

THESIS

MEASURING RESILIENCE TO CHILDHOOD MALTREATMENT
IN COLLEGE STUDENTS

Submitted by

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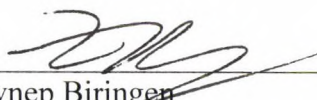
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WE HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER OUR
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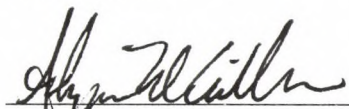
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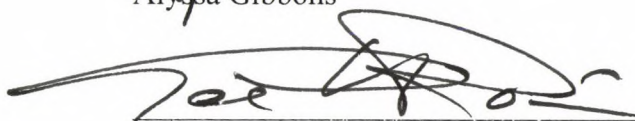
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ABSTRACT OF THESIS

MEASURING RESILIENCE TO CHILDHOOD MALTREATMENT IN COLLEGE STUDENTS

This study developed and validated three measures to be used in the assessment of outcomes for college students with childhood maltreatment histories. The College Adjustment Questionnaire (CAQ) measures college adjustment within academic, social, and emotional domains. The Childhood Maltreatment Questionnaire (CMQ) assesses for five types of child maltreatment – physical, sexual, and emotional abuse, and physical and emotional neglect. The Social/Emotional Resources Inventory (SERI) is a measure of protective factors typically associated with good outcomes for individuals who experience early adversity. Results of the confirmatory factor analyses, along with reliability and validity analyses, indicate that the measures demonstrate good psychometric properties and present an alternative to the use of the proprietary measures that currently exist. Future studies will need to further validate the measures, particularly with regard to criterion-related validity. Additional studies should also examine the data obtained from the measures and use it to develop an understanding of the relationship between childhood maltreatment and college adjustment, as well as the protective factors that influence this relationship.

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CHAPTER I

Introduction

Decades of research on childhood maltreatment have consistently shown that early abuse and neglect has serious negative effects on the psychological, emotional, and behavioral functioning of children. These effects tend to be long-term in nature and often contribute to poor adjustment and functioning in victimized children as they grow up (Collishaw, Pickles, Messer, Rutter, Shearer, & Maughan, 2007; Malinosky-Rummell & Hansen, 1993; Mullen, Martin, Anderson, Romans, & Herbison, 1996). Research, however, has also revealed a large subset of children who do not appear to suffer the deleterious effects associated with abuse and neglect histories (Anthony, 1974; McGoin & Widom, 2001; Werner & Smith, 1982). A resilience framework has been used to explain the hardiness of these children and has informed much of the research on this topic in recent years.

The concept of resilience, often described as “manifested competence in the context of significant challenges to adaptation or development” (Masten & Coatsworth, 1998, pp. 206), arose from the study of psychopathology in at-risk children in the 1970’s. After finding that a substantial minority of at-risk children were developing competently, researchers developed the construct of *resilience* and began to examine the factors that promoted healthy development in these children. Research has identified numerous

“protective factors”, which are generally grouped into three broad categories: individual, family, and community factors (Masten & Coatsworth, 1998).

Research on protective factors has often focused on finding factors that are positively correlated with good outcomes for general types of childhood trauma such as divorce, death of a parent or sibling, poverty, and serious illness. According to Masten and Coatsworth (1998), “results of these studies have been remarkably consistent in pointing to qualities of the child and the environment that are associated in many studies with competence or better psychological functioning during or following adverse experiences” (pp. 212). It appears, however, that research specifically examining resilience to trauma in the form of childhood neglect and abuse has been less extensive. Among those studies with a maltreatment focus, most have specifically examined resilience to childhood sexual abuse, which may be too narrow in focus to provide a general indication of the protective factors that are associated with resilience to various other forms of childhood maltreatment. Also, looking at the protective factors that are associated with good outcomes for adults with maltreatment histories may be particularly important, as little is known about the factors that contribute to long-term resilience for these individuals. Indeed, researchers are still working to understand the long-term effects of maltreatment (i.e., Allen, 2008; Arata, Langhinrichsen-Rohling, Bowers, & O’Farrill-Swails, 2005), so examining resilience in the long-term for these individuals is a fairly new research avenue.

Recent studies have estimated the prevalence rate of child abuse and neglect histories among college students to be between 34% (Clemmons, Walsh, DiLillo, & Messman-Moore, 2007) and 50% (Arata et al., 2005). The present study seeks to evaluate

the psychometrics of three new measures designed to examine resilience in college students. These measures include the College Adjustment Questionnaire, a measure that assesses level of functioning for college students in academic, social, and emotional domains; the Childhood Maltreatment Questionnaire, a measure that assesses for a history of abuse or neglect in childhood; and the Social/Emotional Resources Inventory, which assesses for multiple types of protective factors that may have been present in childhood.

Measuring Childhood Maltreatment

In 2008, 722,000 reports of child maltreatment were substantiated by Child Protective Services across the country (U.S. Department of Health and Human Services, 2010). Of that number, 71.1% of the reported children suffered neglect, 16.1% were physically abused, 9.1% were sexually abused, and 7.3% were emotionally or psychologically maltreated. These statistics become staggering when we consider the cases of maltreatment that were either not reported, reported but not investigated, or reported and investigated but not substantiated due to lack of evidence.

The statistics reported by the US Department of Health and Human Services highlight some of the biggest issues in quantifying maltreatment: what exactly is “maltreatment” and how should it be measured? Depending on what person or agency is collecting the data, the approach can vary widely. For example, according to the federal government, abuse and neglect is “a recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act which presents an imminent risk of serious harm” (US Department of Health and Human Services, 2010) and is only formally considered a

case of maltreatment once it has been substantiated by a CPS investigator. Although comprehensive, this definition proves to be quite vague in its characterization of maltreatment and leaves substantial room for interpretation when trying to identify potential neglect and abuse. Additionally, using only substantiated instances of maltreatment likely significantly reduces the number of incidents that can be recorded and reported. For example, Smith, Ireland, Thornberry, and Elwyn (2008) found that 29% of their sample self-reported maltreatment even though only 21% of the sample had a substantiated case of maltreatment, indicating that self-report might be a more sensitive method of measuring prevalence of maltreatment. In another vein, researchers found no difference in outcomes for children with substantiated maltreatment cases versus those who were investigated but the maltreatment was unsubstantiated, which further indicates that “substantiation status” is not necessarily meaningful in defining maltreatment (Hussey et al., 2005).

Research on maltreatment has run into many of the same problems that the US Department of Health and Human Services has encountered when trying to define and quantify neglect and abuse. Several literature reviews (Besharov, 1981; Lamphear, 1986; Mullen et al., 1996; Rosenberg, 1987; Veltman & Browne, 2001) have commented on the lack of a clear operational definition of abuse and neglect in most maltreatment studies, and Briere (1992) stated that “until researchers settle on a standard definition of what does and does not constitute [maltreatment], findings regarding abuse correlates must be evaluated in terms of the specific definition being used” (pg.198). Researchers have alternately used legal, medical, psychological, and social work definitions of maltreatment, which Besharov (1981) and other researchers claim has resulted in a large

body of research on childhood neglect and abuse with findings that cannot be directly compared because different definitions of abuse and neglect were utilized. Additionally, inconsistent definitions have resulted in varying prevalence or incidence rates being reported by different studies (Besharov, 1981; Briere, 1992; Veltman & Browne, 2001), as some researchers had very broad or vague definitions that allowed for participants to be classified as having experienced maltreatment, even though more stringent definitions from other studies would not have classified them so (see Russell (1984) and Briere & Runtz (1988) for an example).

Using varying definitions of maltreatment can also lead to inconsistent results when looking at the outcomes of maltreated individuals. For example, it is possible that stronger and more negative effects would be found when using a definition of maltreatment that is inherently more severe and far-reaching than another definition (i.e., being slapped or grabbed vs. being hit hard enough to have to go to the hospital; Briere, 1992). Also, research suggests that chronicity of maltreatment, which can vary widely depending on the definition used, is an important feature of maltreatment that can lead to differential outcomes (Éthier, Lemelin, & Lacharité, 2004).

Another issue in the measurement of maltreatment is the question of what type of measurement method to use. According to Smith et al. (2008), researchers typically use one of two measurement strategies: “The first strategy uses Child Protective Services (CPS) records to measure maltreatment based on a finding that the alleged maltreatment was substantiated. The second measurement strategy relies on self-report of child or parent experiences, generally retrospectively collected in adulthood” (pg. 174). Research suggests that while CPS records can provide an objective report of maltreatment, this

strategy can result in a high number of false negatives (individuals classified as never having experienced maltreatment, even though they did) and lack sensitivity in detecting more subtle forms of maltreatment (Hussey et al., 2005; Smith et al., 2008). Self-report measures overcome some of the limitations of chart or record review by allowing individuals to report abuse and neglect that may have not been investigated but nevertheless occurred (Smith et al., 2008). Research also suggests that use of questionnaires rather than interviews may lead to greater self-reporting, ostensibly due to the fact that the survey format is “voluntary, private, and confidential,” whereas the interview format provides “opportunities for interpersonal mistrust when disclosure occurs in a face-to-face encounter with an unfamiliar person and the patient does not know the treaters who will be receiving the information” (Dill, Chu, Grob, & Eisen, 1991, pg. 169).

Adding to the difficulty of maltreatment measurement is a lack of well designed measures. Several measures have been developed (Bernstein & Fink, 1998; Bernstein et al., 1994; Bifulco, Brown & Harris, 1994; Ditomasso, 1995; Felitti et al., 1998; Fink, Bernstein, Handelsman, Foote, & Lovejoy, 1995; Finkelhor, Ormrod, Turner, & Hamby, 2005; Gallagher, Flye, Hurt, Stone, & Hull, 1992; Herman, Perry, & van der Kolk, 1989; Meyer, Muenzenmaier, Cancienne, & Struening, 1996; Sanders & Becker-Laussen, 1995; Straus & Hamby, 1997; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998; Turner, Finkelhor, & Ormrod, 2007; Zanarini, Gunderson, Marino, Schwarz, & Frankenburg, 1989), but criterion-related validity and construct validity is lacking for most (Bernstein et al., 2003). For obvious reasons, this is problematic; given the sensitive nature of maltreatment research and the substantial impact that research findings can have on

public policy and interventions for maltreated children, it is crucial that the instruments used to measure maltreatment *actually* measure neglect and abuse. The Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998; Bernstein et al., 1994) is one of the few instruments that have been evaluated for these types of validity and results indicate that the measure has both good reliability and good validity (discriminant, convergent, and criterion-related).

The CTQ was originally developed as a 70 item measure but has since been reduced to a short form with 28 items (Bernstein & Fink, 1998; Bernstein et al., 2003). It is one of the most widely used maltreatment measures and has a manual that comes with validity data for 2,200 men and women from seven different clinical and community settings (Bernstein & Fink, 1998). The CTQ assesses for physical, sexual, and emotional abuse in addition to physical and emotional neglect, which reflects “common definitions of child abuse and neglect as found in the childhood trauma literature” (Bernstein & Fink, 1998, pg. 2). This is a particular strength of the measure, as many other measures assess for only one or two types of maltreatment (i.e., physical and sexual abuse) despite research showing that children can experience multiple types of maltreatment over the course of their childhood, and even concurrently (Arata et al., 2005; Briere & Runtz, 1988; Clemmons et al., 2007). A further strength of the measure is that it assesses not only for multiple types of maltreatment, but does so by using objective, behavioral terms in addition to using the direct terms *neglect and abuse*. Bernstein and Fink (1998) noted that terms such as abuse are “potentially stigmatizing labels” (pg. 8), and research has shown that individuals are more likely to report abuse and neglect when activity-specific questions are asked rather than term-specific questions (Peters et al, 1996; Russell, 1986).

It has been hypothesized that asking about specific activities or behavioral experiences may limit some of the embarrassment and reluctance to report maltreatment since the stigmatizing terms are not used; additionally, activity-specific items may be more sensitive to cases of maltreatment where the maltreated individual does not identify their experience as having been neglect or abuse, even though it meets criteria for neglect or abuse, and would therefore not be reported if term-specific items were used (such as “I was physically abused”). A final strength of the CTQ is that it does not approach maltreatment as a dichotomous phenomenon. By asking about the frequency of various experiences, it allows for the assessment of both the presence of maltreatment and the frequency of the abuse and neglect, thereby providing some dimensionality in the measurement of maltreatment.

Unfortunately, the CTQ is a proprietary measure that costs about \$3 per questionnaire for a sample size of 300 participants, and the expense prevents many researchers from accessing and using the measure. Additionally, there has been some concern that the factor structure of the measure is not stable (Bernstein et al., 2003; Thombs et al., 2007; Wright, Asmundson, McCreary, Scher, Hami, & Stein, 2001). For example, some researchers have found that four factors are a better fit for some population samples, with the physical abuse and emotional abuse scales being combined (Lundgren, Gerdner, & Lundqvist, 2002; Villano, Rosenblum, Fong, Nuttbrock, Marthol, & Wallace, 2004; Wright et al., 2001). Thus, the development of a new, non-proprietary measure with a more stable factor structure seems prudent.

Overall, the CTQ represents a major step forward in the measurement of maltreatment, overcoming many of the problems of earlier measures and using research

on neglect and abuse to guide its development and make it as strong of a measure as possible. It seems, however, that there is room for the development of another measure that is comparable in quality but free to use. A nonproprietary measure with good psychometric properties and a more stable factor structure would improve the status of childhood maltreatment research.

Measuring Factors that Promote Resilience

Resilience “refers to the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten, Best, & Garmezy, 1990, pp. 426). An individual is thought to be resilient if they have experienced a significant threat or trauma and their adaptation or development is judged to be good (Masten & Coatsworth, 1998). Resilience is not typically defined as extraordinary functioning or adaptation; instead, research tends to focus on those individuals who are functioning as well as “non-at-risk” peers.

Interest in the variables that promote good adaptation in at-risk youth has lead to research on so called “protective factors” – factors that are defined as “moderating the effects of individual vulnerabilities or environmental hazards so that the adaptational trajectory is more positive than would be the case if the protective factors were not operational” (Masten, Best, & Garmezy, 1990, pp. 426). A myriad of protective factors have been identified and they are generally organized into three categories: family factors, community factors, and individual factors (Masten & Coatsworth, 1998).

Family factors include things such as having a close relationship with a caring parent figure where the relationship is warm, consistent, and minimally critical (Howard, Dryden, & Johnson, 1999; Masten & Coatsworth, 1998; Rutter, 1979), parental support

and connectedness (Chandy et al., 1996; Herrenkohl, Herrenkohl, & Egolf, 1994; Masten & Coatsworth, 1998; Spaccarelli & Kim, 1995), connections to extended family networks (Masten & Coatsworth, 1998), and socioeconomic advantages (Masten & Coatsworth, 1998). Further research suggests that having a sensitive and emotionally responsive caregiver (Egeland, Carlson, & Stroufe, 1993; Farber & Egeland, 1987) and positive family changes, such as interventions aimed at reducing abuse or otherwise reducing the impact and incidence of maltreatment (Egeland, Yates, Appleyard, & van Dulmen, 2002) are protective as well.

Community factors are things such as bonds to prosocial adults outside the family (Luthar & Zigler, 1991; Masten & Coatsworth, 1998; Masten & Powell, 2003), connections to prosocial organizations (Masten & Coatsworth, 1998), high-quality and reciprocal friendships (Bolger, Patterson, & Kupersmidt, 1998; Schwartz et al., 2000), attending effective schools (Howard, Dryden, & Johnson, 1999), and access to quality healthcare and social services (Masten & Powell, 2003).

Individual factors include having a positive self-concept (Garmezy, 1981; Werner & Smith, 1982), high self-esteem and self-efficacy (Howard, Dryden, & Johnson, 1999; Moran & Eckenrode, 1992; Valentine & Feinauer, 1993; Werner, 2005), social competence (Howard, Dryden, & Johnson, 1999), an easygoing temperament (Perry, 2002; Rutter, 1983; Shapiro & Friedman, 1996; Werner, 2005), an internal locus of control (Bolger & Patterson, 2001; Garmezy, 1981; Luthar, 1981; Moran & Eckenrode, 1992; Valentine & Feinauer, 1993; Werner, 2005; Werner & Smith, 1982) and a sense of purpose and future-orientation (Garmezy, 1981; Howard, Dryden, & Johnson, 1999). Other individual factors are a sense of spirituality or faith (Valentine & Feinauer, 1993;

Werner, 2005), having a talent (Masten & Coatsworth, 1998; Shapiro & Friedman, 1996), and having good intellectual functioning (Luthar, 1991; Masten & Coatsworth, 1998; Masten, Hubbard, Gest, Tellegen, Garmezy, & Ramirez, 1999).

In general, existing protective factor research seems to lack cohesion and clarity. Much of this comes from the fact that researchers are still struggling to operationally define resilience. According to Masten, Best, and Garmezy (1990), resilience is often used to refer to three different kinds of phenomena: good outcomes despite high-risk status; sustained competence under threat; and/or recovery from trauma. Thus, resilience as a term remains fairly difficult to operationalize because it can refer to several different phenomena. A second problem with defining resilience is that it is “an inferential construct that involves human judgments about desirable and undesirable outcomes as well as definitions of threat or risk” (Masten & Gewirtz, 2006, pp. 2). Resilience is subjective; researchers decide what constitutes risk and good adaptation and conduct their studies on the basis of those initial decisions. As a result, the protective factors that are identified vary widely across studies because different definitions of resilience lead to different notions of good outcomes, and different outcomes are associated with different protective factors.

To date there is only one measure of protective factors, developed by Cole, Rosén, and Malach (2007, 2008). Previous studies have generally examined the role of protective factors by either, 1) identifying factors they think might impact the relationship between early adversity or trauma and later outcomes and then conducting a study to address their hypotheses, or by 2) collecting demographic and descriptive data about resilient individuals and then examining which factors were associated with good

outcomes for those individuals. As noted above, these strategies have led to a significant amount of variation in the protective factors that have been examined and reported in the resiliency literature, given the substantial subjectivity in determining which protective factors should be included and examined in any study. Using a measure such as the one developed by Cole et al. (2007, 2008) will help to limit the subjectivity of “choosing” protective factors to study and will allow for a more comprehensive evaluation of the factors that are associated with resilience to maltreatment.

Measuring Resilience in College Students

Estimates of the prevalence of child abuse and neglect histories among college students vary from as low as 19% to as high as 80% (Cook, 1991; Witchel, 1991), with recent studies narrowing the range to between 34% (Clemmons et al., 2007) and 50% (Arata et al., 2005). These percentages are comparable to prevalence rates from community samples (Scher et al., 2004) and suggest that college populations are a reasonable population in which to study maltreatment.

For the purposes of this study, college students with maltreatment histories who are classified as being well-adjusted will be considered resilient, as they meet the criteria outlined by Masten and Coatsworth (1998) that state that an individual should only be considered resilient if they have experienced some sort of trauma or adversity in their past and their current adaptation or adjustment is judged to be good. Studies by Cole et al. (2007, 2008) have used this same method of resiliency classification with participants that were drawn from the same population that this study proposes to use.

College adjustment has been of interest to researchers for decades, with articles on the topic first appearing in the 1940's. Overall, it appears that researchers were

initially interested in examining the factors that impacted adjustment to college and then the role that college adjustment could play on other factors, such as matriculation and attrition (Gerdes & Mallinckrodt, 1994) and the need to seek counseling (Baker & Siryk, 1984). In recent years, it appears that the construct of college adjustment has come to represent a general outcome variable, such that level of adjustment is no longer the focus of interest and rather simply represents a general level of ability or functioning that has been achieved.

Researchers have proposed that college adjustment is actually comprised of several factors and that assessment of college adjustment must necessarily involve a multifaceted approach to quantifying it (Baker & Siryk, 1984; Gerdes & Mallinckrodt, 1994). A large body of literature provides support for this proposition, with research showing that there are several dimensions of adjustment, such as academic, social, and personal/emotional, that contribute to overall college adjustment (see Gerdes & Mallinckrodt, 1994, for a review of the research).

Several instruments exist to measure college adjustment: the Student Adaptation to College Questionnaire (Baker & Siryk, 1989), the College Adjustment Rating Scale (Zitzow, 1984), the College Adjustment Scales (Anton & Reed, 1991), and the College Adjustment Questionnaire (Crombag, 1968; van Rooijen, 1986). Of these, the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1989) is by far the most widely used and has the best psychometric properties. The other measures are either obscure or have an intended use that is not appropriate for this study (i.e., the College Assessment Scales, which are intended to be used as a screening device for college students who may need counseling). The SACQ is also superior to the other measures

because it takes a multifaceted approach to measuring college adjustment and looks at functioning across several domains, which is important given that “most researchers who study adjustment would advocate that [multiple] indicators be used simultaneously so a more comprehensive picture of a student’s adjustment can be obtained” (Taylor & Pastor, 2007, pg. 1003).

Unfortunately, the SACQ is a proprietary measure that has been copyrighted and costs about \$2.50 per questionnaire for a sample size of 300 participants. The expense of the measure makes it inaccessible to many researchers, and given that it is one of few (if not the only) adequate measures of college adjustment, it seems prudent to develop another measure that can be used as an alternative to the SACQ.

Current Study

The current study sought to develop two new measures – a measure of childhood maltreatment and a measure of college adjustment – and establish the validity and reliability for each instrument. This study also sought to assess the psychometric properties of the protective factors measure previously developed by Cole et al. (2007, 2008).

CHAPTER II

Method

Participants

Three hundred and one students participated in data collection during September and October of 2009. The data collection occurred at a large western United States university, and students from Introductory Psychology classes were recruited. In return for participating in this study, participants received credit toward Introductory Psychology course requirements. Participants were 163 (54.2%) female and 138 (45.8%) male students. Demographic information collected indicated that 222 (73.8%) were freshman, 49 (16.3%) were sophomores, 20 (6.6%) were juniors, 7 (2.3%) were seniors, and 3 (1%) were in their fifth year or above. Additionally, 14 (4.7%) participants reported their ethnicity as African American/Black, 13 (4.3%) as American Indian/Native American, 7 (2.3%) as Asian American/Asian, 23 (7.6%) as Hispanic/Latino, 2 (<1%) as Native Hawaiian or Pacific Islander, 236 (78.4%) as White non-Hispanic, and 6 (2%) self-reported as Other. The average age was 18.69 years of age ($SD = 1.45$).

Scale Development

Scale development for this study followed a general pattern of 1) determining the construct to be measured and reviewing existing scales and research on the construct, 2) developing an operational definition of the construct, 3) using subject matter experts (SME's) to develop items on a rational/theoretical basis that were meant to represent the

construct as fully as possible and that were consistent with items from other similar measures, 4) administering the newly developed measure to study participants, 5) analyzing the data by examining the factor structure of the items and removing weak, unnecessary, or problematic items, 6) conducting reliability analyses on the refined measures, and 7) correlating scores from the newly developed measures with preexisting measures to establish validity. This process was consistent with that recommended and outlined by Loevinger (1957), who has been described as having the “most complete exposition of theoretically based psychological test construction” (Watson & Clark, 1995, pg. 310).

College Adjustment Questionnaire. The College Adjustment Questionnaire (CAQ) was created specifically for this study. The measure asks respondents to indicate how true certain statements about college experiences are for them at this point in time. Items were designed to sample across the domains of academic, social, and emotional functioning in college and are measured on a 5-point Likert type scale ranging from *not true* to *completely true* (see appendix A for a copy of the initial measure).

The Academic Adjustment subscale focuses on features of academic functioning, such as performance in classes and academic achievement. The Social Adjustment subscale assesses for adjustment in the social aspects of college life and asks questions about social connectedness and feelings of satisfaction with interpersonal relationships. The Emotional Adjustment subscale focuses on features of emotional/psychological functioning, and asks questions about how the individual presently feels about their college experience. As discussed above, items for each domain were developed by subject matter experts using a rational/theoretical approach.

The Student Adaptation to College Questionnaire (SACQ) developed by Baker and Siryk (1989) was used in this study to establish convergent validity for the CAQ. The SACQ has 64-items arranged into 4 subscales that measure Academic Adjustment (23 items), Social Adjustment (18 items), Personal-Emotional Adjustment (15 items), and Institutional Attachment (14 items). The measure also provides a Full Scale score. Participants rate their responses on a nine-point scale that ranges from *applies very closely to me* to *doesn't apply to me at all*. Reported subscale reliabilities are good, with alphas of .84, .84, .81, .80 respectively (Baker & Siryk, 1989). Full scale reliability is also good (alpha = .92, Baker & Siryk, 1989). The measure also exhibits acceptable criterion-related and construct validity (Baker & Siryk, 1989). (See appendix B for a sample of representative items from the measure.)

Childhood Maltreatment Questionnaire. The Childhood Maltreatment Questionnaire (CMQ) was also developed specifically for this study. The measure asks respondents to indicate how often various events occurred when they were a child. The items were designed to sample across the five domains of sexual abuse, physical abuse, emotional abuse, physical/medical neglect, and emotional neglect, which is consistent with previous measures and research on maltreatment. Items are measured on a five-point Likert type scale, ranging from *never* to *very often* (see Appendix C for a copy of the initial measure).

State and federal definitions of maltreatment were considered when developing the operational definitions of the different types of abuse and neglect to be measured by the CMQ. According to the Child Welfare Information Gateway (2009), “physical abuse is generally defined as ‘any nonaccidental physical injury to the child’ and can include

striking, kicking, burning, or biting the child, or any action that results in a physical impairment of the child.” Taking this definition into consideration, items were written to reflect incidents of bodily assault on a child by a caregiver or parent that resulted in physical injury. It should be noted that this definition is nearly identical to that used by Bernstein and Fink (1998) for the CTQ.

Definitions of sexual abuse vary widely from state to state. Given that sexual abuse definitions depend primarily on the age difference between victim and perpetrator (with the perpetrator always being older than the victim), we made sure to specify that the sexual interactions being asked about occurred with an older person. Overall, sexual abuse was defined as any sexual contact or incident that was sexual in nature that occurred with an older person. Again, this definition was nearly identical to the definition used on the CTQ.

Emotional abuse items were written to reflect acts of verbal assault on a child by a caregiver or parent that resulted in actual or potential emotional/psychological harm by compromising the child’s sense of self and/or wellbeing. As before, this definition was consistent with that of the CTQ.

Physical neglect was defined as failure of a parent or caregiver to provide the basic physical and medical care necessary for a child, unrelated to financial constraints. Item content included clothing issues (i.e. not having enough warm clothes, wearing dirty clothes), bathing issues (i.e., not being bathed regularly, being dirty and unkempt), lack of access to food, lack of supervision, and lack of medical care. It is interesting to note that although this definition is very similar to the definition used on the CTQ, the items were quite different in content. This difference likely reflects the fact that physical

neglect is a multifaceted domain of neglect that can encompass many classes of neglectful behavior.

Emotional neglect was defined as failure of a parent or caregiver to provide the basic emotional and psychological care necessary for a child, such as emotional connection and affection. This definition was consistent with the definition used by the CTQ.

A final subscale was comprised of items attempting to measure the positive aspects of a parent/caregiver-child relationship (i.e., feeling loved, supported, and safe). These items were conceptualized as providing a validity check for the measure, as individuals who rated the items from the five maltreatment domains highly should not, theoretically, also rate these “love” items highly (due to the abusive and/or neglectful nature of their relationship with their caregiver). Thus, those individuals who do rate all items high would stand out as having an invalid profile.

Convergent validity for the Childhood Maltreatment Questionnaire was established by correlating scores on the CMQ with scores from the Childhood Trauma Questionnaire – Short Form (CTQ-SF; Bernstein & Fink, 1998; Bernstein et al., 2003). The CTQ is a 28-item questionnaire that asks about experiences in childhood and adolescence and asks participants to rate their responses on a five-point Likert scale ranging from *never true* to *very often true*. The CTQ has five clinical scales: physical, emotional, and sexual abuse, and physical and emotional neglect. The short form demonstrates good convergent and discriminant validity with therapist’s ratings of childhood maltreatment (Bernstein et al., 2003). The measure also has good test-retest reliability (ICC = 0.86) and good internal consistency with Cronbach’s alpha’s ranging

from .66 to .92 for the subscales (Bernstein & Fink, 1998). (See appendix D for a sample of questions from the CTQ-SF.)

Life Events. A history of negative life events (not including maltreatment) was assessed by the Life Events Questionnaire-Adolescent version (LEQ-A; Gest et al., 1999; Masten et al., 1994). The measure was developed for use with adolescents in the resilience study called Project Competence and has been used in two recent studies by Cole et al. (2007, 2008) using a sample comparable to the one used in this study. The 67-item questionnaire asks respondents to indicate whether or not particular life events have occurred in their lifetime. It should be noted that this measure has been modified to ask participants about lifetime occurrence rather than using the original 12 month time frame that the questionnaire specified. Only 24 of the 67 items are scored, as they have been deemed the most important by Project Competence researchers. The 24 items have been judged to be primarily negative events that are independent of an adolescent's actions. Independence of the event is important, as Masten et al. (1994) notes that nonindependent events inflate the correlation between life events and adjustment and provide a poor indication of competence.

Correlations between the LEQ and CMQ were used to provide evidence of discriminant validity for the CMQ. Since the CMQ was designed to measure not just negative events in childhood but specifically experiences with maltreatment, it was hypothesized that scores on the CTQ and LEQ would only weakly to moderately correlate, reflecting the measurement of related (i.e., negative and/or traumatic events) but different (i.e., maltreatment vs. non-maltreatment) constructs. (See appendix E for a copy of the measure.)

Social/Emotional Resources Inventory - Revised. A slightly revised version of the Social/Emotional Influences Inventory (Cole et al., 2007, 2008; newly titled Social/Emotional Resources Inventory) was used to identify the individual, family, and community factors that may have been present in participants' lives. The measure asks participants to indicate on a five-point Likert scale the extent to which certain things were true of them when they were growing up. Responses range from *not true* to *completely true*. Exploratory and confirmatory factor analysis performed by Cole et al. (2008) on the original 40-item measure revealed that there were nine factors or subscales to the measure: Positive Caregiving (6 items), Faith (3 items), Intelligence (3 items), Financial Resources (3 items), Self-Esteem (3 items), Talent (3 items), Family Connections (3 items), Good Schools (3 items), and Parental Expectations (2 items). The other 11 original items, which were written to comprise Temperament, Kin Connections, Prosocial Others, and Prosocial Organizations subscales, were dropped. The inventory was revised for this study to include slight changes in the Faith items (i.e., adding the word spirituality to make the items less religion-specific) and changes in wording of the directions. Cole et al. (2008) reported a coefficient alpha of .91 for the full scale and good internal reliabilities for the subscales that ranged from .75 to .91. (See appendix F for a copy of the initial measure).

Procedure

Participants were given an informed consent form that provided a description of the study and any potential risks from participating in the study, as well as an assurance of anonymity and confidentiality. All students filled out survey packets containing the CAQ, CMQ, LEQ and SERI. Of those survey packets, 63 also contained the CTQ-SF and

SACQ. Participant names were not linked with the survey packets in any way so as to maintain confidentiality and avoid any reporting issues that could emerge with the maltreatment questionnaires. Students received a debriefing form at the end of the study and were thanked for their participation.

CHAPTER III

Results

College Adjustment Questionnaire

Confirmatory Factor Analysis. The correlation matrix of the College Adjustment Questionnaire (CAQ) was subjected to confirmatory factor analysis (CFA) in order to examine the fit of the actual data with the proposed three factor structure (academic, social, and emotional adjustment subscales/factors) that was hypothesized to underlie the CAQ. All latent factors were allowed to intercorrelate since we expected them to be significantly correlated with each other. We did not allow any complex factor loadings in which an item would load on more than one factor. Following the recommendations of Hu and Bentler (1998), several indices of model fit were used: the Tucker Lewis Index (TLI; values should be $> .90$), the Comparative Fit Index (CFI; values should be $> .90$), and the Root Mean Square Error of Approximation (RMSEA; values should be $< .08$).

Means, standard deviations, and factor loadings for the 22-items of the original measure are displayed in Table 1. Based on investigation of initial model fit, several items were removed due to factor loadings being less than .50 (Bernstein et al., 2003 used a similar criterion; also see Watson, Clark, & Tellegen, 1988) and having correlation residuals that were extremely large (i.e., greater than .15), which indicates poor fit between the predicted and observed covariance matrices. As shown in Table 2, model fit

for the remaining 14 items was good, with a TLI of .925, a CFI of .939, and a RMSEA of .070. All factor loadings were significant and ranged from .55 to .86. This analysis confirmed a three factor structure which we labeled Academic Adjustment, Social Adjustment, and Emotional Adjustment.

Reliability Analysis. The internal consistency of the CAQ was assessed by examining inter-item correlations and split-half reliability. According to George and Mallery (2003), a Cronbach's alpha (α) above .7 is considered acceptable, an α above .8 is considered good, and an α above .9 is considered excellent. Similarly, Garson (2010) reports that "a common rule of thumb is .80 or higher for adequate reliability and .90 or higher for good reliability" when reviewing the Spearman-Brown split-half reliability coefficient.

Using these guidelines, the CAQ full scale demonstrated good inter-item consistency with a Cronbach's alpha (α) of 0.828 and an adequate split-half reliability of 0.876. The CAQ subscales also demonstrated good reliability, with α 's of .885 (Academic Adjustment subscale), .841 (Social Adjustment subscale), and .788 (Emotional Adjustment subscale), respectively.

Validity Analysis. A Pearson product-moment correlation coefficient was computed to assess the relationship between scores on the CAQ and scores on the SACQ. Both questionnaires purported to measure adjustment along academic, social, and emotional domains in college students. Strong correlations between the measures would demonstrate good convergent validity for the CAQ. Results indicate positive correlations between the full scale scores, $r = .667$, $n = 51$, $p = .000$; the Academic subscale scores, $r = .650$, $n = 51$, $p = .000$; the Social subscale scores, $r = .667$, $n = 51$, $p = .000$; and the

Emotional subscale scores, $r = .694$, $n = 51$, $p = .000$. A correlation could not be computed for the institutional attachment subscale found on the SACQ, as the CAQ was not designed to assess for adjustment in that domain. Overall, the correlations between the two measures were large (Cohen, 1988), indicating good convergent validity for the CAQ.

Additionally, correlations between the subscales and full scale on the CAQ were examined for evidence of further construct validity (see table 3). In general, the correlations between the subscales were large enough to indicate that the subscales were measuring a common construct (adjustment), but small enough to indicate that the subscales were measuring different facets of the construct. It is interesting to note that the correlation between the Academic and Social Adjustment subscales was very small and negative, indicating that academic adjustment was inversely related to social adjustment. Although unexpected, this relationship is also found in several of the studies reported in the SACQ manual (see pgs. 37-41 in Baker & Siryk, 1989) and does not appear to be a major problem at this time.

Childhood Maltreatment Questionnaire

Confirmatory Factor Analysis. The correlation matrix of the Childhood Maltreatment Questionnaire (CMQ) was subjected to CFA in order to examine the fit of the actual data with the proposed six factor structure (physical, sexual, and emotional abuse, physical and emotional neglect, and love subscales/factors) that was hypothesized to underlie the CMQ. As with the CAQ, all latent factors were allowed to intercorrelate since we expected them to be significantly correlated with each other. We did not allow any complex factor loadings in which an item would load on more than one factor. The

Tucker Lewis Index (TLI; values should be $> .90$), Comparative Fit Index (CFI; values should be $> .90$), and Root Mean Square Error of Approximation (RMSEA; values should be $< .08$) were used as fit indices.

Means, standard deviations, and factor loadings for the 47-items of the original measure are displayed in Table 4. It is important to note that an 11 factor model was tested first, since the items on the physical neglect subscale appeared to form subfactors (i.e., lack of supervision, lack of adequate clothing, lack of access to food, and lack of regular bathing) that could have been unique latent factors. Based on investigation of initial model fit, several items were removed due to factor loadings being less than .50 (Bernstein et al., 2003 used a similar criterion; also see Watson, Clark, & Tellegen, 1988) and having correlation residuals that were extremely large (i.e., greater than .15), which indicates poor fit between the predicted and observed covariance matrices. With the removal of these items, it became clear that a six factor structure provided a better fit for the data and the model was adjusted accordingly. As shown in Table 5, fit for the 23-item, six factor model was good, with a TLI of .910, a CFI of .923, and a RMSEA of .08. All factor loadings were significant and ranged from .63 to .96. The resulting six factors were labeled Sexual Abuse, Physical Abuse, Emotional Abuse, Physical Neglect, Emotional Neglect, and Love.

Reliability Analysis. The internal consistency of the CMQ was assessed by examining inter-item correlations and split-half reliability. Overall, the CMQ demonstrated excellent reliability with a Cronbach's alpha (α) of 0.919 and a Spearman-Brown coefficient of 0.927. Five of the CMQ subscales also demonstrated very good reliability, with α 's of .949 (Sexual Abuse subscale), .886 (Physical Abuse subscale),

.833 (Emotional Abuse subscale), .913 (Emotional Neglect subscale) and .748 (Love subscale). The Physical Neglect subscale demonstrated relatively poor internal consistency with a Cronbach's alpha (α) of .487. This low value likely reflects the variability in the items that comprise the Physical Neglect subscale, as each item assesses a different facet of the underlying construct. Given that the variability in the Physical Neglect items seems to make sense on a theoretical basis, the low alpha isn't completely surprising. It does suggest, however, that further examination of how to best measure that construct in a reliable way would be appropriate.

Validity Analysis. A Pearson product-moment correlation coefficient was also computed to assess the relationship between scores on the CMQ and scores on the CTQ. Both questionnaires purported to measure childhood maltreatment and strong correlations between the measures would demonstrate good convergent validity for the CMQ. Results indicate positive correlations between the Sexual Abuse subscale scores, $r = .877$, $n = 63$, $p = .000$; the Physical Abuse subscale scores, $r = .885$, $n = 63$, $p = .000$; the Emotional Abuse subscale scores, $r = .809$, $n = 63$, $p = .000$; the Physical Neglect subscale scores, $r = .398$, $n = 51$, $p = .001$; and the Emotional Neglect subscale scores, $r = .489$, $n = 63$, $p = .000$. Overall, the correlations between the two measures were large (Cohen, 1988) for the sexual, physical, and emotional abuse subscales, and moderate (Cohen, 1988) for the neglect subscales, which indicates that the content area covered by the two measures is quite similar in nature and results in similar scores.

Scores on the CMQ were also correlated with scores on the Life Events Questionnaire (LEQ) in order to provide evidence for discriminant validity. Results show that correlations between the CMQ subscales and LEQ full scale score were in the small

to moderate range (see table 6 for the correlations), reflecting some overlap of the constructs while also providing support for the conceptualization of the CMQ as measuring something more than just negative life events.

Additionally, further evidence of construct validity for the CMQ was established by examining correlations between the subscales on the CMQ (see table 6). The correlations range from small to large, reflecting greater overlap of some constructs (i.e., emotional abuse and emotional neglect, $r = .776$) and little overlap of other constructs (i.e., sexual abuse and physical abuse, $r = .252$). Overall, the correlations between the subscales make sense on a theoretical basis and are consistent with the correlations reported by Bernstein and Fink (1998) for the CTQ, which provides evidence for acceptable construct validity of the measure.

Social/Emotional Resources Inventory - Revised.

Confirmatory Factor Analysis. The correlation matrix of the Social/Emotional Resources Inventory - Revised (SERI) was subjected to CFA in order to examine the fit of the actual data with the proposed nine factor structure (positive caregiving, faith, intelligence, financial resources, self-esteem, talent, family connections, good schools, and parental expectations) that was hypothesized to underlie the SERI. All latent factors intercorrelated freely since we expected them to be significantly correlated with each other. We did not allow any complex factor loadings in which an item would load on more than one factor. The Tucker Lewis Index (TLI; values should be $> .90$), Comparative Fit Index (CFI; values should be $> .90$), and Root Mean Square Error of Approximation (RMSEA; values should be $< .08$) were used as fit indices.

Means, standard deviations, and factor loadings for the 40-items of the original measure are displayed in Table 7. It is important to note that a 13 factor model was tested first, since that is the number of factors that comprised the original the measure. Based on investigation of initial model fit, several items were removed due to factor loadings being less than .50 (Bernstein et al., 2003 used a similar criterion; also see Watson, Clark, & Tellegen, 1988) and having correlation residuals that were extremely large (i.e., greater than .15), which indicates poor fit between the predicted and observed covariance matrices. With the removal of these items, a nine factor structure provided a good fit for the data. This nine factor model was consistent with results of Cole et al. (2008) and included the same factors that they found. As shown in Table 8, fit for the 26-item, nine factor model was good, with a TLI of .939, a CFI of .951, and a RMSEA of .062. All factor loadings were significant and ranged from .67 to .97. The resulting nine factors were labeled Intelligence, Positive Caregiving, Good Schools, Parental Expectations, Self-Esteem, Talent, Faith, Family Connectedness, and Financial Resources.

Reliability Analysis. The internal consistency of the SERI was assessed by examining inter-item correlations and split-half reliability. The SERI full scale demonstrated good inter-item consistency with a Cronbach's alpha (α) of 0.899 and good split-half reliability with a Spearman-Brown coefficient of 0.953. The SERI subscales also demonstrated good reliability, with α 's of .931 (Intelligence subscale), .795 (Positive Caregiving subscale), .810 (Good Schools subscale), .729 (Parent Expectations subscale), .928 (Self-Esteem subscale), .866 (Talent subscale), .966 (Faith subscale), .841 (Family Connections subscale), and .926 (Financial Resources subscale).

Validity Analysis. Correlations between the subscales were examined for evidence of construct validity (see table 9). Overall, results indicate that factors that were conceptually different had either insignificant or small correlations with each other (i.e., intelligence and financial resources, $r = .034$, $n = 301$, $p = .557$), while factors that were more conceptually related demonstrated larger correlations (i.e., self-esteem and talent, $r = .512$, $n = 301$, $p = .000$). This pattern of correlations between the subscales make sense on a theoretical basis and are consistent with expectations based on theory, thereby providing evidence of construct validity for the measure.

Additional Analyses

Independent T-Test. Participant data for the entire sample ($n = 301$) was sectioned into two groups on the basis of completion of the SACQ and the CTQ. Participants who received the SACQ and CTQ as part of their survey packet were considered part of the validation sample ($n = 63$) and their data was used to conduct correlation analyses between the CAQ and the SACQ and the CMQ and the CTQ. The participants who did not receive the additional measures were considered part of the comparison sample ($n = 238$) and their data was not used in the correlation analyses between the CAQ and SACQ and the CMQ and CTQ.

An independent t-test was conducted to examine any potential differences between the validation sample ($n = 63$) and the comparison sample ($n=238$). Results indicate that there was a significant difference in age between the two groups (validation sample: $M = 18.38$, $SD = .71$, comparison sample: $M = 18.69$, $SD = 1.45$), $t(229) = -2.92$, $p = .004$). Although this difference was statistically significant, it does not appear clinically meaningful, as the groups had a mean age between that differed by only four

months. There were no significant differences between the groups in gender composition (validation sample: $M = 1.44$, $SD = .50$, comparison sample: $M = 1.46$, $SD = .49$), $t(229) = -.25$, $p = .802$); year in school (validation sample: $M = 1.27$, $SD = .55$, comparison sample: $M = 1.44$, $SD = .85$), $t(151) = -1.95$, $p = .053$); or ethnicity (validation sample: $M = 6.48$, $SD = 1.62$, comparison sample: $M = 6.30$, $SD = 1.56$), $t(299) = .722$, $p = .441$).

CHAPTER IV

Discussion

The primary purpose of this study was to develop and validate three measures to be used in the assessment of outcomes for college students with childhood maltreatment histories. Results of the confirmatory factor analyses, along with reliability and validity analyses, indicate that the measures demonstrate good psychometric properties and present an alternative to the use of the proprietary measures that currently exist.

Using confirmatory factor analysis (CFA), support for a three factor structure of the College Adjustment Questionnaire (CAQ) was obtained. Fit indices were good (TLI of .925, a CFI of .939, and a RMSEA of .070) and factor loadings ranged from .55 to .86 for a model that contained 14 items predicted to factor onto three latent constructs. These results offer support for the theoretical argument that college adjustment is made up of several domains of adjustment (Baker & Siryk, 1984; Gerdes & Mallinckrodt, 1994) and further confirm that the separate domains of academic, social, and emotional functioning are important contributors to overall college adjustment. These results are also consistent with work that has been done on the Student Adaptation to College Questionnaire (SACQ), a similar measure that also examines college adjustment along academic, social, and emotional domains.

In addition to evidence for factorial validity of the CAQ, results also indicate that the measure has good convergent validity. Full scale scores on the CAQ correlated

strongly with full scores on the SACQ ($r = .667$), indicating that there is significant overlap in what the two questionnaires are measuring (i.e., college adjustment). The subscale scores also correlated strongly between the measures (Academic subscales, $r = .650$; Social subscales, $r = .667$; and Emotional subscales, $r = .694$), providing further support for the construct validity of the measure.

Reliability estimates of the CAQ were also good, with a Cronbach's alpha of .828 and a split-half reliability of .876. Overall, the CAQ is a measure with strong psychometric properties that successfully measures overall adjustment in college students.

The Childhood Maltreatment Questionnaire (CMQ) was also examined using confirmatory factor analysis. Results indicate that a model with 6 factors and 23 items has a good level of fit (TLI of .910, a CFI of .923, and a RMSEA of .08), with factor loadings ranging from .63 to .96. A six factor structure is an important feature of the measure, as it shows that the CMQ successfully assesses several domains of neglect and abuse, which is congruent with the current research movement of measuring maltreatment by assessing for multiple types of abuse and neglect. Measuring multiple types of maltreatment with the same measure is particularly important because research has shown that children often experience multiple types of abuse concurrently, as well as separately at different points in their childhood (Arata et al., 2005; Briere & Runtz, 1988; Clemmons et al., 2007), and it is therefore extremely limited in scope to assess for only one type of abuse or neglect. Additionally, the presence of Physical, Sexual, and Emotional Abuse subscales, along with Physical and Emotional Neglect subscales makes

the CMQ extremely consistent with the CTQ, which assesses for maltreatment across those same five domains, and increases the comparability of the two measures.

Another important feature of the measure is the presence the “Love” subscale, which allows for the assessment of individuals’ perceptions of their relationship with their parents or caregivers while also assessing for specific forms of abuse or neglect. In addition to information about perceptions of the relationship being useful in its own right, the reverse valence of the items on the scale also allows for the scale to be used as a validity check for particular response sets (i.e., scoring all items high or all items low). Since individuals who experience neglect and/or abuse from caregivers don’t typically report feelings of safety or closeness with the perpetrators, it is expected that they would rate the abuse and neglect items higher and the Love subscale items lower if responding truthfully and accurately.

The CMQ demonstrated strong convergent validity in its correlations with the CTQ. Correlations were as very large between the abuse subscales (Sexual Abuse subscale scores, $r = .877$; Physical Abuse subscale scores, $r = .885$; Emotional Abuse subscale scores, $r = .809$) and moderate between the neglect subscales (Physical Neglect subscale scores, $r = .398$; and Emotional Neglect subscale scores, $r = .489$). It makes sense that the correlations between the neglect subscales were lower, as the items that comprised those subscales on the CMQ varied a fair amount from those items on the CTQ. It is reasonable that the items on the CMQ were different from the CTQ, as neglect is a fairly nebulous construct and is not as easily described in terms of specific activities in the way that abuse is, therefore leading to greater variability in the items that can be written to represent the construct. Overall, the fact that the scales demonstrated moderate

correlation despite being comprised of different items suggests at least some successful measurement of a similar underlying construct (i.e., neglect).

It is, however, also important to note that the alpha obtained on the Physical Neglect subscale on the CMQ was quite low, which creates problems for the CMQ. The low reliability of the subscale may be indicative of the need for more items to be written and included in the subscale in order to fully assess the construct in a reliable way. It is also possible that widening the construct of Physical Neglect to include more behaviors and types of experiences that occur in physical neglect situations could increase reliability by generating new items that might better reflect the true nature of physical neglect.

Evidence for the discriminant validity of the CMQ was also established. Correlations between the subscales of the CMQ and a measure of overall negative life events were small enough to suggest that although the constructs measured by the CMQ and LEQ are related, they are not the same thing. This makes sense, as childhood maltreatment is likely to co-occur with other types of negative life events, such as parental divorce, serious illness or injury, or family financial problems. Thus, on a theoretical basis, scores on the CMQ and LEQ should be at least minimally correlated because both measures are assessing for the presence of negative experiences in childhood that tend to be related. The types of negative experiences are qualitatively different (i.e., maltreatment vs. nonmaltreatment), however, which also necessitates that the correlations between the measures not exceed a moderate level at most. The correlations obtained in this study ranging from .2 to .4 are consistent with these expectations and represent evidence of discriminant validity for the CMQ.

In addition to convergent and discriminant validity, correlations between subscales of the CMQ provide further evidence for construct validity. CMQ subscale correlations ranged from small to large, reflecting greater overlap of some constructs (i.e., emotional abuse and emotional neglect, $r = .776$) and little overlap of other constructs (i.e., sexual abuse and physical abuse, $r = .252$). The pattern of observed correlations makes sense on a theoretical basis and is consistent with the correlations reported by Bernstein and Fink (1998) for the CTQ, which suggest that the measure is indeed measuring multiple domains of maltreatment and is construct valid.

Reliability for the CMQ was also good, with a Cronbach's alpha of .919 and split-half reliability of .927, and generally excellent reliabilities for the individual subscales. Overall, the measure appears to be a valid, reliable measure of childhood abuse and neglect.

The Social/Emotional Resources Inventory (SERI) was examined using CFA as well. Results indicate that the final 26-item, nine factor measure demonstrates good fit and has strong factor loadings ranging from .67 to .97. The nine factor structure found in this study is identical to the structure of the final measure reported by Cole et al. (2008), which provides support for the factorial validity of the measure by demonstrating invariance across samples.

Further support for the construct validity of the SERI was provided by correlations between the SERI subscales. Overall, results indicate that factors/subscales that were conceptually different had either insignificant or small correlations with each other (i.e., Intelligence and Financial Resources, $r = .034$), while factors that were more conceptually related demonstrated larger correlations (i.e., Self-Esteem and Talent, $r =$

.512). This pattern of correlations between the subscales makes sense on a theoretical basis and is consistent with expectations based on theory, thereby providing evidence of construct validity for the measure.

Reliability of the SERI was also very good, with a Cronbach's alpha of .899 and a split-half reliability of .953. Overall, the measure appears to have good psychometric properties and can serve to further research and measurement of protective factors.

Limitations and Directions for Future Research

Several limitations to this study exist. First, the nature of data collection was retrospective self-report, which relies not only on the accurate reporting of events but also accurate memory for the events, which has the potential to introduce substantial bias in the data that is collected. Given the considerable concern surrounding the ability of abuse and neglect survivors to accurately remember their trauma (Price & Connolly, 2008; Smith & Gleaves, 2007), as well as the stigma that is associated with maltreatment that may keep individuals from reporting it, it would have been ideal to use records to confirm cases of maltreatment in order to provide evidence of criterion-related validity for the CMQ and utilize multiple methods of assessment in the study.

Another limitation is the lack of criterion-related validity, as well as test-retest reliability estimates for each of the measures. Of the validity and reliability estimates that could be computed for the measures, all but one were adequate or better. However, if the measures are to continue to be considered accurate and useful, further validation will need to occur. Additionally, the issue of a low alpha on the Physical Neglect subscale of the CMQ needs to be addressed.

A final limitation was the restricted population from which the sample was drawn. Given that participants were all from an Introductory Psychology student pool, this sample must be considered a convenience sample. Additionally, participants self-selected into the study, which means the generalizability of the study might be questionable given that students may have been attracted to (or avoided) the study because of its particular focus on childhood maltreatment. It is possible that with a different and more diverse sample the results would have been different.

Future studies using the measures developed in this study should seek to validate the questionnaires across diverse populations and establish criterion-related and test-retest reliability estimates for each questionnaire. Additional studies should also seek to examine the relationship between childhood maltreatment and college adjustment using these measures. If it is found that there is a negative relationship between childhood maltreatment and college adjustment, this would provide further support for the validity of the measures as this result has been reported by other researchers (Duncan, 2000; Elliott, Alexander, Pierce, Aspelmeier, & Richmond, 2009). Finally, the role of protective factors (as measured by the SERI) in the relationship between childhood maltreatment and college adjustment should also be examined. A particular emphasis on gender differences in the protective factors that impact the relationship between maltreatment and college outcomes would be especially helpful, as there is no research to date on this topic.

Implications

The current measures of college adjustment and childhood maltreatment have either weak psychometric properties or are proprietary. This study provides two new

measures that overcome those issues and offers new options for assessing the constructs of college adjustment and childhood maltreatment. These measures will add to maltreatment, adjustment, and resilience research by becoming assessment tools that can be used by a wide variety of researchers who wish to accurately and easily quantify those constructs without incurring the additional cost inherent in the existing proprietary measures. Additionally, there was only one existing measure of protective factors, developed by Cole et al. (2008). This study provided evidence for the reliability and validity of that measure, which makes the measure a more viable option for assessing protective factors.

Conclusion

Three measures were developed and validated in a college population. Participants answered questions about childhood maltreatment, current levels of college adjustment, and protective factors in childhood. Results indicate that all three measures have good psychometric properties and present a viable alternative to the use of proprietary measures. Future studies will need to further validate the measures, particularly with regard to criterion-related validity, and further examine reliability via test-retest methods.

**** Author's note: Free copies of each measure are available by contacting the author at**

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Table 1

Means, Standard Deviations, and Standardized Factor Loadings for CAQ Items.

Variable	Mean	SD	Initial Factor Loading	Final Factor Loading (if retained)
Academic Adjustment				
Item 1	3.93	0.72	0.81	0.82
Item 4R	3.27	0.96	0.41	--
Item 7	3.88	0.71	0.82	0.82
Item 10	3.57	0.90	0.81	0.81
Item 13R	3.97	0.95	0.63	--
Item 17	3.57	0.88	0.79	0.80
Item 20R	4.19	0.94	0.70	0.70
Social Adjustment				
Item 3R	3.75	1.17	0.74	0.78
Item 6	3.81	0.96	0.83	0.85
Item 9	3.25	1.12	0.67	--
Item 12R	4.08	1.15	0.69	0.69
Item 14	3.07	1.16	0.59	0.58
Item 16R	4.08	1.04	0.64	--
Item 19	3.73	1.06	0.41	--
Item 21	3.63	0.98	0.74	0.71
Emotional				
Item 2R	4.66	0.73	0.42	--
Item 5	3.91	0.96	0.82	0.86
Item 8	3.92	0.76	0.70	0.67
Item 11R	4.34	0.96	0.74	0.75
Item 15R	4.44	1.03	0.54	0.55
Item 18	4.18	0.75	0.46	--
Item 22R	4.44	1.04	0.35	--

*R = reversed item; higher scores indicate better functioning.

Table 2

Summary of CFA Model Fit Indices for CAQ.

Model	χ^2	<i>df</i>	<i>p</i>	TLI	CFI	RMSEA
Null model, all 22 items	3185.81	231	.000	--	--	0.206
Three factor model, all 22 items	651.07	206	.000	0.796	.788	0.085
Null model, 14 items	2088.55	91	.000	--	--	0.270
Three factor model, 14 items (Final Model)	196.07	74	.000	0.925	0.939	0.074

Table 3

Intercorrelations of CAQ Subscale and Full Scale Scores.

	Academic Adjustment	Social Adjustment	Emotional Adjustment	CAQ Full Score
Academic Adjustment	1	-.013	.335**	.587**
Social Adjustment	-.013	1	.436**	.733**
Emotional Adjustment	.335**	.436**	1	.794**
CAQ Full Score	.587**	.733**	.794**	1

**Correlation is significant, $p \leq .01$

Table 4

Means, Standard Deviations, and Standardized Factor Loadings for CMQ Items.

Variable	Mean	SD	Initial Factor Loading	Final Factor Loading (if retained)
Emotional Abuse				
CMQ3	1.49	0.95	0.77	--
CMQ11	1.41	0.91	0.79	0.75
CMQ17	1.38	0.86	0.82	0.81
CMQ25	1.21	0.72	0.66	--
CMQ34	1.32	0.86	0.82	0.82
Emotional Neglect				
CMQ6	1.70	1.19	0.73	--
CMQ15	1.24	0.68	0.87	0.88
CMQ20	1.34	0.78	0.83	0.82
CMQ29	1.29	0.77	0.74	--
CMQ37	1.21	0.67	0.87	0.85
CMQ42	1.22	0.71	0.86	0.86
Love				
CMQ1R	1.36	0.68	0.71	--
CMQ9R	1.33	0.73	0.74	--
CMQ16R	1.34	0.79	0.66	0.73
CMQ21R	1.55	1.16	0.60	0.67
CMQ31R	1.47	0.96	0.60	--
CMQ39R	1.51	1.02	0.75	0.75
Physical Abuse				
CMQ4	1.09	0.41	0.74	--
CMQ12	1.28	0.79	0.90	0.91
CMQ18	1.39	0.90	0.79	0.78
CMQ26	1.16	0.60	0.93	0.90
CMQ35	1.21	0.66	0.72	0.71
Dirty and Unkempt				
CMQ7	1.12	0.54	0.41	--
CMQ40	1.04	0.24	0.42	--
CMQ46	1.01	0.11	0.89	0.74

(See table continued on next page)

Variable	Mean	SD	Initial Factor Loading	Final Factor Loading (if retained)
Inadequate Clothing				
CMQ10	1.05	0.35	0.16	--
CMQ27	1.02	0.15	0.58	--
CMQ47	1.02	0.14	0.79	0.71
Specified Physical Neglect				
CMQ14	1.05	0.28	0.96	--
CMQ24	1.12	0.56	0.44	--
Unsupervised				
CMQ8	1.39	0.86	0.89	--
CMQ22	1.24	0.68	0.77	--
CMQ32	1.35	0.80	0.79	0.63
Hungry				
CMQ2	1.20	0.87	0.30	--
CMQ30	1.04	0.29	1.00	0.82
CMQ43	1.03	0.21	0.81	--
Sexual Abuse				
CMQ5	1.15	0.57	0.84	0.82
CMQ13	1.02	0.21	0.37	--
CMQ19	1.10	0.44	0.94	0.96
CMQ23	1.10	0.48	0.86	0.87
CMQ28	1.08	0.42	0.71	--
CMQ36	1.07	0.41	0.93	0.92
CMQ41	1.08	0.44	0.75	--
CMQ44	1.10	0.43	0.92	0.93
Medical Neglect				
CMQ33	1.06	0.30	0.79	--
CMQ38	1.03	0.26	0.38	--
CMQ45	1.11	0.52	0.50	--

*R = reversed item; higher scores indicate more maltreatment.

Table 5

Summary of CFA Model Fit Indices for CMQ.

Model	χ^2	<i>df</i>	<i>p</i>	TLI	CFI	RMSEA
Null model, all 47 items	11,499.96	1081	.000	--	--	0.179
Eleven factor model, all 47 items	3,111.51	981	.000	0.775	.796	0.085
Null model, 23 items	5659.75	253	.000	--	--	0.267
Six factor model, 23 items (Final Model)	629.83	215	.000	0.910	0.923	0.08

Table 6

Intercorrelations of CMQ Subscale Scores.

	Sexual Abuse	Physical Abuse	Emotional Abuse	Physical Neglect	Emotional Neglect	Love
Sexual Abuse	1	.252**	.288**	.037	.282**	.166**
Physical Abuse	.252**	1	.741**	.477**	.606**	.540**
Emotional Abuse	.288**	.741**	1	.434**	.776**	.557**
Physical Neglect	.037	.477**	.434**	1	.426**	.340**
Emotional Neglect	.282**	.606**	.776**	.426**	1	.529**
Love	.166**	.540**	.557**	.340**	.529**	1

**Correlation is significant, $p \leq .01$

Table 7

Means, Standard Deviations, and Standardized Factor Loadings for SERI Items.

Variable	Mean	SD	Initial Factor Loading	Final Factor Loading (if retained)
Intelligence				
SERI 1	4.29	0.66	0.63	0.86
SERI 14	4.38	0.67	0.73	0.95
SERI 25	4.41	0.61	0.67	0.91
Positive Caregiving				
SERI 2	4.58	0.69	0.60	0.83
SERI 15	4.69	0.64	0.59	0.85
SERI 26	4.24	1.02	0.46	0.71
Prosocial Others				
SERI 3	4.00	1.14	0.07	--
SERI 27	4.06	1.14	0.08	--
SERI 40	4.40	0.92	0.16	--
Good Schools				
SERI 4	4.32	0.79	0.48	0.73
SERI 16	4.58	0.68	0.69	0.88
SERI 28	4.22	0.85	0.40	0.69
Temperament				
SERI 5	4.11	0.88	0.17	--
SERI 17	4.07	1.00	0.08	--
SERI 29	3.15	1.19	0.28	--
SERI 38	3.67	1.11	0.55	--
Parental Expectations				
SERI 6	4.66	0.59	0.55	0.69
SERI 18	4.78	0.51	0.44	--
SERI 30	4.74	0.54	0.79	0.93
Self-Esteem				
SERI 7	3.76	1.16	0.80	0.91
SERI 31	3.74	1.14	0.83	0.94
SERI 39	4.09	1.00	0.77	0.86
Talent				
SERI 8	4.37	0.92	0.57	0.85
SERI 19	4.58	0.73	0.55	0.80
SERI 32	4.32	0.94	0.61	0.85

(See table continued on next page)

Variable	Mean	SD	Initial Factor Loading	Final Factor Loading (if retained)
Kin Connections				
SERI 9	4.37	0.93	0.63	--
SERI 20	4.13	1.17	0.68	--
SERI 33	4.16	1.15	0.72	--
Faith				
SERI 10	3.32	1.38	0.93	0.94
SERI 21	3.24	1.47	0.93	0.96
SERI 34	3.01	1.49	0.92	0.96
Family Connectedness				
SERI 11	4.54	0.83	0.62	0.83
SERI 22	4.71	0.62	0.54	0.71
SERI 35	4.69	0.65	0.66	0.90
Financial Resources				
SERI 12	3.71	1.23	0.88	0.92
SERI 23	3.89	1.21	0.93	0.97
SERI 36	4.33	0.96	0.80	0.82
Proocial Organizations				
SERI 13	4.19	1.20	0.65	--
SERI 24	4.50	0.94	0.65	--
SERI 37	4.01	1.18	0.67	--

Table 8

Summary of CFA Model Fit Indices for SERI.

Model	χ^2	<i>df</i>	<i>p</i>	TLI	CFI	RMSEA
Null model, all 40 items	9438.99	780	.000	--	--	0.192
13 factor model, all 40 items	2249.66	660	.000	0.792	.819	0.088
Null model, 26 items	6502.78	325	.000	--	--	0.252
Nine factor model, 23 items (Final Model)	565.90	263	.000	0.939	0.952	0.062

Table 9

Intercorrelations of SERI Subscale Scores.

	Intelligence	Positive Caregiving	Good Schools	Parental Expectations	Self- Esteem	Talent	Faith	Family Connectedness	Financial Resources
Intelligence	1	.125*	.263**	.237**	.301**	.361**	.140*	.115*	.034
Positive Caregiving	.125*	1	.401**	.231**	.439**	.357**	.206**	.820**	.263**
Good Schools	.263**	.401**	1	.249**	.259**	.265**	.209**	.383**	.260**
Parental Expectations	.237**	.231**	.249**	1	.248**	.300**	.106	.289**	.179**
Self-Esteem	.301**	.439**	.259**	.248**	1	.512**	.291**	.341**	.301**
Talent	.361**	.357**	.265**	.300**	.512**	1	.272**	.360**	.278**
Faith	.140*	.206**	.209**	.106	.291**	.272**	1	.227**	.192**
Family Connectedness	.115*	.820**	.383**	.289**	.341**	.360**	.227**	1	.272**
Financial Resources	.034	.263**	.260**	.179**	.301**	.278**	.192**	.272**	1

*Correlation is significant, $p \leq .05$, **Correlation is significant, $p \leq .001$

Appendix A

College Adjustment Questionnaire

Listed below are some statements that describe how college students might be feeling about their experience with college. **Please use the rating scale below to indicate how accurately each statement describes you *at this point in time*.** Please read each statement carefully, and then circle the number that corresponds to how accurately the statement describes you.

Response Options

- 1: Very Inaccurate
- 2: Moderately Inaccurate
- 3: Neither Inaccurate nor Accurate
- 4: Moderately Accurate
- 5: Very Accurate

Right now:	Very Inaccurate			Very Accurate	
1. I am succeeding academically	1	2	3	4	5
2. I frequently think about dropping out of college	1	2	3	4	5
3. I don't have as much of a social life as I would like	1	2	3	4	5
4. I find school to be very difficult	1	2	3	4	5
5. I feel that I am doing well emotionally since coming to college	1	2	3	4	5
6. I am happy with my social life at college	1	2	3	4	5
7. I am doing well in my classes	1	2	3	4	5
8. I am happy with how things have been going in college	1	2	3	4	5
9. I have as many friends as I would like to have	1	2	3	4	5
10. I am happy with the grades I am earning in my classes	1	2	3	4	5
11. I feel that I am emotionally falling apart in college	1	2	3	4	5
12. I have had a hard time making friends since coming to college	1	2	3	4	5
13. I am struggling to keep up academically	1	2	3	4	5
14. I am as socially engaged as I would like to be	1	2	3	4	5
15. I have felt the need to seek emotional counseling since coming to college	1	2	3	4	5
16. I often feel lonely or isolated at college	1	2	3	4	5
17. I am meeting my academic goals	1	2	3	4	5
18. I am succeeding at being on my own in college	1	2	3	4	5
19. I feel that I have been able to have successful relationships since coming to college	1	2	3	4	5
20. I have performed poorly in my classes since starting college	1	2	3	4	5
21. I am satisfied with my social relationships	1	2	3	4	5
22. I am not enjoying my time at college	1	2	3	4	5

Appendix B

The following is a sample of item content on the Student Adaptation to College
Questionnaire – Adolescent Version

“The 67 statements below describe college experiences. Read each one and decide how well it applies to you at the present time (within the past few days). For each statement, circle the asterisk at the point in the continuum that best represents how closely the statement applies to you. Circle only one asterisk for each statement. To change an answer, draw an X through the incorrect response and circle the desired response.”

	Applies Very Closely to Me	Doesn't Apply to Me at All
	<----->	
1. I feel that I fit in well as part of the college environment	* * * * *	* * * * *
2. I have been feeling tense or nervous lately	* * * * *	* * * * *
3. I have been keeping up to date on my academic work	* * * * *	* * * * *
4. I am meeting as many people, and making as many friends as I would like at college	* * * * *	* * * * *
5. I know why I'm in college and what I want out of it	* * * * *	* * * * *
6. I am finding academic work at college difficult	* * * * *	* * * * *

Appendix C

Childhood Maltreatment Questionnaire

Listed below are statements that describe experiences with maltreatment that people may have had when they were growing up. Some of the experiences can be very common and others not as common. **Please indicate how often each of the following occurred while you were a child.** So that you can describe your experiences in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then circle the number that best describes your experience.

Response Options

- 1: Never
- 2: Rarely
- 3: Sometimes
- 4: Often
- 5: Very Often

When I was a child:	Never					Very Often				
1. I felt loved by all my caregivers	1	2	3	4	5					
2. I was not fed enough as a child	1	2	3	4	5					
3. I was called names by a caregiver that were meant to be intentionally hurtful (e.g., moron, idiot, good-for-nothing, worthless)	1	2	3	4	5					
4. I was hit hard enough by a parent/guardian to have to receive medical care	1	2	3	4	5					
5. I was touched in a sexual way by a person older than me	1	2	3	4	5					
6. A parent/guardian was emotionally distant towards me	1	2	3	4	5					
7. I was not bathed regularly	1	2	3	4	5					
8. I was left alone and unsupervised for significant periods of time as a young child	1	2	3	4	5					
9. I felt cared for by my parents/guardians	1	2	3	4	5					
10. I did not have enough clothes to stay warm on cold days	1	2	3	4	5					
11. One of my caregivers said degrading things to me	1	2	3	4	5					
12. I was physically hurt by a parent/guardian	1	2	3	4	5					
13. I was forced to watch someone else engage in sexual behavior	1	2	3	4	5					
14. My physical care was neglected by a parent/guardian	1	2	3	4	5					
15. A parent/guardian refused or failed to provide the affection I needed	1	2	3	4	5					
16. I felt safe with all of my caregivers	1	2	3	4	5					
17. I was emotionally maltreated by a parent/guardian	1	2	3	4	5					
18. I was hit hard enough by a parent/guardian to leave marks on my skin	1	2	3	4	5					
19. I was sexually molested by a person older than me	1	2	3	4	5					
20. My emotional needs were not met by a parent/guardian	1	2	3	4	5					
21. I could trust that none of my caregivers would intentionally hurt me	1	2	3	4	5					
22. I had to fend for myself because there was no one around to supervise me	1	2	3	4	5					
23. I was sexually abused as a child	1	2	3	4	5					

When I was a child:	Never			Very Often	
24. I was not adequately physically cared for by a parent/guardian	1	2	3	4	5
25. A caregiver said things that indicated they cared very little for my wellbeing	1	2	3	4	5
26. One of my caregivers physically abused me	1	2	3	4	5
27. A parent/guardian did not keep me in clean clothes	1	2	3	4	5
28. A person older than me made me show them my genitals for their sexual gratification	1	2	3	4	5
29. One of my caregivers was emotionally inattentive	1	2	3	4	5
30. I went hungry because a parent/guardian did not feed me	1	2	3	4	5
31. I felt supported by all of my caregivers	1	2	3	4	5
32. A parent/guardian left me by myself even though there should have been someone watching me	1	2	3	4	5
33. My medical care was neglected by a parent/guardian	1	2	3	4	5
34. A parent/guardian emotionally abused me	1	2	3	4	5
35. I experienced non-accidental physical injury from a parent/guardian	1	2	3	4	5
36. I was coerced to touch a person older than me in an inappropriate sexual way	1	2	3	4	5
37. One of my caregivers failed to provide adequate emotional care for me	1	2	3	4	5
38. A parent/guardian did not give me medicine, even when I was really sick	1	2	3	4	5
39. All of my caregivers were "there for me" when I was growing up	1	2	3	4	5
40. I was dirty and unkempt	1	2	3	4	5
41. A person older than me made me look at their genitals	1	2	3	4	5
42. I was emotionally neglected by a parent/guardian	1	2	3	4	5
43. A parent/guardian did not provide enough food for me even though they had enough money to be able to do so	1	2	3	4	5
44. I was coerced into unwanted sexual behavior	1	2	3	4	5
45. I was not taken to the doctor when I needed to go	1	2	3	4	5
46. One of my caregivers did not bathe me, even when I was clearly dirty	1	2	3	4	5
47. A caregiver did not dress me appropriately for the weather	1	2	3	4	5

Appendix D

Childhood Trauma Questionnaire-Short Form

The following is a sample of item content on the CTQ-SF.

	Never True			Very Often True	
1. Called names by family	1	2	3	4	5
2. Parents wished was never born	1	2	3	4	5
3. Felt hated by family	1	2	3	4	5
4. Family said hurtful things	1	2	3	4	5
5. Was emotionally abused	1	2	3	4	5
6. Hit hard enough to see doctor	1	2	3	4	5
7. Hit hard enough to leave bruises	1	2	3	4	5
8. Punished with hard objects	1	2	3	4	5
9. Was physically abused	1	2	3	4	5
10. Hit badly enough to be noticed	1	2	3	4	5
11. Was touched sexually	1	2	3	4	5
12. Hurt if didn't do something sexual	1	2	3	4	5
13. Made to do sexual things	1	2	3	4	5
14. Was molested	1	2	3	4	5
15. Was sexually abused	1	2	3	4	5
16. Felt loved	1	2	3	4	5
17. Made to feel important	1	2	3	4	5
18. Was looked out for	1	2	3	4	5
19. Family felt close	1	2	3	4	5
20. Family was source of strength	1	2	3	4	5
21. Not enough to eat	1	2	3	4	5
22. Got taken care of	1	2	3	4	5
23. Parents were drunk or high	1	2	3	4	5
24. Wore dirty clothes	1	2	3	4	5
25. Got taken to doctor	1	2	3	4	5

Appendix E

LEQ

This questionnaire contains statements describing events that can happen in the life of any child or in any family. Some of them will apply to your family – meaning you, your parents, and brothers and sisters. Many will not. Please read each statement very carefully and decide whether it is something that happened to you (or your family) while you were growing up.

If the event happened to you or your family, please circle YES. If the event *did not* happen to you or your family, please circle NO. Please answer all of the items as honestly and quickly as you can.

When I was growing up...	Circle One	
1. I had a new brother or sister who was born	YES	NO
2. Our family moved to a new home or apartment	YES	NO
3. I changed schools (not counting the typical change from elementary to junior high/middle school to high school)	YES	NO
4. I became seriously ill or was injured	YES	NO
5. My brother or sister became seriously ill or was injured	YES	NO
6. At least one parent became seriously ill or was injured	YES	NO
7. I was involved in a serious accident	YES	NO
8. I was left with a visible physical handicap due to an accident, injury, or illness	YES	NO
9. I had an important change in physical appearance which upset me (acne, braces, glasses, physical development, etc.)	YES	NO
10. I was a victim of violence (mugging, sexual assault, robbery)	YES	NO
11. A member of my family was a victim of violence (mugging, sexual assault, robbery)	YES	NO
12. One of my parents died	YES	NO
13. A brother or sister died	YES	NO
14. A grandparent died	YES	NO
15. One of my close friends died	YES	NO
16. Another adult came to live with my family	YES	NO
17. I left home to live under the care of another parent, relative, or others	YES	NO
18. I left home to live on my own before graduating from high school	YES	NO
19. I ran away from home	YES	NO
20. A member of my family ran away from home	YES	NO
21. My parents separated	YES	NO
22. My parents divorced	YES	NO
23. One of my parents remarried	YES	NO
24. I had at least one outstanding personal achievement	YES	NO
25. I was voted or appointed to a leadership position (i.e., class office, team captain, etc.)	YES	NO

26. I received a special award for something <i>done at school</i> (ribbon, trophy, plaque, certificate, etc)	YES	NO
27. I received a special award for some activity <i>outside of school</i> (ribbon, trophy, plaque, certificate, etc.)	YES	NO
28. I received special recognition for athletic competition	YES	NO
29. I did not get into a group or activity that I wanted to get into (music group, sports team, theater, etc.)	YES	NO
30. I failed a grade or was “held back”	YES	NO
31. I did much worse than I expected in an important exam or course	YES	NO
32. I was threatened with suspension or was suspended from school at least once	YES	NO
33. I became pregnant (for females)	YES	NO
34. I got someone pregnant (for males)	YES	NO
35. An unmarried family member became pregnant	YES	NO
36. One of my parents had problems at work (demotion, trouble with boss or co-workers, change in working hours, etc.)	YES	NO
37. One parent lost his or her job	YES	NO
38. My mother began to work	YES	NO
39. There was a change in a parent’s job so that my parent was away from home more often	YES	NO
40. I had little contact with one parent	YES	NO
41. I tried to get a job and failed	YES	NO
42. The family financial situation was difficult	YES	NO
43. There was some damage or loss of family property (such as apartment, house, car, or bike)	YES	NO
44. The family had funds cut off by some government agency (i.e., welfare, food stamps, AFDC, disability, etc.)	YES	NO
45. My family was evicted from a house or apartment	YES	NO
46. I had many arguments with brother(s) and/or sister(s)	YES	NO
47. I had many arguments with my parent(s)	YES	NO
48. My parent(s) and I had many arguments over my choice of friends, and/or social activities, such as the use of the car or hours to stay out	YES	NO
49. There were many arguments between adults living in the house	YES	NO
50. There were many arguments between a parent and a former or separated spouse	YES	NO
51. There were many arguments with in-laws or relatives	YES	NO
52. I was not accepted by people my age	YES	NO
53. I had suicidal thoughts	YES	NO
54. A member of my family committed suicide	YES	NO
55. A member of my family developed severe emotional problems	YES	NO
56. I became involved with alcohol or drugs	YES	NO

57. A brother or sister became involved with alcohol or drugs	YES	NO
58. A parent had trouble with alcohol or drugs	YES	NO
59. I got in trouble with the law	YES	NO
60. I went to jail	YES	NO
61. A brother or sister was arrested or went to jail	YES	NO
62. A parent was arrested or went to jail	YES	NO
63. I began to date	YES	NO
64. I began "going steady", despite my parent's disapproval	YES	NO
65. I got married, despite my parent's disapproval	YES	NO
66. I broke up with a girlfriend or boyfriend	YES	NO
67. I lost a close friend	YES	NO

Appendix F

Social/Emotional Resources Inventory

The following statements describe things that may or may not have been true while you were growing up. **Please use the rating scale below to indicate how accurately each statement describes your childhood.** Please read each statement carefully, and then circle the number that corresponds to how accurately the statement describes you.

Response Options

- 1: Very Inaccurate
- 2: Moderately Inaccurate
- 3: Neither Inaccurate nor Accurate
- 4: Moderately Accurate
- 5: Very Accurate

When I was growing up:	Very Inaccurate				Very Accurate
1. I was intelligent	1	2	3	4	5
2. I received warm parenting	1	2	3	4	5
3. There was an adult outside my family who took an interest in my welfare	1	2	3	4	5
4. My school met students' academic needs	1	2	3	4	5
5. I had an easygoing disposition	1	2	3	4	5
6. My parents had high expectations for me	1	2	3	4	5
7. I had strong self-confidence	1	2	3	4	5
8. I had a talent (i.e., talented in sports, music, drama, academics, etc.)	1	2	3	4	5
9. I had positive connections to my extended family (e.g., grandparents, aunts, uncles, etc.)	1	2	3	4	5
10. I had a strong sense of faith or spirituality	1	2	3	4	5
11. I felt connected to a parent/guardian	1	2	3	4	5
12. My family did not have to worry excessively about money	1	2	3	4	5
13. I was involved in an organized group (e.g., church group, school-related group, Girl or Boy Scouts, etc.)	1	2	3	4	5
14. I was smart	1	2	3	4	5
15. My parents were loving	1	2	3	4	5
16. I received a good education	1	2	3	4	5
17. I was laid-back	1	2	3	4	5
18. My parents believed I was capable	1	2	3	4	5
19. I was skilled in at least one activity	1	2	3	4	5
20. I had a close relationship with family members other than my parents/guardians and siblings	1	2	3	4	5
21. My faith or spirituality was important to me	1	2	3	4	5
22. A parent/guardian in the home looked out for me	1	2	3	4	5
23. My family was financially comfortable	1	2	3	4	5
24. I was involved in extra-curricular activities (including school-related and non school-related activities)	1	2	3	4	5
25. I was bright	1	2	3	4	5
26. I was emotionally close to my parents	1	2	3	4	5
27. An adult outside of my family motivated me to succeed	1	2	3	4	5

28. My school had skilled teachers	1	2	3	4	5
29. Few things in my life got me too worked up or excited	1	2	3	4	5
30. My parents expected me to succeed	1	2	3	4	5
31. I had high self-esteem	1	2	3	4	5
32. Others noticed my special ability in an activity (e.g., sports, music, drama, academics, etc.)	1	2	3	4	5
33. I could depend on family members other than my parents and siblings	1	2	3	4	5
34. Religion/spirituality was a central part of my life	1	2	3	4	5
35. I had a parent/guardian I could rely on	1	2	3	4	5
36. My family was able to afford the things we needed	1	2	3	4	5
37. I was involved in groups that served others	1	2	3	4	5
38. I was able to deal well with stress	1	2	3	4	5
39. I believed in myself	1	2	3	4	5
40. There was an adult outside my family who cared about me	1	2	3	4	5