do savoring beliefs serve as a protective factor for resilient young adolescents?

CHAPTER 3

METHOD

Subjects

The sample consisted of 200 young adolescents in grades 6-8 enrolled in Gary Public Elementary School which is located in an inner-city area of Chicago. Ninety-eight percent (n=196) of the students were Hispanic. The four non-Hispanic subjects were excluded from the analyses in order to create a homogeneous sample of Hispanic students. Of the remaining 196 subjects, 77 (26 boys, 51 girls) were 6th graders, 65 (30 boys, 35 girls) were 7th graders, and 54 (23 boys, 31 girls) were 8th graders. The school is located in an economically disadvantaged neighborhood. Eighty-three percent of the students at the school are eligible for free lunch and an additional 8% are eligible for reduced lunch (an index of economic disadvantage - e.g. Seidman, Allen, Aber, Mitchell, & Feinman, 1994). Students who were enrolled in special education or bilingual classrooms were not asked to participate. Although every student in a traditional classroom was invited to participate in the study, data were obtained only from those subjects whose parents granted permission. Parental permission forms were written in both English and Spanish.

Materials

This section is composed of two parts. Part 1 concerns measures of Life Stress, Social Competence, and Savoring Beliefs. Descriptive information, reliability estimates (Cronbach's alpha's), and results of confirmatory factor analyses (CFA) are presented for each measure (with the exception of school records). CFA were used to compare the goodness-of-fit of alternative measurement models of Daily Hassles, Peer-Rated Social Competence, and Savoring Beliefs. Part 2 contains descriptive information and reliability estimates (Cronbach's alpha's) for the Subjective Well-Being measures. CFA for the SWB measures are presented in the Results section because the examination of the structure of SWB of young adolescents is a primary research question of the present work.

Part 1:

Life Stress Measures:

Daily Hassles Microsystem Scale (Seidman, Allen, Aber, Mitchell, Feinman, Yoshikawa, Comtois, Golz, Miller, Ortiz-Torres, & Roper, 1995).

This measure was designed to assess daily hassles within the family, peer, school, and neighborhood microsystems of poor inner-city adolescents. There are 28 items for which children respond "Yes" or "No" as to whether the hassle occurred within the past month. If the hassles occurred the children rate how much of a hassle it was on a 4-point scale (1=not at all a hassle; 4=a very big hassle). Siedman et al. (1995) identified a five-factor

solution via principle components analysis which best described children's experiences with daily hassles. In addition to the four hypothesized factors, a fifth factor, labeled "resource hassles," was added to reflect problems relating to lack of resources. Cronbach's alphas for this sample were found to be .42 for the school subscale, .58 for the family subscale, .27 for the neighborhood subscale, .46 for the friends subscale, and .37 for the resource subscale. Although some of these internal consistency reliability's are relatively low, acceptable test-retest and validity data has been reported previously (Siedman et al., 1995). CFA were used to compare the goodness-of-fit of the five-factor model, the originally hypothesized four-factor model, and a one-factor model representing overall hassles (see Table 1). Although the 5-factor model does provide a significant improvement in fit compared to the one-factor and four-factor models ($\Delta\chi^2(9, n=196) = 49.68, p<.001$) and was found to achieve the highest goodness-of-fit index, the one-factor model was used as an index of global daily stress in the present study because of the very low reliability of the five subscales. Cronbach's alpha was found to be .77 for the one-factor overall daily hassles model.

Life Events Survey (Ge, Lorenz, Cogner, Elder, & Simons, 1994) This is a measure of uncontrollable life events based upon the Junior High Life Experiences Survey (JHLES); (Swearingen & Cohen, 1985). The current 25-item scale differs from the original in that desirable or controllable life events which appeared on the original JHLES were removed and items reflecting uncontrollable problems with close friends

were added. Subjects respond “Yes” or “No” as to whether each particular event has occurred within the past year. The frequency of negative life events is obtained by summing affirmative responses. To replicate the format of the hassles scale also used in this study, subjects rated the severity of the negative life events which occurred using a 4-point scale (1=not at all a problem; 4=a very big problem). Although acceptable reliability and validity data have been reported previously (Swearingen & Cohen, 1985), the reliability in this sample was found to be unacceptably low (Cronbach’s alpha = .60) and, thus this scale was not used in the analyses.

Social Competence Measures:

Revised Class Play Method of Peer Assessment (Masten, Morison & Pellegrini, 1985). This scale assesses peer reputation through the use of an imaginary play in which the students pretend they are the directors of the play and cast their classmates into various roles. There are 30 roles: 15 positive (e.g. someone you can trust) and 15 negative (e.g. someone who picks on other kids). To eliminate gender bias, the class play was administered twice to each group of students: first the play was cast with the boys as the actors, then the play was re-cast with the girls as the actors. Subjects could select the same classmate for multiple roles, however they could not cast themselves in any role. Masten and colleagues (Masten et al., 1985) identified a three-factor structure for the Revised Class Play: A positive dimension labeled Sociability-Leadership, and two negative dimensions labeled Aggressive-Disruptive and Sensitive-Isolated. Masten et al.

(1985) report Cronbach's alphas ranging from .95 to .93 for the Sociability-Leadership factor, .93 to .90 for the Aggressive-Disruptive factor, and .85 to .81 for the Sensitive-Isolated factor. The temporal stability of the three factors over a six-month interval for girls and boys in grades 3 to 6 range from .85 to .93 for the Sociability-Leadership factor, .64 to .84 for the Aggressive-Disruptive factor, and .65 to .88 for the Sensitive-Isolated factor. Subjects' scores on this measure consist of the number of nominations they receive for each of the 30 items (roles in the play).

As suggested by Masten et al. (1985), scores in the present study were standardized within grade and gender to take into account the number of subjects creating the scores and the number of classmates available to nominate. Exploratory principal components analysis revealed a five-factor solution for this measure (sociability/leadership, aggressive/disruptive, helpful/polite, isolated/sad, and positive affect). Confirmatory factor analyses (CFA) were used to compare the goodness-of-fit of Masten's three-factor model and a confirmatory version of the five-factor model. As can be seen in Table 2, the five-factor model, while not achieving an acceptable goodness-of-fit index, does provide a highly significant improvement in fit as compared to Masten's three-factor model ($\Delta\chi^2(7, n=196) = 305.21, p < .0001$). Because the social competence measure was to be used to classify subjects as resilient and non-resilient and one of the subjective well-being variables of interest is positive affect, using the positive affect subscale of the five-factor model would introduce a confound into the design. Thus, a

four-factor model (the five-factor model excluding the positive affect subscale items) was imposed on the data via CFA (see Table 2). Because the four-factor model and Masten's three-factor model are not nested, the change in chi-square value across these two models cannot be computed. However, the goodness-of-fit index for the four-factor model (.74) was higher than that of Masten's three-factor model (.60).

Subjects were classified into Resilient and Non-Resilient groups using both the three- and four-factor models. Only one subject was classified differently as a function of the model used. The classification procedure utilizing Masten's three-factor model classified 37 subjects as resilient², while classification via the four-factor model classified 36 subjects as resilient. Because of the similarity in the group composition using the two methods, concerns about statistical power, and most importantly, the fact that Masten's three-factor model had prior conceptual grounding in the literature, Masten's three-factor model of social competence was used to classify participants into resilient and nonresilient groups in all analyses reported here.

School Records. Academic records including report card grades, standardized test scores (IOWA test of basic skills), and attendance records were obtained from the subjects' school registration cards.

Savoring Beliefs:

Young Adolescents' Savoring Beliefs Scale (YASBS; Cafasso & Bryant, 1996).

This measure is an adaptation of Bryant's (1992) original Savoring Beliefs Scale. The

SBS assesses people's perceptions of their ability to derive pleasure through anticipation of future positive events, savoring present positive moments, and reminiscing about past positive experiences. The 24 SBS items (half positively-anchored and half negatively anchored) were rewritten to facilitate understanding by school-aged children. The revised scale was analyzed by the "Correct Grammar" (Wilson, 1990) reading-level program and was found to be readable by subjects at a 5th grade reading level. Cafasso and Bryant (1996) reported that YASBS scores are internally consistent for both boys and girls across grades 5-8, with alphas ranging from .84 to .93. Results from Cafasso and Bryant's (1996) CFA suggested that one global factor underlies the YASBS. Adding "measurement method" factors that reflect positively-and negatively-anchored YASBS items raised the goodness-of-fit index of the one-factor model to .91, providing a reasonably good measurement model for the data (Cafasso & Bryant, 1996). Replication of these findings with the current sample revealed that a one-factor model, combined with positive and negative measurement method factors, provided a significant improvement in fit as compared to an alternative one-factor and a three-factor model ($\Delta\chi^2(24, n=196) = 226.83, p < .001$) (Table 3). The YASBS Total Score was used in the present study and was found to be internally consistent (Cronbach's alpha = .83).

Part 2:

Subjective Well-Being Measures:

Multidimensional Student's Life Satisfaction Scale (MSLSS; Huebner, 1994).

This is a 40-item measure of life satisfaction, appropriate for students in the 3rd to 5th grades. Items are designed to assess children's satisfaction in five domains of life: family, friends, school, living environment, and self. The response format is a 4-point scale corresponding to how often the children experienced life-satisfaction: (1) never, (2) sometimes, (3) often, or (4) almost always. High scores on the MSLSS indicate high life satisfaction (half of the items are negatively worded and are reverse scored, thus higher scores indicate higher levels of life satisfaction). Acceptable reliability and validity coefficients have been reported for this scale (Huebner, 1994). In the present study, Cronbach's alpha was .92 for the total score, .79 for the family subscale, .82 for the friends subscale, .83 for the school subscale, .82 for the living environment subscale, and .78 for the self subscale. The results of CFA examining the structure of this measure for the present data are reported in the results section.

Positive/Negative Affect Scale (Huebner, 1991a). This scale consists of 10 positive affect and 10 negative affect items based upon the work of Diener (e.g. Diener & Emmons, 1984), and has been shown to be appropriate for students working at a third grade level. The items consist of statements such as "I feel happy" and "I feel scared" assessing the frequency with which children feel these emotions on a four-point scale:

(1) never, (2) sometimes, (3) often, and (4) almost always. High scores indicate high affect. The results of CFA examining the structure of this measure for the present data are reported in the results section.

Procedure

The purpose of the research and the procedure for data collection were explained to the administration and faculty. A parental permission letter was sent home with each child, explaining the study and providing the parents with an opportunity to call the researcher if any questions arose. Parents indicated permission through a consent form which the student returned to the school (see Appendix). Because no form of deception was used in this study, the procedure was explained to everyone involved. The procedure and the purpose of the study was explained to the subjects before data collection began. Subjects were allowed to end their participation in the project at any time during data collection without penalty.

The subjects were tested in their classrooms. Each student who had returned a parental consent form was given a packet of questionnaires. The experimenter explained that this study was designed to find out how people their age handle their emotions and how they have been feeling lately. The subjects were told that their responses would remain anonymous and confidential. The experimenter fully explained the concept of confidentiality and how it allows people to respond honestly. The experimenter read all items. The experimenter or the classroom teacher answered requests for clarification.

CHAPTER 4

RESULTS

The results of the present study are presented in the following manner: The first section consists of an examination of the SWB of young adolescents. Specifically, Research Question 1: What is the factor structure of SWB for young adolescents? is addressed. The second section concerns classification of the young adolescents into the resilient and non-resilient groups. The classification method suggested by Luthar (1991) is applied, as well as a number of alternative classification methods. The third section contains an examination of the SWB of the resilient and non-resilient groups.

This section addresses Research Question 2: Do resilient and non-resilient young adolescents differ in mean levels of the SWB factor(s)? The fourth and final section contains an examination of the savoring beliefs of the resilient and non-resilient groups.

Two research questions are addressed in this section, specifically: Research Question 3: Do resilient and non-resilient young adolescents differ in savoring beliefs?, and Research Question 4: Do savoring beliefs serve as a protective factor for resilient young adolescents?

Examination of the SWB of Young Adolescents

This section will present the results of confirmatory analyses examining the structure of SWB, which involve the Positive/Negative Affect Scale and the Multidimensional Students' Life Satisfaction Scale. Additionally, results pertaining to the relationship among the SWB factors will be presented.

Research Question 1: What is the factor structure of SWB for young adolescents?

The purpose of this set of analyses was to test the hypothesis that the SWB of young adolescents is multidimensional. Confirmatory factor analysis (CFA) via LISREL 7 (Joreskog & Sorbom, 1989) was used to evaluate the goodness-of-fit of alternative measurement models of SWB. The analyses in this study were not intended to find the best-fitting measurement model for the data. Instead, these analyses were conducted to contrast alternative models to test hypotheses about the structure of SWB. Significant changes in chi-square values were used to evaluate hypotheses about which model(s) provided a better representation of the observed data. In testing these models an a priori structure was imposed on the data. Specifically items were allowed to load only on a specific factor based on the particular model. The items were forced to have a loading of zero on the other factors. The procedure allowed the factors to relate to one another and the program calculated the factor intercorrelations. Each LISREL analysis provided a goodness-of-fit chi square statistic used to assess how well the model fit the data. Each

analysis also provided a goodness-of-fit index (GFI; Joreskog & Sorbom, 1989) which reflects the proportion of common variance explained by the model.

The analyses were conducted in five parts. The cognitive (life satisfaction) and affective (positive and negative) components were examined separately (Parts 1 and 2), followed by analysis of the cognitive and affective components together in an overall model of SWB (Part 3). The relationships among the SWB factors are reported (Part 4). The final section (Part 5) presents results pertaining to demographics and the SWB factors.

Part 1: The Structure of Life Satisfaction

CFA was used to compare the goodness-of-fit of two competing models of Life Satisfaction. The first model is a unidimensional model that assumes Life Satisfaction reflects a single global factor (global Life Satisfaction). This model is consistent with use of total scores to represent Life Satisfaction. The second model is a multidimensional one that assumes Life Satisfaction consists of five different dimensions, namely satisfaction with family, friends, school, living environment, and self. This model is based on the work of Huebner (1994).

Table 4 presents the results of these analyses. Although the unidimensional model is internally consistent (Cronbach's $\alpha = .89$) it explains only 57 % of the common variance among the life satisfaction items. It was hypothesized that Huebner's (1994) five-factor model would provide a significant improvement in goodness-of-fit

relative to the one-factor model. Confirming this hypothesis, the 5-factor model was a significant improvement in fit ($\Delta\chi^2(10, n=179) = 741.26, p < .001$) over the one-factor model, and increased the amount of common variance explained to 74%. These analyses suggest that a more reasonable structural model for life satisfaction than total score given the observed data is a multidimensional model with 5 internally consistent factors, representing satisfaction with family (Cronbach's alpha = .84), friends (Cronbach's alpha = .83), school (Cronbach's alpha = .80), living environment (Cronbach's alpha = .70), and self (Cronbach's alpha = .70). These results confirm the model of life satisfaction proposed by Huebner (1994).

Part 2: The Structure of Affect

CFA was used to compare the goodness-of-fit of two competing models of Affect. The first is a unidimensional model that assumes affect reflects a single global factor (global Affect). The second model is a bidimensional one that assumes affect consists of two related dimensions: Positive Affect and Negative Affect. This model is based on a growing body of literature (Diener & Emmons, 1984) that supports the bidimensionality of affect.

Table 4 presents the results of these analyses. The unidimensional model is not internally consistent (Cronbach's alpha = .61), and explains only 70% of the common variance among the affect items. The bidimensional model, with separate factors representing positive and negative affect, provides a significantly better fit to the data

($\Delta\chi^2(1, n=179) = 225.43, p < .001$), and explains 85% of the common variance among the affect items. The positive affect (Cronbach's alpha = .85) and the negative affect (Cronbach's alpha = .80) scales were found to have acceptable internal consistency reliability. These analyses suggest that a two-factor model with separate positive and negative factors is a more reasonable structural model of affect than is a one-factor model.

Part 3: The Structure of SWB

Combining measurement models of Life Satisfaction and Affect, it was hypothesized that SWB is multidimensional, and consists of three independent, yet related, factors namely-- Life Satisfaction, Positive Affect, and Negative Affect. To test the multidimensionality hypotheses, CFA was conducted using all three scales in combination. Five different measurement models were tested and the change in goodness-of-fit associated with the models and the amount of common variance explained were used to test hypotheses about which of these models was the most reasonable representation of the data. These five models were: a) a one-factor model that assumed a global structure of SWB, b) a two-factor model that assumed a one-factor structure for Life Satisfaction and a one-factor structure for Affect, c) a three-factor model that assumed Life Satisfaction was unidimensional but Affect was bidimensional with separate factors representing Positive and Negative Affect, d) a six-factor model that considered Affect to be unidimensional but Life Satisfaction to be multidimensional

consisting of five interrelated factors representing different domains of life, and e) a seven-factor model that treated both Life Satisfaction and Affect as multidimensional. This model can be thought of as the combination of the two most reasonable models found for Life Satisfaction (5-factors) and Affect (2-factors) when these constructs were considered separately.

The results of these analyses are also presented in Table 4. The first model tested was a one-factor model representing global SWB. This model accounted for 52% of the common variance among the set of SWB items. The second model tested considered SWB to be comprised of two correlated factors representing the affective and the cognitive dimension of SWB. A three-factor model was also tested which consisted of two affect factors representing positive and negative affect and one factor representing global life satisfaction. The 2-factor (affect and satisfaction) and 3-factor (positive and negative affect, satisfaction) models provided significant reductions in chi-square values and increases in the percent of common variance explained. However, all three of these models treated Life Satisfaction as a unidimensional construct and explained only about half of the common variance in the data. Recall from the earlier analyses that a 5-factor structure was a more reasonable model for life satisfaction than was a one-factor model. Accordingly, the next SWB model evaluated treated Life Satisfaction as multidimensional. This six factor model consisted of the five Life Satisfaction factors and one factor representing overall affect. The six factor model explained 62% of the

variance in SWB and provided a significant decrease in chi-square value relative to the 3-factor model ($\Delta\chi^2(12, n=175) = 580.77, p < .001$). The final model tested was a 7-factor model. It was hypothesized that the 7-factor model which treated both Life Satisfaction and Affect as multidimensional would fit the SWB data better than any of the alternative measurement models. Confirming the hypotheses (see Table 4) the 7-factor model explains more common variance in SWB (67%) than did the 6-factor model; and most importantly, the 7-factor model provided a significantly better fit to the data ($\Delta\chi^2(6, n=175) = 229.49, p < .001$).

Summary The above analyses suggest that a multidimensional model is a more accurate conceptualization of SWB than is a unidimensional model. Confirming hypotheses, a multidimensional model which treated positive affect, negative affect and life satisfaction as distinct, yet related factors, was found to be a more reasonable representation of the data than a unidimensional model. The 7-factor model of SWB differs from the hypothesized 3-factor model in that Life Satisfaction was found to be multidimensional, composed of 5 factors. Thus, young adolescents' SWB appears to be most reasonably represented by a 7-factor model, consisting of 5 Life Satisfaction factors and 2 Affect factors. In addition to the above empirical evidence for the 7-factor model providing a reasonable representation of the data, the 7-factor model has strong grounding conceptually (Huebner, 1991, 1994).

Part 4: The relationships among the factors

Table 5 presents the relationships among the seven SWB factors as found in the LISREL solution. The standardized Φ (phi) coefficients represent the proportion of variance pairs of factors share after removing the unreliability from each factor, and because they are standardized, they can be interpreted in the same way as Pearson correlations. All factor interrelations were in the expected direction, with the exception of those involving satisfaction with school. As seen in Table 5 school satisfaction is significantly related to all SWB factors except negative affect, and satisfaction with friends or self. However, school satisfaction was significantly related in the expected directions with positive affect and satisfaction with family and living environment.

These findings suggest that young adolescents' assessments of their satisfaction with school are separate from, and do not have implications for, their negative affect and their satisfaction with friends or self. The relatively modest interrelations among the 5 life satisfaction factors support the previous findings that life satisfaction should be conceptualized as a multidimensional, rather than a unidimensional, construct. The largest factor interrelationships were found between the family and living environment ($\Phi = .60$; $p < .001$), and the family and self, and friend and self factors (both $\Phi = .56$; $p < .001$), and the family and friend factors ($\Phi = .51$; $p < .001$). These moderately strong relationships suggest that young adolescents' assessments of their satisfaction with their family are related most strongly to their assessments of their satisfaction with their living

environment, followed by their satisfaction with themselves and their friends. Similarly, young adolescents' assessments of their satisfaction with themselves are strongly related to their assessments of their satisfaction with their friends. Positive affect was found to be highly correlated with satisfaction with self ($\Phi = .68$; $p < .001$), satisfaction with family ($\Phi = .65$; $p < .001$), satisfaction with friends ($\Phi = .59$; $p < .001$), and satisfaction with living environment ($\Phi = .52$; $p < .001$) suggesting that all the domains of life examined except that of school are highly related to positive affect. Confirming hypotheses, positive and negative affect were found to be only modestly and negatively correlated ($\Phi = -.48$; $p < .001$). This indicates that these forms of affect have a little less than one quarter (23%) of their variance in common. Thus, more than three times as much of their variance is unique as is shared. These findings also support the bidimensional conceptualization of affect reported above.

Part 5: Demographics and the SWB factors

Examination of grade and gender differences in the seven SWB factors was conducted through separate multivariate analyses of variance (MANOVA) for the affect and the life satisfaction factors. Specifically, a 2 (gender) x 3 (grade) MANOVA was conducted investigating gender and grade differences for the two affect factors (positive and negative). In conducting this analysis no strong a priori hypotheses were possible because this was the first study to examine these constructs within a young adolescent population. However, given the possible importance of gender and grade effects these

factors were investigated in a two-tailed manner. Another 2 x 3 MANOVA was conducted for the five life satisfaction factors (satisfaction with family, friends, school, living environment, and self). As with Affect it was not possible to make an a priori prediction of the direction of grade and gender differences.

Affect. There were no significant interaction effects. A significant main effect ($F(2,181)=4.63, p=.01$) of gender was found. To determine which dependent variables contributed to the significant multivariate main effect univariate main effects were examined. A significant univariate main effect for gender was found for negative affect ($F(1,182)=7.79, p=.006$), with girls reporting significantly higher negative affect than boys (see Figure 3). A significant multivariate main effect ($F(4,364)=3.08, p=.01$) of grade was also found. Examination of the univariate grade effects revealed a significant grade difference in positive affect ($F(2, 182) = .6.37, p = .002$). Follow-up analyses via Tukey post hoc comparisons one-way analysis of variance revealed that sixth grade students reported significantly higher positive affect than eighth grade students (see Figure 4).

Life Satisfaction. There were no significant gender x grade interaction effects for the five factors of life satisfaction. A significant main effect ($F(5,186)=5.05, p=.000$) of gender was found. Examination of the univariate main effects revealed a significant main effect of gender for the satisfaction with school factor was found ($F(1,190)=13.89, p=.000$), with girls reporting significantly higher satisfaction with school than boys (see

Figure 5). A significant multivariate main effect ($F(10,374)=2.27, p=.01$) of grade was also found. Examination of the univariate grade effects revealed significant univariate main effects of grade for three of the five factors: satisfaction with family ($F(2, 190) = 10.28, p = .000$), living environment ($F(2, 190) = 5.35, p = .005$), and self($F(2,190) = 3.18, p = .04$). Follow-up analyses via Tukey post hoc procedures were conducted. For family satisfaction, it was found that all three grades significantly differed from each other with average level of family satisfaction decreasing from the sixth to eighth grades. For satisfaction with living environment and self, it was found that sixth grade students reported significantly higher satisfaction than eighth grade students (see Figure 6).

Classification of Subjects into Resilient and Non-Resilient Groups

Luthar Classification Method

The Daily Hassles Microsystem Scale was used as the index of stress, and the three indices of peer rated social competence, school grades, and IOWA test scores were used as indicators of social competence. Subjects were classified according to the procedure described by Luthar (see Figure 7):

To define groups high and low on stress and competence, cutoff points were 1 SD above and below the respective group means. Four cells were defined, that is, high/low stress, by high/low competence. To be classified as being high (or low) in competence, subjects had to have scores in the upper (or lower) extreme on one or more competence composites. Individuals who were at the upper extreme in one area of competence but at the lower extreme in another were not used in the analyses. (1991; p. 609)

These analyses differed from Luthar's only in that individual scales of competence were used; composite competence variables were not formed¹. Luthar's method imposes stringent restrictions on classification. Subjects in the upper third of the stress distribution were considered "high stress". If a subject scored in the upper third of one or more positive competence distributions, did not score in the lower third of any competence distribution (positive or negative), and did not score in the upper third of either negative competence distribution, that subject was classified as "resilient" (high stress/high competence). If a subject in the "high stress" group did not score in the upper third of any distribution of positive competence, that subject was classified as "non-resilient" (high stress/low competence). Subjects in the lower third of the stress distribution were considered "low stress". If a subject scored in the upper third of one or more positive competence distributions, did not score in the lower third of any competence distribution (positive or negative), and did not score in the upper third of either negative competence distribution, that subject was classified as "non-resilient" (low stress/high competence). If a subject in the "low stress" group did not score in the upper third of any distribution of positive competence, that subject was classified as "non-resilient" (low stress/low competence).

As can be seen in Table 6, only 6 subjects (3% of the total sample) were classified as resilient via Luthar's methodology. Luthar (1991) found 6% of her sample of inner-city 9th grade students were resilient using the classification method described above.

Given the small sample sizes in the cells and the stringent cutoff points proposed by Luthar, an alternative method of classification was applied to the present data.

Modified Luthar Classification Method: Median Split on Stress Measure

This second method, labeled “Modified Luthar-Median Split on Stress,” differs from the original Luthar method only in that a median split was used to define low and high stress groups. The stress distribution was cut at the median, however the cutoff points for the competence distributions remained at 1 SD above and below the mean, and the other criteria for group membership described above were also applied. As can be seen in Table 7, only 21 subjects were classified as resilient (11 % of the total sample) using the revised Luthar approach. Application of Luthar’s stringent classification method highlighted practical and conceptual limitations of the approach.

1. The use of tertiles for defining high/low stress groups results in only two-thirds of the subjects being used in the analyses -- those extremely high and those extremely low in reported stress. Thus, to achieve acceptable statistical power for analyses of group comparisons an inordinately large total sample size is required.

2. The application of stringent criteria for membership in the resilient and non-resilient groups further restricts the size of the sample used in analyses.

3. The application of stringent criteria for membership in the resilient and non-resilient groups greatly restricts the theoretical definition of “resilience”. Luthar’s approach classifies as “resilient” subjects who are high in positive competence but not at

the extreme end of any other competence distribution. For example, a subject who is high in academic competence but is also rated in the lower tertile of negative social competence would not be classified as resilient based on Luthar's method, even though a low rating on the negative competence dimensions of sadness/isolated or aggressive/disruptive is a socially desirable rating. Similarly, a subject who is high in academic competence but is rated in the low tertile of the positive social competence dimension Sociability/Leadership would not be classified as resilient based on Luthar's method. This restricted definition of resilience results in a group of subjects who are high in at least one domain of positive competence, and are rated in the upper or mid-tertile for all other positive competence domains and in the mid-tertile for all negative competence domains. Specifically, a "resilient child" is one who is neither high nor low on negative social competence, is high on at least one domain of positive competence and is not low on any other domain of positive competence.

Improvements to Luthar's approach which would clarify the theoretical definition of "resilient child" include:

- a. Removing the requirement that subjects classified as resilient cannot have a negative social competence ratings in the lower tertile. Low ratings on sadness/isolated and aggressive/disruptive are socially desirable, and low ratings reflect the socially competent behavior required from original definitions of resilience (Garmezy, 1987

Rutter, 1985).

b. Removing the requirement that subjects classified as resilient cannot have ratings or scores in the lower tertile of a positive competence dimension. According to Luthar's method, to be classified as "resilient" a child who is high in one positive domain of competence could not be low in any other domain of positive competence. Thus, by definition, a "resilient" child demonstrates at least average performance in all positive competence domains and superior performance in at least one of those domains. The domains of positive competence include both social and academic forms of competence.

Is it not reasonable, however, to consider a child experiencing high stress who attains superior performance in one domain of positive competence to be resilient, regardless of that child's performance in the other positive competence domains? For example, should a high-stress child (Child A) who is rated as very high in the positive social competence domain of Sociability/Leadership, but does not demonstrate superior academic performance, be considered resilient or non-resilient? Similarly, should Child B who is experiencing high stress, who performs extremely well academically, but is not rated as high in positive social competence, be considered resilient or non-resilient? As stated earlier in this work: Resilience has been defined in terms of "successful adaptation" (Masten et al., 1990), and adaptation and competence have been defined as "...effective functioning in the environment as reflected in developmental tasks..." (Garmezy & Masten, 1991, p. 156). What is missing from conceptual definitions of

resilience is a clear statement of whether the term “resilient child” refers to 1) a child in a high stress condition who is highly competent within one domain or 2) a child in a high stress condition who is highly competent across multiple domains of functioning.

The question at issue is : What are the necessary and sufficient criteria governing classification of subjects into the “resilient” group? The following analyses address this question through the application of various classification criteria and illustrate that the definition of a “resilient” child varies widely depending on the particular classification method utilized.

Comparison of various methods of forming Resilient and Non-Resilient Groups

All analyses will follow the general definition of resilient as high stress/high competence, and non-resilient as high stress/low competence. Luthar’s method considered low-stress children non-resilient regardless of competence level. This view is in contrast to traditional definitions of non-resilience which imply non-superior functioning under conditions of high stress (Holmbeck, December, 1996; personal communication). Thus, low stress subjects will be excluded from further analyses. The high/low stress groups were formed on the basis of a median split on the Daily Hassles distribution. The high stress group was composed of 115 subjects (20 subjects whose scores were exactly at the median were included in the high stress group). The same cutoff scores were used in all three methods described below to differentiate competence/non-competence. For example, a rating in the upper tertile of the positive

social competence dimension Sociability/Leadership was considered “competent,” and a rating in the upper tertile of the negative social competence dimension was considered “non-competent” for all three classification methods described below. The three classification methods differed in their definition of “resilience”; specifically, the criteria used to determine group membership (combinations of competence/non-competence ratings) differed among the methods (see Table 8).

Method I: Resilience as the presence of high positive competence

Subjects were classified as resilient if they reported high daily stress and they were rated as competent in at least one of the positive domains of competence (Sociability/Leadership, school grades, or IOWA scores). Subjects’ ratings on the two negative competence dimensions were not considered. Thus, resilient subjects ($n = 50$) are experiencing high stress and exhibiting competence in at least one domain of positive functioning. Non-resilient subjects ($n = 65$) are experiencing high stress and do not exhibit superior functioning on any domain of positive competence.

Method II: Resilience as the presence of high positive competence and the absence of high negative competence

Subjects were classified as resilient if they reported high daily stress, if they were rated as competent in at least one of the positive domains of competence, and they were not rated as high in either of the negative social competence dimensions (Sad/Isolated & Aggressive/Disruptive). Thus, resilient subjects ($n = 37$) are experiencing high stress,

exhibiting competence in at least one domain of positive functioning, and do not receive any non-competence rating. Non-resilient subjects ($n = 78$) fall into two categories: those who do not exhibit superior functioning in any positive competence domain and those who exhibit positive competence but also are rated as non-competent as a result of high ratings on at least one negative social competence dimension.

Method III: Resilience as 3 “favorable” competence ratings

This method differs from the other methods in that the lack of a non-competence rating on the negative social competence dimensions was considered to be a “favorable” rating, as was a rating of competence in any of the positive competence domains. Given that subjects were rated competent/non-competent on 5 dimensions (two negative social dimensions, one positive social dimension, and two positive academic dimensions), “favorable” ratings on three of the five dimensions would represent a majority of the dimensions rated favorably. This method lowers the standard of functioning required for inclusion in the resilient category in that subjects who do not display negative competence are rewarded with a “favorable” rating for each of the negative competence dimensions. To obtain three “favorable” ratings, however, a subject must also display superior functioning in at least one dimension of positive competence. That is, a low or mid-range score on both negative dimensions is insufficient for inclusion in the resilient group; a subject must also be considered competent in at least one dimension of positive functioning.

Another way in which this method differs from Methods I (resilience as the presence of high positive competence) and II (resilience as the presence of high positive competence and the absence of high negative competence) is that subjects who were rated as high on the negative competence dimensions (i.e. non-competent) were included in the resilient group if they were rated as competent on all three dimensions of positive competence. Thus, the resilient group (n = 40) was composed of subjects with various combinations of competence and non-competence ratings due to the inclusion criteria being three “favorable” ratings. Non-resilient subjects (n = 75) received two or fewer “favorable” ratings.

Summary of Group Classification Analyses

Application of the above classification methods, coupled with Luthar’s method, and the median-split revision of the Luthar method, clearly illustrates that whether a subject is considered “resilient” or “non-resilient” depends on the method of classification chosen by the investigator. A comparison of the number of subjects classified as “resilient” can be easily made through examination of Tables 7-9. The number of “resilient” subjects across the five classification methods varies from 6 to 50. All of the six subjects classified as “resilient” by Luthar’s method were classified as “resilient” via Alternative Classification Methods I, II, and III. In addition to variability in the number of subjects classified as “resilient”, the conceptual definition of “resilience” across the different methods also varies greatly.

For the purposes of this work, classification Method II (Resilience as the presence of high positive competence and the absence of high negative competence) will be used to form resilient/non-resilient groups. This method was chosen for the following practical and conceptual reasons:

1. Method II is based on a median-split of the Daily Hassles distribution which includes more subjects in the analyses than Luthar's method.

2. Method II allows the inclusion in both the resilient/non-resilient groups of those subjects whose ratings or scores fall in the upper or lower tertiles of the competence distributions. Luthar's original method and the revised Luthar method eliminate subjects who fall at the extreme ends of more than one competence distribution.

3. Method II operationalizes a conceptual definition of resiliency supported in the literature. Subjects classified as resilient reported high daily stress, exhibited superior performance in at least one domain of positive competence, and did not receive high ratings on the negative competence dimensions (i.e., did not receive any non-competent ratings on the dimensions of sad/isolated or aggressive/disruptive). As stated earlier in this paper:

Typical indicators of resilience across developmental levels are social competence, academic achievement (Luthar, 1993; Luthar & Zigler, 1991) and the lack of a clinically diagnosed mental health disorder (Radke-Yarrow & Sherman, 1990). A child who was exposed to a risk situation who was not clinically diagnosed as having a mental health problem and who exhibited developmentally appropriate levels of social competence and academic achievement was considered resilient. (page 12)

Although not addressed directly in current definitions of resilience, it is implied that poor functioning in social competence would be indicative of non-resilience. Thus Method II, which excludes from the “resilient” group subjects who receive one or more ratings of social non-competence, best operationalizes the prevailing definition of resiliency in the literature. For the remainder of the present work, the term “resilient group” (n = 37) will refer to those subjects who display superior performance in at least one positive domain of competence and did not receive a rating of non-competent in either negative social competence dimension, and the term “non-resilient group” (n = 78) will refer to those subjects who were not high on any positive competence dimension or were high on a positive dimension and a negative dimension. Information concerning grade and gender of subjects in the resilient and non-resilient group is displayed in Table 9.

Examination of the Subjective Well-Being of the Resilient and Non-Resilient Groups

Previous findings suggest that distress and happiness are separate, but related dimensions of mental health and that the absence of negative psychological functioning does not imply the presence of positive psychological functioning (Diener & Emmons). The present analyses were conducted to examine the nature of positive and negative psychological functioning of resilient and non-resilient young adolescents.

The first finding of note is that resilient young adolescents do report feelings of positive affect and life satisfaction. Indeed, the resilient groups’ reported levels of positive affect and life satisfaction are relatively high (see Figures 8a-b). Prior work

(Luthar, 1991, 1993) investigating the psychological functioning of resilient adolescents had focused on indicators of distress. The current findings confirm predictions that resilient young adolescents experience not only distress (e.g. negative affect), but also positive affect and satisfaction in many domains of life.

Examination of the levels of positive affect and negative affect within subjects for both the resilient and non-resilient groups supports findings in the adult literature (Diener, 1984) that positive and negative affect are separate domains of emotional experience; thus, it is possible for an individual to report high levels of one type and low levels of the other. Tables 10a-b display the percentage of subjects that were above or below the median in positive and negative affect for the resilient and non-resilient groups. Of the twenty resilient subjects who reported high negative affect, half reported high positive affect and half reported low positive affect. Of the seventeen resilient subjects who reported low negative affect 40% also reported low positive affect and 60% percent reported high positive affect. A similar pattern of results was observed in the non-resilient group. For both the resilient and non-resilient group, the combination of low negative affect / low positive affect was the least frequently reported. These results suggest that the majority of young adolescents sampled are experiencing above average levels of one or the other type of affect, with some young adolescents experiencing above average levels of both types of affect. Additionally, these findings suggest that to accurately describe the affective experience of young adolescents, both positive and

negative affect must be examined; information concerning the level of one type of affect does not provide information about the level of the other type of affect.

Research Question 2: Do Resilient and Non-Resilient Young Adolescents differ in mean levels of the SWB factors?

Earlier analyses in the present study supported a multidimensional model of SWB; specifically, SWB was conceptualized as being comprised of seven distinct, yet related, factors. The interrelations among the seven factors are, however, not of sufficient size to justify inclusion in a multivariate analysis of variance (MANOVA) (Stevens, 1992), given that the procedure requires uniformly high interrelations among the dependent variables included in the analyses (see Table 5). Therefore, the two domains of SWB, specifically Affect and Life Satisfaction, were considered separately in the present analyses of group differences. Within Affect and Life Satisfaction separate t-tests were conducted to examine for differences between the resilient and non-resilient groups. Separate MANOVA's were not conducted within the Affect and Life Satisfaction domains because, the interrelations among the factors were not of sufficient size to justify inclusion in a MANOVA. The interrelation between the Positive and Negative Affect factors was $\Phi = -.44$, and the median interrelation among the Life Satisfaction factors was $\Phi = .46$.

The means of the resilient and non-resilient groups are markedly similar within both the affect and life satisfaction domains (see Figures 8a-b). Examination of group

differences in Affect was conducted through separate t-tests comparing the resilient and non-resilient groups on Positive Affect and on Negative Affect. The resilient and non-resilient groups did not significantly differ in positive affect ($t(112) = -.58$; $p = .56$) or negative affect ($t(111) = .41$; $p = .68$). Examination of group differences in Life Satisfaction was conducted through separate t-tests comparing the resilient and non-resilient groups on the five Life Satisfaction factors. The resilient and non-resilient groups did not differ significantly in satisfaction with family ($t(113) = -.28$; $p = .78$), friends ($t(113) = -.30$; $p = .76$), school ($t(113) = 1.36$; $p = .18$), living environment ($t(113) = .01$; $p = .99$), and self ($t(113) = .71$; $p = .48$). Replication analyses were conducted with an alternative classification method for forming the resilient and non-resilient groups³ and with pilot data collected from a different sample of subjects⁴. The same pattern of nonsignificant differences between the groups was found in each replication analysis.

A power analysis was conducted to determine if sufficient statistical power was present to detect an effect. It was necessary to reframe the analyses as a two-group MANOVA to estimate statistical power. Following procedures recommended by Stevens (1986) for the estimation of power for a two-group MANOVA with unequal group sizes, the harmonic mean and the effect size was computed for each analysis and power tables were used to estimate power at the .05 significance level (Stevens, 1986; p. 180). The effect size for the analysis of group differences in affect was estimated to be .02. This extremely small effect size is not listed in power tables. If the effect size were .25 (the

smallest effect size tabled), power for the affect analyses would have been .60. Thus, the MANOVA for the affect factors was limited by insufficient power. The effect size for the analysis of group differences in life satisfaction was estimated to be .13. This extremely small effect size is not listed in power tables. If the effect size were .25 (the smallest effect size tabled), power for the affect analyses would have been .44. Thus, the MANOVA for the life satisfaction factors was also limited by insufficient power.

Examination of the Savoring Beliefs of the Resilient and Non-Resilient Groups

Savoring Beliefs of the Total Sample

The correlations between young adolescents' savoring beliefs and the seven SWB factors are displayed in Table 11. Confirming predictions, a strong and positive statistically significant correlation was found between savoring beliefs and positive affect. Also confirming predictions a negative and statistically significant correlation was found between savoring beliefs and negative affect. Tests of the homogeneity of these correlation coefficients (Hedges & Olkin, 1985) revealed that the absolute value of these correlations significantly differ ($q(1) = 16.80$; $p < .0001$). Thus, positive affect is significantly more strongly related to savoring beliefs than is negative affect. Savoring beliefs were found to be significantly and positively correlated with all five factors of life satisfaction. Tests of the homogeneity of correlation coefficients revealed that the correlations of the Life Satisfaction factors with savoring beliefs did not significantly differ from each other ($q(3) = 2.19$; $p > .53$). The moderate to strong

positive relationship between positive affect and savoring beliefs and the weaker negative relationship between negative affect and savoring beliefs replicate previous findings (Cafasso & Bryant, 1996) of savoring beliefs being more strongly related to indicators of positive psychological functioning than to indicators negative psychological functioning.

Regression analyses were conducted to examine whether savoring beliefs significantly predicted the SWB factors after controlling for the effects of age, gender, and daily hassles. Age and gender were entered on step 1, daily hassles on step 2 and savoring beliefs on step 3. Savoring beliefs were found to significantly predict five of the seven SWB factors: Positive and negative affect, and satisfaction with family, friends, and living environment. The results of these analyses are presented in Table 12. Higher levels of savoring beliefs are associated with lower levels of negative affect, and with higher levels of positive affect, satisfaction with family, friends, and living environment after controlling for the effects of age, gender, and daily hassles.

To examine grade and gender differences in savoring beliefs a 2 (gender) x 3 (grade) analysis of variance was performed on the YASBS total score. No significant interaction or main effects were found.

Research Question 3: Do Resilient and Non-Resilient Young Adolescents differ in Savoring Beliefs?

The savoring beliefs of the resilient and non-resilient groups were compared and were found to not differ significantly, $t(107) = .86$; $p = .354$ (see Figure 9). Replication

analyses were conducted with an alternative classification method for forming the resilient and non-resilient groups⁵ and the same pattern of nonsignificant differences between the groups was found. A power analysis was conducted to determine if the sample size was large enough to provide sufficient statistical power. Pilot data were used to obtain an estimate of effect size following the procedures for estimating effect size based on the standardized mean difference⁶ suggested by Hedges and Olkin (1985). The effect size was estimated to be .08. Given the number of subjects included in the analyses of group differences in savoring, the statistical power of the analyses was estimated to be below .20 (Cohen & Cohen, 1983). Thus the sample size was insufficient to achieve adequate power.

Research Question 4: Do Savoring Beliefs moderate the relationship between Stress and SWB for Resilient Young Adolescents?

It was hypothesized that savoring beliefs would moderate the relationship between stress and SWB for resilient young adolescents and would operate as a protective factor. As Holmbeck (1997) explains: “..a moderator variable is one that affects the relationship between two variables, so that the nature of the impact of the predictor on the criterion varies according to the level or value of the moderator (p. 599).” Prior work in the resiliency area has identified variables, labeled protective factors, which moderate the relationship between stress and outcome variables (Rutter, 1987). Specifically, a protective factor exerts a positive impact on the stress-to-outcome relationship; in high

stress conditions high levels of the protective factor decrease the negative impact of stress. For example, if savoring beliefs operate as a protective factor, high levels of savoring will be associated with more beneficial outcomes than will low levels of savoring, however this effect will be present only in high stress conditions.

Following procedures recommended by Cohen and Cohen (1983) for the investigation of moderation effects, hierarchical multiple regression analyses to predict the SWB factors were conducted. A significant interaction term (the product term of savoring and stress) would indicate that savoring moderated the relationship between stress and SWB. All variables were standardized before they were included in the analyses. This procedure reduces the correlations between the predictors and the product term (i.e. interaction term) which includes the predictors (Jaccard, Turrisi, & Wan, 1990). Age was treated as a covariate and the interaction of age with the predictors of hassles and savoring was examined (Holmbeck, 1997). Due to the fact that interaction terms involving age and one of the predictors was significant for some of the SWB factors, and that age was a significant predictor of the SWB factors, three-way interaction terms (age x hassles x savoring) were included in the regression analyses. Age was entered at Step 1, Daily Hassles and Savoring Total Score at Step 2, the cross-products of the three predictor variables (age x hassles, age x savoring, hassles x savoring) at Step 3, and the three-way interaction term (age x hassles x savoring) at Step 4. If the three-way interaction was non-significant, the regression was conducted including only the

interaction term of “hassles x savoring”. Evidence for a moderating effect of savoring will be obtained if the entry of the interaction term (either 2-way or 3-way) is associated with a significant increase in the multiple R^2 (Cohen & Cohen, 1983).

Significant interactions were plotted following procedures outlined in Holmbeck (1989). The regression equation was solved using values of the predictors one standard deviation above and below the mean. Because all variables were standardized before entry into the regression, standardized regression coefficients were used in the prediction equation, and values of (1) and (-1) represented one standard deviation above and below the mean for each predictor.

Resilient Group

A protective effect of savoring beliefs was found for satisfaction with living environment for the resilient group. A protective effect of savoring beliefs was not found for the other six factors of SWB. Given these unexpected findings, interpretations concerning the role of savoring beliefs as a protective factor should be made with caution.

For the resilient group, a significant two-way interaction was found for the criterion of living environment satisfaction (see Table 13 and Figure 10). Confirming predictions, savoring beliefs were found to serve as a protective factor for satisfaction with living environment. Specifically, the beneficial effects of savoring are present under conditions of high stress and are absent in low stress conditions. This is evidenced in that under conditions of high stress, the subjects who report a higher savoring ability

experience greater satisfaction⁷ than do those who report a lower savoring ability. In low stress conditions, there is not a great difference in the level of satisfaction reported as a function of level of savoring.

A power analysis was conducted to determine if the sample size of the resilient group was large enough to provide sufficient statistical power for the detection of a significant two-way interaction effect. The power analysis was conducted according to procedures suggested by Jaccard et al. (1990). This method allows the estimation of the sample size necessary to achieve a power level of .80 (alpha = .05) which is traditionally considered an adequate power level (Cohen & Cohen, 1983). The R^2 of the main-effects-only model (i.e. including only the predictors--not the product term) and the R^2 of the interaction model (i.e. the analyses including the predictors and the product term) are used to obtain tabled values of the necessary sample size. It was found that the analyses of savoring beliefs as a protective factor were conducted at a power level of less than .80 (alpha = .05). For the analyses predicting life satisfaction with living environment, given the 19% of variance accounted for in the main-effects-only analyses, and the 29% of variance accounted for in the analyses involving the two-way interaction term, a sample size of 57 subjects is necessary to achieve a power level of .80 (alpha = .05). Since the sample size of the resilient group was 37, it was of inadequate size to achieve sufficient power for the analyses. Given that Jaccard et al. (1990; p.37) only presents tabled values for a power level of .80 it is not possible to estimate the power

level which is associated with a sample size of 37. There was also insufficient power for the analyses involving the other six SWB factors. To achieve adequate power for the analyses involving the other factors sample sizes ranging from 111 to greater than 143 would have been necessary for the resilient group. Thus, the sample size of the resilient group limited the findings concerning the role of savoring as a protective factor for the resilient group.

Non-Resilient Group

Although the role of savoring for the non-resilient group was not an a priori focus of this investigation, replication of the above analyses was conducted for the non-resilient group.

The three-way interaction of age, daily hassles, and savoring beliefs was found to be a significant predictor of negative affect. For the younger age group, savoring beliefs were found to serve as a resource factor: high levels of savoring beliefs are more beneficial, and are associated with lower negative affect, than are low levels of savoring beliefs regardless of the level of stress experienced (Table 14 and Figures 11a-b).

Savoring beliefs do, however, operate as a protective factor for the older age group. At low stress levels, there is no difference in negative affect experienced as a function of level of savoring. At high stress levels, those subjects who report low savoring ability experience greater negative affect than do those subjects who report high savoring ability.

Thus, higher levels of savoring protect subjects from experiencing negative affect under high stress conditions.

CHAPTER 5

DISCUSSION

This study makes several contributions to our understanding of resilience and the nature of SWB in young adolescents. First, it extends examinations of a three-factor model of SWB to a population of young adolescents. This was accomplished through application of a model of SWB which includes both affective and cognitive domains of well-being, specifically, positive and negative affect, and life satisfaction. Secondly, it expands the range of psychological outcomes investigated on a resilient population to include indicators of positive psychological functioning, filling the gap created by past work where only indicators of distress were examined. Thirdly, it examined the relationship between savoring beliefs and SWB for young adolescents in general, and resilient and non-resilient young adolescents in particular. And finally, the results from this study comprise the first systematic analysis of numerous conceptualizations and classification methods for categorizing young adolescents as resilient or non-resilient. The issues examined in this study bridge the SWB and resiliency fields; each will be discussed in turn.

Subjective Well-Being of Young Adolescents

The current work both replicates and extends previous work in the SWB field. Prior investigations of the SWB of adults (Diener & Emmons, 1984) and of younger children (Huebner, 1991a, 1991b) suggested that SWB could be conceptualized as consisting of an affective (positive and negative) and a cognitive (satisfaction with life) domain. Confirming hypotheses, and replicating the pattern of results found in prior work, the structure of SWB for the current sample was found to consist of an affective and a cognitive domain. The present study is also the first to find support for this model in an inner-city Hispanic population of young adolescents in the 6th-8th grades.

Also replicating previous work (Diener, 1984; Huebner, 1991a), the SWB of young adolescents can be further differentiated within the affective and cognitive domains. Research with children and adults (Diener, 1984; Huebner, 1991a; 1994) showed that the affective domain of SWB consists of positive and negative affect, and in investigations of children it was found (Huebner, 1994) that the cognitive domain of SWB (life satisfaction) could be best conceptualized as consisting of five separate but interrelated factors representing different domains of life, specifically: family, friends, school, living environment, and self. Results from CFA in the present study support this multidimensional conceptualization of SWB within a population of young adolescents. It was found that a bidimensional model of affect, consisting of a positive and a negative affect factor, provided a significantly better representation of the present data than did a

unidimensional model of affect. A multidimensional model of life satisfaction, consisting of the five factors proposed by Huebner (1994), provided a significantly better representation of the present data than did other models of life satisfaction tested. To examine the structure of SWB in the present data the best fitting affect and cognitive models were considered simultaneously in a seven factor model of SWB. It was found that the seven factor model consisting of the two factor affect model and the five factor life satisfaction model provided a significantly better representation of the present data than did other models of SWB tested. It was concluded from these analyses that a multidimensional model of SWB was the most reasonable model tested. The multidimensional model of SWB suggests that the affective experience of young adolescents consists of two distinct factors representing positive and negative affect, and that young adolescents make differential assessments of their satisfaction with life as a function of domain of life.

The intercorrelations among the SWB factors confirmed hypotheses that the indicators of positive psychological functioning would be positively interrelated and would be negatively correlated with negative affect. It was found that positive and negative affect were moderately and inversely correlated, replicating previous work by Huebner (1991a). Furthermore, all of the affect and life satisfaction factors were intercorrelated in the expected directions except for satisfaction with school. School satisfaction was not significantly related to negative affect or satisfaction with friends or

self. These findings suggest that young adolescents' assessments of their satisfaction with school are unrelated to the level of negative affect they report and are unrelated to their assessments of satisfaction with friends or self. Of the other factors of SWB, the life satisfaction factors were found to be positively intercorrelated, as well as positively correlated to positive affect and negatively correlated to negative affect.

Interesting grade and gender differences in the seven SWB factors were found. Although the level of positive affect reported was relatively high, positive affect was found to significantly decrease from the sixth to eighth grades. There was not a significant grade difference in negative affect, however, levels of negative affect tended to increase with increasing grade level. This latter finding is consistent with prior work (Compas et al., 1991) which found the early adolescent period to be characterized by increased reports of negative psychological functioning. Specifically, normative life changes, such as the onset of puberty and the transition to junior high school, have been found to be associated with increases in distress for young adolescents (Connell, 1985; Tobin-Richards et al., 1983). The results of the present work, specifically the finding that positive affect significantly decreases from sixth to eighth grades, make an important contribution to our understanding of psychological functioning during the early adolescent period. In addition to suffering from the presence of negative psychological functioning (Compas et al., 1991) young adolescents are also suffering decreased positive affect. Thus, the emotional lives of the young adolescents examined in this work consist

of distress (negative affect) and decreased happiness (positive affect). This finding supports the hypothesis of this study that examination of indicators of both positive and negative mental health outcomes is critical when trying to fully understand the psychological functioning of young adolescents.

In terms of gender differences, girls reported significantly higher negative affect than did boys. The higher negative affect reported by girls is consistent with prior work in which girls were found to report higher levels of depressed mood than boys from the period of early adolescence through late adolescence (Allgood-Merton, Lewinsohn & Hops, 1990). Additionally, it has been found that females tend to express (Brody & Hall, 1993; Fujita, Diener & Sandvik, 1991) more intense emotional experiences than males. However, given this tendency in females, it is unclear why females only reported significantly higher negative affect but did not also report significantly higher positive affect. A possible explanation may be that this result is due to an instrumentation artifact. Supporting this notion examination of the distributions of positive affect scores for boys and girls revealed the presence of a ceiling effect for both genders. Thus, it is possible that a gender difference in positive affect was not found because the scale range restricted variability on this construct. A positive affect scale with a larger range should be utilized in future investigations of positive affect within a young adolescent population.

The finding that girls report significantly higher satisfaction with school than do boys replicates previous work by Huebner (1994). Huebner (1994) found a gender

difference which approached significance for school satisfaction in a Caucasian population of third to sixth grade students. In the present study, grade differences in positive affect, and satisfaction with family, living environment and self were also found. The mean levels of all three factors of SWB decreased from grades six to eight, with significant differences found between sixth and eighth grade students for positive affect and satisfaction with living environment and self, and significant differences among all three grade levels for satisfaction with family. These findings indicate that with increasing age young adolescents experience reductions in positive affect, satisfaction with family, living environment, and self. Prior work (Huebner, 1994) examining the life satisfaction of children did not reveal a decrease in satisfaction with age; it was found that the level of satisfaction with friends increased from the third to fourth grade. Therefore, there is evidence that satisfaction with certain domains of life changes as a function of age. Specifically, at younger ages (grades 3-4) an increase in satisfaction with friends was found (Huebner, 1994), while the present work revealed at older ages (grades 6-8) satisfaction with family, living environment, and self tends to decrease with increasing age. The pattern of grade differences in the current study and in previous investigations (Huebner, 1994), suggests that future work should be conducted within a developmental perspective when investigating life satisfaction in childhood and early adolescence.

Subjective Well-Being of Resilient and Non-Resilient Groups

Previous work (Luthar, 1991) in the resiliency field illustrated that, although functioning well overtly, some resilient adolescents were suffering psychologically. These findings suggested that there may be an emotional cost associated with resilience. However, this previous work examined only indicators of psychological distress. The results of the present work highlight that the subjective experience of young adolescents is composed not only of psychological distress (i.e. negative affect), but also of positive psychological functioning, specifically positive affect and life satisfaction. Prior investigations into the psychological functioning of resilient adolescents which focused solely on indicators of distress were thus limited in scope. The present work contributes to our understanding of the psychological functioning of resilient individuals by expanding the range of psychological outcomes examined within this population to include all seven factors of SWB.

It was found that, although living in a high-risk environment and reporting high levels of daily stress, resilient and non-resilient young adolescents report relatively high levels of positive affect and life satisfaction in all five domains. Because it is often thought that positive and negative affect are opposite poles of a single continuum, a person reporting high negative affect is assumed to be experiencing low positive affect. The model of SWB supported by the present work illustrates that assumption is faulty. Given that positive and negative affect are related, yet distinct, factors, it is possible for

an individual to simultaneously report high positive and high negative affect. The current findings suggest that when trying to understand the nature of the psychological functioning of young adolescents, regardless of their classification as resilient or non-resilient, the complexity of their emotional experience must be acknowledged. It is necessary to describe the affective experience of young adolescents as a function of both positive and negative affect simultaneously. It was found that of the resilient young adolescents who reported high negative affect, half reported high positive affect and half reported low positive affect; a similar pattern was found for the non-resilient group. Thus, knowledge of the level of one affect factor does not predict where a resilient or non-resilient young adolescent will fall on the other affect factor. While Luthar's (1991; 1993) work was of seminal importance in drawing attention to the psychological functioning of resilient adolescents, her limited focus, solely on indicators of distress, provides an incomplete picture of the psychological well-being of the resilient group.

So is there an "emotional cost" associated with resilience as the work of Luthar suggests? The answer to that question depends upon what level of negative affect is deemed atypical and synonymous with "cost". If the simple reporting of feelings of negative affect is synonymous with cost, then, yes there is an emotional cost associated with resiliency. However, while the results pertaining to group differences should be interpreted with caution due to low statistical power, the striking similarity in the level of negative affect reported by the resilient and non-resilient groups suggests that this cost

(i.e. reported negative affect) may be a result of high risk environments and high levels of daily stress instead of a by-product of resilience.

A more fine-grained analysis of “emotional cost” could be conducted by considering levels of positive and negative affect simultaneously. As stated earlier, of the resilient young adolescents reporting high negative affect, half reported high positive affect and the other half reported low positive affect. The resilient young adolescents suffering emotionally may be those who are experiencing high negative affect and low positive affect. It may be that the balance of positive to negative affect is an important determinant of psychological health. This idea is consistent with theories of “cognitive balance” (Schwartz & Garamoni, 1989) which consider the balance of positive to negative affect to be a determinant of an individual’s emotional state. Thus, it is not sufficient to know the level of one affect factor when assessing the emotional health of an individual, instead the ratio of positive to negative feelings must be considered.

Further sophistication in assessing the “emotional cost” of resilience could be achieved through the simultaneous consideration of life satisfaction and positive and negative affect. Theories of SWB (Myers & Diener, 1995) describe high SWB as consisting of “..a preponderance of positive *thoughts and feelings* about one’s life (p. 11).” (italics added). Thus, it is the combination of the cognitive and affective domains of SWB which are considered to determine an individual’s level of SWB. In addition to the high distress reported by some resilient adolescents, it is possible that another “cost” of

resilience could be low satisfaction with life. For example, the resilient young adolescents who are suffering may be those experiencing high negative affect, moderate positive affect and low life satisfaction across domains. Alternatively, a resilient young adolescent who is experiencing high negative affect, high positive affect and high life satisfaction may not be experiencing low SWB; thus, that resilient young adolescent may be considered to not be suffering an “emotional cost”. It is necessary, therefore, to consider all seven factors of SWB to fully understand what “cost”, if any, is associated with resilience.

Savoring Beliefs of Young Adolescents

Simultaneous consideration of all seven SWB factors when studying resiliency could also greatly contribute to our understanding of factors which promote positive psychological functioning. In analyses involving the total sample, it was found that savoring beliefs are significantly correlated, in the expected directions with all seven factors of SWB. Replicating previous work (Cafasso & Bryant, 1996), and confirming predictions, it was found that savoring beliefs are positively correlated with indicators of positive psychological functioning and negatively correlated with an indicator of distress. Additionally, savoring beliefs were found to be a significant predictor of psychological functioning, after controlling for the effects of stress, gender and age. Savoring beliefs were found to significantly predict, in the expected directions, five of the seven factors of SWB. Specifically, higher perceived savoring beliefs were associated with lower

negative affect, higher positive affect and higher satisfaction with family, friends and living environment. These results suggest that young adolescents who perceive the ability to control their positive emotions through savoring experience higher positive psychological functioning and less negative psychological functioning than those who report lower levels of savoring beliefs.

The present study extends investigations of savoring beliefs to a population of Hispanic young adolescents. The YASBS was found to be reliable and valid for this population. Replicating previous work (Cafasso & Bryant, 1996), a one-factor model, which includes positive and negative “measurement method” factors, was found to be the best of the models tested to represent the savoring beliefs of the Hispanic young adolescents.

There were, however, differences between the pattern of grade and gender differences within the present inner-city Hispanic population of young adolescents who attended a Chicago Public School, and prior findings with a population of primarily Caucasian-American and African-American young adolescents who attended parochial Catholic schools (one urban, four suburban schools). The previous work (Cafasso & Bryant, 1996) revealed that girls’ levels of savoring beliefs increased across the fifth to eighth grades while that of boys’ were not significantly different across grade levels. In the present work, savoring beliefs were not found to vary by grade or gender. If considered separately, these two sets of findings appear discrepant, and suggest different

patterns of gender differences across grades for the two samples. However, insight into the actual cause of the diverse patterns can be obtained through examination of the pattern of means of boys and girls across grade levels for the two samples.

As can be seen in Figure 12, the pattern of savoring beliefs scores for boys across grade levels are similar for the two samples; the savoring beliefs of boys do not differ significantly across grade level for either sample. The primary difference between the two samples, however, lies with the savoring belief scores of girls. In the previous study, the savoring belief scores of the girls significantly increased across grades five to eight. It can be seen from Figure 12 that the savoring belief scores of the girls' in the prior study obviously stand out from those of the girls in the present study and from those of the boys in either sample. It appears that the level of savoring beliefs reported by the girls' in the present study are consistently lower than those of the girls in the prior study. These results suggest that the inner-city, Hispanic girls in the present study perceive themselves to have a lower ability to savor positive experiences than their female peers.

What could this difference be due to? It is unlikely that the lower level of savoring beliefs reported by these girls is due to inner-city residency or attendance in the public school system, because there were not obvious differences in the levels of savoring beliefs of boys across the two samples. Moreover, the savoring beliefs of girls in the current sample are more similar to those of boys of both samples than they are to girls from the prior study. The lack of a gender difference in savoring beliefs in the current

sample is surprising because it contrasts with previous findings of females reporting higher levels of savoring beliefs than males in young adolescent, college-age, adult, and older adult populations (Bryant, 1989, 1992; Meehan et al., 1993). Future work should be directed at exploring in more depth the positive mental health functioning, and specifically the savoring beliefs, of inner-city Hispanic female young adolescents to further probe the pattern of results found in the present study.

Savoring Beliefs of the Resilient and Non-Resilient Groups

The resilient and non-resilient groups did not differ in reported savoring beliefs; however, these results should be interpreted with caution due to the low statistical power of the analyses. In addition to examining for group differences in savoring beliefs, analyses were conducted to examine the relationship between savoring beliefs and psychological functioning for the resilient and non-resilient groups. Insight into the role savoring beliefs may possibly play in resiliency was obtained through investigations of the protective effect of savoring beliefs.

Previous work in the resiliency field (Garmezy, 1991; Luthar, 1991; Rutter, 1985) had identified factors which protect children and adolescents against the detrimental effects of risk. It was hypothesized that savoring beliefs would operate as a protective factor for the resilient group: specifically, high levels of savoring beliefs will be associated with more beneficial outcomes than will low levels of savoring beliefs. This effect will be present only in high stress conditions. Unfortunately, the tests of this

hypothesis were severely limited by low statistical power. There was not adequate power to analyze the protective effect of savoring beliefs for any of the seven factors of SWB for the resilient group.

Partially supporting the hypothesis, it was found that savoring beliefs operated as a protective factor for satisfaction with living environment. All the resilient young adolescents were experiencing above average stress relative to the total sample, however, there was variation in the stress experienced within the resilient group. At high stress levels the resilient young adolescents who report high levels of savoring beliefs experience greater satisfaction with living environment than do those who report lower levels of savoring beliefs. At lower stress levels a similar level of satisfaction with living environment is reported by those resilient young adolescents who report high and low savoring beliefs. Thus, the relationship between savoring beliefs and satisfaction with living environment does vary as a function of stress level for the resilient group.

The possible role of savoring beliefs as a protective factor was also examined for the non-resilient group. It was found that savoring beliefs operated as a protective factor for negative affect and that the protective effect of savoring beliefs varied as a function of age. Savoring beliefs operated as a resource factor for the younger age group with higher levels of savoring beliefs associated with lower negative affect regardless of stress level. For the older age group a protective effect of savoring beliefs emerged. At low stress levels, similar levels of negative affect were experienced regardless of level of savoring

beliefs. At high stress levels, however, higher savoring belief levels are associated with lower negative affect than are lower savoring belief levels.

These findings provide limited support for the hypothesis that savoring beliefs serve as a protective factor, protecting young adolescents from the negative effects of stress upon the factors of satisfaction with living environment for the resilient group, and negative affect for older adolescents in the non-resilient group. Currently, it is difficult to determine if savoring beliefs operate as a protective factor for the other factors of SWB, due to the limitation of low statistical power in the present analyses. However, findings that savoring beliefs exerted a differential impact upon outcomes for the resilient and non-resilient groups, and that the effect of savoring beliefs varied as a function of age for the non-resilient group, suggest that investigations into the role of savoring beliefs as a protective factor might be a fruitful area for future work.

Further insight into the role savoring beliefs may play in resiliency could be achieved by considering savoring beliefs to function as a resource factor in addition to a protective factor. As stated earlier, a protective factor exerts a differential impact upon outcomes as a function of stress level. A resource factor exerts a beneficial impact on psychological outcomes regardless of stress level; specifically, higher levels of a resource factor are associated with better outcomes than are lower levels of a resource factor at both low and high levels of stress. If savoring beliefs operate as a resource factor, higher levels of savoring beliefs will be associated with higher positive outcomes and lower

negative outcomes regardless of level of stress. This was the manner in which savoring beliefs functioned for the non-resilient group for the outcome of negative affect.

Additionally, although not reported as a primary finding of the present work, significant main effects of savoring beliefs were found for many of the SWB factors via analyses designed to investigate savoring beliefs as a protective factor. Thus, current findings provide support for the hypothesis that savoring beliefs operate as a protective factor, and as a resource factor. These interesting results suggests that savoring beliefs may exert a differential impact upon various psychological outcomes, that savoring beliefs may influence different psychological outcomes for resilient and non-resilient groups, and that the effect of savoring beliefs may be influenced by stress level for some outcomes but not for others. Clearly there is evidence that the role of savoring beliefs in resiliency merits attention in future investigations.

Conceptualization of “Resilience”

Early resiliency researchers (Garmezy, 1984; Rutter, 1979; Werner & Smith, 1982) produced a large body of work from which a conceptualization of resilience has evolved and continues to guide much work in the resiliency field. The present study classified young adolescents as resilient through the application of a method utilized by Luthar (1991) and through a number of alternative methods. The goal was to arrive at an operational definition of resiliency which would be consistent with the definition of resilience that grew out of earlier conceptualizations (Masten et. al., 1990; Garmezy et al.,

1984) of the construct. The operational definition of resilience introduced by Luthar (1991) was found to be inconsistent with this prior thinking in the field. The following elements highlight limitations of her approach.

Luthar Method

Definition of Non-Resilient

Luthar's operational definition of resiliency contrasts the resilient group (whose members report high stress and achieve high competence) with three non-resilient groups: high stress/low competence, low stress/high competence, low stress/low competence. By including in analyses non-resilient groups which are comprised of adolescents experiencing low stress, differences in psychological functioning reported between the resilient and non-resilient groups could be due to differences in stress level experienced. It has been found (Compas et. al., 1991; Jose, Cafasso & D'Anna, 1996; Kanner, Feldman, Weinberger, & Ford, 1987) that young adolescents who report higher levels of stress also report higher levels of distress than do young adolescents who report lower levels of stress. Thus, Luthar's (1991) finding that resilient adolescents (high stress/high competence) report greater distress than their non-resilient peers may illustrate a difference in stress level between the two groups instead of illustrating a psychological "cost" of maintaining high competence in the face of high stress. Additionally, resiliency traditionally is defined as superior functioning in high stress conditions (Anthony, 1974) and non-resiliency as non-superior functioning in high stress conditions (Holmbeck,

December, 1996; personal communication). Thus, Luthar's method which treats low stress groups as non-resilient is in contrast to traditional definitions of non-resilience, and complicates meaningful comparisons between groups because of the differences in reported stress level between the high stress resilient group and the two low stress non-resilient groups.

Stringent Inclusion Criteria for Membership in the Resilient Group

The stringent inclusion criteria used by Luthar (1991): 1) defines high/low groups as those in the upper and lower tertile which involve only extreme groups in the analyses, and 2) imposes a restricted definition of resilience into the work.

The use of extreme groups in investigations of resilience drastically reduces the size of the sample involved in analyses comparing resilient and non-resilient groups and in analyses investigating protective factors. If the goal of resiliency research is to generalize to high-risk populations, low statistical power associated with small sample sizes limits the generalizability of the findings. Low statistical power also hinders the development of a body of empirical work on this topic through increasing the difficulty of conducting replication studies, particularly because power analyses are difficult to conduct without estimates of population parameters (Cohen & Cohen, 1983).

The use of extreme groups also limits investigations of resilience to young adolescents or adolescents who are experiencing extreme stress (i.e. in the upper tertile of the stress distribution). Thus, subjects who are experiencing stress levels that are above

average, but not extreme, are excluded from the investigation. Ignoring subjects who report above average stress levels limits the generalizability, or external validity, of research findings. The extreme groups studied by Luthar (1991) may be unrepresentative of the general population of adolescents living in high-risk conditions. There may be merit in examining a larger and more representative group of subjects, especially when the research will inform prevention work targeted at high-risk populations as a whole.

In addition to using the upper and lower tertiles to define high/low groups on the stress distributions, Luthar's (1991) approach uses the upper and lower tertiles to define high/low competence. While this criteria itself is not problematic, the classification criteria utilizing these high/low cutoffs severely restricts the operational definition of resilience. Luthar's approach classifies as resilient adolescents who are extremely high in stress, are extremely high in at least one positive domain, are moderate in all other positive domains (not low), and are moderate in all negative domains (not high or low). This produces a group of "resilient" adolescents who are neither high nor low on negative competence, are high on at least one domain of positive competence, and are not low on any other positive competence domains. The specific aspects of this method which are of questionable utility when developing an operational definition of resilience will each be considered in turn:

The adolescents classified as resilient by Luthar's approach report high stress and demonstrate moderate to superior competence across domains. In terms of positive

competence, Luthar's (1991) approach requires that to be classified as resilient a subject not only must have one extremely high positive competence rating, but all of their other positive competence ratings must be high or moderate. This excludes from the resilient group a high stress subject who demonstrates superior competence in one positive domain, if the subject also is rated low in any other positive competence domain. For example, Luthar's (1991) method would classify as resilient an adolescent who reported high stress, who performed extremely well academically and also was rated moderately or highly socially competent. However, an adolescent who reported high stress, who performed extremely well academically, but demonstrated very low positive social competence, would not be considered resilient.

The most problematic aspect of Luther's (1991) approach is the requirement that subjects whose scores are in the extreme end of more than one competence distribution be excluded from consideration as resilient. This requirement excludes subjects who are in the high stress group and are very low in negative competence, even though low negative competence is a socially desirable rating. Thus, a subject reporting high stress, who is highly competent in one positive domain and is rated as low in a domain of negative competence would not be classified as resilient by Luthar's (1991) method because the low negative competence rating would exclude that subject from consideration. Yet, children or adolescents who are experiencing high stress, who display high positive competence and display little or none of the behaviors associated with poor negative

competence are the stereotypic “resilient child” often referred to in both academic and popular discussions of resiliency. In fact, it is this group of children or adolescents whom early resiliency researchers labeled “invulnerable” (Anthony, 1974), and who were the focus of much research attention. Thus, it is inconsistent with original conceptualizations of the construct, and with current thinking that low negative competence is a socially desirable rating, to exclude this group of children or adolescents in investigations of resilience.

Alternative Classification Methods for Forming the Resilient Group

Due to the above methodological and conceptual limitations in Luthar’s approach, alternative classifications methods were utilized in the present work. One method was an modification of Luthar’s (1991) original method which utilized a median split on stress to define high/low groups instead of tertiles. Alternative methods, not directly derived from Luthar’s work (1991), likewise used a median split on stress to define the high stress group. These included: Method I (resilience as the presence of high positive competence), which considered at least one rating of high positive competence to be indicative of resilience, with the negative competence dimensions not being considered; Method II (resilience as the presence of high positive competence and the absence of high negative competence), which classified young adolescents as resilient if they received at least one high positive competence rating and were not rated as high in either of the negative social competence dimensions; Method III (resilience as 3 “favorable

competence ratings), which considered “favorable” a high positive competence rating or a non-high negative competence rating, with three or more “favorable” ratings considered indicative of resilience.

The application of Luthar’s method and the alternative classification methods formed resilient groups which ranged in size from 6 to 50. Broader than the range of group sizes, however, is the scope of the differences in the conceptualization of resilience operationalized by each method. The present study classified young adolescents as resilient and non-resilient based on classification Method II (resilience as the presence of high positive competence and the absence of high negative competence). This method was chosen because it was most consistent with the definition of resilience that grew out of earlier conceptualizations (Masten et. al., 1990; Garmezy et al., 1984) of the construct. Specifically, in the present work, a resilient young adolescent was one who reported high stress, was rated as highly competent on at least one positive dimension and did not receive high ratings on the negative competence dimensions (high ratings on negative dimensions were indicative of non-competence). The present work illustrates that a researcher’s conceptualization of resilience greatly affects the number of subjects classified as resilient, and the nature, specifically the mix of competencies and non-competencies, of the members in the resilient group.

Specific Issues to Consider when Conceptualizing and Forming Operational Definitions of Resilience

As can be seen from the findings of the current study, and the previous work of Luthar (1991; Luthar et al., 1993), resilience is a complex and multifaceted construct. There are a number of factors to consider when conceptualizing resilience and when developing empirically based methods for classifying subjects as resilient or non-resilient.

1). Competence Within vs. Across Domains

Is it necessary to be extremely competent in more than one domain to be considered resilient? The domains of overt competence assessed in both the current study of inner-city young adolescents, and Luthar's (1991; Luthar et al., 1993) investigations of inner-city adolescents, were social competence and academic achievement. Results from the present study suggest that, for resilient young adolescents, competence within only one domain is much more frequent than competence across domains. Of the 37 resilient young adolescents it was found that 29 (78%) were competent within only one domain (social or academic) and only 8 (22%) were competent in both the social and academic domains. Garmezy and Masten (1991) define successful adaptation as "...effective functioning in the environment as reflected in developmental tasks...(p. 156)." A young adolescent who lives in a risk environment, experiences high stress, and performs

extremely well academically is obviously succeeding in a developmental task. Should it also be necessary for this young adolescent to be extremely talented in social interactions before he/she can be classified as resilient? The conceptualization of resilience utilized in the present study considered high competence within one domain to be sufficient for membership in the resilient group, regardless of the level of competence in the other positive domain.

2.) High Negative Competence

Should a rating of high negative competence eliminate a young adolescent from consideration as resilient, even if that young adolescent demonstrates superior functioning on a different competence dimension? For example, if a young adolescent who lives in a high risk environment, experiences high stress, and performs extremely well academically is rated as extremely aggressive and disruptive by his/her peers (i.e. a high negative competence rating), should that young adolescent be included or excluded from the resilient group? In the present study, 50 young adolescents experienced high stress and were highly competent on at least one positive dimension. Thirteen of these young adolescents received ratings of high negative competence, and as a result, were considered non-resilient.

Recent work (Consortium on the School-based Promotion of Social Competence, 1994) examining the social competence of children and adolescents suggests, however, that the behaviors considered undesirable in most operational definitions of social

competence may be innocuous or even desirable in some social contexts. Social competence has recently been defined as:

“...life skills for adaptation to diverse ecologies and settings. This perspective incorporates the possibility that in certain cultures, neighborhoods, and situations, so-called undesirable behaviors (e.g., aggressive, selfish, or passive behavior) may be required if one is to be perceived as “well adjusted” or to avoid being subject to harm. Also, it implies that behaviors that may appear to reflect a lack of competence may instead be adaptations to idiosyncratic or harmful ecological circumstances.” (Consortium on the School-based Promotion of Social Competence, 1994, p. 275).

This definition of competence seems quite appropriate to the high risk, inner-city environment of the Hispanic young adolescents in the present study. Classification Method I (resilience as the presence of high positive competence) included in the resilient group young adolescents with high ratings on the negative competence dimensions (i.e. the thirteen young adolescents who were excluded from the resilient group in Classification Method II--resilience as the presence of high positive competence and the absence of high negative competence). In the primary analyses of this work, the same pattern of results was found utilizing Classification Methods I and II. Despite this finding, considering high ratings on aggressiveness, disruptiveness, sadness or isolation to be indicative of poor social functioning may serve to eliminate from the resilient group young adolescents who are socially competent within their specific social context.

3). Developmental Perspective on Resilience

A contextual approach to social competence could be integrated with a developmental approach to the study of resilience. In addition to considering social competence as context-specific, resilience itself could be considered a context-specific phenomena, with the context being the developmental stage of the resilient individual. The goal of the current work was to examine resilience during the early adolescent period, and in so doing to explore only one stage of development. Competence in “developmental tasks” (Garmezy & Masten, 1991) has been a consistent element in conceptualizations of resilience, implying that competence should be defined in a flexible and developmentally appropriate manner. It is also important to acknowledge that risk factors may exert a differential impact as a function of age. For example, the presence of gang violence in a neighborhood may put a young child at indirect risk through the possibility of being an innocent victim of violence, while a young adolescent or older adolescent may be at direct risk for involvement in gang activity. Similarly, with the onset of puberty (Tobin-Richards et. al., 1983) young adolescents are exposed to possible risks of childbearing and sexually transmitted disease (Barber & Crockett, 1993), risks which were not relevant to younger children. Previous work (Egeland et. al., 1993; Masten et. al., 1988; Tolan, 1996; Werner & Smith, 1982) has illustrated that a child who demonstrates resiliency in one developmental period may not maintain the resilience in a

later period. Thus, both conceptualizations and operational definitions of resilience should be crafted within a developmental perspective.

Future Research Directions

The results of the present study should be considered in light of two limitations, both of which can be overcome in future work. First, the sample size was too small to fully investigate differences between the resilient and non-resilient groups or to fully investigate the role of savoring beliefs as a protective factor for the resilient group. Replicating this study with a larger sample size would address this issue. A second limitation is the use of peer ratings as the sole index of social competence. Coupling peer ratings with those of teachers and parents would greatly enhance the validity of the measurement of this construct.

This study comprises the first investigation of positive affect and life satisfaction in resilient young adolescents. Future work should focus on the major finding of this study which is that resilient young adolescents experience positive psychological functioning. In future research both positive affect and life satisfaction should be investigated as independent factors of SWB, however, the relationship between positive and negative functioning should also be considered, to accurately assess the complexity of young adolescents' SWB. Additionally, investigation of factors which promote positive psychological functioning, such as savoring beliefs, could significantly advance

our understanding of the manner in which resilient young adolescents maintain positive mental health.

APPENDIX A
PARENTAL PERMISSION LETTER

Parental Permission Form

Dear Parents:

Let me introduce myself. My name is Lynda Cafasso and I am a doctoral student in developmental psychology at Loyola University of Chicago. I am studying how children handle stress. I am happy that your principal, Ms. Dangerfied, is allowing Gary School students to participate.

I am asking that you allow your child to participate in this project. Your child will complete a set of questionnaires asking them about the things they experience in life, how they handle their emotions and how they have been feeling recently. The questionnaires will be given to the children in their classrooms. No names will appear on the questionnaires. All responses will be private and confidential. In addition, I am asking permission to examine your child's school records.

Please sign and return the attached permission form by March 3rd. If you have any questions do not hesitate to call me at (312) 508-3001. Thank you for helping with this project.

Sincerely yours,

Lynda Cafasso, M. A.

 ***** PERMISSION FORM *****

PLEASE SEND THIS TO SCHOOL WITH YOUR CHILD BY MARCH 3 !!!

I give permission for my child _____
 to participate in the study and for Ms. Cafasso to examine my child's school records.

My child is in grade _____

His/Her teacher's name is _____

Parent or Guardian please sign here

APPENDIX B

TABLES

Table 1: Summary Table of Results of Confirmatory Factor Analysis of Daily Hassles

Goodness of Fit Statistics for Various Factor Models of Daily Hassles

Factor Model	No. of items	χ^2	df	GFI
<i>1-Factor</i>				
Overall Hassles	28	536.58	350	.83
<i>2-Factor</i>				
Resource Hassles & Other Hassles	28	528.36	349	.83
<i>5-Factor</i>				
Seidman's Hypothesized 5 Factors	28	478.68	340	.87

GFI = Goodness-of-Fit Index

Table 2: Summary Table of Results of Confirmatory Factor Analysis of Social Competence (Revised Class Play Index of Social Competence)

Goodness of Fit Statistics for Various Factor Models of Social Competence

Factor Model	No. of items	χ^2	df	GFI
<u>3-Factor (Masten's)</u> Sensitive/Isolated Aggressive/Disruptive Sociability/Leadership	29	1328.23	374	.60
<u>5-Factor(PC Fact. Anal.)</u> Sociability/Leadership Aggressive Helpful/Polite Isolated/Sad Positive Affect	29	1023.02	367	.73
<u>4-Factor</u> <u>(Positive Affect items deleted)</u> Sociability/Leadership Helpful/Polite Aggression Isolated/Sad	27	916.81	318	.74

GFI = Goodness-of-Fit Index

Table 3: Summary Table of Results of Confirmatory Factor Analysis of Savoring Beliefs

Goodness of Fit Statistics for Various Factor Models of Savoring Beliefs

Factor Model	No. of items	χ^2	df	GFI
<i>1-Factor</i>				
Global Savoring	24	554.95	252	.75
<i>3-Factor</i>				
Future, Present, & Past Savoring	24	546.9	249	.75
<i>3-Factor</i>				
Global Savoring & Positive/Negative Method	24	320.07	225	.88

GFI = Goodness-of-Fit Index

Table 4: Summary Table of Results of Confirmatory Factor Analysis of Subjective Well-Being

Measures included: Life Satisfaction, Positive Affect, Negative Affect

Goodness of Fit Statistics for Various Factor Models of Subjective Well-Being

Factor Model	No. of items	χ^2	df	GFI
<u><i>Life Satisfaction</i></u>				
1 Factor (global satisfaction)	40	2001.31	740	.57
5 Factor (5 subscales)	40	1260.05	730	.74
<u><i>Affect</i></u>				
1 factor (global affect)	20	531.26	170	.70
2 factor (positive & negative)	20	305.83	169	.85
<u><i>Subjective Well-Being</i></u>				
1 Factor (global SWB)	60	3879.65	1710	.52
2 Factor (affect & satisfaction)	60	3719.26	1709	.53
3 Factor (positive, negative, satisfaction)	60	3544.72	1707	.56
6 Factor	60	2963.95	1695	.62
7 Factor (5 Life Sat., 2 Affect)	60	2734.46	1689	.67

GFI = Goodness-of-Fit Index

N = 175

Table 5: Standardized LISREL estimates of Φ (phi) coefficients between latent constructs of SWB

	Affect		Life Satisfaction				
	Positive	Negative	Family	Friend	School	LivEnv	Self
<u>Affect</u>							
Positive		-.48***	.65***	.59***	.24**	.52***	.68***
Negative			-.35***	-.41***	.06 ns	-.34***	-.45***
<u>Life Satisfaction</u>							
Family				.51***	.43***	.60***	.56***
Friend					.12 ns	.49***	.56***
School						.17*	.15 ns
Living Environment							.39***

*** p < .001

** p < .01

* p < .05

Table 6: Luthar's Classification Method

	High Stress	Low Stress
High Competence	Resilient N=6	Non-Resilient N=4
Low Competence	Non-Resilient N=12	Non-Resilient N=2

Table 7: Revised Luthar Classification Method: Median Split on Stress

	High Stress	Low Stress
High Competence	Resilient N=21	Non-Resilient N=16
Low Competence	Non-Resil N=20	Non-Resilient N=10

Table 8: Summary Table of Classification Analyses: Number (and description) of “Resilient” subjects obtained

Methods I, II, & III

Stress: High Stress Group via Median split of Daily Hassles N=115

Academic competence:

1. Year-end Math and Reading Grades, Competence = C-grade or better in both Math and Reading
2. IOWA Test of Basic Skills, Competence = Scores greater or equal to the 50th percentile Math and Reading

Social Competence (Masten’s 3-factor model):

1. Positive dimension = Sociability/Leadership Competence = Rating in the upper tertile
2. Negative dimensions = Aggressive/Disruptive & Sad/Isolated Non-Competence = Ratings in the upper tertile

<i>Description of Resilient</i>	<i>N of Resilient</i>	<i>Description of Non-Resilient</i>	<i>N of Non-Resilient</i>
Method I. <u>Resilience as the presence of high positive competence:</u> High stress. High on at least 1 dimension of positive competence. May or may not be high on negative competence	50 (43%)	High stress. Not high on any dimension of positive competence	65 (57%)
Method II. <u>Resilience as the presence of high positive competence and the absence of high negative competence:</u> High stress. High on at least 1 dimension of positive competence. Not high on either dimension of negative competence	37 (32%)	High stress. Not high on any dimension of positive competence or high on a positive dimension and also high on a negative dimension	78 (68%)
Method III. <u>Resilience as 3 “favorable” competence ratings:</u> High stress. At least 3 dimensions rated favorably (with a low or mid-range rating on negative competence considered favorable)	40 (35%)	High stress. Two or fewer dimensions rated favorably	75 (65%)

Footnote: Cell percentages indicate percent of Total Sample N=196

Table 9: Grade and Gender information for Resilient and Non-Resilient Group

	<u>Resilient</u>		<u>Non-Resilient</u>	
	<u>Boys</u>	<u>Girls</u>	<u>Boys</u>	<u>Girls</u>
<u>Grade 6</u>	3 (8.1%)	8 (21.6%)	11 (14.1%)	21 (26.9%)
<u>Grade 7</u>	7 (18.9%)	12 (32.4%)	11 (14.1%)	13 (16.7%)
<u>Grade 8</u>	1 (2.7%)	6 (16.2%)	9 (11.5%)	13 (16.7%)
	N = 37 (100%)		N = 78 (100%)	

Table 10a: Percentage of Resilient subjects reporting high/low
Positive and Negative Affect (N=37)

		<u>Positive Affect</u>	
		<u>High</u>	<u>Low</u>
<u>Negative Affect</u>	<u>High</u>	27% (n=10)	27% (n=10)
	<u>Low</u>	27% (n=10)	19% (n=7)

Table 10b: Percentage of Non-Resilient subjects reporting high/low
Positive and Negative affect (N=75)

		<u>Positive Affect</u>	
		<u>High</u>	<u>Low</u>
<u>Negative Affect</u>	<u>High</u>	29.33% (n=22)	32% (n=24)
	<u>Low</u>	26.66% (n=20)	12% (n=9)

Table 11: Correlations of Savoring Beliefs and Subjective Well-Being Factors

	Affect		Life Satisfaction				
	Positive	Negative	Family	Friend	School	Environment	Self
Savoring	.53*** (183)	-.29*** (183)	.31** (187)	.30*** (187)	.16* (187)	.27*** (187)	.22** (187)

All Correlations one-tailed

(N) in parentheses

*** $p < .001$

** $p < .01$

* $p < .05$

Table 12: Summary of Regression Analyses of effects of Savoring Beliefs on the SWB factors, controlling for effects of Age, Gender, and Daily Hassles for the Total Sample

Step	Predictor	r	B	Mult. R	R ²	R ² chg
<u>Positive Affect</u>						
1.	Gender	.03	.0245			
2.	Age	-.27	-.2767	.2738	.07	.07***
3.	Hassles	-.20	-.1953	.3348	.11	.04**
4.	Savoring	.53	.4826	.5757	.33	.22***
<u>Negative Affect</u>						
1.	Gender	.20	.1999			
2.	Age	.11	.1435	.2451	.06	.06**
3.	Hassles	.50	.4700	.5227	.27	.21***
4.	Savoring	-.29	-.2245	.5663	.32	.05***
<u>Family Satisfaction</u>						
1.	Gender	.02	.0164			
2.	Age	-.27	-.2788	.2758	.08	.08***
3.	Hassles	-.43	-.4396	.5128	.26	.19***
4.	Savoring	.31	.2072	.5504	.30	.04**

r = bivariate correlation; B = standardized regression coefficients for the full model; Mult. R = Multiple R;

R² chg = change in R²

~ p < .10 ** p < .05 *** p < .001

Table 12 cont.

Step	Predictor	r	B	Mult. R	R ²	R ² chg
<u>Friend Satisfaction</u>						
1.	Gender	.09	.0872			
2.	Age	-.15	-.1412	.1644	.03	.03 [~]
3.	Hassles	-.29	-.3138	.3496	.12	.10 ^{***}
4.	Savoring	.30	.2362	.4182	.17	.05 ^{***}
<u>Living Environment Satisfaction</u>						
1.	Gender	-.06	-.0584			
2.	Age	-.20	-.2103	.2157	.05	.05 ^{**}
3.	Hassles	-.33	-.3236	.3845	.15	.10 ^{***}
4.	Savoring	.27	.2081	.4344	.19	.04 ^{**}

r = bivariate correlation; B = standardized regression coefficients for the full model; Mult. R = Multiple R;
R² chg = change in R²

[~] p < .10 ^{**} p < .05 ^{***} p < .001

Table 13: Summary of Regression Analyses of effects of Age, Hassles and Savoring on Satisfaction with Living Environment for the Resilient group

Step	Predictor	r	B	Mult. R	R ²	R ² chg
1.	Age	-.13	-.1333	.1333	.02	.0178
2.	Hassles	.39	.1326			
3.	Savoring	.12	.3921	.4310	.19	.1680**
4.	Hassles X Savoring	.38	.3328	.5412	.29	.1071**

r = bivariate correlation; B = standardized regression coefficients for the full model; Mult. R = Multiple R;

R² chg = change in R²

**p < .05

Table 14: Summary of Regression Analyses of effects of Age, Hassles and Savoring on Negative Affect for the Non-Resilient group

Step	Predictor	r	B	Mult. R	R ²	R ² chg
1.	Age	-.05	-.0502	.0502	.002	.0025
2.	Hassles	-.42	.5143			
3.	Savoring	.52	-.3665	.6167	.38	.3777***
4.	Age X Savoring	-.51	-.1041			
5.	Age X Hassles	-.11	.2015			
6.	Savoring X Hassles	.26	-.2398	.6848	.47	.0887**
7.	Age X Savoring X Hassles	-.49	-.2313	.7077	.50	.0318**

r = bivariate correlation; B = standardized regression coefficients for the full model; Mult. R = Multiple R;

R² chg = change in R²

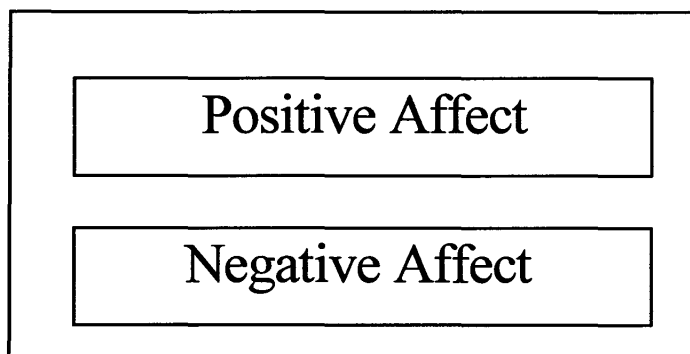
p < .05 * p < .01

APPENDIX C
ILLUSTRATIONS

Figure 1. The Three-Factor Model of Subjective Well-Being

Subjective Well Being

Affective Component



Cognitive Component

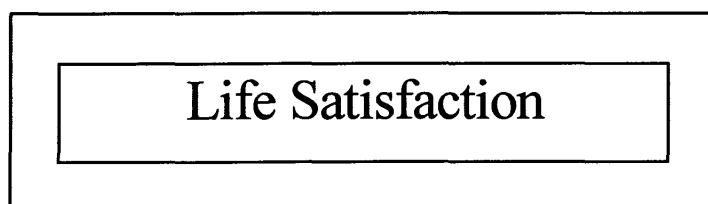
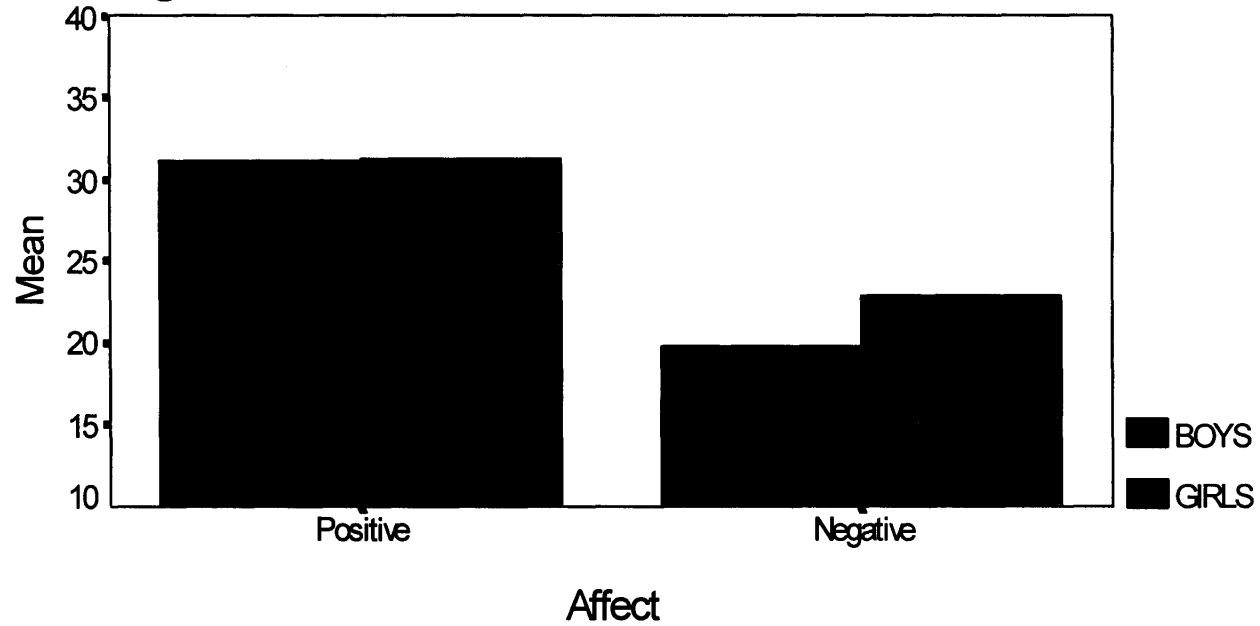


Figure 2. A Four-Factor Model of Perceived Control

	Type of Control	
Type of Experience	Primary Control (over events)	Secondary Control (over feelings)
Negative Experience	Avoiding bad things (being able to decrease the likelihood of bad events)	Coping with bad things (being able to reduce distress in response to bad events)
Positive Experience	Obtaining good things (being able to increase the likelihood of good events)	Savoring good things (being able to derive pleasure in response to good events)

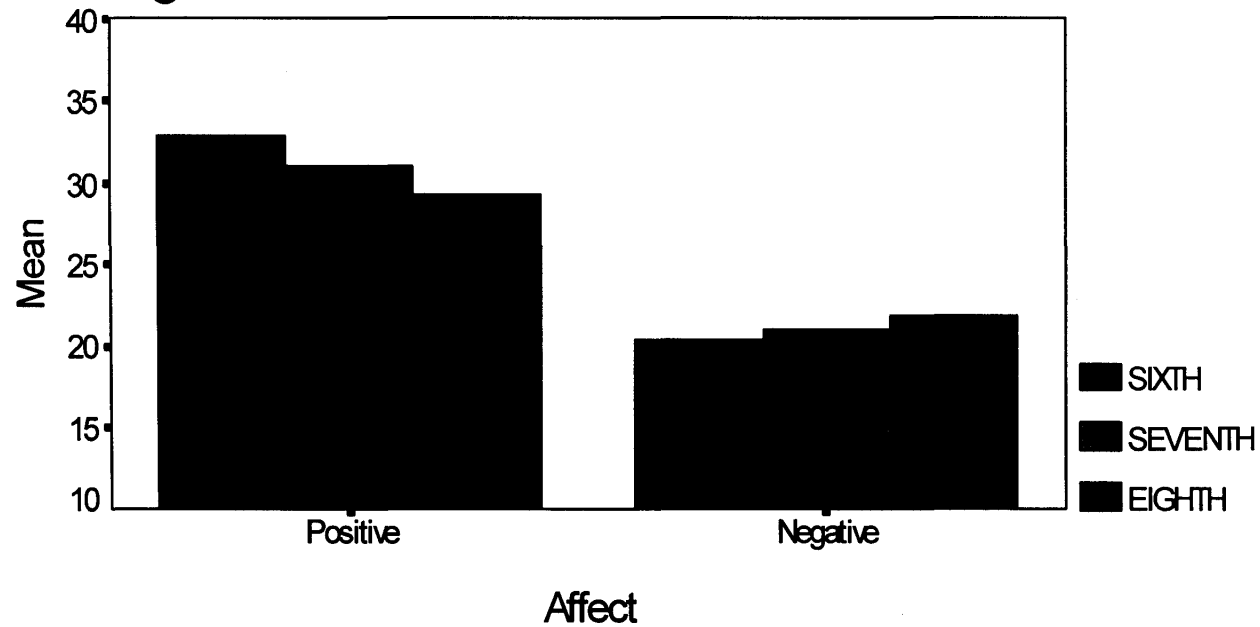
Adapted from Bryant, 1989, J. of Pers.

Figure 3: Gender Differences in Affect



Negative Affect: Significant Difference

Figure 4: Grade Differences in Affect



Positive Affect: Sixth significantly different from Eighth

Figure 5: Gender Differences in Life Satisfaction



School: Girls significantly differ from Boys

Figure 6: Grade differences in Life Satisfaction



Family: All three grades significantly differ

Living Environment and Self: Sixth significantly different from Eighth

Figure 7. Diagram of Luthar Classification Method to form Resilient and Non-Resilient Groups

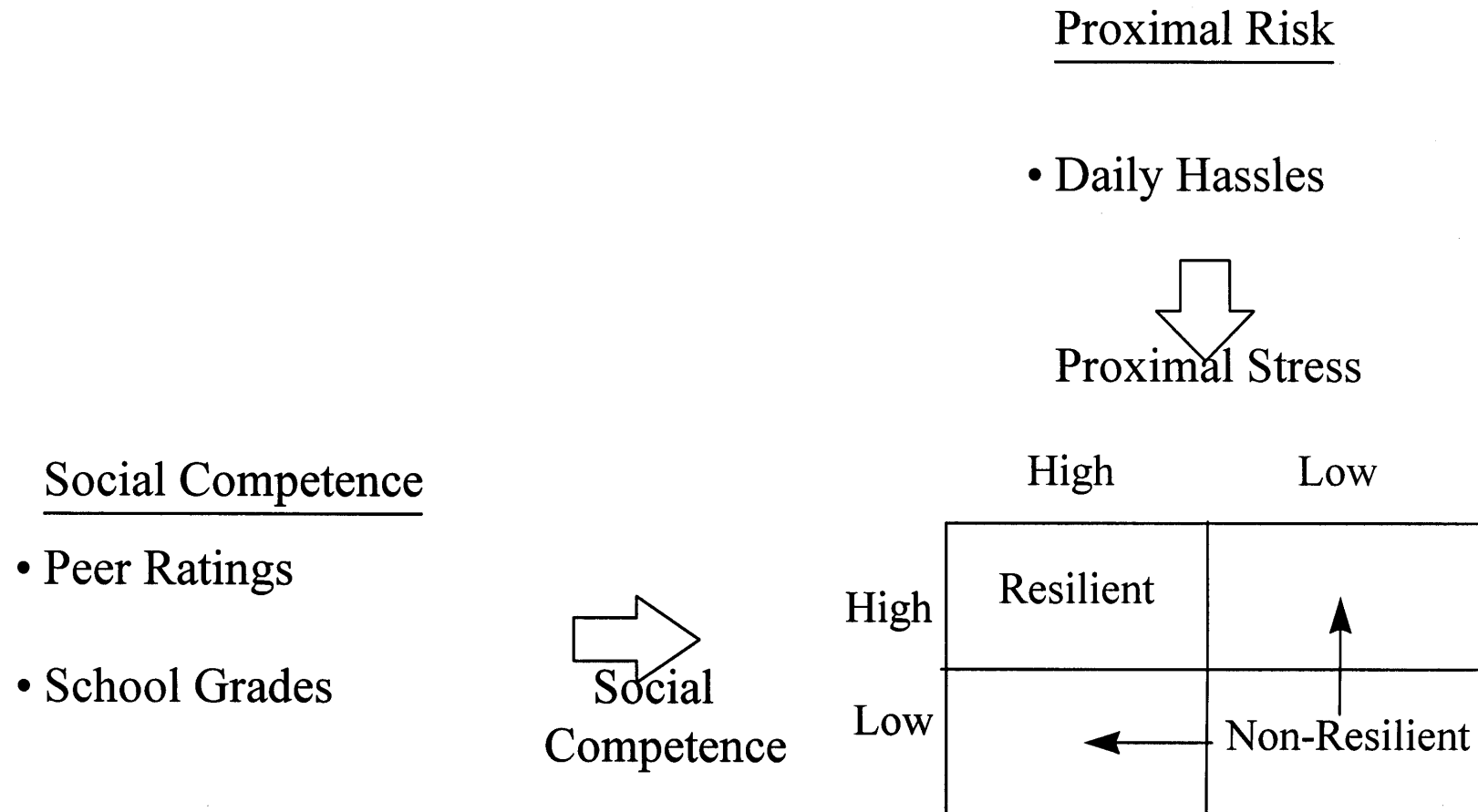
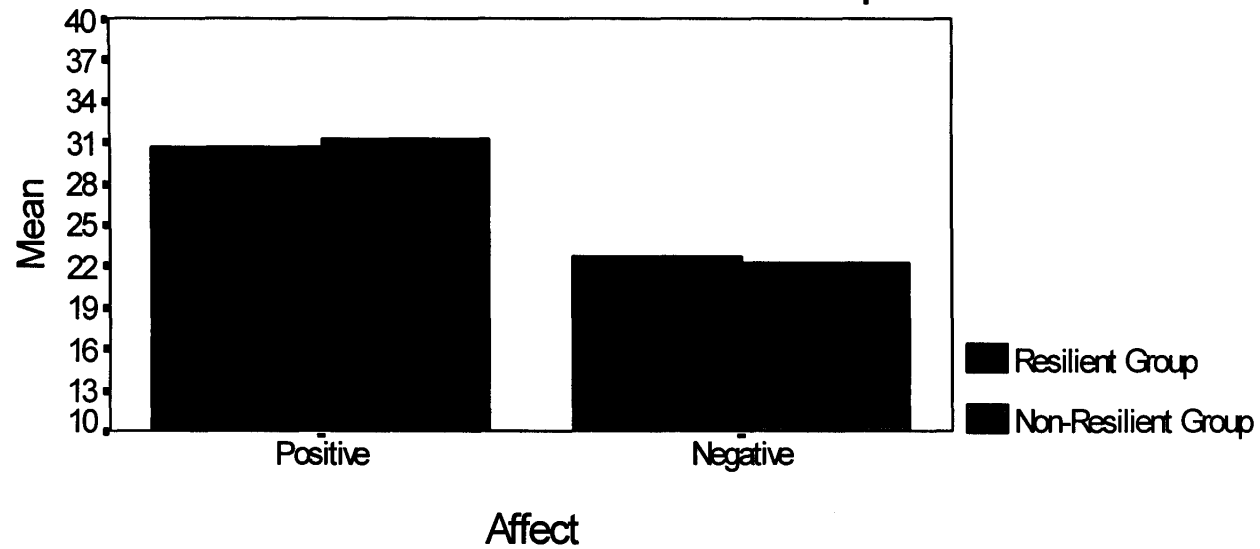


Figure 8a: Affect
Resilient and Non-Resilient Groups



Resilient Group n=37 Non-Resilient Group n=78

Figure 8b: Life Satisfaction
Resilient and Non-Resilient Groups

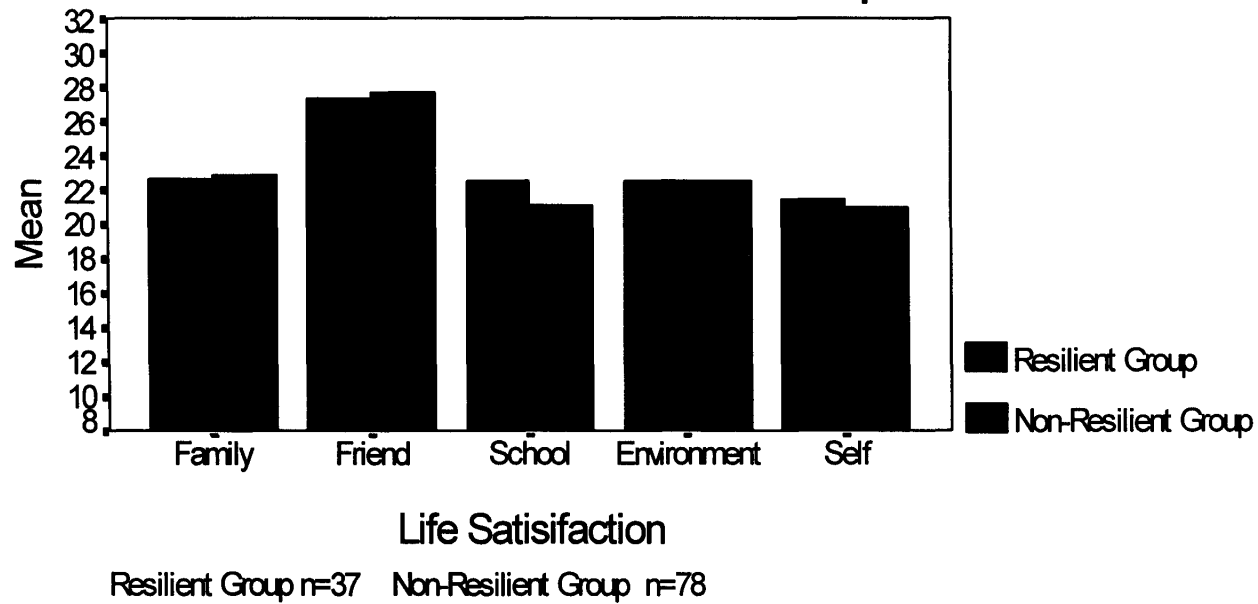
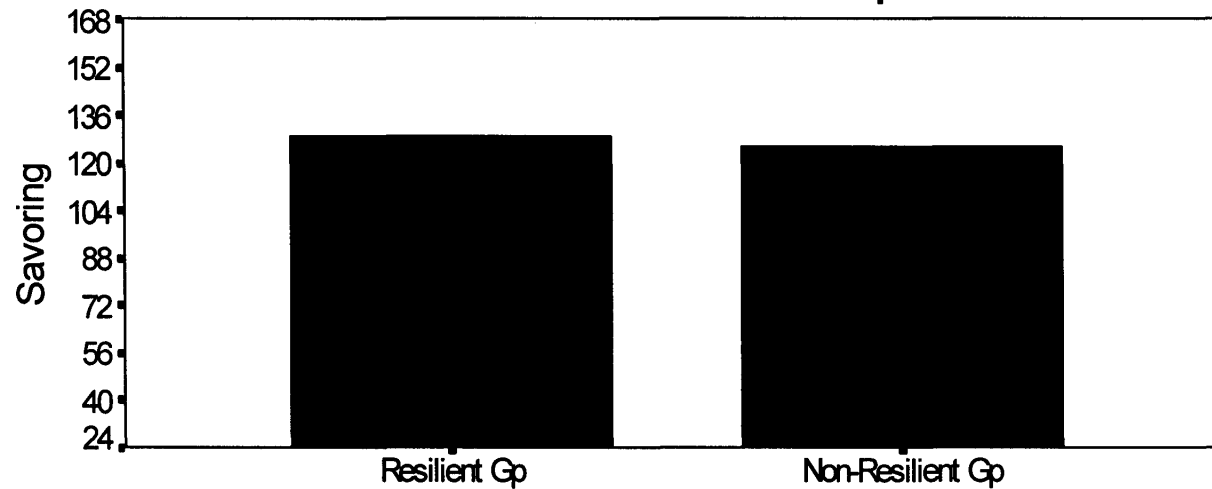


Figure 9: Savoring Beliefs of Resilient and Non-Resilient Groups



Possible Score Range 24-168

Resilient Gp n=36 Non-Resilient Gp n=73

Figure 10: Interaction of Savoring and Hassles
Predicting Satisfaction with Living Environment

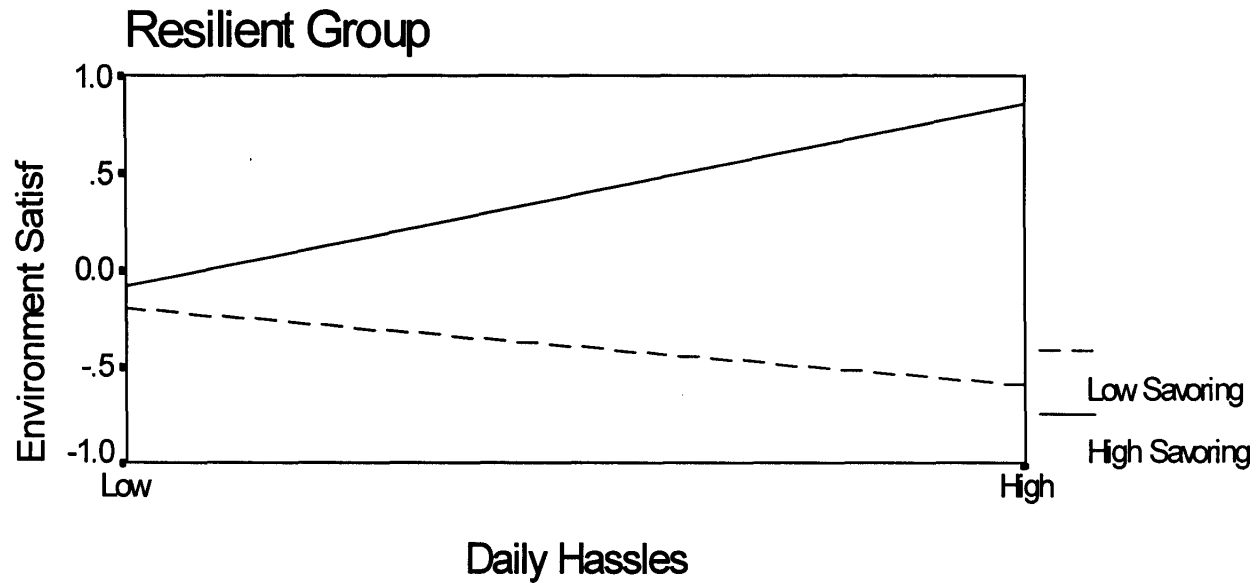


Figure 11a: Prediction of Negative Affect Age X Hassles X Savoring Interaction

Non-Resilient Group: Younger age group

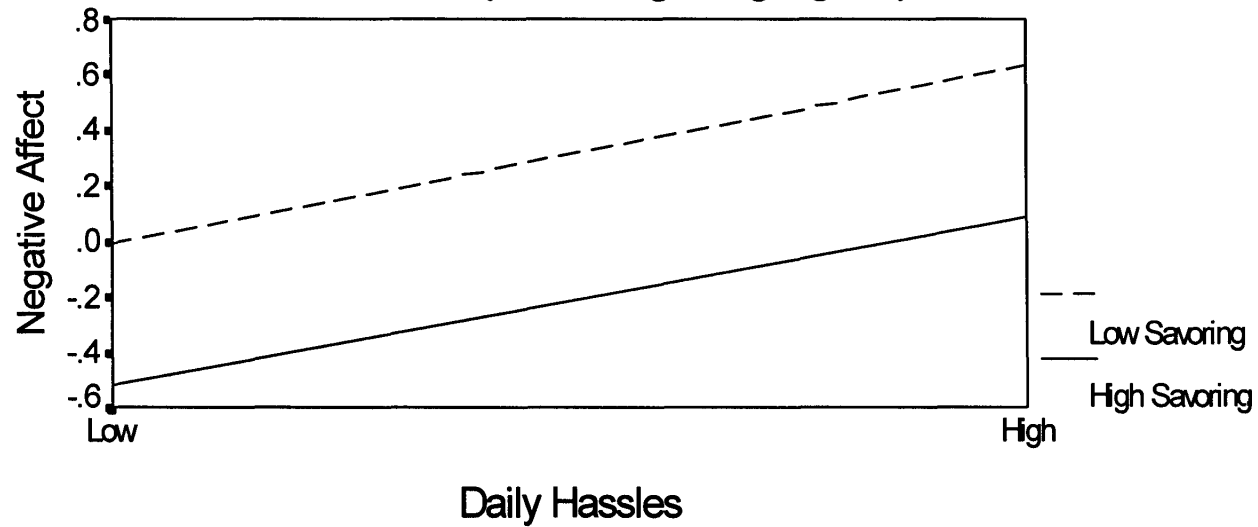


Figure 11b: Prediction of Negative Affect
Age X Hassles X Savoring Interaction
Non-Resilient Group: Older age group

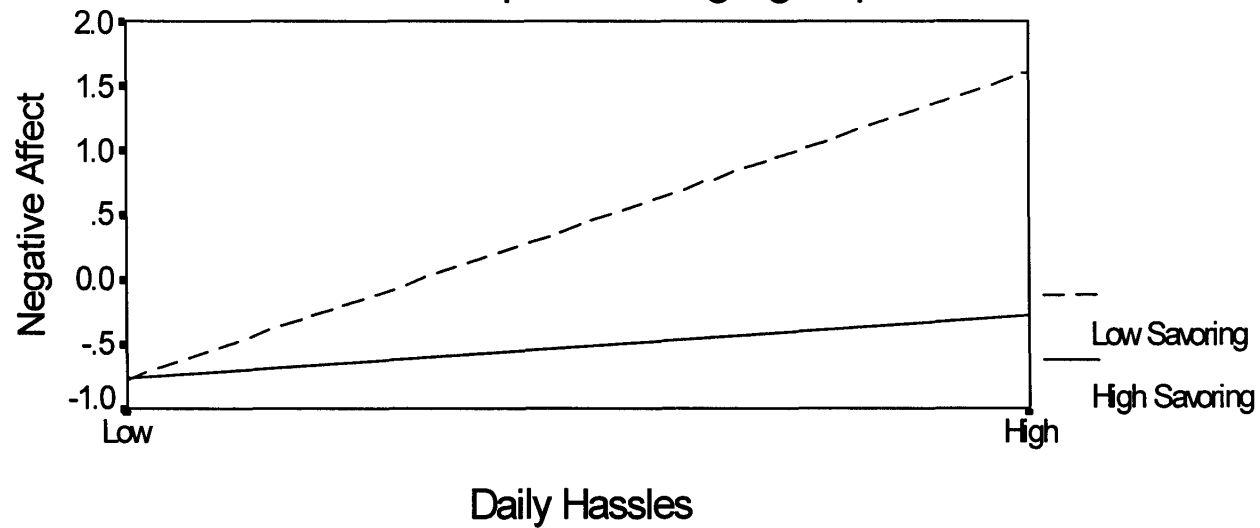
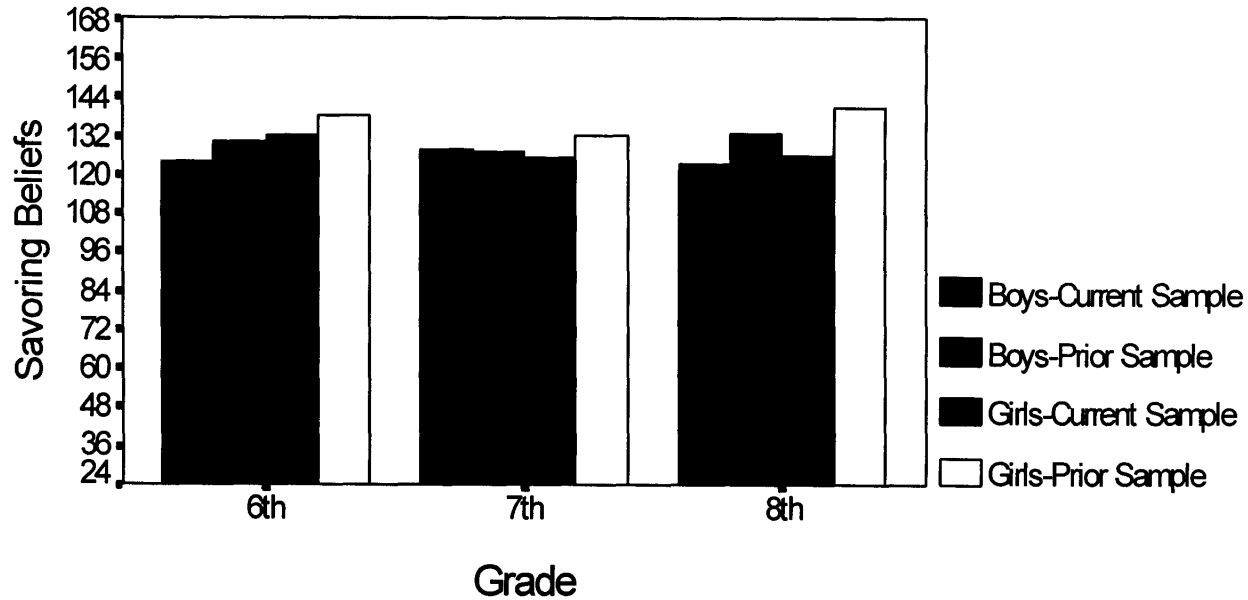


Figure 12: Savoring Beliefs of Two Samples
Gender and Grade Differences



ENDNOTES

1. Luthar (1991;1993) created competence composites using scales of peer and teacher ratings of social competence.
2. Classification of subjects into the resilient group was conducted using both the 4-factor model and Masten's 3-factor model of Social Competence.. Further analyses utilized Masten's 3-factor model due to the larger number of subjects classified as resilient and prior theoretical support in the literature (see Footnote Table 1).
3. Classification Method I (Resilience as the presence of high positive competence), which resulted in $n = 50$ for Resilient Group and $n = 65$ for Non-Resilient Group, was used to investigate for group differences in the affect and life satisfaction domains of SWB. No significant group differences were found.
4. Pilot data was collected from 79 6th-8th grade students at Von Humboldt Elementary, an inner-city Chicago Public School. Students were classified into Resilient and Non-Resilient groups based on Classification Method I (Resilience as the presence of high positive competence). No significant group differences were found for the affect or life satisfaction domains of SWB.
5. Classification Method I (Resilience as the presence of high positive competence), which resulted in $n = 50$ for Resilient Group and $n = 65$ for Non-Resilient Group, was used to investigate differences in Total Savoring Score. The groups were found to not differ significantly ($t(107) = -.07; ns$).

6. Hedges and Olkin (1985) suggest using the pooled standard deviation of the two groups when using a single sample to estimate effect size. Below is the formula for the pooled standard deviation (s):

$$s = \sqrt{(n^e - 1)(s^e)^2 + (n^c - 1)(s^c)^2 / n^e + n^c - 2}$$

where e = experimental group; c = control group; s = standard deviation

For the pilot data the mean difference was 1.54 and the pooled standard deviation was found to be 19.33. Effect size = .08.

7. The 95% Confidence Intervals were computed for two predicted Y (Living Environment Satisfaction) values and were found to not overlap which suggests that the values do differ. Specifically, the 95% Confidence Intervals were computed for the values of Y predicted corresponding to High Hassles/ High Savoring Beliefs and High Hassles / Low Savoring Beliefs.

Footnote Table 1: Classification of Subjects into Resilient Group based on the 4-Factor Model & Masten's 3-Factor Model of Social Competence

4-Factor Model: Positive Competence = sociability/leadership, helpful/polite.
 Negative Competence = aggressive/disruptive, isolated/sad,

	High Stress	High Stress, No Positive Competence	High Stress High Pos. & High Neg.	Resilient ¹
Median split (Hassles)	115	63 (55%)	16 (14%)	36 (31%)

3-Factor Model: Positive Competence = sociability/leadership
 Negative Competence = aggressive/disruptive, isolated/sad

	High Stress	High Stress, No Positive Competence	High Stress High Pos. & High Neg	Resilient ¹
Median split (Hassles)	115	65 (57%)	13 (11%)	37 (32%)

Note 1: Resilient = Classification Method II: Resilience as the presence of positive competence and the absence of negative competence.

Note 2: (Percent) = percent of high stress group

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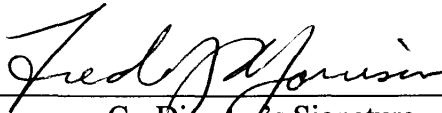
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The final copies have been examined by the directors of the dissertation and the signatures which appear below verify the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the committee with reference to content and form.

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