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Trauma Resilience Scale for Children: Validation of Protective Factors Associated with Positive Adaptation Following Violence

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TRAUMA RESILIENCE SCALE FOR CHILDREN: VALIDATION OF PROTECTIVE FACTORS ASSOCIATED WITH POSITIVE ADAPTATION FOLLOWING VIOLENCE

By

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In memory of Dr. Wendy Crook who was a trusted mentor, former FSU College of Social Work Doctoral Program Director, and a tireless advocate for people experiencing homelessness.
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# TABLE OF CONTENTS

List of Tables................................................................................................................. ix

Abstract ............................................................................................................................ x

CHAPTER ONE: Introduction and Dissertation Overview.............................................. 1
   I. Statement of Problem ............................................................................................... 1
      A. Violence Prevalence ......................................................................................... 1
      B. Relevance to Social Work .............................................................................. 4
      C. Statement of Need ............................................................................................ 5
      D. Study Goal ....................................................................................................... 6
   II. Overview of Dissertation Elements ....................................................................... 6

CHAPTER TWO: Conceptual Literature Review.............................................................. 8
   I. Violence Literature Summary ................................................................................ 9
      A. Impact of Violence on Children ..................................................................... 9
      B. Risk Factors .................................................................................................. 12
      C. Violence Symptom Measurement with Children ......................................... 14
      D. Defining Violence and Inclusion Criteria ..................................................... 18
   II. Related Theories and Models ............................................................................. 20
      A. Stress and Coping .......................................................................................... 20
      B. Empowerment ............................................................................................... 27
      C. Strengths-Based Perspective .......................................................................... 31
      D. Ecological Model ........................................................................................... 34
      E. Conclusion .................................................................................................... 39
   III. Resilience ........................................................................................................... 39
      A. Historical and Conceptual Overview ............................................................. 39
      B. Definitional Disagreement .............................................................................. 43
      C. Resilience Definitions .................................................................................... 45
   IV. Measures Similar to the TRS-C .......................................................................... 46
      A. General Resilience ......................................................................................... 46
      B. Resilience Following Violence ......................................................................... 48
      C. Children’s Resilience ..................................................................................... 49
   V. Protective Factors ................................................................................................. 52
      A. Protective Factors Associated with Resilience Following Violence ............ 52
      B. Protective Factors Utilized in this Study ....................................................... 52
         a. Self Value .................................................................................................... 53
         b. Self Regulation ........................................................................................... 54
         c. Optimism/Motivating Power ...................................................................... 55
         d. Creative Problem Solving .......................................................................... 56
         e. Supportive Belief Structure ...................................................................... 56
         f. Healthy Caregiver/Family Support .............................................................. 57
         g. Supportive Peer Relationships .................................................................... 59
         h. Supported Academic Functioning ............................................................... 61
i. Activity Involvement/ Active Diversion ................................. 62
j. Community Safety/Support .................................................. 63
k. Infused Content ................................................................. 63
C. Implications for Measurement .............................................. 63

CHAPTER THREE: Methods ...................................................... 65
I. Research Design .................................................................... 65
   A. Introduction ...................................................................... 65
      a. Domains .................................................................... 66
      b. Infused Content .......................................................... 66
   II. Research Questions & Hypotheses .................................... 67
   III. Safety Precautions ......................................................... 70
   IV. Phase One: Initial Instrument Design and Development .... 72
      A. Adult Expert Panel ...................................................... 72
         a. Sample .................................................................... 73
         b. Methods ................................................................... 73
      B. Children’s Focus Groups .............................................. 74
         a. Sample .................................................................... 74
         b. Methods ................................................................... 75
   C. Study Transition Methods ................................................. 76
   V. Phase Two: Full Validation Sample Methods ..................... 76
      A. Sample ......................................................................... 76
         a. Inclusion Criteria ....................................................... 76
         b. Sample Sites ............................................................. 77
         c. Sample Size Adequacy .............................................. 79
      B. Testing Process ............................................................ 81
         a. Children .................................................................. 81
         b. Parent/Caretakers ..................................................... 82
      C. Resilience Narrative Analysis ......................................... 83
      D. Data Management ......................................................... 84
         a. Clerical Error Checks ............................................... 84
         b. Missing Data ........................................................... 84
      E. Psychometric Analyses .................................................. 87
         a. Assumptions ............................................................ 87
         b. Redundancy ............................................................. 88
         c. Reliability Analysis .................................................. 88
         d. Factor Analysis ........................................................ 89
         e. Standard Error of Measurement ................................. 92
         f. Item Changes ........................................................... 92
         g. Convergent and Discriminant Construct Validation ....... 92
         h. Differences Between Groups ..................................... 94
         i. Scoring and Descriptive Summary .............................. 95
APPENDICES ...................................................................................................................................................... 138
   I. Appendix A: Initial Proposed Items with Reading Level ................................................................. 138
   II. Appendix B: Human Participant Protections Certifications.......................................................... 143
   III. Appendix C: Phase I Agency Approvals and Agreements ......................................................... 145
   IV. Appendix D: Phase I Content Validation Expert Test Packet .................................................... 158
   V. Appendix E: Phase I Informed Consents ....................................................................................... 160
   VI. Appendix F: Children’s Focus Group Outline .............................................................................. 163
   VII. Appendix G: Phase II Agency Approval Documents .................................................................. 164
   VIII. Appendix H: Phase II Consent and Participant Contact Letters ........................................... 172
   IX. Appendix I: Parent Demographic Form ....................................................................................... 181
   X. Appendix J: Research Changes from Prospectus to Dissertation............................................ 182

REFERENCES .................................................................................................................................................. 183

BIOGRAPHICAL SKETCH .................................................................................................................................... 209
**LIST OF TABLES**

Table 1: Convergent Hypotheses of TRS-C and Relevant Measures .......... 68
Table 2: Content Validation Expert and Children's Focus Group Ratings .......... 97
Table 3: Qualitative Resilience Responses: In Order of Frequency ............. 102
Table 4: Demographics of TRS-C General Validation Sample .................. 104
Table 5: Reliability Analysis ................................................................. 106
Table 6: Multiple Groups Method Final Correlations ............................ 109
Table 7: Structural Equation Modeling Goodness of Fit Indicators: Initial and Respecified Models ............................................................. 112
Table 8: Item Removal and Rewording Decisions ..................................... 113
Table 9: Convergent Validity Indicators: Global Scale Correlations ........... 115
Table 10: Convergent Validity Indicators: Subscale Correlations .............. 116
Table 11: Internal Convergent Validity Calculations ............................... 118
Table 12: Internal Discriminant Validity Calculations ............................ 119
Table 13 Discriminant Validity: Test Administration .............................. 120
Table 14: Group Comparisons by TRS-C Subscales and Global Scale .......... 122
Table 15: TRS-C Mean Score Properties .................................................. 125
Table 16: TRS-C Mean Score Percentiles for Global and Subscales .......... 126
The Trauma Resilience Scale for Children (TRS-C) was created to be a developmentally appropriate, psychometrically valid, reliable and unbiased measure of the major protective factors associated with children’s resilience following violence. Extending pilot work with adults, this scale assesses children’s perceived presence of ten protective factors following child maltreatment including: physical abuse, sexual abuse, witnessing or experiencing intimate partner violence, and/or witnessing or experiencing a serious threat or injury to life. Empirical and theoretical literature guided subscale and item formulation. Mixed methods design was used for content validation and item refinement with adult trauma experts (n=9) and children in the foster care system (n=9). Refined items were subsequently tested on a larger sample within school and clinical settings (n =208) for scale reliability, validity, factor structure, and differences across demographic characteristics. The scale demonstrated psychometric properties that support its use with children in varied circumstances. The limitations and implications of the scale are discussed, including application within clinical and research settings.
CHAPTER ONE

INTRODUCTION AND DISSERTATION OVERVIEW

Statement of Problem

Children, all human beings under age 18, need special care, safeguards and assistance due to their developmental immaturity, according to the 1989 United Nations Convention on the Rights of the Child (CRC) Preamble. They have the right to protection from “all forms of violence” (CRC, article 19) including maltreatment; injury; exploitation; sexual abuse; abduction; torture; any cruel, inhuman, and degrading treatment or punishment; and taking part in or being targeted by hostilities during armed conflict (CRC, 1989, Articles 19, 34, 35 & 37-39; Optional Protocol, 2000). Even with 192 countries ratifying the CRC, children throughout the world continue to experience violent events through phenomena such as war, crime, human trafficking, exploitation, family violence and abuse (Krug, Dahlberg, Mercy, Zwi & Lozano, 2002).

Violence, “the exertion of physical force so as to injure or abuse” (Merriam-Webster, 2006), is a pervasive societal issue. Violence directly involving children, specifically including physical abuse, sexual abuse, domestic violence and exposure to life-threatening situations continues to occur frequently in the United States and internationally. The CRC (1989) outlines the need for states throughout the world to take “all appropriate measures to promote physical and psychological recovery” (Article 39) of children suffering from violence.

In many regions, social work involvement is common during the recovery process following these violent experiences. The best practice methods are attained when social workers in research and practice settings have a clear understanding of those factors associated with both the symptoms and the recovery related to children’s violence exposure. For these workers, empirically-based tools aiding in the assessment of trauma and symptoms following violence are prevalent. However, comparable tools assessing aspects related to recovery and resilience are rare, especially those assessing the protective factors related to recovery from the children’s perspective.

Violence Prevalence

Worldwide, violence against children “exists in every State and cuts across boundaries of culture, class, education, income, ethnic origin and age” (Pinheiro, 2006, p.5). It occurs in settings ranging from the personal such as home and close friend or family dwellings to community locales such as school, work and justice systems. It occurs in forms considered somewhat socially
acceptable, such as moderate corporal punishment, to forms generally considered repulsive as seen in sexual slavery and homicide. Violence involving children can be found everywhere from the bully on America’s playgrounds to the child soldier on international battle fields. All ethnicities and both genders are affected, every day.

Corporal punishment is any use of violence to punish children and physically coerce their behavior. Although less effective and more destructive to the child’s well being than other forms of behavior management (Strauss, 2001; Gershoff, 2008), it remains common and moderately acceptable throughout much of the world. In 2009, although several countries had laws minimizing corporal punishment in specified settings, only 25 countries prohibited corporal punishment of children across all settings including the home, school and the penal system (Global Initiative to End all Corporal Punishment of Children).

Physical abuse and sexual abuse are pervasive issues both globally and in the United States. In the year 2007 alone, approximately 233,449 children of all major ethnic groups were determined by authorities to have experienced physical abuse, sexual abuse, or multiple forms of maltreatment in the United States (Child Welfare Information Gateway, 2009). Worldwide, physical abuse prevalence reports range from a low 4.6% of children, as reported by parents in Romania and the U.S., to a high 64% as reported by injured children in Ethiopia (Krug et al., 2002). These figures are difficult to obtain and may be unreliable, as reporting processes vary widely. Countries report from a low 1% to a high 45% of their children experience sexual abuse (Krug et al., 2002). Although this wide range reflects international legal and definitional differences and possible underreporting in some areas, an estimated total of 150 million girls and 73 million boys have experienced “forced sexual intercourse or other forms of sexual violence involving physical contact” worldwide (Pinheiro, 2006, p.12). Although girls are more likely to be sexually abused, boys are more likely to be the victims of homicide and violence involving a weapon. It is estimated globally that 53,000 childhood deaths were the result of homicide in 2002 alone (Pinheiro, 2006). In the United States 10% of all FBI reported homicides in 2004 were children (Bureau of Justice Statistics, 2006).

Prevalence data on children who witness violence or experience threats to life are more limited. No consistent national data are available, but researchers have conducted surveys. In a survey of over 4,000 randomly selected U.S. youth ages 12 to 17, Kilpatrick & Saunders (1997) found that 43% of male and 35% of female adolescents experienced witnessing firsthand someone either shot with a gun, knifed, sexually assaulted, mugged, robbed, or threatened with a weapon.
Jenkins and Bell (1994) report that almost two thirds of 203 sampled Chicago inner city youth had witnessed a violent event, and 45% had seen someone killed. Domestic violence between parents consistently exposes children to violence. Between 3 and 10 million children may be exposed to domestic violence annually (Strauss, 1992). Finkelhor, Ormrod, Turner & Hamby (2005) randomly selected 2030 children across the U.S. They found that in only one year, over 3% had witnessed domestic violence, 5% had been exposed to shooting, bombs and/or riots, and 13% had witnessed an assault with a weapon. Troublingly, 38 of these children reported having someone close to them murdered.

The International Labour Office in 2005 (ILO) estimated that a total of 12.3 million people are an approximate lower estimate of forced labor throughout the world. Of these, approximately 40-50% or 5-6 million forced laborers are children. Forced labor is partially defined by the use of violence to keep the person working (ILO, 2005). Many forced laborers are beaten, sexually abused/exploited and kept in squalid conditions. Some are working as a result of human trafficking.

The U.S. Department of State (2005) estimated that 600,000 – 800,000 people are trafficked across international borders annually, and up to 50 percent of these are children. The large majority of transnational victims are forced into prostitution or other commercial sexual exploitation. Furthermore, as many as 1.2 million children may be affected when including trafficking within their own countries (ILO, 2005). Within the U.S., it is estimated that between 244,000 and 325,000 American children are at risk each year of becoming victims of commercial sexual exploitation when including child pornography and prostitution (Estes & Weiner, 2001). Approximately 98% of children forced into sexual exploitation are girls (ILO, 2005), but, 95% of the sexually exploited boys are procured by males, many of whom are married with children of their own (Estes & Weiner, 2001). Within forced labor, the gender distribution is more equal. Approximately 44% of children forced into economic exploitation are boys (ILO, 2005).

These childhood violence prevalence statistics can be an underestimation of the actual problem. This can be a failure of the parents or children to disclose, lack of access to the victims of violence, or lack of inclusion in officially reported statistics. For example, U.S. child victims of crime are not always reported as minors when compiling crime reports (Berliner & Elliot, 2002). Data show that a youth is more than twice as likely as an adult to be the victim of a violent crime (Finkelhor & Hashima, 2001). Although reporting processes and definitional differences may provide a range in the estimated number of children affected by violence, it remains clear that a
A considerable number are experiencing violence both within the United States and on an international scale. Violence towards children is a problem that is addressed from many viewpoints and varied disciplines. Social workers have a primary responsibility and function in this field.

**Relevance to Social Work**

When children experience violent events, multiple adverse issues ranging from acute emotional difficulties to long term relational and health problems may occur (Acosta, Albus, Reynolds, Spriggs & Weist, 2001; Wolfe, Crooks, Lee, McIntyre-Smith & Jaffe, 2003). Social workers often become involved when families obtain services and/or come into contact with the legal system for violence-related issues.

Approximately 19.2% of general BSW graduates and 8% of all National Association of Social Workers (NASW) members are employees in the child welfare field (Rogers, Smith, Ray & Hull, 1997; NASW, 2001). When 153,000 NASW member social workers were surveyed, 2.3 percent identified assisting victims of violence as their primary practice focus (Gibelman & Schervish, 1997). However, many more workers deal with children who have experienced violence. According to a random sample of over 4900 social workers licensed in 49 states and the District of Columbia, 13% stated that child welfare was their specialty (Center for Health Workforce Studies and NASW Center for Workforce Studies, 2006). According to Whitaker, Weismiller & Clark’s (2006) specialized report on this project relating to children and families, 78% of all licensed social workers provided services to either children and/or adolescent clients in their practice. These workers state that 47% of these clients have child maltreatment issues as their presenting problem. A great majority, 95%, provided direct services to these youth, with 92% providing screening and assessment tasks. Beyond this, social workers are employed in areas such as family interventions, where the parents may have exhibited violence toward each other, or criminal justice, where violence stems from non-familial sources as well. Clearly, a significant proportion of social workers are providing direct assessment services with maltreated children.

Furthermore, the social work profession has stated the value in understanding diversity and acting to prevent oppression and exploitation of vulnerable groups (National Association of Social Workers [NASW], 1999). In all settings, those social workers who served more children and adolescents also served larger proportions of children from ethnic minority groups (Whitaker et al., 2006). Certain international and inner city locales where many social workers are employed
have both high levels of violence, as discussed previously, as well as more diverse populations. Internationally, children of marginalized status, including ethnic minorities and children experiencing disabilities, are at a higher risk of violence (Pinheiro, 2006). Therefore, social workers must be aided in providing the best practice methods and assessment tools with respect to children from these diverse backgrounds.

The 2005 Social Work Congress, consisting of NASW, the Association of Baccalaureate Social Work Program Directors, the Council on Social Work Education (CSWE) and The National Association of Deans and Directors of Schools of Social Work, brought together over 400 leaders in social work. Of the top 12 imperatives they voted to guide the profession for the next decade, child welfare needs, including best practices related to empirical evidence, was the third highest priority (Clark et al., 2006).

It is evident that diverse children with violent experiences are being assessed and served by social workers across many settings. It is essential that these workers have the empirically based tools necessary to help serve these children in the best manner possible.

**Statement of Need**

Following violence experienced by their clients, social workers are engaged in helping and studying the whole person, both strengths and weaknesses. Empirically based resources exist that are helpful when diagnosing and understanding symptoms related to violence. Researchers have written a great deal of literature dedicated to understanding and defining problems and negative consequences associated with violent events. However, fewer researchers write about positive adaptation following violence. Empowering clients to build those protective factors associated with resilience, so that they can move beyond any resulting negative effects following violent events, is equally important in both clinical and research settings.

To help these children recover from the negative consequences of violence, clear evidence about how positive adaptation does or does not occur in children becomes essential. Currently, the resilience literature does not comprehensively address childhood violence with clearly defined concepts, organized models, and ample empirical research. To aid in focusing these issues, a strong psychometric scale measuring factors contributing to resilience following violence is essential. Several symptom based measures exist. Additionally, the majority of scales related to children’s experiences with violence are answered primarily by the adults in their lives. Yet, child and parent reports can be useful when studied in combination (Litrownik, Newton, Hunter, English & Everson,
No known resources are available for measuring the child’s perception of the presence protective factors associated with resilience following experiences of violence. This hinders our research knowledge and our ability to provide evidence-based services to these children. It is important, therefore, to listen to the children’s voices and build an assessment tool that is both relevant to and understandable by the children. Furthermore, because children from both genders and all ethnicities are affected by maltreatment, it is also essential to pay attention to distribution of gender and ethnicities, limiting any bias that items in the scale may present.

**Study Goal**

This dissertation is a starting place for addressing shortcomings related to maltreated children’s needs. It is the goal of this study to create a psychometrically valid, reliable and unbiased measure of major protective factors which are strongly associated with children’s resilience following violence.

**Overview of Dissertation Elements**

This document provides an overview of traumatic response, resilience, & protective factors associated with violent events in children’s lives. An empirical and conceptual literature review is offered for each area.

In Chapter 1, the dissertation purpose has been presented and the dissertation elements have been outlined. The need for this project has been examined in relation to prevalence of violence related to children and the relevance to social work. In Chapter 2, a comprehensive review of the literature ensues. The negative effects of violence in children’s lives are examined incorporating measurement implications and relevance to the field. Theoretical concepts relating to violence processes and outcomes are defined and discussed in relation to relevance, distinguishing conceptual issues, and study inclusion and exclusion criteria. Resilience is overviewed from a historical and conceptual perspective highlighting issues relating to this study. Existing measures concerning each conceptual viewpoint are critiqued for conceptual relevance and psychometric integrity. Protective factors as they relate to each concept are explored in the empirical literature, with a primary focus on resilience following violence. Clearly defined, focused and relevant factors included as subscale domains for the TRS-C are formulated: Self Value, Self Regulation, Optimism/Motivation, Creative Problem Solving, Supportive Belief Structure, Healthy Caregiver/Family Support, Supportive Peer Relationships, Supported Academic Functioning, Activity Involvement/Active Diversion, Community Safety and Support.
Chapter 3 focuses on the specific research questions and methods used for answering these questions. Initially, the research questions are delineated for each of two phases, including both qualitative and quantitative segments. Phase I included an expert review panel and children’s focus groups which helped to refine and clarify items. Based on this input, item modifications were made. In Phase II, the refined item pool was given to a large sample of children. Resulting data were analyzed for global and subscale reliability, model integrity, factor structure, and validity. The sample characteristics, data and statistical methods of each phase are discussed.

In Chapter 4, the results of the analyses are presented across both phases of research. Across the subscales and global TRS-C scales, the majority of results lend support to the reliability, validity, the multidimensional structure, and lack of bias. However, the convergent construct validation demonstrated mixed results. Finally, in Chapter 5, the limitations, applications and implications of the findings are discussed.
CHAPTER TWO

CONCEPTUAL LITERATURE REVIEW

The following is an overview of the literature directly related to this project. This review first addresses the literature related to violence including: the impact that violence has been shown to have in the lives of children, the risk factors that increase the effects of violence in the child's life, the implications for measurement, and the definitions of violence and trauma that serve as the basis of this study.

Relevant conceptual frameworks that are similar, but not utilized as the foundation of this dissertation, and those that support and guide this dissertation are subsequently discussed. The relevant frameworks include: stress and coping theory, the empowerment perspective, and strengths-based perspective. The frameworks integrated into the project are the ecological model, the trauma outcome model, and the resilience perspective from which protective factors have emerged. This discussion ends with definitions of resilience and related concepts as utilized specifically for this project.

The measurement literature relevant to the Trauma Resilience Scale for Children is assessed and critiqued. This includes scales from related concepts as well as scales that measure similar domains. Scales that are utilized when validating the TRS-C are presented and discussed. Current scales’ limitations and the need for creating a new scale are discussed.

Finally, protective factors related to positive outcomes despite the child’s experiences of violence are defined and explored. Included are those empirical works that specifically studied those factors that, when present, are associated with resilience and positive adaptation following violence. These factors: Self Value, Self Regulation, Optimism/Motivating Power, Creative Problem Solving, Supportive Belief Structure, Healthy Caregiver/Family Support, Supportive Peer Relations, Supported Academic Functioning, Activity Involvement/Active Diversion, and Community Safety and Support, are tied to the domains that lie at the foundation of the TRS-C. Implications for measuring these factors are addressed, concluding with the research goal directing this project.
Violence Literature Summary

Impact of Violence on Children

Studies consistently show that violence has been associated with increased negative impacts on children, beginning immediately and lasting, for some, over time. Although some differences are noted with the varying types of violence and between genders, it remains clear that across the research violence is associated with certain problems.

Generally, children experiencing maltreatment display several difficulties in comparison with their non-maltreated peers. In an empirical literature overview, Finkelhor & Hashima (2001) summarize that problems following violence include physical injuries and death, increased risk of psychiatric disorders across all major categories, increased risk of becoming violent towards others, and developmental changes. Long term impacts were studied by Silverman, Reinherz & Giaconia (1996) with 375 participants over 17 years. They found that 80% of adults maltreated as children met criteria for at least one DSM psychiatric disorder. Some gender differences are noted. For females, 70% reported suicidal ideation following maltreatment. Among males who experienced maltreatment, 43.5% exhibited alcohol and/or drug dependence, compared with only 7.9% of their peers.

Several studies have teased out the effects of differing maltreatment types. The literature associated with physical abuse demonstrates increases in aggression, depression and decreased prosocial behavior (Salzinger, Feldman, Ng-Mak, Mojica & Stockhammer, 2001). The National Longitudinal Study of Adolescent Health looked at outcomes of childhood maltreatment in 15,197 youth. A history of caregiver physical assault and contact sexual abuse was significantly associated with poorer health, increased depression, increased adolescent smoking and regular alcohol use, binge drinking, marijuana use, increased overweight status, and increased aggression, including fights ending in physical harm to the other person. The findings remained significant for all but two variables (overweight status and depression for sexual abuse) even when the model was adjusted for age, gender, race, parent’s education, immigrant status and U.S. region (Hussey, Chang & Kotch, 2006). In a longitudinal study, childhood physical abuse was significantly associated with subsequent suicidal ideation in a physically abused subset (n= 637) of a randomly selected sample (Enns, et al., 2006).
Looking specifically at childhood sexual abuse (CSA), Beitchmann, Zucker, Hood (1992) conducted a thorough literature review. They report consistent findings including increased depression in women and adult sexual functioning problems for both men and women who were abused as children. Luster & Small (1997), in a study of over 42,000 adolescents, found that childhood sexual abuse and physical abuse are each associated with increased suicidal ideation & binge drinking. Later, these authors found sexual abuse associated with depression and lower GPA as well (Luster, Small & Lower, 2002). In a meta-analysis, Paolucci, Genuis & Violato (2001), looked at CSA defined as unwanted sexual contact during childhood, across 37 empirical studies involving 25,367 participants. When comparing the outcomes of children experiencing childhood sexual abuse compared to non-abused peers, the researchers found a minimum 21% increase in depression, 21% increase in suicide, 20% increase in Post Traumatic Stress Disorder (PTSD), 14% increase in sexual promiscuity, 10% increase in academic difficulties and 8% increase in sexual perpetration of others over those who had not experienced sexual abuse. Neither gender, socio-economic status (SES), age, type of abuse, number of incidents, nor victim/perpetrator relationship significantly mediated the effects. A longitudinal random sample of 664 by Cohen, Brown & Smailes (2001) reported significantly increased symptom levels across both Axis I and Axis II mental health disorders in young adulthood following CSA, including depression, substance abuse, personality disorders and disruptive behavior. They also found significantly increased symptoms of depression and disruptive disorders in those young adults who had experienced childhood physical abuse across certain reporting types. Across 46 studies, a meta-analysis by Arriola, Louden, Doldren and Forenberry (2005) connected CSA with later increases in HIV risk behavior in women. In a review of 45 studies, Kendall-Tackett, Williams & Finkelhor (1993) noted that children who had experienced sexual abuse clearly had more symptoms than non-abused children. Most frequently, preschool children were shown to experience “anxiety, nightmares, PTSD, internalizing problems, externalizing problems and inappropriate sexual behavior” (p.167). School-age children’s most common symptoms were: “fear, neurotic and general mental illness, aggression, nightmares, school problems, hyperactivity and regressive behavior” (p.167). When looking specifically at adolescents, most commonly observed behaviors included “depression; withdrawn, suicidal or self-injurious behaviors; somatic complaints; illegal acts; running away; and substance abuse” (p.167) Depression was particularly prevalent across age groups.
Children who witness violence have an associated increase in certain problems as well. Alalu (2000), in a meta-analysis of 15 articles examining witnesses to violence, found increased depressive symptoms and problem behavior, including aggression. Litrownik, Newton, Hunter, English and Everson (2003) examined a longitudinal sample of 682 four and six year olds, many from minority ethnic backgrounds. When these children were reported by parents to have witnessed violence within the family, their aggression, depression and anxiety increased significantly. A meta-analysis by Wolfe, Crooks, Lee, McIntyre-Smith & Jaffe (2003) of 41 studies found an overall difference in the children who were exposed to violence. They had more internalizing emotional issues than their peers such as depression and anxiety, and more externalizing behavioral issues such as conduct problems. This effect was magnified when the children had also been abused. Luster, Small and Lower (2002) in a sample of 17, 465 adolescents found witnessing the physical abuse of another person was associated with binge drinking, depression, and lower self-reported GPA. Although the literature is not as comprehensive with respect to witnesses of violence as compared to direct forms of violence, evidence has shown more severe distress outcomes with certain groups of minors who witnessed violence as opposed to personal violence experiences (Jenkins & Bell, 1994).

Confounding our understanding of the outcomes of violence experienced during childhood, researchers critique that the various violent experiences are compounding and cumulative related to outcome variables, both positive and negative (Felitti, et al, 1998; Kendall-Tacket, Williams & Finkelhor, 1993; Masten & Powell, 2003; Saunders, 2003; Wyman, Sandler, Wolchik, & Nelson, 2000) and difficult to tease out (Gore and Eckenrode, 1996; Saunders, 2003). Furthermore, the research tends to be either very specific to one form of violence or lacks adequate confounding variable control when a comparative study is conducted (Oddone-Paolucci, Genuis & Violato, 2001; Wolfe, Crooks, Lee, McIntyre-Smith & Jaffe, 2003). Some of these critiques are being addressed by newer research (Hussey, Chang & Kotch, 2006; Finkelhor, Omrod, & Turner, 2007). In a nationally representative sample (n=2,030), children experiencing multiple victimization types (four or more) generally exhibited significantly more symptoms of depression, anxiety and aggression than many groupings of children with three or fewer forms (Finkelhor, Omrod & Turner, 2007). Although much more needs to be done and weaknesses exist in the literature, it still remains clear that most children who experience violence have exhibited increased problems, ranging from psychological and emotional to physical and behavioral difficulties.
Interestingly, in Kendall-Tackett, Williams & Finkelhor’s study review of sexually abused children (1993), between 21% to 49% are not symptomatic at the time of assessment (Kendall-Tackett, Williams, & Finkelhor, 1993). Although these children may have symptoms that occur at a different time, it still represents a large portion of children who are not experiencing trauma at the time of assessment. Furthermore, many children who were experiencing trauma at the time of assessment may have successful recoveries over time through several factors. For example, a meta-analysis by Rind, Tromovitch & Bauserman, found that when children experiencing sexual abuse were studied at the college level, those who had been sexually abused, were only slightly less well adjusted than their non-abused peers. Furthermore, family environment, when held constant, explained most of this variance (1998). What happened to these academic achieving students with a stable family could be explained as the result of the interplay between risk and protective factors. Research in this area is growing more common and is beginning to converge on risk factors that place a child at higher risk for experiencing violence, including its negative effects, and protective factors that are associated with resilience, buffering and/or reducing the negative outcomes discussed above. The risk factors for negative outcomes are discussed subsequently. The protective factors will be discussed later in the chapter.

Risk Factors

Risk factors include those aspects of a child’s experience shown to increase the possibility of experiencing violence or its negative outcomes. These include any component of the child’s life that the symptom literature has demonstrated correlates with either maladaptive behavior following violence or increased possibility of experiencing violence. Those discussed here are the major findings and trends seen in the child maltreatment literature.

Being a child places a person in a high risk category for violence (Pinheiro, 2006). Children are at even a greater risk for violence when they are part of certain groups and have specific life experiences. Worldwide, age is a predominant factor in risk for victimization. Very young children are at greatest risk for physical abuse, with homicide rates the highest in the 0-4 age range as well as among adolescent boys ages 15 to 17 years (United Nations General Assembly, 2006). Physical violence affects more boys while girls are at a greater risk for sexual violence including forced prostitution (Hussey, Chang & Kotch, 2006; Krug, et. al., 2002). In the U.S., the youngest children, 0-3, are affected the most by all maltreatment forms. The 0-3 age group made up 81% of fatalities due to maltreatment with boys at a slightly higher risk than girls (U.S. Department of Health and
Human Services [DHHS], Children’s Bureau, 2006). As of 2004, children in the 12-15 age range were slightly more likely to have substantiated sexual or physical abuse (DHHS, 2006). This, however, may be due to the child’s increased developmental verbal abilities and willingness to disclose. Maltreatment onset in younger aged children predicts more anxiety and depression in later adulthood. Whereas, later maltreatment onset predicts both decreased high school graduation rates and increased diagnoses of Antisocial Personality Disorder later in adulthood (Kaplow & Widom, 2007).

In general, marginalized children are at an increased risk for violence and subsequent lack of resources following the incident(s). These include children who have disabilities, have been orphaned, are from economically challenged situations or are part of certain minority groups (DHHS, 2006; Finkelhor, Ormrod, Turner & Hamby, 2005; Pinheiro, 2006; Sullivan & Knutson, 2000; White, 1987). In a sample of over 50,000 children who were compared with maltreatment data, children with educationally relevant disabilities were 3.4 times more likely than the general population to experience maltreatment, including sexual and physical abuse. These children were also more likely to be maltreated at a younger age. It should be noted that some children’s disabilities may be caused by severe maltreatment (Sullivan & Knutson, 2000). Poverty is associated with higher physical and sexual abuse odds (Hussey, Chang & Kotch, 2006). Household income lower than $20,000 is significantly associated with increases in multiple perpetrator assault; assault with a weapon; being exposed to shooting, bombs or riots; attempted or completed rape; domestic violence; and someone close to the child being murdered (Finkelhor, et.al, 2005). According to parent and child reports, in the U.S., minorities are significantly more likely to experience multiple perpetrator assault. Overall, blacks are significantly more likely to witness or experience indirect violence. Hispanics and blacks are significantly more likely to have someone close to them murdered. Whites are more likely to report being bullied (Finkelhor, et al., 2005). As discussed, socially marginalized children must be acknowledged in violence related research as they are at a greater risk than typical children from majority populations.

Parental factors can create significant risks for the child as well. In the U.S., children are most likely to have substantiated physical abuse by a parent or a partner of the parent. They are most likely to have substantiated sexual abuse by a parent or other relative (DHHS, 2006). Children who come from larger families, whose mothers are depressed or have substance problems, whose mothers or fathers have low social support and low income, and whose fathers are absent or are not
biologically related, are at higher risk (Coohey, 2000; Kotch, Browne, Dufort, Winsor & Catellier, 1999; Radhakrishna, Bou-Saada, Huner, Catellier & Kotch, 2001). As reviewed by Kolko (2002), children who have poor family relationships or coercive parental interactions are at an increased physical abuse risk. Their parents are also more likely to perceive their children in a more negative light than non-abusive parents.

Previous violent experiences, even when unrelated to the particular type of most recent violence, have been shown to increase the possibility of further victimization and traumatic symptoms following the event (Duncan, 1999; Laor, et al., 2006). In a meta-analysis of 21 studies with samples totaling 20,956, a moderate effect size (.17) was found for childhood sexual abuse in relation to later re-victimization. Furthermore, multiple victimizations may be a risk factor for poorer outcomes (Finkelhor, Omrod & Turner, 2007). But less is known about how multiple forms of violence affect children. This area needs more research in relation to risk and resilience. More severe experiences, longer duration, higher frequency, closer relation to the perpetrator and the use of force in sexual abuse situations are related to increased symptoms in children. Furthermore, negative outlook on the part of the child, lack of maternal support and extensive court involvement without protections, such as juvenile courts or closed circuit testimony, were associated with increased symptoms (Kendall-Tackett, et al., 1993).

**Violence Symptom Measurement with Children**

Empirical studies consistently assess difficulties for children following maltreatment and risk factors associated with experiences of violence. Because of this, the intervention and measurement literature primarily focuses on identification of negative impacts and symptoms associated with violent events. Several examples of major tools utilized from a diagnostic or symptom identification perspective are presented.

For a majority of practitioners and some researchers, diagnostic tools such as the International Statistical Classification of Diseases and Related Health Problems, 10th Revision ([ICD-10], World Health Organization [WHO], Version for 2007) and the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Text Revision ([DSM-IV-TR], American Psychiatric Association, 2000) are used regularly as assessment guides for the outcomes of violent events, including anxiety, PTSD, depression and other symptom-based formulae.

Several psychometric scales assess the presence or severity of childhood violence experiences. The Child Abuse and Trauma Scale (Sanders & Becker-Lausen, 1995) measures the
presence of events across three subscales: Sexual Abuse, Punishment, and Neglect/Negative Home Atmosphere. It is a retrospective test of childhood experiences validated on adults. Cronbach’s alpha was .63 for the Punishment Subscale, .76 for the Sexual Abuse subscale and .86 for the Neglect/Negative Home Atmosphere. Exploratory factor analysis yielded three factors: Negative Home Atmosphere (including neglect), Sexual Abuse, and Punishment. The scale correlated significantly with dissociation, depression and stressful life events measures.

The Childhood Trauma Interview (Fink, Bernstein, Handselman, Foote & Lovejoy, 1995) assesses childhood trauma experiences. This scale was initially validated on retrospective accounts with drug or alcohol dependent participants. Evolving from the concept of this scale, The Childhood Trauma Questionnaire (Scher, Stein, Asmundson, McCreary & Forde, 2001), was created. It assesses domains that include physical abuse and sexual abuse. On a validation group of 1007 mostly African American and Caucasian adults, the alpha coefficient estimate was good for the entire scale, .91. However the subscales were inconsistent, from a low of .58 for the Physical Neglect Subscale to .94 for the Sexual Abuse factor. On a later version with adolescent psychiatric inpatients (n=396), out of five factor loadings, Physical Abuse with an $\alpha = .86$ and Sexual Abuse with an $\alpha = .95$ are reported. It is a retrospective scale utilized most appropriately with adolescents and adults. It is not known if this scale is appropriate for young children.

The Screen for Adolescent Violence Exposure (SAVE) is a three factor measure (Traumatic Violence, Indirect Violence, and Physical /Verbal Abuse) assessing degree of teens’ violence exposure. Conducted in two phases, violence categories were formulated based on interviews with teens and adults and validated on 1036 primarily African American 6-12th graders. Three subscales, Indirect Violence, Traumatic Violence and Physical/Verbal Abuse were created across three settings, School Violence, Home Violence and Neighborhood Violence. Alpha coefficients ranged from a low of .58 on the Physical/Verbal Abuse subscale at home to a high of .94 for the Total Violence in the neighborhood. The scales correlated significantly with theoretically similar measures (Hastings & Kelley, 1997).

Other psychometric measures assess outcomes based on DSM oriented criteria or other symptoms. Specifically for children’s symptom identification, the Achenbach Child Behavior Checklist, 6-18 (Achenbach & Rescorla, 2001) is a commonly utilized parent report tool used to look at frequent behavioral problems in children following violence (Le Prohn, Wetherbee, Lamont, Achenbach & Pecora, 1997). It measures internalizing and externalizing behavioral
issues. Internal consistency ranges from .78 to .97 on the scales and subscales. A newer version
has a Post Traumatic Stress Problems scale and options for use with multicultural children
(Achenbach, 2007). The Youth Self Report now contains a positive qualities scale for youth 11-
18 which most teens endorse. It has been used, in its various forms, in over 200 studies related to
abuse (Achenbach, 2006). However, it does not focus specifically on abuse or violence or those
factors associated with doing well following violence.

The Child Post-Traumatic Stress Disorder Reaction Index is an interview structure based
on DSM criteria that has gone through several iterations. It has been widely used with children
and adolescents who have been exposed to varying traumatic situations world-wide, such as
children in Kuwait exposed to Gulf war violence (Nader, Pynoos, Fairbanks & Al-Ajeel, 1993).
The UCLA PTSD Reaction Index was formulated with child, adolescent and parent versions
(Steinberg, Brymer, Decker, Pynoos, 2004). It screens and assesses lifetime trauma and past
month trauma experiences and subsequent PTSD symptoms from stressors including violence
and abuse among other stressors. The scale shows higher Reaction Index scores among those
children who have experienced trauma. Cronbach’s alpha in several reports has fallen between
.85 a .90 range based on the version administered (Steinberg, Brymer, Decker, Pynoos, 2004).

The Children’s PTSD Inventory is a scale developed for general trauma, including
violence. The items are also based on DSM-IV diagnosis criteria. Subscale alpha coefficients
ranged from a low .53 for the Situational Reactivity Subscale to a high.89 for both Re-
experiencing and Avoidance & Numbing subscales. The overall reliability was .95 lending more
strength to the overall test (Saigh, et al., 2000). Possibly due to the small sample size, n=104,
factor analyses were not conducted.

The Children’s Impact of Traumatic Events Scale-Revised [CITES] has been used in
empirical research measuring symptoms of PTSD, Social Reactions, Attributions, and Eroticism.
In spite of this, it has not shown consistently strong psychometric properties across all subscales.
The PTSD and Social Reactions subscales reliabilities remain strong, ranging from alpha
coefficients of .87 to .89. However, the Abuse Attributions and Eroticism scales range from .57
to .78 across studies. Although the scale has shown evidence for convergent and discriminant
validity, inconsistent correlations existed between the subscales and other scales measuring
similar constructs across studies (Chaffin & Shultz, 2001; Crouch, Smith, Ezzell & Saunders,
1999; Wolfe, Gentile, Michienzi, Sas & Wolfe, 1991)).
The Screen for Child Anxiety Related Disorders is a scale with nearly identical parent and child questionnaires. It has been validated on Dutch and ethnic minority children from non-western countries such as Morocco (Hale, Raaijmakers, Muris & Meeus, 2005) and children from the U.S. (Boyd et al, 2003, Wren, et. al, 2007). It has alpha coefficients ranging from .74 to .93 (Birmaher, et al., 1997; Hale, et al., 2005). It has high fit indicators for its original five factor structure but has shown a three factor structure with African American Children (Boyd, et al., 2003). Emerging from this scale, a new subscale was created utilizing re-configured items to directly measure PTSD symptoms. This scale has shown convergent validity. Reported trauma was associated with higher scores on this Traumatic Stress Disorder subscale (Muris, Merckelbach, Körver & Meesters, 2000).

The Trauma Symptom Checklist for Children is a commonly utilized tool in both practice and research settings for children 8 years of age and older. It assesses several symptoms following violence, including symptoms related to anxiety, depression, anger, post traumatic stress, dissociation, and sexual concerns, and has been utilized in over 70 published research articles (Briere, 2007). On the standardization sample of 3,008 children, alpha coefficients ranged from .77 for the Sexual Concerns scale to a high of .89 for the anger scale (Briere, 1996). The Trauma Symptom Checklist for Young Children is a caretaker report for children ages 3-12. It has shown subscale reliability alpha coefficients, ranging from .81 on the sexual concerns subscale to a high of .93 on the Post-traumatic Stress-Total score. (Briere, et al, 2001)

The Child Sexual Behavior Inventory (Friedrich, et al., 2001) examines children’s sexual behaviors, ranging from sexual anxiety and intrusiveness to boundary issues and gender role behavior. A sample of 1,114 children from the general population across the U.S. was compared with 620 children who had been sexually abused and 577 psychiatric outpatients. The scale differentiated between those children who have and have not been sexually abused. Alpha coefficients were .72 for the normative sample, .83 for the outpatient sample and .92 for the sexual abuse sample.

These are major assessments commonly used for abuse identification and symptom based assessment. They are very useful in both clinical and practice settings, yet, they do not assess the degree to which a child experiences those factors associated with resilience and recovery except for two subscales with low reliability on the CITES -- Social Supports, alpha equal to .57 and Empowerment alpha equal to .67 (Wolfe, et al, 1991).
These scales are successfully utilized in many settings ranging from individual therapy to large-scale studies. Their importance when measuring trauma related problems is strong. Although their value should not be diminished in relation to assessment of issues related to negative effects following children’s violent experiences, they do not test the strengths of children. In relation to violence, factors empirically associated with overcoming the symptoms and negative effects would be beneficial in conjunction with these measures to help a child move towards recovery.

**Defining Violence and Inclusion Criteria**

Definitions of terms related to violence are discussed in this section. These definitions are the parameters for decision making regarding inclusion of children in the study and the classification of those who have experienced violence. For this study, *Violence* includes: “intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation” (Chapter 1, p. 5, Krug et al., 2002). The Keeping Children and Families Safe Act of 2003 amendment to the Child Abuse Prevention and Treatment Act (CAPTA) defined abuse as: “Any 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” (para. 2, Child Welfare Information Gateway, 2005).

For the purposes of this project, definitions of violence relate specifically to the type of violence experienced. The specific areas reflect the needs identified in the research, and focus on violence without becoming so broad as to lose conceptual relevance. The violence typology and their definitions as incorporated into the research include the following:

1. **Domestic violence:** A child has witnessed a parent or caretaker being injured, assaulted and/or seriously threatened physically or sexually by the parent or caretaker’s intimate partner.
2. **Sexual abuse/rape:** The child has been coerced to participate in sexually explicit conduct and/or has experienced sexual contact/exploitation by a person in a position of power and/or authority over her or him.
3. **Physical abuse:** The child has experienced non-accidental physical injury by someone with power and/or authority over him or her.
4. **Other life-threatening event:** The child has experienced and/or witnessed a severe and violent event which presents a threat or actual physical injury, a threat of death or actual death, or an imminent risk of serious injury or harm, other than those mentioned above.

The following sources were consulted to aid in formulation of these definitions: The Centers for Disease Control (2003), The American Psychological Association (2001), DSM IV TR, American Psychiatric Association (2002) United States US Code Title 42, Ch. 67 and 42 U.S.C.A. §5106g, (Child Welfare Information Gateway, 2005; Legal Information Institute [LII], 2005), and The World Health Organization (Krug, et al., 2002). Although legal definitions of domestic violence and child maltreatment vary and overlap throughout individual states in the U.S. (Child Welfare Information Gateway, 2005), an attempt has been made to remain consistent with accepted definitions currently in use while creating distinct violence categories which can apply across ecological contexts.

This study includes children who have experienced both: a) **direct violence:** personal harm or injury to the child including physical abuse, sexual abuse, or bodily injury to the child that threatens his or her safety and b) **indirect violence:** violence that the child witnesses and/or occurs to someone for whom the child cares deeply. **Trauma** is a possible outcome following violence. Trauma may encompass or follow the violent event as manifested by negative symptoms impairing psychological/emotional, physical, academic, and/or relational functioning. For example, trauma is seen when a person manifests PTSD symptoms. Most, but not all, children experience trauma following violence.

The author acknowledges that other events such as neglect and psychological abuse may result in traumatic outcomes in the human experience. Although these areas are extremely important as areas of inquiry and validation, this study focuses on participants who experienced violence within the previously defined areas.

Violence and its subsequent negative outcomes are extremely important areas of study and practice. They have been and continue to be studied from many viewpoints. Nevertheless, some children do not show increased symptoms following abuse such as those noted in the reviews by Kendall-Tackett, et al. (1993), Rind, et al. (1998) and Walsh, Dawson & Mattingly (2010). More recently, researchers are looking at those factors that are related to overcoming and/or avoiding the negative symptoms usually related to victimizing experiences. This area, although being addressed, is not covered as comprehensively as the symptom perspective. When looking at the whole child in both clinical and research settings, it is essential to assess
those factors that correlate with recovery and resilience in the literature in addition to symptoms that need attention. Important theories and models lend support to this concept.

**Related Theories and Models**

Several theories, models and perspectives guide the understanding or have influenced the emergence of recovery and resilience concepts following violent events. They include: the Stress and Coping theory, Empowerment perspective, Strengths-Based Perspective, and Ecological Modeling including the Trauma Outcome Model, which applies ecological modeling to violence. Each related theory or model is discussed with respect to similarities and differences between the other related concepts. This leads to a discussion of protective factors as they correspond to scales related to the proposed domains of the TRS-C. Resilience is addressed periodically in relation to each related theory or model with a final section explicating it as the primary guiding force of this dissertation and the perspective from which protective factors emerged in empirical works.

**Stress and Coping**

From a physiological perspective, Hans Selye, a physician with a doctorate in organic chemistry, published the book, *The Stress of life* (1956), his first compilation of his work on stress written for the general public. Within the chapters, he presented focused concepts based on medical experimental designs from his earliest works. His work is considered as a primary impetus that moved the concept of stress into a global medical and psychological model. Subsequently, these and myriads of his other works, such as *Stress without Distress* (1974), evolved in which he later clarified the idea in the physiological, behavioral and emotional realms. He initially defined stress as “‘the sum of all nonspecific changes caused by function or damage’ or ‘the rate of wear and tear in the body’” (1974, p.141). His original work looked at three major components related to stress. The *stressors* are the initial state of alarm, “the external agent which started the trouble, for instance, by acting directly upon the skin, the kidney or the mind” (1956, p. 261). The *defensive measures* are resistance to the stressor including examples such as inflammation in the case of injury or emotional reactions in the case of mental stress. Finally, the *mechanisms of surrender* are the means leading to exhaustion “such as hormonal and nervous stimuli which encourage the body not to defend itself” (p. 262). He defined *adaptation* as the “spacial concentration of effort” (1956, p. 118) that allows us to remain alive through our constant change process, the energy of which can be used up and “the
loss of which is death” (Selye, 1950, foreword). By gradual learning, we begin using only a few of the mechanisms that are most useful in coping with a new situation in a balance of defense and submission (Selye, 1956). When the response is out of balance, maladaptation occurs. In relation to measurement, Selye indicated, as is similar to resilience discussed later, that stress is not measurable, but instead is assessed through resulting effects of the stress in the body and mind which can be easily measured (1956). Stresses as they relate to illnesses were also addressed by James Halliday (1948) in a book looking at psychosocial medicine in England and Scotland. This work contained some of the first writing addressing the issue of coping within an environment of stress. Subsequently, the stress literature began to give rise to more emphasis on coping as a concept, which is loosely defined as a positive or negative adaptation process, leading to post-stress functioning. For example, in Selye’s later work, his stress responses were refined to include perspectives, from both positive (eustress) and negative (distress) angles, stating that “activity associated with stress may be pleasant or unpleasant” (1974, p.31).

Eustress is associated with optimal performance (Selye, 1975) while distress is the “damaging or unpleasant stress” (1974, p. 31). He acknowledged that his earlier definitions were related more to the later concept of distress. Selye explained that stress is not simply “nervous tension,” or “something to be avoided” because “complete freedom from stress is death” (1974, p. 30-32). He redefined stress from his earlier work to include the more positive aspect of stress. It was defined as “the nonspecific response of the body to any demand made upon it…stress is what remains when we disregard specific changes” (1974, p.141). Work such as this helped researchers to begin looking at both positive adaptation and negative trends following stressors, which later included violence.

Stress and coping gained psychological prominence through studies of World War II combat stressors (Lazarus, 1993). The sociologist Reuben Hill and colleagues (Hill & Boulding, 1949) studied family adjustment in relation to the stress of war. This work was inspired by previous authors studying differences in families during the depression. Hill looked at the dynamics of what he called invulnerable families identified as those seemingly impervious to the negative effects of the separation and reunion crises of war. He found that good family adaptability and integration lessened the difficulty.

In 1951 Lazarus and Deese reviewed both the effects of stress on performance and techniques for measuring stress from a psychological perspective. Following that, Lazarus &
Baker (1956) proposed a methodological framework emphasizing individual differences as they accounted for the research findings on stress. This began a surge in stress research, looking at differing populations across varying contexts.

These early concepts were expanded with Holmes and Rahe’s seminal Social Readjustment Rating Scale (1967), a checklist of stressful life events considered etiologically significant to physical illness. This measure is closely related to the Schedule of Recent Experience (SRE) Life Changes Questionnaire, which included a broad spectrum of life events weighted for their impact on life change by 400 diverse participants (Rahe, 1974). The Social Readjustment Rating Scale is a checklist of social or life events that were tested in relation to their cumulative impact on illness resulting from the stress placed on the individual experiencing them. This work signified that stress assessments were emerging with greater respect for the context and degree of impact from the environment, but remained focused on relations with negative, primarily physiological outcomes.

Coming from both social work and psychological perspectives, Patterson and McCubbin (1983) advanced what is known as the ABC-X model to look at family adaptation from the stress and coping perspective. The model includes a) a stressor in relation to b) existing resources and c) perceptions. These three aspects can lead to a crisis. Over time, the stress effects can accumulate as a piling up of demands. Coping occurs in relation to existing/new resources and perceptions resulting in adaptation or mal-adaptation. Coping can, therefore, can be functional or dysfunctional (1983). Authors specializing in stress, such as Mederer and Hill (1983), acknowledge the value of Patterson and McCubbin’s model and definition of stress, stating that McCubbin and Patterson sharpened the definitional distinction between stress and distress. Stress is the “demand-capability imbalance” and distress as “an unpleasant or dysfunctional state which arises from a condition of stress” (Mederer and Hill, 1983, p.46-47). Mederer and Hill acknowledge that the ABC-X model removes the negative connotations from the concept of stress and also identifies those “intervening variables” which affect the probability that a family will move into transition and adjustment following difficulties (p.47). This concept eventually influenced research looking specifically at risk and protective factors and their contribution to adaptation.

Psychologists Susan Folkman and Richard Lazarus began looking at more complex issues surrounding stress and coping. Folkman (1984) discussed control, appraisals and coping
in relation to adaptational outcomes following the stress process. The two authors (Folkman & Lazarus, 1985; Lazarus, 1993) addressed problem-focused coping, where a person’s environment is influenced by actions, improving the psychological stress, and emotion-focused coping, which is the change in interpretation of the stress. Problem focused coping would be similar to the protective factor Problem Solving used in this dissertation. Emotion focused coping has some overlap with Self Value, Self Regulation and Optimism/Motivation protective factors. The work began preliminarily acknowledging the protective factor of social support in relation to coping and the use of what they called the “Stress Questionnaire” (p. 154, 1985). This scale had four subscales, Emotions, Challenge Emotions, Harm Emotions, and Benefit Emotions with alpha reliabilities ranging from .59 to .84. They later created the measure, Ways of Coping Questionnaire (1988) that assessed varying positive and negative coping strategies with 67 items. In a community sample, subscale alpha coefficients ranged from a low of .61 for the distancing subscale to a high of .79 for the positive reappraisal scale (Folkman, Lazarus, Dunkel-Schetter, Delongis & Gruen, 1986). It has been very useful in many research projects, but has shown some inconsistent psychometric properties for factors and reliability at the subscale level for varying populations. For example, Lundqvist & Ahlström, (2006) studied the psychometric properties on a Swedish sample of 510 people experiencing chronic disabilities, their next of kin and a control group of students. The Cronbach’s alpha for the global scale was .86 for all respondents. However, subscales were not stable across all domain groupings, ranging from a low of .49 for a Confrontive Coping Subscale to a high of .80 for a Problem Solving domain. Furthermore, within this work these authors summarize the factor analyses from six other studies and compare the results with their own. The studies report factor analyses on three, five, seven, eight, nine and ten factor models. Fit indices range from a low of .64 AGFI for the Mishel and Sorensen (1993) seven and nine factor models to a high of .94 IFI for the Wineman, Durand and McCulloch (1994), three factor model. The Root Mean Square Errors of Approximation ranged from a low 0.054 on the Lundqvist & Ahlström eight factor model to a high of .091 on the Rosberger, Edgar, Collet and Fournier (2002) three factor model. None of the models had an AGFI with an adequate fit. The highest was at .87 for the Wineman and colleagues three factor model conducted on 655 adults with chronic neurological problems (Lundqvist & Ahlström, 2006; Rosberger, et al., 2002; Wineman, Durand & McCulloch, 1994). Olmedo, Ibáñez &
Hernández (2001) did not find support for the eight factor model in a study of 222 health care workers. All studies addressed either illness or general stressors, not specifically violence.

Believing that problem-focused and emotion-focused coping was too simple, Carver, Scheier and Weintraub (1989) developed a multidimensional coping inventory over three waves with a sample of 978 students. Their scale, COPE, assesses 12 conceptually distinct scales, including Active Coping & Planning, Seeking Social Support, Positive Reinterpretation, and Turning to Religion. These particular subscales are similar to protective factors used in this dissertation including active diversions, problem solving, optimism, parent and peer support, and supportive belief structure. However, the COPE subscale alpha reliabilities are inconsistent, ranging from .45 to .92.

The stress and coping literature gained momentum for children through psychologists, psychiatrists and medical doctors as seen in Garmezy and Rutter’s Stress, Coping, and Development in Children (1983). These researchers addressed healing in the context of the children’s problems (Haggerty & Sherrod, 1996). Previously in these disciplines child developmental research focused primarily on the individual. The concepts of stress and coping did lend themselves to looking at the problem from a more broad perspective such as in the social work profession. The basis of the concept within the violence perspective is that the presence of a violent stressor gives rise to coping, which is a positive or negative adaptation process leading to post violent functioning. Though most accept the concept as important, definitions have been extremely difficult to pin down (Rutter, 1983). The concepts of stress and coping have served research and children well, yet through more research, longitudinal studies and conceptual thought, the concept is moving towards a model of risk and protective factors and their contribution to resilience. In the late 1980s many of the stress and coping researchers such as McCubbin & McCubbin (1988), began moving toward a resilience focus. They explain that the importance of stress theory when studying resilient families is “based in part on the central roles that family strengths, resources, and coping play in understanding and explaining family behavior under stress” (p.248). Haggerty & Sherod (1996) explained in a book outlining some aspects of this transition from stress concepts to resilience focus:

One direct implication of research across the past decade is that the label stress and coping is too general and too simplistic to continue to serve as a useful framework for
research. Instead, concepts of risk, resilience and development must guide investigations. (Haggerty & Sherod, 1996, p. xviii)

As overviewed, several stress and coping authors are now writing with a resilience foundation. For example, McCubbin, Thompson, Thompson and Futrell (1998-1999) applied their coping expertise by editing a series of three volumes called the Resiliency in Families Series. In the work, they underscore the need for knowledge relating to “successful adaptation under stressful life conditions” for high risk children (p.1). When discussing the meaning of the more resilient families, the authors explain that these families are “better able to negotiate their way through transitions and crises and to cope with and even thrive on life’s hardships” (p.2). These authors present a family resiliency model with a focus on family change and adaptation over time. The concept emerged from studies originally referring to invulnerability rather than resilience to stressors including war induced family crises (McCubbin, Boss, Wilson & Lester, 1980). Their model evolved over time from a more basic model of stress and coping. The adjustment phase of the model demonstrates that over time, a stressor creates vulnerability in a family. This plays into an established functioning pattern that the family is already utilizing. The family creates balance within four domains of the family system functioning: a) Interpersonal Relationships, b) Development, Wellbeing & Spirituality, c) Community Relationships & Nature, and d) Structure and Function. This leads to stressor appraisal in light of the family resources, eventually leading to problem solving and coping. This coping can be positive, leading to recovery, or negative aiming towards a crisis situation (p.13-14). These concepts lend conceptual backing to this dissertation’s protective factor-based domains: Family Support, Supportive Peer Relations, Supportive Belief Structure, & Community Safety and Support. The adaptation phase of the model includes the adjustment model with additional complexity. Following a stressor, the maladjustment period is preceded by inadequate or deteriorated functioning thus leading to a crisis. Added areas also include possible new, retained and restored familial patterns of functioning following maladjustment. Greater detail related to the family situational appraisal and an expanded family resources model that include family and community support is also added (p.25). This focus of family based resilience work leads to measurement and studies which emerged from prior stress & coping work and ecological modeling (McCubbin, et al., 1998-1999).
Scales, such as the Family Hardiness Index, based on these transitional concepts have been applied to family adaptation (McCubbin, Thompson & McCubbin, 1996). This index has a reported .82 Cronbach’s alpha for the global scale consisting of 20 questions. The three subscale model, Commitment, $\alpha=.81$, Challenge, $\alpha= .80$, and Control, $\alpha = .65$, has measured family hardiness across several family types ranging from families with children experiencing severe illness such as cardiac problems to native Hawaiian families (McCubbin, Thompson & McCubbin, 1996). These authors’ Hardiness definition is adapted from Kobasa’s work in 1979 with male executives and lawyers. It is “a personality characteristic encompassing both cognitive and behavioral components which acts as a stress resistance resource and has the potential to offset the illness producing effects of stress on individuals” (McCubbin, Thompson & McCubbin, 1996, p. 240). Family-based coping testing is related to the protective factors related to family support seen later in resilience work.

Scales, including the Adolescent Coping Orientation for Problem Experiences (A-COPE) and the Youth Coping Index (YCI) from McCubbin, Thompson & McCubbin (1996), use this theoretical base to address adolescent coping. The A-COPE is a 12 subscale test with alpha reliabilities ranging from .50 on the Seeking Professional Support subscale to .76 on the Investing in Close Friends subscale. Structured interviews of 30 10th-12th grade students in relation to their most stressful family and life events produced the items. The validation sample consisted of 467 adolescents. Although the scale is not violence-specific, several of the subscales such as Social and Spiritual Support are similar to protective factors found to be associated with resilience following violent events. Emerging from the A-COPE, The YCI was created to be ethnically sensitive to African American youth. Overall alpha reliability, as tested on African American Youth offenders, was .86 on the global scale and ranged from .70 to .84 on the three subscales.

Several scales specifically address children’s coping. Brodinsky, et al., (1992) created a self report Coping Scale for Children and Youth as part of another research project. The sample was predominantly white middle class and focuses on general coping behaviors present in adolescents. It does not have peer-reviewed psychometric analyses. The Self-Report Coping scale was validated on 481 fourth through sixth graders. It tests five types of positive and negative coping strategies. Those similar to the TRS-C include Seeking Social Support, and Self-Reliance/Problem Solving. Reliability analyses yielded alpha coefficients ranging from .68
to .84 (Causey & Dubow, 1992). The Kansas Coping Inventory is a measure created with a sample of 296 fourth through sixth grade children who had experienced an academic stressor. Several domains relate to the TRS-C including Social Support, Spiritual Support, and Problem Solving. It also includes Active Behavioral Avoidance in addition to Relaxation and several negative coping techniques such as Negative Emotional Venting surrounding every day stressors. Alpha coefficients ranged from .60 to .85 across subscales (Danovsky, 1995).

From a psychological perspective, Spaccarelli (1994), based on a review of the literature, proposed a transactional model specifically applied to child sexual abuse in relation to stress and coping. The model included abuse as the stressor including those arising from the abusive events, related events and abuse disclosure events. Support resources and other moderators such as age, gender and personality affect both coping strategies and cognitive appraisals leading to possible psychological symptom outcomes. Among his recommendations for future research, he proposed studying the interaction between the stressors of abuse and the child’s initial responses in light of contextual interpersonal and environmental factors. He included the need to look at not only those aspects related to negative outcomes but also protective factors that may result in decreased symptoms of abuse.

The stress and coping models have continued to impact many important child abuse related empirical research projects. As reviewed, this work was an important step in laying the foundation for subsequent resilience concepts with families and children who have experienced violence.

**Empowerment**

The empowerment concept specifically focuses on the implementation of solutions to problems and stressors mostly in a community context. The impetus of empowerment emerged in social work with Solomon’s application to black families (1976). She wrote that empowerment begins with using tactics to reverse the negative valuations of individuals in their surroundings. Its usefulness in social work with black families spread to use in other disciplines and with other oppressed and vulnerable populations, mostly in community mobilization work. The empowerment perspective addresses the “intent to and the processes of assisting individuals, groups, families and communities to discover and expend the resources and tools within and around them” (Saleeby, 2002, p.9).
Community psychologist Rappaport (1984) defines empowerment as, “a process: the mechanism by which people, organizations, and communities gain mastery over their lives” (p.3). He continues explaining that due to the variability of empowerment across contexts and people, it is easier to define in its absence as powerlessness, learned helplessness, alienation or loss of the sense of control. Similar to resilience, which is measured by protective factors associated with overcoming the negative effects of a particular context, Rappaport explains that empowerment is not to be reified in its generalized measurement of a specific intervention, end product, or means by which empowerment occurs. Instead, he explains, “The way it is measured is not the thing itself. Nevertheless, each measurement, intervention, and description in a particular context adds to our understanding of the construct” (p.4). This thinking lends support to this project’s goal of assessing protective factors following the specific context of violence in the specific phase of childhood.

Later, Zimmerman and Rappaport (1988) approached empowerment within a community from a three pronged perspective including the personality, cognitive and motivational measures becoming a sum total of empowerment of the individual. To measure the personality aspect, they used existing measures of locus of control, chance control, belief in powerful others and ideologies of external control rather than self as influencing social/political systems. Cognitive measures included self-efficacy, including sense of mastery and perceived competence and political efficacy, including a measure of internal and external efficacy in response to change. Motivational measures included scales that measured desire for control and civic duty. As discussed later, similar to the concept of empowerment, multiple dimensions of protective factors are needed to look at positive adaptation and subsequent resilience.

Perkins and Zimmerman (1995) explain that “empowerment theory, research and intervention link individual well-being with the larger social and political environment” (p. 569). Similar to resilience concepts discussed later, it “compels us to think in terms of wellness versus illness, competence versus deficits, and strength versus weakness” (pp. 569-570). However, unlike stress and coping, ecological models, and resilience perspectives, it focuses mostly on empowering individuals, groups and communities to gain greater access to resources which they lack or remain deficient in comparison to other groups. Similarly, resilience includes this aspect following difficult experiences, but usually goes further on the individual level.
Zimmerman (1995) does successfully apply the concept “psychological empowerment” to individuals, but continues to remain focused on the macro structure. He breaks the concept into three major components, a) Intrapersonal, including perceived control, self-efficacy, motivation, and perceived confidence; b) Interactional, including critical awareness, understanding causal agents, skill development, skill transfer and resource mobilization; and c) Behavioral, including community involvement, organizational participation, and coping behaviors. These domains are similar to protective factors following violence including Self Value, Self Regulation, Optimism/Motivation, Creative Problem Solving, and Community Safety/Support. Differing from resilience, empowerment is not related to returning to a previous level of functioning following a damaging event, but includes outcomes related to themes of “mastery and control, resource mobilization, and sociopolitical context and participation” (p. 585). In relation to measurement, Zimmerman continues to explain that due to variability of psychological empowerment between people, contexts and over time, a universal measure that would fit most people or a global measure that would fit most contexts may not be an appropriate or feasible goal. Although empowerment differs from resilience, Zimmerman’s arguments would lend support to this project’s goal of specific focus on children within the specific event of violence.

Other authors have compared empowerment to related concepts of stress and coping, ecological modeling and adaptation. Gutiérrez (1990) defined empowerment as the “process of increasing personal, interpersonal, or political power so that individuals can take action to improve their life situations” (p.149). Defining empowerment in relation to stress and coping, she later (1994), suggested that the concept of stress and coping can be enhanced by empowerment and coping processes, including group and community levels contributing to proactive change. Empowerment, therefore, becomes an approach encouraging adaptive coping strategies. She explained that the change process contains the research-based empowering sub-processes: increasing self-efficacy, developing a critical consciousness, developing relevant skills and involving others sharing similar problems or situations. These concepts have overlap with protective factors of Self Value, Self Regulation, Creative Problem Solving, Healthy Caregiver/Family Support, Supportive Peer Relations, and Community Safety/Support.

Connecting the empowerment concepts of Zimmerman with ecological modeling, Speer & Hughey (1995) review one community organization in terms applied to both concepts. The
individual, the organization and the community are described in relation to work towards community change through essential skills: a) the need for interdependence in which all the people in an organization or community are connected, b) the cycling of resources changing their distribution in a community, c) role adaptation to become responsive and d) succession of the environment as it changes overtime. Similarly, resilience related concepts blend well with subsequently discussed ecological modeling using concepts such as adaptation and the need for support from varying levels of resources.

Specifically addressing social work, according to Simon (1994), social work’s empowerment tradition is based on collaborative partnerships; expansion of client strengths and capacities; and focus on individual, family and environment strengths. Clients are active agents of change, and the focus of empowerment is directed toward oppressed and vulnerable populations. Rose (2000) explains that the empowerment perspective is the basis that connects social work disciplines from policy to direct practice. Application of empowerment embodies an earned trust based on relationships where meaning is produced, not received, by client populations. The participants are “equally valid contributors to defining and shaping the process, product, and purpose of their interaction, not simply functional consumers of concealed, still dominated relationships” (p.411).

Applying empowerment specifically to child maltreatment, Finkelhor and Browne (1985) conceptualized powerlessness as one of four key trauma related dynamics with children who have been sexually abused. They asserted that powerlessness is affected when a child’s ability to make decisions and his or her sense of self has been breached due to sexual abuse. Draucker (1995) explored a coping model with 149 adult survivors of childhood sexual abuse. Although the model fit was not ideal, she found powerlessness was significantly associated with traumatic sexualization and interpersonal victimization. Banyard and LaPlant (2002) conducted an exploratory study with 211 female university students to look at the links between empowerment and child maltreatment. Claiming that no one scale measures empowerment, the researchers used ten scales to assess the construct. The scales converged into three primary factors: Intrapersonal Empowerment, Social Action, and Community Connections. Intrapersonal Empowerment and Community Connection were significantly inversely correlated with child maltreatment even after controlling for other general aspects of family environment.
Intrapersonal empowerment and community connection are similar to the protective factors relating to Parental and Peer Relationships and Community Support.

An empowerment scale developed by Rogers, Chamberlin, Ellison and Crean (1997), was created to test empowerment components deemed important by an advisory board of self-help program leaders. Attributes of empowerment such as “having decision making power” and “understanding that a person has rights” (p. 1043) were incorporated into scale items. The full scale Cronbach’s alpha was .86. Exploratory factor analysis revealed five factors, including Self-esteem, Power-powerlessness, Community Activism and Autonomy, Optimism and Control over the future, and Righteous Anger. The subscales were retested by Wowra and McCarter in 1999. Their analysis of 283 respondents showed an overall Cronbach’s alpha of .85, with subscale alphas of .55 for Power, .60 for Anger, .66 for Control, .67 for Activism and .91 for Esteem. This scale was used by Tourigny, Hébert, Daigneault and Simoneau (2005) with teen girls participating in a sexual abuse therapy group. The girls demonstrated significant increases in total empowerment compared to a control group. Although the strength of the subscales varies, this test has been used with maltreatment populations, and the subscales of Optimism/Control and Activism are related to protective factors in this project: Optimism/Motivation and Community Safety/Support.

Empowerment of a child following violence could be accomplished by acknowledging his or her ability to influence the outcomes in his or her life, thus increasing the protective factors in that child’s life. This concept lends itself to the ability of the child who has experienced violence, as part of an oppressed population, to affect his or her outcomes related to the adaptation. Beyond the similarities of empowerment concepts to specific protective factors, empowerment as an intervention could theoretically enable the child to strengthen the protective factors related to problem solving and accessing protective resources such as school and family support.

**Strengths-Based Perspective**

Though not as thoroughly developed, strengths-based foundational works are taking hold in many disciplines from organizational behavior to social work. Early developmental work by Erickson contributed to the strengths perspective from the concept of looking at ego-strengths that would allow a child to successfully accomplish developmental milestones (1964).
In social work, Saleeby (2002) is a prominent writer on the strengths-based practice model, encouraging social workers to address problems from a strengths perspective in addition to a symptom based formula. This appeal is similarly emphasized in the stress & coping and resilience concepts of adaptation, and the empowerment concepts of a positive sense of self and the assertion of individual rights and resources. Several principles guide the process of working with clients’ strengths to aid in the resolution of problems. These begin with the assumption that every client population has strengths. Problems such as violence may cause injury, but at the same time can be the sources of opportunity. This concept is similar to the empowerment focus on being an active agent of change. This is also similar to the stress and coping concept of stressors working to motivate positive change (Selye, 1974) and the concept that positive adaptation following a difficult event can lead to a trajectory of resilience. Taking a transitional perspective between resilience and strengths based work, Wolin & Wolin (1993) described this as survivors’ pride.

Saleeby (2002) points out that a helper does not know the upper limits of a person’s ability or capacity to change and grow. Similar to empowerment perspectives, clients are best served when helpers collaborate with them. Professional, familial and/or informal care is essential to human well-being at childhood and when difficult circumstances arise later in life. Caring relationships offer hope to those who need support either physically or socially. All families should be assisted both formally and informally in caring for their members. In any event, Saleeby emphasizes, caregivers need to give quality care without subverting their own well being. Because every environment is full of resources, care from these sources is essential (Saleeby, 2002). Protective factors related to family and community support are similar to this concept.

From an educational perspective, Howard Gardner, in 1983, set forth his theory of Multiple Intelligences based on a synthesis of his experience and research with children, patients with brain-damage, and a task force on human potential. This theory claims that intelligence is multi-faceted and contains several aspects ranging from Linguistic to Musical to Spatial realms (1983). Gardner’s research in application spread to the educational realm where he, in collaboration with Krechevsky (1993) assessed the intellectual domains with the first research question being, “Do young children have domain-specific as well as more general strengths?” (p. 94). The domains included activities assessing: Numbers, Science, Music, Visual Arts,
Movement, and Social. They did not correlate with each other or with the Stanford-Binet Intelligence test, but did remain constant over time (Gardner & Krechevsky, 1993). With the exception of the social domain, the domains in this test do not overlap with the content of the protective factors related to resilience following child maltreatment. Nonetheless, the strengths-based nature and suggestions that Gardner sets forth are helpful when creating a measure for children. This dissertation project contains elements that coincide with Gardner’s suggestions for improving our assessments including: the need for a developmental perspective in testing, addressing human creative capacity, dealing with the strengths in context, use of multiple measures (domains) related to the construct, sensitivity to individual differences, and an attempt at making the test interesting (Gardner, 1993).

The Behavioral and Emotional Rating Scale (BERS) addresses strengths in an educational setting with children experiencing issues such as behavioral and learning issues. The measure is a parent-rated multi-dimensional assessment for children widely used in educational, clinical and research settings (Epstein & Sharma, 1998; Harniss, Epstein, Ryser & Pearson, 1999). It was formulated to assess strengths related to succeeding in school and overcoming educational behavioral issues. Internal consistency reliabilities ranged from .77 to .99. A newer version, BERS-2, with a youth self report scale in addition to the parent report has shown acceptable factor analytic properties, three goodness of fit indicators were above .98 for the five factors although RMSEA was high at .12 for youth scale and .15 for the parent scale (Buckly, Ryser, Reid & Epstein, 2006). It is not specifically focused on resilience, but has a substantial overlap with protective factors assessed in the TRS-C. BERS-2 domains with similar content to the TRS-C include Family Involvement, Intrapersonal Strength, Interpersonal Strength, School Functioning and Affective Strength. The measure also asks key questions that include friends and activity involvement. Several items and concepts within the BERS-2 domains have relevance to the TRS-C.

It was determined that this scale was the closest match to be used for convergent validation purposes in this dissertation. The measure asks questions about children from a positive perspective and has acceptable psychometric properties. As the BERS-2 domains were structured differently from the TRS-C, it was decided that the BERS-2 domains relating to the self (Interpersonal Strength, Intrapersonal Strength and Affective Strength) would be compared with TRS-C internal indicators at the individual ecological level (Self Value, Self Regulation, Optimism/Motivating Power, and Problem Solving). Problem Solving did not include the affective strength as it was determined to be
a solely cognitive-behavioral rather than cognitive-behavioral and emotional process. The BERS-2 item, “participates in religious activities” most closely related to the Supportive Belief Structure construct of the TRS-C. For the TRS-C relational level domains (Family Support and Supportive Peer Relations), Interpersonal Strength and Affective Strength were hypothesized to correlate as interpersonal and emotional skills are components of relationships. Additionally, for the TRS-C Family Support domain, the BERS-2 Family Involvement domain was added to the convergent hypotheses because the two factors contained similar content. Added to the Peer Relations hypotheses, the BERS-2 Friends Key Question listing the child’s friends was hypothesized would correlate. For the TRS-C Supported Academic Functioning domain, the BERS-2 School Functioning was determined to be used based on content. For the TRS-C Activity involvement, it was decided to use the BERS-2 Activities Key Questions listing the child’s activities in which he or she participates. Although the domains and subscales were not perfect in item and domain match, the substance of the measure is relevant and applicable. Additionally, the BERS-2 is the strongest and most widely used strengths-based measure in educational, clinical and research settings.

From the strengths perspective, resilience is viewed as working in a complementary manner. According to Saleeby, resilience is “the ability to bear up in spite of ... ordeals” and “meeting the demands and challenges of one’s world, however chastening” (2002, p.11). He explains that the difference between strengths and resilience is that “the strength perspective [is] an organizing construct that embraces a set of assumptions and attributes about health and potential” (p.30). On the other hand, “resilience [is] the attribute that epitomizes and operationalizes what the strength perspective is all about” (p.30). When creating a scale, resilience flows from this perspective as the operational construct that embodies the child’s strengths.

**Ecological Model**

The ecological model approaches issues from the perspective of the relationship between the person and increasingly larger levels of involvement in the physical environment, including the family and the community. With roots in biological research, the concept was applied to domains in the physical sciences. In social work, a version of the ecological concept was first utilized when Mary Richmond (1917) talked of the four processes of casework including: interviewing the person, the family, sources outside the immediate family, and carefully weighing their relation to one another. The sources outside the family included medical
resources, schools, work, neighborhood and social agencies. Similar to empowerment, this concept was easily incorporated into social work through emphasizing the environment and action when dealing with individual’s problems including those of children (Germain & Gitterman, 1980).

Kurt Lewin (1931), combining principles of sociology and psychology explained that children’s behavior was codetermined by existing environmental and psychological influences. He formulated behavior as a function of the person and environment in what he called the life-space (1935). Concepts, applied periodically to adolescents, such as “group belongingness” and understanding the interdependence of the person in a framework of larger values over time were emphasized. Urie Bronfenbrenner (1979) in his work looking at the ecology of human development described the importance of increasing levels of experience, which he named micro-, meso-, exo- and macro- systems in development. Taking a human development perspective in his work, much of his applications are to children in settings such as school and daycare. He defined the ecological concept as, “the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which [he or she]… lives” (p.21). The initial formulation of this concept appears similar to Selye’s adaptation work, but Bronfenbrenner goes further in explaining that the process is “affected by the relations between [the] settings, and by the larger contexts in which the settings are embedded” (p.21). The micro system was defined as “a pattern of activities, roles and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics” (1979, p. 22). A child would be impacted by this system when violence occurs affecting his or her internal processes. Subsequently, social and community support around the child work to offset the negative impact of the violence. Bronfenbrenner continues to explain that the mesosystem “comprises the interrelations among two or more settings in which the developing person actively participates (such as, for a child, the relations among home, school, and neighborhood peer group)” (1979, p. 25). The exosystem “refers to one or more settings that do not involve the developing person as an active participant, but in which events occur that affect, or are affected by, what happens in the setting containing the developing person” (p. 25). For the child who has experienced violence, this may be the interactions between the perpetrator of violence and the community and/or the legal system. Finally, the macrosystem is addressed as the “consistencies, in the form
and content of lower-order systems … that exist, or could exist, at the level of the subculture or the culture as a whole, along with any belief systems of ideology underlying such consistencies” (Bronfenbrenner, 1979, p. 26). These systems greatly affect the support and reactions children receive when they have experienced violence. For example, in one context such as a school system, wounding the sexual organ of a child may be considered wrong in the macro ideology, whereas in another, such as a faith-based circumcision, it may be considered acceptable. The interdependence between systems, especially how the individual and group gain resources from the macro system, is consistent with the empowerment perspective. Protective factors related to a child’s inner strengths, peer and family relationships, and school/community resources directly reflect these interaction levels.

Garbarino (1977) and Belsky (1980) effectively argued the need for an ecological integration applied directly to child maltreatment. In their work, the ecological model was utilized to encourage exploration of child maltreatment in relation to individual development, family, community and cultural contexts. Based on an extensive review of the literature related to boys who have experienced sexual abuse, Spiegel’s Sexual Abuse of Males model utilizes an ecological perspective in referring to the micro-, meso-, exo-, and macrosystems related to difficulties boys face following sexually abusive incidents (1997, 2003). Additionally, at the micro level, his concept of Compensation refers to, “the process of counteracting or neutralizing the internal conflict associated with sexual abuse by means of cognitive and/or behavioral restructuring” (2003, p. 137). Although the author refers to this as adaptation, his descriptions of negative consequences are more similar to maladaptation found in stress and coping concepts, as opposed to adaptive coping or resilience concepts.

Mohr, Lutz, Fantuzzo & Perry (2000) utilized an ecological framework to assess 22 studies of children exposed to family violence over the prior decade. They found that only two studies utilized multidimensional measures beyond the Child Behavior Checklist, a symptom based assessment. Among other methodological concerns, the authors critique the studies as lacking standardized definitions, needing a more developmentally appropriate child-centered focus, and lacking strengths-based assessments. The authors’ recommendations support this dissertation’s use of clearly delineated definitions, focus on children, and fulfilling the need for a wider range of domains to be assessed following violence, including protective factors which reflect the strengths in a child’s life. .
Emerging from a social work perspective and utilizing an ecological framework, Rasmussen (1999; 2001) developed, in collaboration with other researchers and clinicians, the Trauma Outcome Model describing interrelated reactions which occur following violence in a child’s life. It explains a traumatic event in reference to the experience of child abuse in the context of the individual characteristics of the child, the family dynamics and the greater ecological context. Given this immersion, the child experiences outcomes related to his or her cognitive and emotional understanding. He or she has an awareness of the event(s) consisting of what he or she senses, thinks, feels, wishes and actually does. Within these choices, the child has the possibility of cycling through three outcomes: a) externalizing the event and moving on to possibly harm others, b) internalizing the event and possibly victimizing him or herself, and c) accepting and integrating the experience to work through trauma resulting in recovery (1999, 2001). Several therapeutic interventions and qualitative evaluations have been conducted related to this model (Burton, Rasmussen, Bradshaw, Christopherson & Huke, 1998). However, no known psychometrically tested measures have been created. According to Rasmussen, “Resilience or vulnerability to the effects of trauma depends on the interaction of the child’s cognitive and personality strengths and weaknesses. Family dynamics and ecological factors influence this interaction” (1999, p. 33). The Trauma Outcome model summarizes major aspects related to the conceptual basis of this project. It addresses abuse in the context of the ecological systems in which the violence occurred. The model also addresses outcomes related to negative functioning, directed inward or externally, and recovery. Recovery is the outcome following a resilient trajectory. Focusing on the protective factors that support the child’s movement to recovery is the basis of this dissertation.

A few scales, such as the short form of Questionnaire on Resources and Stress, measure ecological functioning of children in terms of difficulties (Friedrich, Greenberg & Crnic, 1983). Although the original 285 question version had Kuder-Richardson internal consistency ranging from .24 to .88 on individual scales, Friedrich and colleagues’ factor analysis revealed four factors for assessing children with developmental delays including: Parent and Family Problems, Pessimism, Child Characteristics, and Physical incapacitation. Later, Scott, Sexton, Thompson & Wood (1989) demonstrated acceptable psychometric properties of this version of the test with children experiencing special needs. Reliability coefficients for a four factor model ranged from .77 to .84 (Scott, Thompson & Sexton, 1989).
More scales for children have been assessed from an ecological validation perspective. As early as 1957, measures such as Levitt’s Children’s Manifest Anxiety Scale utilized an ecological context comparing differences in 824 children from differing geographical locations. Test-retest reliabilities ranged from .85 to .90 for the Anxiety scale and .60 to .70 for the Lie scale across the samples. Significant differences across normal samples between geographical areas in aspects such gender emphasized the importance of geographical location when developing test norms.

Later, authors such as Mohr & Tulman (2000) and Stockhammer, Salzinger, Feldman, Mojica & Primavera (2001) began specifically calling for measurement of violence related to children from an ecological perspective. Stockhammer and colleagues’ study, although concentrating on occurrence of abuse and risk factors, used an ecological perspective looking distinctly at differences between direct and indirect violence in the family context. They underscore the need to look at multiple sources for information surrounding the child including the community (Child Protective Services), the school (teachers) and the parents. They also emphasize the need to look at the context of the violence (2001). As important and informative as this process was, the authors did not use measures from the child’s perception. The TRS-C may be able to add to a bigger ecological picture by gaining the perspective of the child. Mohr & Tulman suggest using the ecological framework to examine risk and change in the child’s contextual “orbits of influence such as family, peers, schools, community and …sociopolitical and cultural sphere” (p. 60) when assessing children exposed to violence. They suggest multidimensional assessment of risk factors and protective factors with respect to developmental issues to account for resilient outcomes. Furthermore, they advocate that theory should guide the choice of constructs with emphasis on those that are malleable, so that change efforts may be concentrated on those aspects that contribute to resilience and adaptation with respect for contextual, cultural and consequential validity (2000). These suggestions lend support to the TRS-C qualities focusing on creating a psychometrically strong assessment of empirically based protective factors that are validated on diverse school-age children following maltreatment within the context of their spheres of influence.

As is true with other related concepts discussed here, ecological modeling is now widely utilized in conjunction with a resilience perspective and as the basis of study relating to risk and protective factors. Many researchers acknowledge that the experience of violence must be
influenced and examined within the context of the entire system within which the child is immersed (Pinheiro, 2006). Researchers are studying protective factors in relation to the individual child, the family environment and the community in which violence occurs. It is the context in which a growing body of resilience research related to violence is placed (Krug, et al, 2002; Pinheiro, 2006; Rasmussen, 2001; Zielinski & Bradshaw, 2006). This research, in conjunction with literature discussed more in-depth later, supports the TRS-C domains formulated from the protective factor research following a child’s experience with violence.

**Conclusion**

The theories and models related to this dissertation have been presented with an overview of each concept from varying disciplinary perspectives, focusing on measurement and maltreatment viewpoints. These concepts provide a solid rationale for this project, supporting the perspective of this dissertation. The relation each of the previous concepts has to this project has been outlined with a focus on moving toward the primary concept of resilience, because the aim of this study is to create a measure of protective factors associated with resilience following childhood experiences of violence.

**Resilience**

Resilience has become an integrating perspective that is converging as an overarching concept to address the processes and phenomena that, in conjunction with each other, bring a child to the goal of recovery following violence. Research conducted from a resilience perspective is the foundation from which protective factors emerged; driving the understanding we have of those aspects associated with recovery following violence.

The resilience literature, like that of stress and coping, is widely used but continues to exhibit definitional differences. The following discussion will acknowledge the literature and the divergent views while focusing on specific goals and definitions for this project. Research decisions should be based on a coherent conceptual rationale reflecting high relevance to the specific area addressed (Luthar and Zelazo, 2003). Therefore, resilience studied within an ecological context is presented as the best perspective to guide this project.

**Historical and Conceptual Overview**

Resilience has emerged as a concept that takes into account the historical context of recovery and development, while demonstrating a guide for empirical study on specific factors that promote the adaptive journey towards the goal of recovery. It is from the resilience
perspective that protective factors have emerged. It is, therefore, essential to review this literature to guide the creation of a measure assessing those factors associated with resilience and recovery.

The following discussion addresses major trends in the conceptual thoughts of the resilience authors over time. As authors are discussed, it is important to note that one group of writers comes from a biological model focused more on the invulnerability of children to difficulties in a more static manner. The other major group, which is gaining more following as the concept converges, comes from a developmental psychology perspective. This group conceptualizes resilience as a process that is enabled by factors in the child’s environment helping a child return to normative functioning following negative life events that would usually correlate with maladaptive behavior in the empirical literature. These authors most clearly distinguish resilience from other theories based on the long-term analyses of factors associated with doing well, despite prior difficulties. Scholars incorporating ecological modeling into resilience research are looking at recovery following difficult circumstances within nested contexts of support including protective factors related to the individual, his or her family and community.

Finally, this section will address authors who are attempting to converge the somewhat varied views on the concept of resilience for applied research and clinical use. Disagreements exist between these authors in terms of definitions. This section begins with a presentation of their work from their own perspective. Because the divergent opinions at times conflict with one another, following the discussion of major contributors’ differing points of view, a clear set of definitions are presented for utilization in this particular study.

In a review of the references of known resilience authors with specific emphasis on children who had experienced violence, a trail led back to 1942 when Mildred Scoville, a psychiatric social worker, addressed and studied the needs of children in war-torn Great Britain. She observed the “amazing resiliency of children to situations dangerous to life” (pp.361).

Beginning the major trend of developmental researchers looking at resilience, in 1955, Emmy Elizabeth Werner, a developmental psychologist, began studying babies from the prenatal period. In her ambitious work, she and her colleague, Ruth Smith, have continued to follow 379 of these people 40 years later (2001). Through the years, she has carefully tested for correlates of positive adaptation in these children throughout their adulthood.
Coming from a medical model, in 1971, Garmezy, through his observations in the 1950s with schizophrenia, began writing about “invulnerable children” who do not succumb to the high-risk environments to which they have been exposed. In 1987, Anthony and Cohler pulled together emerging thinkers in the book *The Invulnerable Child*. Although the concept of invulnerability is problematic because it is seen as a static internal trait that leaves no room for change, within this work was a 40 year follow-up of resilient children that helped lead the field (Felsman & Vaillant, 1987). Vaillant and Western continued to follow these 332 inner-city male youths who were 70 years old by their 2001 publication. They found that factors such as childhood coping and education strongly predicted health and mental health in old age.

There were problems with the line of conceptual thought that came from a medical model of resiliency, focusing on static traits, including biological, within the individual that contribute to invulnerability to harmful events (Anthony & Cohler, 1987; Bertalanffy, 1959; Garmezy, 1971, 1985). The view of invulnerability as a stable and static trait does not allow for acknowledgement of temporary negative consequences or environmental influences on the biological predispositions. Rutter (1985) describes three problems with the invulnerability notion. He states, “the resistance to stress is relative, not absolute; the bases of resistance are both environmental and constitutional; and the degree of resistance is not a fixed quality” (p. 599). Additionally, the perspective places no value on the child’s ability to change. Most authors have moved away from this perspective, utilizing the more relative concept of resilience.

Michael Rutter’s early work focused on looking at factors between groups and over time within a child’s environment such as maternal deprivation, his or her biological makeup (e.g. developmental disabilities) and personality (e.g. temperament) that were associated with prediction of psychiatric functioning and development (1979a; 1979b). Although he was using qualified concepts from the invulnerability work, he helped lead the trend of identifying protective factors relating to children’s responses to stress when exposed to disadvantaged situations including poverty, poor parenting, marital discord, hostility and low intellect. He noted that in most studies, including his own longitudinal study, children from difficult circumstances were much more likely to develop psychiatric disorders, become delinquent, or demonstrate low academic achievement. In spite of this tendency, over a quarter of these children “show no evidence of any kind of delinquent or antisocial behaviors as assessed in multiple ways on several occasions” (1979 b, p. 324). His work included relevance of the circumstances (ceasing of the stressor/lack of multiple stressors), number of stresses,
and factors in the child, family, and outside the home as important in an ecological-type emphasis when looking at the children who did well despite difficulties. He stressed the importance of understanding both adaptive and maladaptive perspectives including risk and protective factors (1979a; 1979b; 1985) related to outcomes following difficulties. Following children from birth to preschool years, Farber and Egeland (1987) applied these early concepts to maltreated children. They looked at factors associated with decreasing young children’s vulnerability to the negative effects of maltreatment. This format of looking at protective factors, those associated with overcoming negative events, became the cornerstone of resilience research.

Beginning in 1955, Emmy Werner became interested in studying social competence in children across gender, intelligence, rural vs. urban residence and socio-economic status. Based on her own research recommendations to expand the analyses to include other subjects such as cross-cultural comparisons and to conduct, “a thorough validation study which combines the evaluation of several informants with actual observation of the child’s growth in social competence” (1955, pp.78), she began one of the most ambitious longitudinal studies of our day. Following individuals from the prenatal years through middle age, she and other colleagues, most notably Ruth Smith (Werner & Smith, 2001), were able to observe and delve deeply into those factors that, over time, despite difficulties, allow individuals to thrive.

Based on research recommendations from the previous works, more researchers began looking at those factors that protect and promote recovery and resilience in children. Utilizing a developmental perspective, many researchers looked for correlates to positive adaptation over longitudinal studies. Although definitions were inconsistent, the landmark resilience studies such as those of Rutter (1979), Garmezy (1987), Werner & Smith (2001), Cicchetti & Rogosch (1997), usually had a similar research strategy. The researchers identified subjects and their experiences of risk factors. Over time, the researchers monitored the individuals considered high-risk for maladaptive behaviors due to the presence of the event. Those people who positively adapted in a normal pattern of behavior –those who lacked major psychosocial problems and/or exhibited stable life functioning in areas such as education, psychological functioning and relationships-- were noted. The authors pooled the observations on these individuals with others in the study who exhibited similar positive life adaptive characteristics. These people were then assessed for correlates in their lives that coexisted with the positive adaptation to the negative event identified. The developmental theorists continued this process over several years. Based on the developmental nature of much of
the historical research, most of the application to this concept was in the field of childhood issues.

The work from the more recent developmental longitudinal researchers now emphasizes the identification of specific protective factors across the individual, his or her family and environment that, over time, act as buffers from negative life events (Trickett, Kurtz & Pizzigati, 2004; Werner & Smith, 2001). Authors from this viewpoint acknowledge that early negative life events and attributes considered risk factors would usually increase the risk of maladaptive outcomes across the developmental process, according to the symptom-based research. Yet, across the long-term resilience trajectory they do not (Masten, 2001; Werner & Smith, 1992, 2001). This model has taught us a great deal about resilience. It underscores the need to include protective factors in a working model of resilience. The ecologically influenced resilience researchers organized their emphasis primarily looking at individual attributes, family qualities and community supportive systems as they contributed to resilience (Garmezy, 1985; Gore & Eckenrode, 1996). Many resilience authors now acknowledge that positive adaptation has clustered in the literature into correlates found among one’s internal, familial and community processes combining the ecological model, the developmental theorists and other empirical research (Cicchetti and Lynch, 1993; Gitterman, 2001; Masten & Powell, 2003; Pinheiro, 2006). This multifaceted approach is beginning to further the research into empirical and clinical applications with greater clarity.

These previous views are converging into a more unified concept. Recent thinkers now talk of resilience in terms of “positive adaptation despite significant life adversities” (Luthar, 2003, p. xxix). Most of the resilience authors see resilience as a process that can vary across time as opposed to a static event (Luthar, 2003). Based on the developmental scholars, resilience is being seen as a cumulative and global collection of risks and protective factors rather than singular and event specific (Fraser, 1997; Garmezy, 1996). Protective factors thus become the operationalized basis by which to understand resilience through research and direct practice with children. A huge expansion of this research has continued as revealed by a thorough search of two major databases. Since the mid 1980s, peer reviewed journal articles written on the subject of resilience or resiliency have shown a steady increase. From the 13 articles written in 1985 and the 24 in 1990, they began a steep increase to a peak of 425 in 2005 and leveled off for the first time in 2006 at 403.

**Definitional Disagreement**

A problem in the field is that disagreements in the literature occur relating to how resilience is defined in reference to outcomes in the child’s functioning. Some authors associate resilience with
those people functioning in top percentages of various psychological, educational or relational standardized tests (Cicchetti & Rogosch, 1997; Herrenkohl, Herrenkohl, & Egolf, 1994, Walsh, et al., 2010). In relation to experiences of violence, the problem with this view is that a child may be excellent at adaptation; yet, this particular child may or may not have ever scored in a top percentage on a particular test, such as academic achievement, before a trauma occurred. The theory works for general studies when normed tests of children experiencing maltreatment are compared with a general population. However, for each individual child, such as a clinical client, this is not always helpful. A second view is that resilience is defined as the absence of pathology at clinical cut off scores (Kaufman, Cook, Arny, Jones & Pittinsky, 1994; Walsh, et al., 2010). The problem with this definition is a child may have exhibited pathological symptoms before the experience of violence. For example, a child who demonstrated attention issues before a violent event, may currently exhibit every area of functioning equal to that experienced before the violent event, but continues to test within a clinical range of attention. This definition does not allow for her or him to be included in a resilience trajectory, even though the child has adapted and returned to the previous level of functioning very well.

Similar to the second view, but more event specific, a third stance that authors take in defining resilient functioning is normative developmental functioning across contexts, raters and time of children who have experienced violence compared with those children who have not (Jaffee, et al., 2007). Emerging from the event-specific perspective, researchers are beginning to look at resilience as positive outcomes across domain specific areas and their inter-connected impact on recovery rather than considering resilience as an “across- the- board phenomenon” (Luthar, 2006, pp.741). This is an important change needing consideration in clinical and research settings.

This final definition is the closest to the one for this project. Still, great care must be maintained to look at the whole child. A child who, from caretaker or teacher ratings appears stellar, may be wrestling with inner distress such as self-perception issues, anxiety and/or depression often associated with maltreatment. Several scales measure these symptomatic issues from a child’s perspective. Yet, most studies related to resilience do not ask the children how they are actually doing (Luthar, 2006). The child is the best resource for understanding the sources of support he or she experiences and feels are helpful. Therefore, to fully understand resilience and protective factors in children, the assessment must include the child’s perceptions. An additional problem is that the child may be assessed at a time when they are not experiencing the full range of positive or negative
effects they may encounter at another given time (Kendall-Tackett, et al., 1993). A definition that allows change over time is helpful. An easily administered assessment of the child that allows multiple administrations would be an asset to a definition incorporating this perspective.

Authors in the field critique and state the need for better grounding and testing of resilience driven concepts with empirical research (Luthar, Cicchetti & Becker, 2000; Cicchetti, 2003; Roosa, 2000). However, the definition must be clarified in order for this to happen (Roosa, 2000). Many authors are attempting to gather evidence to consolidate the definitional constructs and principles surrounding resilience (cf. Masten, Best and & Garmezy, 1990; Richardson, 2002), although this process has been somewhat elusive (Luthar, et al., 2000).

Because of the definitional incongruities and for the protection of children, authors now recommend that every report on empirical work include a clear operational definition of resilience, with the focus being on the construct as a process or a phenomenon, not an inherent personal characteristic of a child (Luthar and Cicchetti, 2000). It is also important to state a definition for clarity in research design and execution, and to enhance understanding of findings and concepts being addressed by readers. Therefore, all operational definitions presented in the following discussion are formulated to acknowledge the complexity of resilience, yet create enough focus to be useful for measurement and empirical endeavors.

**Resilience Definitions**

Resilience and related definitions as used in this study are outlined. Even though the resilience research has definitions which change from study to study, resilience authors suggest clarification in each study for conceptual clarity and focus (Heller, Larrieu, D’Imperio & Boris, 1999). Therefore, key definitions relevant to the creation of a measure for children aiding the assessment of those protective factors correlated with resilience and recovery following violence are clearly delineated.

*Resilience* consists of a composite of phenomena which empowers a person to return to functional status following a damaging, or in the case of this research, violent event or events. Resilience is “the power of resuming the original shape or position after compression, bending, etc.” (Oxford English Dictionary, 1989, definition 2), “not an attribute operating in isolation” (Cicchetti, 2003, p. xx), but is immersed in the influence of protective factors within the individual and his or her environment. It is “inferred from an individual’s manifesting competent functioning despite experiencing significant adversity” (Cicchetti, 2003 pp. xx-xxi), “reflecting …positive
adaptation despite experiences of significant adversity” (Luthar, 2006, pp.742). “Resilience is thus conceived as … [a] product of buffering processes that do not eliminate risks and adverse conditions in life but allow the individual to deal with them effectively” (Rutter, 1987 as summarized by Werner & Smith, 2001, p. 3). Resilience can reflect an immediate recovery where violence occurs, but the person does not experience trauma, or it can take place over time. Resilience is usually seen in a trajectory evidenced by the process of positive adaptation that takes place over a period of time, resulting in recovery. It can be manifest across several domains at one point in time or within one or more domains per measurement occasion cumulating over time.

Measures Similar to the TRS-C

Previously, scales measuring symptoms following violence and scales assessing competencies within the framework of specific related theories have been presented and discussed. In this section, scales more specifically related to resilience are described. Scales measuring general resilience are presented. Then scales that look at resilience following violence in adults are reviewed. Finally, scales that look at resilience in children are discussed.

General Resilience

The Connor-Davidson Scale is a brief unidimensional scale validated on adults utilizing pharmacological interventions and compared with a general population sample. Resilience, in this article, “embodies the personal qualities that enable one to thrive in the face of adversity” (2003, p.76) and in terms of measurement is “successful stress-coping ability” (p.77). For the general sample, the scale alpha coefficient was reported at .89. It does not specifically address any type of stressor such as violence. More recently, an abbreviated version was applied in psychopharmacological trials from a biological perspective to patients experiencing post traumatic stress, major depression and generalized anxiety (Vaishnavi, Connor & Davidson, 2007). This scale contained two items selected as, “capturing the essence of resilience” (p. 294). The items were, “Able to adapt to change” and “Tend to bounce back after illness or hardship.” Although this brief scale correlated with scales of hardiness, stress and stress vulnerability in some of the trial groups, the scale does not adequately demonstrate reliability or assess multi-dimensional components of resilience, only the authors’ global definition.

The Brief Resilient Coping Scale (Sinclair & Wallston, 2004), is a four-item measure looking at highly adaptive coping. Borrowing from the authors Dyer and McGuinness, Sinclair & Wallston (4004) define resilience in this work as “a complex phenomenon that refers to the
ability to rebound from and positively adapt to significant stressors” (p. 94). Validated on two samples (n=90 and n=140) of predominantly female adults with Rheumatoid Arthritis, the measure had a Cronbach’s alpha ranging from .64 -.71. The scale significantly correlated with greater personal coping resources and psychological well-being. Items addressed aspects of the TRS-C Creative Problem Solving, Self Valuation/Regulation, and Optimism subscales.

The Resilience Scale was created by Wagnild and Young from a qualitative survey of 24 older women who had overcome general difficulties. Resilience, in their perspective, “connotes emotional stamina and has been used to describe persons who display courage and adaptability in the wake of life’s misfortunes” (1993, p.166). This qualitative work was used as the basis for quantitative scale validation on a random sample of 810 older adults to test the measure created from the qualitative work. Global reliability was tested with coefficient alpha of .91.

Formulation of the TRS-C is also conducted in two phases similar to that utilized in the formulation of the Resilience Scale. Validation on the Resilience Scale continued with several other authors and populations. In relation to violence, one study looked at 50 women living in shelter care due to domestic violence (Humphreys, 2003). Resilience in this study is considered a “positive personality characteristic that enhances individual adaptation” (p. 142). With this population, the global Cronbach’s alpha was .94 and two factors, Personal Competence and Acceptance of Self and Life, were .91 and .81 respectively. These factors are somewhat similar to the proposed TRS-C factors of Self Value and Self Regulation. Resilience in the Humphreys study was significantly inversely correlated with overall psychological and physical distress.

Specifically related to youth, the scale was used with 51 inner-city adolescents, 53% of whom had experienced violence (Hunter & Chandler, 1999). These authors define resilience as, “a complex construct that involves interaction between adversity and an individual’s internal and external protective factors – as well-developed competencies—that allow one to overcome adversity” (p.242). The alpha coefficient was marginal at .72. Additionally, authors pointed to defensive and isolating strategies adolescents used to protect themselves, possibly indicating inconsistency in the definition, application and measurement of resilience. It is unclear whether or not this scale is unidimensional or multi-dimensional, as studies have been inconsistent. For example, in a Swedish sample of 1719, where resilience is defined as, “a personality characteristic that moderates negative effects of stress and promotes adaptation” (Lundman, et. al., 2006, p. 229), five factors were extracted from the Resilience Scale through exploratory
factor analysis, but the Cronbach’s alpha ranged from .78 to .45 for the factors. Although the scale is widely used, it is not specifically related to violence or use with children. Furthermore, items come from the qualitative work with older women experiencing general difficulties and are not based strongly in the literature with specificity towards context.

**Resilience Following Violence**

The Trauma Resilience Scale addresses protective factors associated with positive adaptation following exposure to violence across four relevant domains, Creative Problem Solving, Optimism, Supportive Belief Structure, and Supportive Relationships (Madsen & Abell, 2010), but was not created for children. This scale was created as pilot work for the current project. It has coefficient alphas on the subscales ranging from .83 to .98 and demonstrates moderately high fit indices on the four factor structure.

Taking an ecological perspective, Harvey, et al. (2003), created the 135 item Multidimensional Trauma Recovery and Resiliency Scale (MTRR). It uses clinicians’ observations with clients to assess the impact and domains of recovery following trauma. “Resiliency” in this study is defined as “evident whenever a domain is relatively unaffected by the trauma and also when the affected individual is able to mobilize strengths in one domain to secure repair in another” (p. 91). Items were refined in a pilot study of 20 clinicians. The scale was validated on clinicians’ ratings of 181 primarily female Caucasian adults in treatment for physical or sexual abuse as a child or as an adult. Domains reflecting recovery or resilience include: Authority Over Memory, Integration of Memory and Affect, Affect Tolerance, Symptom Mastery, Self-Esteem, Self-Cohesion, Safe Attachment, Positive Coping, and Meaning Making. Domains similar to the proposed TRS-C factors include Self-Esteem, Affect Tolerance and Self-Cohesion as aspects of Self Value and Self Regulation. Safe Attachment is similar to Healthy Caregiver/Family Support and Supportive Peer Relationships. Meaning Making includes the TRS-C concept of Optimism. Coefficient alpha reliability was .97 for the composite score. Reliabilities for subscales ranged from .71 to .88. Clinician assessed recovery status was associated with higher scores on the scale. Factor analyses were not conducted.

A shortened 99-item version (Liang, Tummala-Narra, Bradley & Harvey, 2007) was constructed on interviews with 181 adult trauma survivors in treatment for sexual or physical abuse in either adulthood or childhood. Coefficient alpha was .83 for the entire scale. Subscales ranged from .63 to .85 with a mean alpha for the individual subscales at .78. A second sample
was conducted with revised items on 164 primarily ethnic minority, incarcerated women who had experienced violence. Subscale reliabilities were stronger ranging from .76 to .89. Interviews for which more than one clinician rated the women were all significantly correlated. This scale was not validated or created for use with children. It also does not assess the perceptions of the persons purported to demonstrate resilience, only the clinicians’ observations.

The Baruth Protective Factors Inventory [BPFI] is a measure initially validated on 98 Undergraduate psychology students (Baruth & Caroll, 2002) and subsequently tested in four waves on a total of 428 people from university and clinical settings (Baruth, 2005). Resilience in this work is gleaned from the definitions of several authors. The research emphasizes the concepts of adaption despite facing adversity, decreasing risk factors by making healthy decisions, continuing growth, and regaining functioning at or above the level they were before the problem (Baruth, 2005, p. 3). This definition is similar to the definition utilized for the TRS-C. The BPFI measures four general resilience aspects for adults, including: Adaptable Personality, Supportive Environment, Fewer Stressors and Compensating experiences. The Supportive Environment subscale is similar to the TRS-C subscales of Community Safety/Support and Healthy Caregiver/Family Support and Supportive Peer Relationships, but does not explore these individually. Among the other subscales, individual items related to proposed TRS-C domains include concepts of creativity, optimism and self control. Validation across three phases yielded global Cronbach’s alpha reliabilities ranging from .76 on the first sample to .96 on the final clinical sample. Subscale reliabilities ranged from .47 to .96 across samples, with the Supportive Environment subscale consistently remaining the highest. Factor analysis supported the four factor model. Validation was conducted with college students and clinical samples from groups experiencing a DSM-IV mental illness, chemical dependency or domestic violence offenses. Although significant differences were found between a non-clinical sample of 25 and a sample of 25 domestic violence perpetrators, the scale was not created nor validated for the purpose of assessing violence. In a similar manner to the TRS-C, this scale measures the potential for resilience through protective factors.

Children’s Resilience

Several children’s scales directly measure children’s coping strategies or resilience with subscales similar to those used in this project, but are not directly related to violence or maltreatment. Taking an ecological perspective focusing on the school system, the Youth
Resiliency: Assessing Developmental Strengths (YR:ADS) questionnaire (Donnon & Hammond, 2007) is a self-report measure validated on 2,291 Canadian urban teens. Resiliency in this work is defined as, “the ability of children and adolescents to cope successfully in the face of stress-related, at-risk or adversarial situations” (2007). The subscale reliabilities range from .75 to .96. Based on 31 developmental strengths, factor analysis on the 94 items yielded 10 factors that accounted for 57% of the variance. The scale, although created to test resiliency in a general sense not specific to violence, has been applied to the assessment of school bullying which included physical and psychological aspects (Donnon & Hammond, 2007). Several factors present in the YR:ADS are similar to domains in the TRS-C. The YR:ADS Self Concept subscale is similar to the TRS-C factor of Self Value, Self-Control relates to Self-Regulation, Social Sensitivity and Peer Relationships is similar to Positive Peer Relations, Parental Support is similar to the Healthy Caregiver/Family Support, School Culture and Commitment to Learning is similar to Supported Academic Functioning, and Community Cohesiveness is similar to Community Safety and Support. The scale Resilience Assessment of Exceptional Students focuses on parent ratings of children experiencing disabilities. Resilience factors include Modeling/Active, Self-Efficacy/Locus of Control, Positive Peer Relations, and Positive adult relations. Other domains were explored for factors including Problem Solving and Social Support. It includes a student interview, teacher rating form, and a parent rating form. Exploratory factor loadings were explored, but no other psychometric properties of the scale are presented (Perry & Bard, 2001). The Adolescent Resilience Scale (Oshio, Kaneko, Nagamine & Nakaya, 2003; Oshio, Nakaya, Keneko & Nagamine, 2002), although developed for adolescents, was validated on 207 Japanese undergraduate students (mean age 20.2 years). Resilience in this study included those students who are, “able to maintain mental health, without deterioration, even after experiencing painful life events” (Oshio, et al., 2003, p. 1218). Subscales include Novelty Seeking, Emotional Regulation and Positive Future Orientation. Global coefficient alpha reliability was .85 and subscale reliabilities ranged from .77 to .81. The scale differentiated between the vulnerable and resilient groups, but was not context specific. It looked at stressors common to undergraduates in broad areas of interpersonal and achievement events.

Another scale created for adolescents is the Resiliency Scale (Jew, Green & Kroger, 1999). The measure consists of 35 items across three factors including: Future Orientation, Active Skill Acquisition and Independence/Risk Taking based on appraisal based resiliency concepts of Mrazek
and Mrazek (1987). Subscale internal consistency reliabilities range from .68 to .91. The scale was validated on three adolescent groups, including a group of ninth graders, a group of seventh through twelfth graders in a rural setting, and teens in a psychiatric inpatient center. The scale demonstrated significant differences between the inpatient respondents and other adolescents. It also is not context specific to violence.

Hjemdal (2007) overviews research spanning nine years related to the creation and validation of a Resilience Scale for Adults (RSA), which was then adapted for adolescents. The team consisted of a group of Norwegian psychologists: Friborg, Hjemdal, Martinussen, Rosenvinge, and Stiles. After a thorough look at the resilience literature, a conclusive definition was formed: “resilience has become the conceptual umbrella or a superordinate construct that subsumes a rich source of protective factors that lead to adaptive development in the face of adversities” (Hjemdal, 2007, p. 308). The original scale for adults was created based on a thorough review of the literature concerning protective factors. Five factors emerged from this work including: Personal Competence, Social Competence, Structured Style, Family Cohesion and Social Resources. The Cronbach’s alphas for these domains ranged from .74 to .92 based on a sample of 276 randomly selected and 59 clinical Norwegian adults. This was followed by a confirmatory factor analysis on a sample of 482 students in a military college. Splitting the Personal Competence subscale into two parts, Perception of Self and Planned Future, produced good relative fit for a six-factor model. This sample was utilized to look at predictive validity. Individuals who scored high on the RSA were significantly healthier psychologically. Specifically related to violence, in a sample of 84 participants who were subjected to non-damaging pain, those with higher RSA scores reported less subjective pain and stress (Friborg, et al., 2006). In a second round of studies (Hjemdal, 2007), the scale was simplified and validated with 425 young adolescents. The global Cronbach’s alpha on this Resilience Scale for Adolescents (READ) was .94 and the subscale reliabilities ranged from .69 to .85. Confirmatory factor analysis showed good fit for the five factor model. For both scales, males reported higher personal competence, and females reported greater social competence. Finally, a sample of 387 adolescents was tested for predictive validity. The adolescents’ lower resilience responses accurately predicted depressive symptoms. Personal Competence, Family Cohesion and Social Competence accounted for the greatest amount of variance. Parent reports, however, did not predict depressive symptoms. Although these studies focused on resilience in relation to non-context specific stress and mental health symptoms, the review of these works lends support to the need for creating the TRS-C
as a multidimensional scale for children, but with a violence specific focus. Like the READ, The TRS-C is a self report, which was shown to be predictive of symptoms in adolescents. The READ domain Personal Competence is related to the TRS-C domains of Optimism/Motivation, Self Value and Self Regulation. The domain of Social Competence is related to the TRS-C Supportive Peer Relations. The READ Family Cohesion is related to the TRS-C Healthy Caregiver/Family Support, and Social Resources is related to Supportive Peer Relations and Community Safety and Support. Finally, assessing multidimensional protective factors associated with resilience is strongly supported.

**Protective Factors**

**Protective Factors Associated with Resilience Following Violence**

Utilizing a resilience foundational basis, several authors have provided a conceptual basis for linking protective factors to overcoming negative effects of violence (Hjemdal, 2007; Rutter, 1985; Trickett, Kurtz & Pizzigati, 2004; Werner & Smith, 2001, Luthar & Zellazo, 2003). With acknowledgement of ecological modeling, the individual, the family and the community are an organizing influence for these factors by impacting at three levels the positive influences protective factors have in aiding the person’s process of dealing with the violent experience over time (Fraser, 1997; Lietz, 2004; Luthar & Goldstein, 2004; Pinheiro, 2006; Taylor & Wang, 2000; Werner & Smith, 2001; 1992). There remains a need for a comprehensive approach to protective factors. The literature does well looking at individual stressors, including violence and those factors that buffer or mediate the negative effects of the violence. Although overviews have been very helpful in converging this literature (Luthar, 2006), reliable ways to test these concepts in a contextually specific, comprehensive, empirically based fashion are missing. There is a great need to use the information gained from the research to build a psychometrically robust scale, contextually and developmentally specific to children’s experiences of violence, for use in both additional research and clinical practice settings.

**Protective Factors Utilized in this Study**

The idea of protective factors began as questions about those influences that protect children from the hazards they face, so that they do not succumb to difficult life circumstances (Rutter, 1979b). They are the positive qualities within the cognitive, emotional, environmental, social and spiritual experience of the child that are associated with and, combined, facilitate resilience as demonstrated in empirical works (Hjemdal, 2007; Rutter, 1985; Werner and Smith, 2001).
Protective factors work cumulatively to empower and support the person so that she or he may avoid or successfully work through negative outcomes associated with violent experiences. When the amount of protective factors is reduced, the risk of trauma becomes higher and resilience becomes more difficult. Werner & Smith (2001), paraphrasing Masten (1994) explained their function: “protective factors ... buffered or ameliorated a person’s reaction to a stressful situation or chronic adversity so that his or her adaptation was more successful than would be the case if protective factors were not present” (p.3). Protective factors are the aspects within the child’s life that promote resilience. Therefore, the domains of the TRS-C are based on protective factors nested in ecological settings, contextually specific to violence, and population-specific to children as they are now converging in the literature. Initial proposed items were constructed based on the conceptual and empirical literature and pilot work for this study (See Appendix A).

The following are the protective factors that have shown empirical support in their association with lower symptom levels than are usually present following violence experienced during childhood. They are presented in ecological order, beginning with the individual aspects of the child, the micro-systems in which the child interacts, the meso-systems that affect the child, and finally, the community factors associated with positive adaptation. Each area is defined as it is utilized in domain and item formation for the TRS-C. Although support for these individual factors has already been presented in the conceptual and assessment literature, additional empirical research specifically supporting each domain is now given to reinforce each proposed TRS-C protective factor domain.

**Self Value** is identified when the child’s emotional and behavioral expressions of self are positive and constructive. Self-perception is negatively impacted by maltreatment (Collin-Vezina, et al., 2006) and lower self-esteem is related to greater symptoms over time (Kim & Cicchetti, 2004). Conversely, Rutter (1979b), in an overview of his and other authors’ findings related to protective factors, first expressed self-esteem as a protective factor by looking at the mediating influence of praise on children’s school behavior beyond pure academic achievement. Runtz & Schallow (1997) in a sample of 302 men and women who had experienced sexual and/or physical abuse in childhood found that self esteem and expression of emotions was associated with positive psychological adjustment. Kim & Cicchetti (2004), in a longitudinal analysis of school aged maltreated (n=206) and non-maltreated (n=139) children from low income families, found that self-esteem was a mediating mechanism in the link between
relationship risks and children’s later maladjustment. However, Friedrich (2002), in a literature overview, underscores the importance of the accuracy of self perception relating to abilities and emotions in these children.

Henry (2001) conducted grounded theory research regarding resilience following violence with seven adolescents from abusive home environments, four child care professionals and two foster parents. She found that positive self value was a major theme in her interviews. Positive self value and self reliance increased with other protective skills. Positive self regard was also found to be a protective theme in Valentine and Feinaur’s (1993) qualitative interviews with 22 resilient women who had experienced childhood sexual abuse. Suzuki (2005) conducted a qualitative analysis of 10 adults who had experienced intimate partner violence in their home of origin as young children, but were currently living in a non-abusive relationship, demonstrating normative mental health and had no substance abuse problems. She found that a major theme allowing these adults to recover following their violent past was a generally positive perception of self.

Measures such as The Self-Perception Profile for Children and Adolescents (Harter, 1985, 1988; Hymel, LeMare, Ditner & Woody, 1999; Wichstrom, 1995) have been successful and widely used to measure self value in children and adolescents. This scale has been studied across cultures and settings. Cronbach alpha consistency ranges from .63 to .81 for subscales including Self Worth, Scholastic Competence and Social Acceptance.

**Self Regulation** is the emotional and behavioral self management a child employs to work toward resolution of violence rather than self-destructive or aggressive behavior. Friedrich described the importance of self regulation of emotions following abuse. He explains that the regulation perspective includes the child’s ability to “face the core tasks of modulating arousal, developing the ability to maintain a psychological homeostasis, and differentiating the expressions of a broad range of positive and negative affect” (Friedrich, 2002, p.147). Disturbances in self-regulation in areas of emotion, cognitions and behaviors are significantly disrupted following physical abuse (Maughan & Cicchetti, 2002; Collin-Vezina, Herbert, Manseau, Blais & Fernet, 2006). In order to achieve recovery, a child lessens this disruption, adapting through increased self-regulation. Maughan & Cicchetti (2002) found that regulated emotional patterns mediated the effect on anxious and depressive symptoms in children who had experienced violence.
Mandel (2003), in a literature review of resilience related to the perceived threat of violence, argues for self regulation of the emotions. This includes emotional and physiological self management to increase psychophysiological resilience. Runtz and Schallow (1997) studied 302 adults who had experienced childhood sexual and/or physical abuse. Positive coping strategies, including expressing emotion, mediated the negative effects of later psychological symptoms. Creamer, McFarlane and Burgess (2005) conducted a study of over 10,000 randomly selected households in Australia. Of those who had experienced trauma, (n=6104) including violence, most had an acute emotional reaction at the time, but only 3% went on to suffer persistent traumatic memories if they had regulated emotions of fear or helplessness. Kliewer, et al. (2004) found in a sample of 101 pairs of African American women and their children who had community violence exposure that emotional regulation in the child and the caregiver was associated with doing well over time. Suzuki (2005), in her qualitative work with resilient adults who had experienced intimate partner violence in their young childhood homes, found emotional regulation to be a major theme in recovery. Supporting the previous two proposed TRS-C domains, self value and self regulation, Kim & Cicchetti (2004) observed that self-esteem and emotional regulation mediate the effect of a child’s symptoms following maltreatment.

Measures such as the widely utilized Achenbach Child Behavior Checklist (CBCL), a parent observational measure assessing problems with emotional and behavioral regulation in children, are used successfully to assess the absence of this domain. Cross-informant testing of the CBCL, including the Teacher and Youth Self-Report versions, looks at emotional regulation problems through the Affective Problems subscale and domains including anxiety and depression. Domains relating to lack of behavioral regulation include Rule-breaking Behaviors, Oppositional Defiant behaviors, and Conduct problems (Achenbach, 2007).

**Optimism/Motivating Power** is defined as perceived energy towards positive expectations about life and future outcomes. In relation to sexual abuse, Kendall-Tackett, Williams & Finkelhor (1993) in a review of 45 studies of children who had experienced sexual abuse, found that a negative outlook was significantly associated with increased negative symptoms. Conversely, several empirical studies have found relationships between optimism and doing well following violence. Wyman, Cowen, Work & Kerley (1993) conducted a longitudinal study of 136 urban youth 9-11 years old. The authors initially found that positive future expectations were associated with affect regulation and school adjustment, which are other
protective factors utilized here in the TRS-C. A follow up of 67 of these children found that positive future expectations predicted enhanced socio-emotional adjustment in school with these youths experiencing stress. Edmond, Auslander, Elze & Bowland (2006) assessed 99 girls who had been sexually abused and were involved in the foster care system. Of the 49 who demonstrated resilient trajectories, future orientation, including certainty of educational plans, was significantly associated with those girls who did not demonstrate clinical symptom levels. Scheier & Carver (1987), using the Life Orientation Test, a short 8 item assessment of optimism (test-retest reliability = .79), found optimism to increase recovery from physical illness, problem focused coping, and seeking of social support, which in turn have shown significant associations with doing well following violence. Valentine & Feinaur (1993), in their qualitative work with resilient adult women who had experienced child sexual abuse, found that internal personal power over decisions was protective. In Henry’s grounded theory work surrounding resilience following maltreatment, a positive future view and hopefulness emerged as a major theme (2001). Supporting this factor as well, Suzuki (2005) in her qualitative analysis of resilient adults who had been exposed to intimate partner violence as young children, found that positive future orientation, including planning and pursuing goals, to be better was a major theme in recovery.

**Creative Problem Solving** is recognized by the child’s perceived ability to find unique solutions to difficult situations. Rutter (1979b), in his overview of protective factors, discussed the positive influence of the child’s competence in mastery of new situations, which he termed adaptability. Dodge, Bates and Pettit (1990), in a study of 309 children who had harm reported by mothers, were able to function more successfully when they were able to generate competent solutions to problems. In a three-year study of 108 Palestinian children living during the Intifada, mental flexibility and the ability to change perceptions was found to buffer emotional disorders (Qouta, El-Sarraj & Punamaki, 2001). Runtz and Schallow (1997), in their study of 302 adults who had experienced childhood sexual and/or physical abuse, found that actively seeking change contributed to adult psychological adjustment. According to the qualitative work of Suzuki (2005), interviewees exposed to intimate partner violence as young children expressed that their ability to learn from past experiences was a major theme in doing well as adults.

**Supportive Belief Structure** is defined as deeply personal and/or sacred beliefs and practices that give support and meaning to life beyond the material or worldly. In pilot work for
this measure, 220 survey respondents who had experienced violence were asked what helped them the most to overcome the negative effects of their violent experiences. Of all open ended responses, spirituality was specified third most often. Although some of the literature related to spirituality has shown mixed results, it has been associated with positive adaptation following violent and negative life events (Weber & Cummings, 2003; Werner & Smith, 2001). Among 119 depressed inpatient respondents who had experienced childhood physical and/or sexual abuse, supportive beliefs, including reasons for living, survival and coping beliefs, and religious and moral objections to suicide, were all significantly protective against life-time suicide attempts (Dervic, Grunbaum, Burke, Mann & Oquendo, 2006). Laor, et al (2006) conducted a study with 1,105 children from six Israeli schools exposed to continuous terrorist violence. Those children who demonstrated strength of ideology adapted more successfully following witnessing violence. Banyard & Williams (2007) conducted a longitudinal study over 7 years of 80 primarily black women who had experienced childhood sexual abuse. They found that the women who were part of a religious organization were significantly more likely to exhibit evidence of resilience. Valentine and Feinhaur’s (1993) qualitative study of 22 resilient women following childhood sexual abuse found spirituality and strong philosophies about life as helpful in moving towards recovery. Suzuki’s (2005) qualitative work with resilient adults who had experienced intimate partner violence in their families of origin as young children supports this factor. She found that spirituality and a strong belief system were important factors in their resilience. Richards and Bergin (1997) summarize that well-being indicators are positively associated with intrinsic and personal spiritual beliefs. In contrast, they explain that some research shows extrinsic and externally based religiosity can be associated with lower well-being indicators. Therefore, this factor is important to be assessed as a self report with focus on the internal experience of the individual child.

**Healthy Caregiver/Family Support** is defined as perceptions of stable care, including meeting survival and emotional needs by at least one core long-term caregiver. Of all open ended responses to the pilot work on overcoming the negative outcomes of violence, family support was given most often. Rutter (1979b), in his overview of protective factors with high risk children underscored the need for at least one stable relationship with an adult, including good supervision & balanced discipline. With even one secure parent bond, including warmth and low criticism in a difficult home, children showed less conduct problems over time (Rutter, 1979b). Felsman and Vaillant (1987), in their 40 year longitudinal study of children at high risk
found strengths such as positive parental relationships to be protective from later maladaptive behavior. Mandel (2003), in her literature review, makes the case for maternal bonding as buffering psychophysiological stress and threat responses.

The importance of secure parental attachments has been applied to abuse by Alexander (1992), Friedrich (2002) and other researchers (Bacon & Richardson, 2001; Cassidy & Shaver, 1999). Several empirical studies associate positive care giving by adults, including monitoring and support, with better outcomes following violence (Dalianis, 1994; Moskovitz, 1983; Ozer, 2005). Kim & Cicchetti (2004) found that following children’s’ maltreatment, a secure mother-child relationship quality was related to self-esteem which in turn positively decreased symptoms over time. Kendall-Tackett and colleagues (1993), in their review of 45 studies relating to children who had experienced sexual abuse, noted that family support, including the mother believing and protecting the child, was a key variable associated with recovery and fewer symptoms. Rind, Tromovich & Bauserman (1998), in their meta-analysis of 59 studies examining college students who had experienced sexual abuse, found family environment, when held constant, to explain most of the variance, explaining that these students were only slightly less well adjusted than their peers without histories of abuse.

In Luster and Small’s (1997) study of over 42,000 adolescents, both males and females who experienced sexual abuse had lower suicidal ideation if high parental monitoring was present in the home. Among 12,118 adolescents in 7th-12th grade, parent and family connectedness was protective against several problematic health issues, including violence (Resnick, et. al, 1997). Rosenthal, Feiring & Taska (2002) followed 147 children following sexual abuse discovery for one year. Youth who reported more satisfaction with caregiver support right after the abuse discovery were less depressed, demonstrated better self-esteem (which has also been shown to be protective), and predicted better parent and teacher rated adjustment one year later. Sexual anxiety was higher in relation to support from caretakers. However, another protective factor, support from friends, although associated with higher levels of depression and self esteem, was significantly associated with lower reports of sexual anxiety. This study supports the need for assessing multiple protective factors following abuse as they each have the potential to impact the process towards resilience differently.

For minorities such as African American children exposed to community violence, a positive caregiver-child relationship is also beneficial. The child’s felt acceptance by the parent
was especially protective against violence, internalizing and externalizing symptoms. Unfortunately, at the highest levels of violence exposure, this effect diminished (Kliewer, et al, 2004). In a longitudinal study of 136 primarily African American women who had experienced childhood sexual abuse, Banyard, Williams, Siegel & West (2002) found that adequate familial care, including no parental drug abuse, low number of moves and at least one supportive person who does not blame or punish the child for the violent event, was protective against psychological and behavioral symptoms. A strong relationship, especially with the mother, acted as a protective factor against getting into future abusive relationships (Banyard, Williams, Siegel & West, 2002). Pharris, Resnick & Blum (1997), found that among 991 girls and 166 boys from Native American backgrounds who had experienced childhood sexual abuse, the negative effects of suicidality were inversely associated with family and parent caring and high expectations. As Laor and Wolmer (2002) discuss, having an adult around both during and after a traumatic event as well as post disaster family functioning mitigated symptom development. Later, Laor and colleagues (2006) studied symptoms (i.e. PTSD, dissociation and grief) and “expressions of personal resilience” (p. 280) such as optimism and coping with stress in Israeli youths living in areas where the students experience high levels of terrorism and trauma (e.g. relocation, losses, personal injury, seeing death or other injuries, etc.). They found that pre-disaster negative family functioning, such as divorce and family violence, increased symptoms following terrorism. When children reported that their parents were involved a proper amount in the children’s lives by decreasing the children’s anxiety and discussing the violence without over-involvement, the children experienced decreased symptoms. This study underscores the need for parents to be involved in children’s post violent healing to an appropriate degree.

Suzuki (2005) showed that closeness to someone in the family of origin was protective in a qualitative analysis of adults who had normative mental health, violence free intimate relationships, and no current substance abuse despite young childhood exposure to intimate partner violence in their home. Reinforcing the importance of both family and peer support, Runtz and Schallow (1997) found these two factors measured together as Social Support accounted for 55% of the variance between child maltreatment and later psychological adjustment.

**Supportive Peer Relationships** are characterized by the perceived presence and maintenance of constructive mutual friendships. TRS-C social support items reflect distress
relieving social support aspects across both socio-emotional aid and instrumental aid as suggested by Thoits (1982).

In pilot work with adults for this study, when asked what helps the most when something hard happens, respondents listed peer support the second most often. Rutter (1979a) found a close confiding relationship to be a protective among women from stressful circumstances. Runtz and Schallow found, in a sample of 302 university students, that perceived social support impacted positive adult adjustment.

Most of the child-related literature is observational rather than self-report, as is the TRS-C administration. Although most data come from the point of view of adults in the child’s life, the findings are relevant in that they support the identification, conceptualization and use of the peer support domain in the TRS-C. Demonstrating the long-term effects of positive peer support with maltreated children, Fantuzzo, et al. (1996) studied 46 African American Head Start students selected as the most socially withdrawn among 10 centers in a major U.S. metropolis. These students were randomly assigned to either the treatment or control group with equal numbers of children experiencing maltreatment in each group. Using an ecological model, the treatment consisted of an in-school, resilient peer support pairing monitored by a parent assistant. Resilient peers were defined as “competent players” (1996, p. 1378). Although the 22 maltreated children demonstrated significantly lower interactive play prior to the intervention, following treatment students showed significant increases in higher levels of interactive play, with no main effect for maltreatment. Interestingly, two months later, the children with positive peer interactive treatment demonstrated significantly higher social skills, self control and significantly lower externalizing and internalizing behavior problems than the control, with no main effect for maltreatment status.

Edmond and colleagues (2006), in their study of sexually abused girls in foster care, found positive peer relations were associated with doing well following violence, as demonstrated by a lack of clinical behavioral and psychological symptoms. This study found youths of color more resilient than white children. Banyard & Williams (2007) in their longitudinal study of women who had experienced childhood sexual abuse found that social support was significantly associated with resilient functioning. Salzinger, Feldman, Ng-Mak, Mojica & Stockhammer (2001) studied 200 case-matched 9-12 year old children, one half of whom had been physically abused. Prosocial behavior, including classmate rated cooperation,
was found to be protective against poor social outcomes. Valentine and Feinauer (1993) found that supportive friendships and healthy examples outside the family helped women who had experienced childhood sexual abuse. In her qualitative inquiries, Suzuki found only one major theme endorsed by all the resilient adult respondents who had in-home exposure to intimate partner violence as young children. They all reported that social support from friends was a major protective theme in doing well as adults (2005).

**Supported Academic Functioning** is seen when a child reports being supported in his or her efforts to work consistently at his or her ability level and attain educational goals. Rutter initially found that the school is a protective factor for high risk children. The characteristic influences of the school as protective included children having rewards, responsibilities, and a sense of achievement. He found that scholastic achievement influenced another protective factor, self esteem (1979b). McCord (1983) in a 40 year perspective study of 232 males who had experienced child abuse, found that academic achievement decreased vulnerability to negative outcomes in health and well being. In Resnick and colleagues’ interviews with 12,118 adolescents in 7th -12th grade, perceived school connectedness was found to be protective against several problematic health issues, including violence (1997).

Gold and colleagues (2000), in a longitudinal study of 270 prisoners of war found education level at the time of trauma to mitigate the symptoms of PTSD 35 years later. In another longitudinal study of 136 primarily African American women who had experienced sexual abuse, high school graduation was associated with competent functioning and lack of behavioral and psychological symptoms (Banyard, Williams, Siegel & West, 2002). In an urban sample of 73 youths monitored for two years, 96% had experienced violence in the past year either directly or indirectly. School connection was associated with less anxiety, depression and violence perpetration in these ethnically diverse 7th and 8th graders (Ozer, 2005). Luster & Small (1997) found a higher GPA associated with doing well, especially among adolescents who had been involved with abuse at a prior time.

Positive involvement in school was protective against suicidality in a study of 1157 Native American youths who had experienced sexual abuse (Pharris, Resnick & Blum, 1997). Edmond and colleagues (2006) found education as expressed by certainty of educational plans associated with resilient trajectories in girls who were in foster care due to the experience of sexual abuse. In Ginsburg and colleagues work (2002), a mixed method survey and focus group
sample of 1852 randomly selected urban youth, many of whom had experienced violence in a major Northeastern high-risk inner-city community, was conducted across four waves of data collection. Across these groups of 9th -12th graders, educational and job related solutions were found to be the highest priorities when asked what community factors would promote a positive future for them. Interestingly, when the teens generated solutions for increasing their likelihood for a positive future, they placed higher value on increasing protective factors, rather than the reduction of risk factors in this extensive study (Ginsburg, Alexander, Hunt, Sullivan, Zhao & Cnaan, 2002; Ginsburg, Alexander, Hunt, Sullivan & Cnaan, 2002). Suzuki (2005) qualitatively found academic success, including positive experiences in school, as a major theme in overcoming the negative effects of witnessing intimate partner violence in resilient adults’ families of origin.

Several indicators of educational achievement have been found to be protective, as discussed. Scales are widely available to measure aptitude and academic achievement in children. Measures such as Stanford Achievement Testing (Spies & Plake, 2005) are used to indicate what children know academically. The Stanford Achievement Test, Tenth edition, normed on more than 300,000 students, tested well against bias in Mantel-Hanzel DIF tests, and has an internal reliability ranging from the mid .80s to .90s. Beyond tests of achievement, barometers such as the grade point average, grade level progression and graduation/dropout statistics are easily obtained by researchers. As such, this domain does not focus on achievement indicators, but rather on the child’s perception that support received from the school and teachers aids him or her in succeeding academically.

Activity Involvement/Active Diversion is identified when a child reports being involved in positive endeavors in the community, school and home. Of all open ended responses in the pilot work inquiring about overcoming difficulties, active diversions including physical activities and artistic expression were generated by the respondents fourth most often. Although active diversions can be very beneficial following violence, they are not helpful when used blatantly as avoidance (Wright Fopma-Loy, Fischer, 2005). Selye supported diversion as a healthy means of conserving adaptation energy and dealing with stress (1974). In Ginsburg and colleagues’ studies of inner-city youths, meaningful use of time was given a very high priority in high-risk students’ needs related to being more likely to have a positive future. Some ideas from the youths included more recreation programs & centers, job training programs, and sports programs.
(Ginsburg, Alexander, Hunt, Sullivan & Zhao, et al., 2002; Ginsburg, Alexander, Hunt, Sullivan & Cnaan, 2002). Suzuki found that a majority of respondents who had experienced violence in their homes as young children found activities such as sports and the arts as helpful with self-esteem, and were a beneficial means to escape the negative influences at home (2005).

**Community Safety and Support** is portrayed when the child perceives the area in which he or she lives to be a secure place to obtain resources. Several studies reinforce community safety and support in relation to children’s outcomes (Bouvier, 2003; Cole & Brown, 2002; Manly, Kim, Rogosch & Cicchetti, 2001; Werner & Smith, 2001). Banyard & Williams (2007) in their longitudinal study found a positive sense of community to be important in relation to resilience indicators. Ginsburg and colleagues studies (2002) found that in relation to teens’ perceptions of being more likely to have a positive future, several community support and safety topics were generated and ranked highly by teens. Primarily, this includes adults and teens working together to be involved in their community, having local role models, cultural awareness and respect, safety from violence and drugs, police or community members supervision, clean neighborhood, less violence and fewer drugs, and adequate housing/less homelessness. Interestingly, students reported that safety concerns kept some away from school, negatively impacting another essential protective factor (Ginsburg, Alexander, Hunt, Sullivan & Zhao, et al., 2002; Ginsburg, Alexander, Hunt, Sullivan & Cnaan, 2002). A strong adult role model outside the family was also a major theme of those resilient adults who had experienced in-home violence as young children (Suzuki, 2005).

**Infused content.** A major finding across the literature is that experiencing fewer and less severe additional stressors and traumatic events is protective (Rutter, 1979b; Kliewer, et al., 2004). Increased safety in all aspects of the child’s life and the reduction of further violent experiences is shared across all ecological levels by the child, parents or caregivers, schools, and communities. For example, a family who provides a safe environment in the home and boundaries that keep the child safe, could reduce the possibility of future negative events. Therefore, safety and protection of the child from incidents of further violence were imbedded throughout the assessment and applied to several protective factors as outlined on page 75.

**Implications for Measurement**

There is a need for increased overall empiricism in the field of resilience (Cicchetti, 2003), especially in the area of interventions and prevention programs based on this concept (Bolger and
Patterson, 2003). In a review of studies looking at how resilience is measured in relation to child maltreatment, very few included multiple indicators of competent functioning. Furthermore, most of these indicators were achieved by measuring the absence of problems rather than presence of strengths (Walsh, et al., 2010). In order to effectively and rigorously conduct research that includes quantifying changes in phenomena associated with resilience, it is essential that psychometrically sound (Saunders, 2003) and developmentally appropriate (Luthar & Zelazo, 2003) measures be included in the process. Research then lends to best practices and accurate assessment in clinical work with children who have experienced violence. As discussed, the empirical literature lends support to the need for an empirically sound, contextually based instrument to measure multidimensional protective factors associated with resilience. Luthar and Zelazo support this, saying “competence should be assessed in terms of multiple theoretically important domains” (p. 525, 2003). This measure should focus on ecological levels of systems, yet must remain easy to administer in both research and clinical settings. Masten and Powell support this goal, stating the need for “field-friendly, research-based tools” assessing “qualities in relationships, schools and communities that appear to make a difference” (p.19, 2003). Therefore, the presence of protective factors that correlate with resilience following violence in the literature as discussed is the focus of the TRS-C.

It is the goal of this study to create a developmentally appropriate, psychometrically valid, reliable and unbiased measure of the major protective factors which are strongly associated with children’s resilience following violence. Domains that are empirically based and theoretically sound are the foundation upon which all items were generated. Following the refinement of these items through focus groups and content validation experts, the measure was subjected to a wide range of statistical analyses with adequate samples of children in order to demonstrate validity, reliability, and factor stability.
CHAPTER THREE

METHODS

Research Design

Introduction

This research project focused on filling shortcomings as outlined in the current literature, creating an instrument that is child friendly in length and syntax, and formulating a scale with strong psychometric properties including distinct domains which reflect known protective factors following violence. First, the research questions guiding this project are outlined. Then, methods for addressing these questions are presented. The study incorporated a mixed-methods design consisting of two phases. Initial item pools were generated within domains as supported conceptually, through pilot work with adults, and the literature review of protective factors associated with resilience following violence (McDonald, 1999; Nunnally & Bernstein, 1994). Similar to the work of Ginsburg and colleagues (2002), who utilized social workers facilitating youths to help refine items, the first phase included mixed methods item refinement for face and content validation. The items were rated and refined through two focus groups of children in the foster care system and a national expert panel of adults. These groups helped to remove items and to shape the wording and construction of items. In the second phase, the refined items were given to a larger sample for full quantitative validation. Item pools were finalized based on information from this work.

The first phase of the study, the mixed methods analysis, is outlined. The process of expert panelists (Part A) and the younger and older children’s focus groups (Part B) are described as they clarify the target constructs as reflected in the literature and in the author’s previous scale development with adults (Madsen & Abell, 2010). The ratings and narratives as a whole were used to drive the item content for full scale development with children in Phase II. In the second study phase, items were given to a larger sample (n = 208) of respondents in 1st-5th grade to facilitate full psychometric quantitative analysis. Reliability, confirmatory factor analyses, and validation processes are outlined. Subsequently, item revision decisions are presented. Due to pragmatics of implementing the study, some modifications were made to the research design between the original prospectus proposal and the actual research stages.
**Domains.** As discussed in the literature review, protective factors associated with positive adaptation following experiences of violence cluster into ten major domains. These areas, found within the individual child, his or her family, and community, include:

- Self Value
- Self Regulation (emotional and behavioral)
- Optimism/ Motivating Power (emotional and cognitive)
- Creative Problem Solving (cognitive and behavioral)
- Supportive Belief Structure
- Healthy Caregiver/Family Support
- Supportive Peer Relationships
- Supported Academic Functioning
- Activity Involvement/Active Diversion
- Community Safety and Support

These domains were the foundation of the items in the proposed measure. Due to some limits of empirical data supporting these themes, they were approached with some openness to further discovery within the mixed methods analysis. Items and domain clusters clarified through children and expert feedback in Phase 1 formed the basis for subsequent psychometric analyses on the full sample in Phase 2. Item changes, domain content and accompanying psychometrics, as modified through these processes, are presented at each stage.

**Infused content.** A protective factor as discussed in Chapter 2 is seen when a child has a smaller amount of subsequent violent experiences, and when those experiences are less severe. This study is focused on creating a measure that can be used for the study of outcomes associated with the presence of protective influences. Therefore, within these domains, the concept of safety is infused throughout. In the Creative Problem Solving domain, a child who is good at solving problems may be able to figure out a way to leave a bad situation before it escalates to violence. Therefore, the item “I think of ways to get out of bad spot” is included in the TRS-C. A parent who monitors his or her child may be able to prevent some violence exposures. In the Healthy Caregiver/Family Support domain, two items related to violence reduction in the family system include, “A person at home keeps me safe.” and “We have rules at home to keep us safe.” Schools that respond immediately to violent incidents may be able to reduce children’s exposure to additional events. The item from the domain Supported Academic Functioning with violence
reduction imbedded is, “The people at school keep me safe.” Finally, communities that have outlets for children to safely connect with each other, such as closely supervised city recreational programs, may also impact reduction in violence exposure in childhood. The TRS-C item addressing Community Safety and Support is “I feel safe in my neighborhood.”

Following the literature review, pilot work and item formulation, the conceptual domain structure needed thorough qualitative and psychometric analysis to create a scale fit for use in research and clinical settings. Research hypotheses and questions set the foundation for these analyses.

**Research Questions & Hypotheses**

This study addressed the following research questions:

- **Phase 1 Initial Design and Development Groups:**
  - **Part A: Content Validation Experts:** Childhood violence professionals and resilient adults.
    1. Do expert ratings on content validity confirm proposed scale items as defined and supported by the literature review?
    2. Do any items need revision or removal?
  - **Part B: Older Children: Ages 9-11**
    1. What do children say helps them the most when something really hard happens?
    2. Do the protective factor domains as clustered in the literature related to resilience following violence make sense to children?
    3. Are unclear items in need of revision or deletion?
    4. Consequences as a source of validity: What impact do the test and its items have on children?
  - **Part C: Younger Children: Ages 6-8**
    1. Do items make sense to younger children as clear and easy to understand?
    2. Are unclear items in need of revision or deletion?

- **Phase 2 Full Validation Sample:**
  1. What do children say helps them the most when something really hard happens?
  2. It is hypothesized that the measures of protective factors following experiences of childhood violence will exhibit adequate reliability on both the global score and individual subscale scores.
3. It is hypothesized that the confirmatory model will fit the proposed factor structure developed in Phase 1.

4. Are poorly performing items in need of deletion?

5. It is hypothesized that the instrument is a valid measure of protective factors following violence across multiple indicators.

   a. External Convergent Validity Indicators:

   It is hypothesized that the Abbreviated Connor-Davidson resilience scale (Vaishnavi, Connor & Davidson, 2007) and the BERS-2 total Strengths Index will positively and significantly correlate with the global TRS-C score. Psychometrics and rationale for use of the BERS-2 is discussed on pages 33 and 34. Each BERS-2 subscale chosen contained items that logically related in theory and substance to each respective subscale of the TRS-C. Each TRS-C proposed subscales will significantly and positively correlate with the respective BERS-2 measures (See Table 1). The Neighborhood/School Zone Boundary in which the child lives, the known antecedent, will be associated with a reduction in error in predicting the Community Safety and Support subscale score.

Table 1

*Convergent Hypotheses of TRS-C and Relevant Measures*

<table>
<thead>
<tr>
<th>TRS-C Subscales</th>
<th>Hypothesized Significant and Positive Correlation</th>
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<tbody>
<tr>
<td>1. Self Value</td>
<td>BERS-2</td>
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<td></td>
<td>Interpersonal Strength, Intrapersonal Strength and Affective Strength</td>
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<tr>
<td>2. Self Regulation</td>
<td>BERS-2</td>
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<tr>
<td></td>
<td>Interpersonal Strength, Intrapersonal Strength and Affective Strength</td>
</tr>
</tbody>
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Table 1 continued

*Convergent Hypotheses of TRS-C and Relevant Measures*

<table>
<thead>
<tr>
<th>TRS-C Subscales</th>
<th>Hypothesized Significant and Positive Correlation</th>
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</thead>
<tbody>
<tr>
<td>3. Optimism/Motivating Power</td>
<td>BERS-2</td>
</tr>
<tr>
<td></td>
<td>Interpersonal Strength, Intrapersonal Strength</td>
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<td></td>
<td>and Affective Strength</td>
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<tr>
<td>4. Creative Problem Solving</td>
<td>BERS-2</td>
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<td></td>
<td>Interpersonal Strength and Intrapersonal</td>
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<td></td>
<td>Strength</td>
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<tr>
<td>5. Supportive Belief Structure</td>
<td>BERS-2</td>
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<td></td>
<td>Single Item Indicator</td>
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<td></td>
<td>Interpersonal Strength, Affective</td>
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<td></td>
<td>Strength and Family Involvement</td>
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<tr>
<td>7. Supportive Peer Relations</td>
<td>BERS-2</td>
</tr>
<tr>
<td></td>
<td>Interpersonal Strength, Affective</td>
</tr>
<tr>
<td></td>
<td>Strength and Key Question: Friends</td>
</tr>
<tr>
<td>8. Supported Academic Functioning</td>
<td>BERS-2</td>
</tr>
<tr>
<td></td>
<td>School Functioning</td>
</tr>
<tr>
<td>9. Activity Involvement/ Active Diversion</td>
<td>BERS-2</td>
</tr>
<tr>
<td></td>
<td>Key Question: Activities</td>
</tr>
<tr>
<td>10. Community Safety and Support</td>
<td>Neighborhood/ School Boundary for which child is zoned</td>
</tr>
</tbody>
</table>

69
b. Internal Validity Evidence:
The validity coefficients on relevant factors will be highly correlated and will be higher than the internal discriminant validity coefficients where correlations between factor items and other TRS-C factor constructs are low. The validity coefficients will be higher along the true scores and observed scores of the same construct.

c. External Discriminant Validity Indicator:
TRS-C global scores and provisional subscale scores will not significantly correlate with site location or time of administration where the data were collected. Scores obtained from clinical sites will be compared with other clinical sites and scores from non-clinical sites will be compared with other non-clinical sites.

d. Concurrent Criterion Validity (predictive utility):
The test will distinguish between the clinical and non-clinical groups on both the global and subscale scores.

6. To demonstrate lack of test bias, real differences will not occur between the subscale and global scores of gender, ethnic, or age groups.

Safety Precautions
This study used participants under the age of 18, many of whom personally experienced violence, and some of whom were wards of the state. Therefore, their physical, mental and emotional well-being was considered before any research began and was continually heeded throughout the entire project. Although some caretakers who were asked about the child’s violence history, or children who were asked about support structures, could be at risk for emotional reaction to questions, authors argue that questions surrounding issues of abuse should be included more often in research. Edwards, Dube, Felitti & Anda (2007) state that not including research questions about abuse may be more problematic than including them, due to the wide ranging impact abuse history has on health. They reason that high response rates and the lack of even a single call to a help line associated with a questionnaire sent out to over 30,000 adults indicates low distress to questions concerning childhood abuse.
With respect for each individual who participated in this research, risks associated with the current study were addressed during every step of the research process. Through a lengthy course of proposals, revisions, and approvals; all protocols and processes were approved by the Florida State University Human Subjects Review Board; the State of Florida Department of Children and Families, Office of Family Safety; the Children’s Home Society of Florida, the Center for Applied Innovation; and the Florida Agricultural and Mechanical University (FAMU) Institutional Review Board (IRB), as applicable to each research population. Recommendations from each committee were followed. For both study phases, legal caretakers of potential participants signed consent forms. Only caretakers were exposed to questions about violence history. All disclosures were voluntary. Children were not asked by researchers about this information. Caretakers were clearly advised of their responsibility to report any abuse in both their testing packet and consent forms.

All children were given the clearly voluntary opportunity to assent to the testing process. In addition to providing children with the written assent version, an approved, easy to understand, verbal version of the assent was clearly read to all younger children and all older children in group administrations. For the 27 individual administrations by trained workers with Children’s Home Society, it is estimated that 13 children were read both the verbal assent and the test questions. This number is based on the number of children whose caretaker checked the box indicating that the child needed reading assistance. All children were allowed to: ask questions before taking the test, opt out of the testing process, stop at any time, and/or take breaks as necessary without any negative consequences. Children were recruited through agencies where they had a therapist or guidance counselor available to address any issues or concerns that may have arisen. All information was kept confidential. All children and adult test respondents were asked to include initials of the child on all testing documents rather than names. Informed consents and test forms have been separated so that all test answers are now anonymous.

The author completed the National Institutes of Health Human Participants Protection Education for Research Teams in 2008, and then completed the Collaborative Institutional Training Initiative (CITI) Human Research Curriculum Refresher Course in 2009 (See Appendix B) Additionally, she was fingerprinted and was cleared on both Federal Bureau of Investigation (FBI) and Florida Department of Law Enforcement (FDLE) background checks. She also has 11 years of professional experience working with children and adolescents, most of whom have experienced abuse. She either conducted test administration or conducted face to face training of CHS
administrators and/or caseworkers on how to do so according to a protocol. Children were treated with dignity and respect. Minimal signs of stress were addressed immediately. The children were either given a short break and/or allowed to stop the test with no negative responses from the researcher. These children were allowed to either join with other children not taking the test, or to draw/read quietly while other children finished the testing.

Additionally, an independent children’s advocate was appointed. He agreed to look at the research and data collection from the child's perspective and help us problem solve for the children should any issues arise. His expertise with children includes counseling, multiple certifications, agency advocacy, university instruction, administration and peer-reviewed research. He was not involved as a researcher with the children and was not an employee of the agencies where the children were being served. No adverse effects of taking the test were expressed by the children, teachers or caretakers.

Phase One: Initial Instrument Design and Development

Initially, items were generated across each of the subscale domains based on the author’s prior scale development with adults and the current literature (See Appendix A). However, with the new items developmental considerations were taken into account. Reading levels of all items were analyzed using the Flesch-Kincaid formula available in Microsoft Word (XP Home, 2001). A reading level was obtained for each of the domains at second grade and below. When calculated as one entity, the initial global scale read at a first grade, fourth month reading level, accommodating a wide range of literacy aptitudes. To further address the developmental relevance of the scale, both child protection experts and focus groups of children answered developmentally appropriate questions about the items (See Appendices C & D). Although the scale originally contained 163 items, the goal of this phase was to pare down the scale to make it as brief as possible while still maintaining its conceptual integrity.

Adult Expert Panel

The Expert Rating Form (See Appendix C) was distributed to experts throughout the United States. Thirteen people were contacted based on their contributions to the Child Welfare empirical and/or theoretical literature, their practice experience with children, and/or personal resilient life experiences following trauma. These experts were approached because the researcher felt that they exemplified high quality work in their field of expertise and/or extremely
productive lives despite childhood experiences of violence. Nine experts: six women and three men, sent back completed forms.

**Sample.** The respondents represented a wide range of experience and geographic backgrounds. One respondent created a child sexual abuse measure and also serves as the clinical director of a major children’s services clinic for maltreatment. Another is the director, at a major pediatric medical center, of all the medical and psychosocial service providers who specialize in services to children who have experienced non-accidental traumas. Four respondents are professors at major universities across the United States who have both practice experience with children and have authored peer-reviewed publications specifically focusing on children and maltreatment. Four respondents demonstrate resilience as evidenced by strong peer and familial relations, community leadership, higher educational achievement, lifelong stable employment, and extraordinary volunteerism/mentorship despite difficult life circumstances. One demonstrates these positive qualities despite spending several years in foster care and having a family member murdered. Another respondent exhibits resilience even through being a political refugee, leaving family and a country plagued by violence as a child, accompanied only by a younger sibling. One displays these qualities despite experiences of childhood sexual abuse. Three of the resilient respondents are also specialized instructors who helped look at the items from a developmental and linguistic perspective.

**Methods.** The initial item pool formulated for children based on a thorough review of the resilience literature and from qualitative and quantitative pilot work with adults was presented to all experts (See Appendix C). Items were written at a second grade reading level or below. Experts were sent an email briefly describing the study. An informed consent and item rating sheet was attached. Each expert was asked to rate the items from 1-5 on two dimensions: a) each question’s reflection of the domain, with 1 = Poor reflection of domain, 2 = Minimal reflection of domain, 3 = Adequate reflection of domain, 4 = Good reflection of domain, and 5 = Excellent reflection of domain, and b) each question’s clarity from a developmental appropriateness perspective with 1 = Not clear, too difficult to understand, 2 = Minimally clear question, 3 = Adequately clear question, 4 = Mostly clear question, 5 = Extremely clear and understandable. The experts were also asked to add any new questions that might have been missing from the domain and/or reword any items that could be improved (See Appendix C).
Experts returned the forms both through email and the postal service. Upon receipt, the ratings were entered into a spreadsheet. Mean rating scores for each response section domain reflection and clarity were calculated for every item. In addition, the combined mean score for both rating categories and standard deviations were calculated. Items performing below a mean 3.5 in any category were highlighted for strong consideration of removal or rewording. Items performing below a 4.0 in any category were highlighted for possible removal or rewording. Item wording change suggestions and other comments were entered into a word document according to item number and domain in order to compare the entirety of the experts’ ideas for each item.

**Children’s Focus Groups**

Items, with removals based on input by the expert reviewers, were presented to focus groups of children currently in group residential foster care. These children were chosen because this research directly applies to their status as children who have experienced violence. The research presented minimal risk to the participants. Additionally, the research may have provided a benefit to the children as they thought about those aspects of their lives that previous research shows may help them overcome the negative effects of violence. Prior to conducting the focus groups, the IRB recommendations from the University Human Subjects Institutional Review Board (IRB), and the administrative teams of the research divisions at Children’s Home Society (CHS) and the State Department of Children and Families (DCF) Office of Family Safety were incorporated into the protocol (See Appendix E). Additionally, the children’s advocate was appointed acting as an independent consultant in relation to the children and the project.

**Sample.** The director of the residential facility was asked to recruit children who wanted to volunteer and had been deemed stable enough to handle the research process; ages 6-8 for a younger focus group, and ages 9-11 for an older focus group. DCF approved that the researcher could be given the names of the children. The Parent/Guardian Informed Consent and Child Assent forms were the only documents that asked for their names (See Appendix F). Children were asked to only write their initials on their actual answers. DCF also asked that none who had just arrived at the facility be included in the process. According to the facility director, all willing participants had been at the facility for at least a month. Once all informed consents from the legal caretakers of the children were received, all children were given assent forms and were
also read the Children’s Verbal Assent before they were given the test information (See Appendix F). It was clarified that participation was voluntary and anyone could stop or take a break at any time. All children at the facility were each allowed to choose a book to keep, regardless of participation. Each age group met on two separate occasions to keep the children from getting stressed. In addition, breaks were taken when children requested water or bathroom use. For each group session, at least two agency workers remained close at hand in case any questions or issues were to arise.

The older children’s focus group consisted of five children: two boys and three girls. One boy voluntarily began both of the two sessions, but decided to quit part way through each one. The younger children’s group consisted of four children: two boys and two girls. One girl only participated in the second meeting due to a mistake with her caretaker informed consent form at the first meeting.

Methods. The researcher began children’s sessions with brief rapport building (Creswell, 1998). When interviewing, she used techniques such as openness, unbiased interviewing, and flexibility to the context of the interview situation. Respect for the young participants’ well being was achieved by continually assessing the fatigue of the respondents. As needed, adjustments to the environment were made as often as necessary. Although Creswell (1998) suggests interviews up to two hours for adults, this is too long for children. For the older children, the goal was around 90 minutes, and an hour for the younger children. In the actual research setting, even this was too long for the respondents’ attention and fatigue. Therefore, both groups were broken into two sessions, meeting on different days.

Children were shown emoticon faces, widely available as free images on the internet, which corresponded to the verbal prompt: “Is this a good question to ask kids about what helps them?”

1 = Bad question 2 =Just okay question 3 = Great question.

Figure 1
Pictures Used to Help Children Rate TRS-C Questions
With the questions and faces in front of them for reference, they were asked to rate the TRS-C items on this scale.

To add information about children to the author’s previous qualitative pilot work with adults who had experienced violence, prior to beginning their ratings each older child was asked: “When something really hard happens, what helps you the most?” All five children responded and talked about this. Then, these older children were given the same three point scale with accompanying faces to rate the actual test items. Although the author read each question out loud, the children all wrote their own answers. Two children decided to read the questions themselves and worked ahead of the group. The older group also responded to how the questions could be better.

Additionally, the older group did an excellent job of discussing how they felt about the individual questions. Qualitative comments were noted by either the children or the researcher. In keeping with Messick’s (1995) recommendation to look at the consequence of taking the test as a source of validity, at the end of the test the children were asked how they felt about the test in general.

The younger children had every other item read to them rather than responding to the entire item pool to decrease the possibility of fatigue. They were asked to physically make the symbol of each face: thumbs up, hands out or thumbs down. The researcher wrote down the number of children giving each symbol for each question.

**Study transition methods.** Following the collection of data from both the adult expert panel and the children’s focus groups, item wording changes were complete and several items had been removed as discussed later. Therefore, the items were deemed stable and ready for wider dissemination. The revised item pool was placed in an easy to follow format for wider distribution to the larger sample of children. As seen in Appendix G, the abbreviated version of the Connor Davidson Resilience Scale, the CD-RISC 2 was added to the revised TRS-C for convergent validation purposes (Vaishnavi, Connor & Davidson, 2007).

**Phase Two: Full Validation Sample Methods**

**Sample**

**Inclusion criteria.** The purposive quota sampling targeted children ages 6-11 from a wide variety of cultural groups representing both clinical and general populations. Children from diverse ethnic identities were approached, hoping to insure representation within the racial/ethnic categories
of Caucasian, African American, Hispanic, Asian and Other across service-based and school-based sites. All children from each research site were allowed to participate, if both the parent/legal caretaker and child were fully willing to participate and the child was able to handle the research process. It was clarified with all children that participation was entirely voluntary. They were all allowed to ask questions, take breaks, refuse to participate or stop at any time without consequence. Thus, any child was allowed to opt out for any reason. Additionally, the caseworkers, counselors, and administrators at the clinical sites, all part of Children’s Home Society (CHS), were asked to only include children who they deemed stable enough to engage in the research project. For example, children who had recently been removed from the home would not meet this qualification. The educational and clinical sites were given instructions and approved research forms before recruiting any children. Groups of administrators and workers at clinical sites received face to face training to guide them through the research protocol involving caretaker/child recruitment and selection without pressure (See Appendix H). Administrators at each educational site met with the researcher to review the research project and to discuss all protocol and recruitment procedures.

**Sample sites.** Sample sites chosen for this study included: The Florida State University Schools (FSUS) elementary school, due to diversity of the school population and a research friendly environment; Florida A & M Developmental Research School (FAMU DRS) elementary school, to include a greater ethnic minority population for maximum usability of the final scale; and Children’s Home Society North Central and Buckner divisions, to include a greater proportion of children who have experienced violence. Additionally, other sites initially agreed to participate, but were unable to accommodate our research due to funding, staffing, or FSU IRB out of state restrictions. These included CHS divisions in other parts of Florida and an inpatient treatment center in Georgia.

Each university-sponsored school site necessitated approvals by IRB boards of the respective universities and a faculty supervisor for each. At FSUS, the dissertation chair served as the supervisor. For FAMU DRS, a faculty member and coordinator of the Social Work research sequence from the FAMU Department of Social Work sponsored the research, in addition to the FSU dissertation chair. Immediately before collecting data, meetings took place with the school director/superintendent and the elementary school principals.

At FSUS the data were collected in two waves, Spring and Fall of 2009. These teachers sent home parent request letters and informed consent forms with all children grades 1st - 5th for the opportunity to participate in the study (See Appendix H). Children whose parents responded to the
first request, and who themselves also assented to the testing, were tested in May. In the second request, which took place at the beginning of the next school year, only students in grades 2\textsuperscript{nd} - 5\textsuperscript{th} were sent requests as a follow-up from the end of the last year. As FSUS is a research school, parents are informed at admissions and are accustomed to getting requests to involve their children in research. As such, many respond quickly, but others may begin to see the research as uninteresting. Additionally, some letters may have not made it into the hands of the parents. So, beginning with the second wave of parent requests, several methods as compiled by Dillman, Smyth & Christian (2009) to increase response rates for surveys were followed. Some recommendations, such as legitimate sponsorship by the University, confidentiality, informed consent about the survey, positive regard of respondents, thanking participants, and avoiding subordinating language, were already in place. The actual letter requesting participation, the accompanying informed consent, the role of the teachers and students and the low-pressure method of approaching students, once their parents had consented, was already determined by an extensive Human Subjects review. Therefore, the researcher was not able to change these aspects. Still, some other recommendations were able to be implemented without changing protocol. For example, the second wave of data collection was conducted near the beginning of the school year, as opposed to the very end when an overwhelming amount of activities and exams are taking place. Other recommendations were also implemented. At the second wave of data gathering, parents received a simple pre-notification informing them of the coming request letter and consents. Subsequently, the second wave of information letters and consents were sent home. With the third and final wave of letters and consents, parents were notified that this was their last opportunity and given a specific deadline. At every step parents were thanked if they had already participated. To bring attention to the research, all communication and forms were copied on gold paper, and most were placed in garnet folders- the school colors. At FSUS, of the approximately 475 children for whom requests were sent, 163 children participated in the study. This is 34.32% of the students attending the applicable grades at FSUS. According to the research coordinator at FSUS, this was a very high response rate. She stated that having all communication in gold helped the administrators, teachers, parents and students easily recognize this study. She stated that she now recommends to other FSUS researchers that they also choose a color for their paper.

At FAMU DRS, all children in grades 2\textsuperscript{nd} – 5\textsuperscript{th} were given the opportunity to participate. This site, a smaller school, was approached to increase the sample size. Additionally, due to the high African American enrollment at this school, the children helped to increase ethnic minority
representation within the full sample in order to reduce test bias. As with the second wave of FSUS data collection, Dillman and colleagues’ suggestions were followed to the extent possible. However, due to time constraints, only one wave of requests was sent home to parents, negatively affecting the response rate. These research forms were printed on green paper and placed in orange folders to represent their school colors. Fifteen students both returned informed consent forms and assented to the research themselves.

Children’s Home Society (CHS) children were extremely difficult to access. Supervisors/caseworkers were trained in face to face meetings on the research protocol in three service divisions, each covering a major area, urban and rural. Due to several time constraints, a financial problem, and a medical issue with the main supervisor, one division had to drop out. In two of the divisions, the author personally went to children’s treatment facilities on several occasions, frequently gathering only one to two responses each time. One service area of a mostly urban division was able to gather the majority of the CHS responses. A total of 34 consents/assents and children’s forms were completed and returned. It is unknown how many caretakers and children were approached by caseworkers.

Four children did not answer any questions on the TRS-C. Other information, such as parent reports about these children, was removed from the analyses (see missing data discussion, p. 93). This resulted in a final sample of 208 children.

Most parent packets were sent home in two request waves. In the schools, the teachers distributed the packets in security envelopes addressed to the child’s parent/caretaker in the children’s take-home folders. Parents were instructed to place the finished packet in the envelope, seal it, and return the envelopes to either the front office or the child’s teacher. In the CHS settings, the parent/caretaker and child filled out the information during the same scheduled block of time and returned the information to the researcher or caseworker. This process resulted in a 66.35% return rate of parent/caretaker forms. Of all children included in the final analyses (n=208), 138 of their parents/caretakers returned forms including the demographic information and/or BERS-2 convergent validation.

Sample size adequacy. Within psychometric analyses, two major issues of sampling adequacy arise. These are: (a) sufficient item sampling from the domains, and (b) adequate respondent sampling (Nunnally and Bernstein, 1994). Content validation and pilot work addressed the first sampling issue. Statistical analyses such as reliability testing, factor analysis, and correlations help us
look at the contribution of items in relation to their respective domains. Larger samples of respondents are helpful to these and other psychometric analyses. However, figuring out what is large enough can be difficult. In this case, the statistical analysis with the most demands from an assumption standpoint was the guide. Factor analyses using structural equation modeling (SEM) drove the goal for the sample size. For SEM, the more factors present and items to be factored, the more respondents are necessary (DeVellis, 2003). In general, a ratio of 5 to 10 participants per parameter is a suggested figure, but after the sample reaches 300, this ratio can be relaxed (Tinsley & Tinsley, 1987). Other authors, such as Comrey, (1988) state that 200 is an adequate sample size for some factor analyses as long as the scale has less than 40 items. If more than 40 items are in the final item pool, a sample of 400 is considered acceptable, although factor analytic structures may continue improving with larger samples (Comrey, 1988). DeVellis (2003) states that although higher samples increase generalizability, the best solution is actually replicating the factor analytic solution on a separate sample. Comrey (1988) suggests randomly splitting a sample above 400 and conducting the analyses separately for each of the samples of 200 to check for consistency. Although this project aimed for the ratio of 5-10 respondents per item as determined after the content validation phase was completed, that sample size was not attained due to the difficulty of accessing the children and time constraints. Based on these recommendations, even for the final item pool of 64, the ideal range for respondents would have been 320 or more. At a final sample of 208 children, this would not be acceptable. Yet, a body of statistical literature shows strength when using very specific SEM fit indices with a lower sample size. For example, the sample size of the Root Mean Square Error of Approximation (RMSEA), according to Kim (2005), can be calculated as a function of the number of variables, the degrees of freedom (df), the value of the non-centrality parameter (δ) that achieves a power equal to 1-β, and the desired value of the RMSEA. The formula described by Kim was used to look at sample size for RMSEA. The df were calculated by LISREL. Alpha was set at .05 and power at .90 to calculate the δ(1-β) in SAS. With the desired RMSEA of .05 at 67 variables, the RMSEA indicator can be calculated with as few as 39 participants. Additionally, Hu and Bentler’s (1998) work gives insight and guidance when determining the appropriate SEM indicator based on sample size performance. They studied SEM sample sizes across seven different simulated distributional conditions, 15 types of goodness of fit indices, and six sample sizes ranging from 150 to 2000. Based on their recommendations, the ML based Tucker-Lewis Non-Normed Fit Index and the Comparative Fit Index (CFI) are used as the primary fit indicators, as they are accessible on
LISREL software and are indicated as strong fit indicators in general and “more preferable when the sample size is small (e.g. N ≤ 250)” (pp.446). Other indices, including the RMSEA and ML based Standardized Root Mean Square Residual (SRMR) were utilized. They are strong indicators of fit across differing situations. Although a small sample size tends to lead one to “over reject substantially true-population models” (pp. 447) with RMSEA, ML based SRMR is a robust measure in most situations and best used when sample size is small (Hu & Bentler, 1998). Therefore, adjusting the analyses of this data to these specific indicators that work with a smaller sample size, it appears that the final sample of 208 was adequate.

Testing Process

Children. Following the caretaker consent process as outlined above, children were invited to participate in the study. For group administrations, the teachers and caseworkers helped to gather the children who qualified, due to the fact that the researcher did not know the children. The researcher then administered assent and testing. For individual administrations, either the researcher worked with agency administrators to identify those children for whom consent had been obtained and collected the data individually, or the caseworker, following clearly outlined protocol, administered the assent and testing.

In the school setting, the researcher worked with the administration and teachers to determine the time that would have the least impact on the children’s educational experience. Most children stayed in their classrooms while the rest of the class transitioned to a “special area” time. Other children convened in a quiet room next to the classrooms. For several administrations, we attempted to conduct the testing during “character education,” as the curriculum addressed during this subject most closely fit the content of the TRS-C. Other children were tested either during Physical Education, another special area time, or a time specified by the teacher. All children were treated with respect and thanked for considering participation. The researcher read the verbal version of the assent to the children. Then, all children were allowed to ask questions. For all children who indicated that they wanted to voluntarily participate, they were invited to examine and sign the child assent form. Within several administrations, a few children decided to opt out or to stop taking the test early. Based on safety, logistics, and the child's specific request; they were either allowed to go back to their special area, to sit quietly and draw or read, or to take a break and return to test taking if they so chose. During all administrations, a teacher was near the test site, should a problem arise.
For most, a teacher remained in either the classroom or an adjacent office in view of children in the classroom.

In the CHS group settings, the researcher met with willing children in a room adjacent to other children in the facilities. All children were approached either after school hours or on a weekend. Times were arranged with the service administrators to avoid special activities. Service workers were nearby in all situations. All children were thanked for considering participation. The researcher read the verbal assent and encouraged the children to ask any questions they had. If they agreed to the verbal assent, they were asked to look over the child assent sheet and sign it, if they felt comfortable. Children were respectfully allowed to opt out, stop at any time, and/or take breaks as needed without negative consequences. Children who opted out or quit the test early returned to join the other group of children. In CHS individual settings, the service providers brought all forms to individual children. This only occurred after training sessions had been conducted by the researcher to ensure the same high level of participant respect and consistency of the research protocol. In reviewing all these forms, one inconsistency was noted. A few child assent forms were returned signed by the adults. CHS personnel confirmed that this had occurred when a young child had participated after the child assent had been read out loud to him or her.

In addition to the child assent, participants were given the final set of items as generated by the content validation phase (See Appendix G). This was accompanied by the Abbreviated Connor-Davidson resilience scale for convergent validation (Vaishnavi, Connor & Davidson, 2007). The total test packet consisted of 106 short questions. It took older children, 4th & 5th graders, about 15-20 minutes to complete. Younger children, 2nd & 3rd graders, who read the instrument themselves, took 30-50 minutes to complete. The youngest children, 1st-3rd graders who had the measure read to them, took about 25-35 minutes with short breaks to complete.

Parent/ Caretakers. For parents who consented to the testing process, a packet consisting of the BERS-2 and a demographic information form about the child was provided. For children who participated in the school setting, the parent/caretaker packet was sent home in the child’s folder by teachers. To adhere to confidentiality standards, parents were asked to provide the child’s initials rather than a name and to return the information sealed in the security envelope provided. For children participating in the CHS setting, the packet was provided to parents/caretakers during an arranged block of time for the child’s testing and given to the researcher or caseworker. The BERS-2 was used for convergent validation purposes (see pages 43, 77 & 78). Additionally, demographic
data including gender, ethnicity, violence history, and date of birth were collected (See Appendix I). Approximately 66% of parents returned this information. In addition to the parent-returned demographic forms, the schools provided gender, age and ethnic data for an additional 46 children. Additionally, both parents and children were asked for date of birth information. This resulted in gender, ethnic and date of birth information for the large majority of the children.

**Resilience Narrative Analysis**

Before beginning the test, children were asked a general resilience question: “When something really hard happens, what helps you the most?” All general sample respondents and older focus group respondents were asked this question. The five older children in the focus group and the 208 children from the general validation sample were asked this question for a total of 213 children. Of these children, 158, or 74.2% responded. According to content, answers were clustered into 12 categories. These categories included:

- **Activities** included items such as sports, writing, music, and computer games.
- **Family** consisted of any mention of parents, caretakers or siblings.
- **Friends** included any mention of friends.
- **Help from People** incorporated those statements mentioning people in a general sense or listing several categories of friends, family, and/or community members.
- **Optimism/Hope** included statements such as “hope nothing bad happens.”
- **Problem Solving** comprised of answers such as “thinking and trying to figure out what to do, most of the time I get the solution.”
- **School** consisted of all statements relating to teachers, school or studying.
- **Self Regulation** included quotes such as “to calm down.”
- **Self Value** incorporated responses such as “I believe in myself.”
- **Spiritual Beliefs** consisted of statements such as “to meditate.”
- **Other-Positive** category was created to include unique positive things that children said helps them such as a pet, hugging stuffed animals, taking medicine and helping others.
- **Other-Denial/Negative** category included responses such as biting things, trying to forget, or saying they don’t know.

Two items were removed from the pool, as they were the description of the difficult thing that had happened, instead of what helped. For example, one child wrote “When I broke my finger.” This
resulted in a final sample of 156 responses. Following the clustering of each response into one of these respective categories, a frequency analysis was conducted.

**Data Management**

**Clerical error checks.** Consents and assents were checked again. These were then removed from their respective testing packets and placed in a locked location. Each packet was assigned a research number. Names accidentally written by either caretakers or children (rather than initials) were crossed out with black marker. The data was entered into the SPSS software (version 17). If a respondent circled adjacent numerical responses such as a 2 and a 3, the mean of those numbers, 2.5, was entered. However, if a respondent circled non-adjacent numbers, the item was treated as missing data. Before beginning any evaluative statistical analyses, the data was checked for errors and missing responses. Every 5th completed measure was compared with SPSS input. Although this procedure does not verify the complete lack of errors, nor is it fully representative in a randomized manner, it is pragmatically a very organized way to check the entry quality of a characteristic sample of the returned instruments. Descriptive statistics, including frequency counts, were then run on the SPSS software. Any case with outliers erroneously entered outside the Likert scale boundaries was fully re-checked for entry accuracy, and the outlier was corrected. This was the case for five of the children’s items and six of the parent responses. Finally, applicable test items were reverse coded.

**Missing data.** The data were checked for missing responses. Of the 212 returned cases, 51% had at least one missing item. Across frequency counts, no more than 20% of responses were missing for any one item. Allison (2002) suggests that items missing more than 5% of their responses may not be missing at random. Therefore, a missing data report was generated by the PASW Missing Values SPSS add on (SPSS, 2009). A pattern of missingness was noted. No item had more than 5% missing until the children were 16% of the way through the testing. The highest item was missing 14% of responses. This item occurred near the very end of the test. This pattern indicated possible fatigue in respondents as the test went forward. This gave strong support to remove items from the test as discussed later. In order to determine which items are low performing or redundant, and can be removed from the measure, statistical analyses must be conducted which require a full set of data. So, to deal with the missing data in the best possible manner, several considerations were made for missing data replacement.

Based on the observed patterns of missingness and the fact that items missing more than 5% of their responses may not be missing at random (Allison, 2002), Little’s test for determining if the
data were missing completely at random (MCAR) was conducted using PASW Missing Values (2008). MCAR refers to “missing data for which missingness does not depend on any of the data values, missing or observed” (Rässler, Rubin & Schnecker, 2008). The data were not MCAR. Therefore, several methodologies could not be employed including Expectation Maximization, Listwise deletion, or the deletion of the entire case from the analysis, is the most conservative solution. Three major problems arise with this solution: a) the difficulty in collecting data from children makes each case valuable, b) the data are not MCAR, and thus this approach becomes biased (Rässler, Rubin & Schnecker, 2008) and, c) the reality that those who miss answers still include important information, and may represent a certain dynamic in the population. Therefore, it is extremely important to keep as much data on the other items as possible. It was determined, therefore, that listwise deletion would be used in cases with no answers on the TRS-C. Four cases, therefore, were deleted from all analyses resulting in a total sample of 208. Cases in which parents did not return BERS-2 testing or demographic data were deleted from relevant convergent validation analyses, resulting in a total sample of 138 for the BERS-2 subscale related investigations. The BERS-2 Key Questions related to Activities ended up with 131 responses and Friends had 128. Caretakers who wrote in the school for which a child is zoned, used in the Community analyses, totaled 111.

Authors have run simulation studies with missing data on Likert type scales. They have found that mean replacement did not impact certain psychometric analyses if no more than 20% of data are missing for each item and simultaneously, no more than 20% of respondents have any missing item (Downey & King, 1998). Many more than this, 51% of the children had at least one missing item. Therefore, mean replacement was not a good option.

For the next options, the data are assumed to be missing at random (MAR) or, “the probability of a unit responding to an item depends only on …observed values but not on any missing values” (pp.371, Rässler, Rubin & Schnecker, 2008). Series mean replacement is an option where the mean of all responses to a particular item are calculated and used to replace all missing data. Although this can affect the variances and covariances in a biased manner for factor analyses, simulation studies have found this to be a viable option, having little effect on standard deviations, inter-item correlations and reliabilities, if the above-mentioned criteria are both met with a fairly large sample. Pairwise deletion computes the required statistics such as covariances with only the available cases. However, these estimates may be seriously biased if the sample is not fully random.
Pairwise tends to be a better choice when correlations among the variables are low. Listwise deletion tends to be better when these correlations are high (Kim & Curry, 1977). TRS-C items, as discussed later, had quite high correlations, especially within domains. Another option is to impute the missing data with a single imputation, such as a regression equation based on the other responses on that item. The predicted regression line value is then substituted for any missing values. This can be complicated with psychometrics, as it may become important to consider all the responses within a particular subscale. Although this is predominantly unbiased in a large sample, the estimators are not entirely efficient (Allison, 2002). Using generalized least squares can accommodate for this. Yet, all the aforementioned procedures still produce standard errors that are underestimated and test statistics that are overestimated.

The techniques of ML and MI solve many of the problems as outlined with the other methods. ML of the missing scores can be calculated with the help of LISREL software (Jöreskog & Sörbom, 2003). The only problem that occurs with this method is when the data are not linear. Imputation procedures are beneficial because they include random draws of the missing values, and all observed values are taken into account to the extent possible. This helps to confirm that the missing data are MAR and that the analyses based on this assumption are valid (Rässler, Rubin & Schnecker, 2008).

Multiple random imputation seems to be the best solution to minimizing bias. It preserves the benefits of imputation procedures and, at the same time, allows for uncertainty due to the imputation process to be assessed (Rässler, Rubin & Schnecker, 2008). It adds random draws from the residual distributions of each imputed variable and adds those random numbers to the imputed values. This is done several times. The variability across imputations is used to adjust the standard errors to be unbiased (Allison, 2002). Utilizing Data Augmentation software (Schafer, 1997) the variability can be converged with the use of Bayesian statistical procedures. The SAS 9.2 software manual (2007) was consulted, and the software was used to impute the data using a Monte Carlo Markov Chain (MCMC) Analysis. This type of analysis is preferable when the data are measured on a continuous scale and not monotone – missing one variable does not indicate that all further variables are also missing. This method generates the multiple imputations by drawing from a Bayesian predictive distribution. As few as three imputations can be adequately predictive, due to the fact that the imputation relies on the missing data to solve the problem, and because the Monte Carlo error is “a relatively small portion of the overall inferential uncertainty” (pp. 107, Schafer, 2000). Furthermore, combining the imputations account for Monte Carlo error.
Data for all numerical indicators were imported from SPSS into SAS. The analyses were programmed to begin with a random seed, to produce five imputations and to restrict the minimum and maximum imputed values to those actually possible as responses. Unfortunately, the computer analyses would not converge, even when the maximum iterations was set to a high of 500,000,000. Therefore, the researcher set the software allowing imputed output data to be replaced outside the possibility for a real response. Following convergence of the five imputed data sets, the researcher recoded the data remaining below or above a possible response to the actual TRS-C minimum or maximum response. According to Schafer (2000), the MI point estimate of the five data sets is simply the average of the complete-data point estimates. SAS and SPSS MI procedures only combine the resulting five data sets for use when performing certain analyses. LISREL uses Estimation Maximization when calculating the missing data, which assumes the data are MCAR as the prior for MI procedures. Therefore, the data had to be combined manually through Microsoft Office Excel (2007). The original data and all five imputed data sets were copied into and Excel file. Every missing data point was replaced with the average of the data point from the other five imputed data sets. Combining the data points before analyses is a less than optimal solution. Although only trivial differences should be noted in the point estimates of statistical results, the standard error of parameter estimates are most likely underestimated. However, with statistical consulting, and the lack of access to programs that calculated the point estimates following the analyses, it was determined to proceed in this manner.

Psychometric Analyses

Assumptions. Items were tested for possible assumption violations regarding several of the required statistical analyses using SPSS (version 17.0). As explained before, the data were analyzed for MCAR and were not missing completely at random. Several potential analytical procedures require normality as a basic assumption. To test for normality at the item level, skew and kurtosis coefficients were tested. Due to the goal of removing items from the measure to make it more child-friendly, items with skew more extreme than $+3$ and/or kurtosis more extreme than $+10$ were considered for removal. Six items were flagged for removal for skewness, ranging from 3.1 to 3.96. Six items were flagged for removal for kurtosis, ranging from 10.1 to 16.7. Five of these items demonstrated both skewed and kurtotic properties. These items were also considered for removal in order to use parametric procedures at the item level. To test error by regression comparisons of the squares of predicted values and actual scores, Tukey’s test for nonadditivity was calculated before

87
and after item removals. To further test assumptions for statistical tests, Levene’s test for equality of variances and Shapiro-Wilk W for normality were calculated at the scale and subscale level for the final item pool. The testing indicated that assumptions appeared acceptable, except significant departures from normality occurred at the subscale level (see p. 108 for results). This impacted the choice of some statistical processes. Non-parametric alternatives based on ranks have been found to outperform parametric alternatives with Likert scale data across varying sample size and alpha levels (Nanna & Sawilowsky, 1998). Additionally, Leech and Onwuegbuzie (2002) overview the non-parametric literature stating, “when assumptions are not met, using a parametric statistic likely will generate invalid results” (p. 10). In addition to working well with unknown distributions, nonparametric tests are generally not affected by smaller sample sizes. Even when normality is met, the non-parametric tests used in this study have a high relative efficiency. However, when the distribution is not normal, they are likely more efficient than the parametric counterparts (Leech & Onwuegbuzie, 2002). Therefore, when possible, appropriate non-parametric tests were used when comparative parametric tests assumed normality and analyses were being conducted at the subscale level. At the item and global level, parametric alternatives are reported when reasonable.

For structural equation modeling, beyond item removal decisions applied at the item level, Hu and Bentler’s (1998) recommendations were consulted for the subscale divergence from normal. In addition to performing well with smaller sample sizes, the ML based Tucker-Lewis non-normed fit index (NNFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA) are less sensitive to distribution problems. The authors’ recommendations of definitely using standardized root mean square residual (SRMR) and coupling this calculation with other recommended fit indices for the best assessment of model fit were followed.

Redundancy. Before running reliability analyses, the items were checked for repetitive content. Inter-item correlations were produced for all items. Every correlation was scrutinized for correlations above .700. Based on content and input from a respondent in the general validation sample, one of two items was flagged for removal from the item pool.

Reliability analysis. It is important to know whether the test items consistently test the particular domain they were designed to test. Reliability is “the proportion of variance attributable to the true score of the latent variable” (DeVellis, 2003, pp.27). Analysis of the measure for internal consistency or the correlation between two parallel portions of this test was conducted. The Spearman-Brown formula can be utilized, but it assumes that the components are parallel, which can
be problematic. Coefficient alpha, the theoretical average of all possible split-half reliability coefficients, is a lower bound estimate of reliability. It has a more relaxed assumption of tau-equivalence or true score equivalence that the items “measure the common property equally sensitively” (McDonald, 1999, pp.85). Therefore, coefficient alpha was calculated using SPSS (Version 17.0) to test reliability for the global concept of resilience and for each subscale. Reliabilities were first calculated on the full item pool. Then, the items flagged for skew, kurtosis, and redundancy were removed. The reliabilities were calculated again. To further reduce the item pool for the final measure, an alpha if item deleted was calculated to help determine questions that diverged from the subscale item responses enough to negatively influence the entire reliability of the scale or subscale. Items that either negatively impacted the reliability or had minimal effect on the outcomes were flagged for removal.

One problem with coefficient alpha is the underestimation of alpha when the scale is multidimensional (Osburn, 2000). It also becomes an underestimation of true reliability if tau-equivalence is not met. Coefficient omega or the ratio of the variance due to the common attribute to the total variance of a single factor model is an option (McDonald, 1999). Although tau-equivalence is not an assumption of coefficient omega, the procedure assumes the congeneric assumption, or that the components are measuring one latent trait (Kamata, Turhan & Darandari, 2003). Because the TRS-C is designed with several subscales, a multi-dimensional reliability indicator should be calculated for the global score. Options include maximal reliability; an extension of the Spearman-Brown formula; multidimensional omega, an extension of coefficient omega; or stratified alpha. Stratified alpha is a good indicator of true reliability across situations when the factor structure is multi-dimensional (Kamata, Turhan & Darandari, 2003; Osburn, 2000). If stratified alpha is higher than coefficient alpha, it lends support to the multidimensional nature of the TRS-C. As multiple factors were proposed as the foundation of the scale, it was calculated for the global score to accommodate the multidimensionality.

**Factor analysis.** As reported later in the discussion of the results of these procedures, final item pool reliabilities demonstrated acceptable ranges. Therefore, it became appropriate and important to examine whether or not the work of exploring the literature, consulting experts and interviewing children to form distinct domains could be supported when assessed with large numbers of children. To do this, a confirmatory factor analysis (CFA) was computed to assess the loadings of items into subscale groupings. A multiple group method of CFA was used as a
second step in confirming the multi-dimensional nature of the TRS-C (Nunnally & Bernstein, 1994). First, the items intended for each subscale were loaded together in rows for examination of bivariate correlations with hypothesized subscale scores. It was hypothesized that item responses would correlate more strongly with their intended subscale scores than with scores for other subscale domains. Then, items were analyzed along columns. The hypothesis in this case was that responses to items intended for a particular subscale would correlate more strongly with their own subscale than responses to items intended for other subscales. Nunnally & Bernstein (1994) advise that correlations of factors with scale scores can be considered moderately high when they fall around .60. Therefore, correlations were also analyzed for this indication of the strength of item/factor loadings. Items appearing problematic, in that a domain is not clearly established by a particular item, were flagged for removal from the item pool in an effort to strengthen the resulting subscale reliability and overall factor structure. Both a parametric, Pearson’s correlation, and a non-parametric measure of association, Spearman’s Rho, were utilized to support the removal of items that did not demonstrate a clean factor structure. Alpha coefficients as outlined previously were recalculated on the new item sets.

To look at model fit of the data to the proposed factor structure, structural equation modeling (SEM) was employed through the use of the LISREL (Version 8.8) software. A path analysis was formulated indicating each item in a subscale would contribute to their respective subscale. Fit function outputs were reported and discussed. A ML estimation fitting function was conducted. When it is close to zero, it shows a model that fits the observed variances and covariances well (Tate, 1998). Covariance residuals are reported. The global assessment of model fit was assessed using the \( \chi^2 \) statistic. This is used to determine if the differences between the reproduced covariances and the observed covariances could have occurred by chance alone. As discussed previously, specific analyses that perform well with a smaller sample size were the basis of determining model fit. All applicable analyses were calculated based on the ML. The root mean square error of approximation (RMSEA) was used to measure the discrepancy between the reproduced and observed covariances per degree of freedom. The comparative fit index (CFI) measures “how much better the model fits, compared to an independence model” (Tate, 1998, p.191). The Tucker Lewis non-normed fit index (TLI) uses the chi square to degrees of freedom ratio to assess the proposed model in relation to the null model (Abell, Springer & Kamata, 2009). Although Hu & Bentler (1998) suggest a fit close to .95 is optimal, values of .90 and greater are assumed to represent an acceptable fit for CFI and TLI.
(Abell, Springer & Kamata, 2009; Tate, 1998). A ratio of the chi-squared statistic to the degrees of freedom below 2 or 3 is also considered an acceptable fit. The standardized root mean square residual (SRMR), a strongly recommended goodness of fit indicator appropriate for this sample, was calculated (Hu & Bentler, 1998). Abell, Springer and Kamata (2009) suggest that a value less than 0.10 allows a researcher to suppose a good fit has occurred between the data covariance matrix and a covariance matrix created based on estimated parameter values. However, none of these fit indices alone are definitive in the decision process about a scale (Hu & Bentler, 1998; Tate, 1998). All indices were addressed as portions of information that when taken together as a whole give the researcher a clearer picture of the model assessment.

The standardized covariance residuals were calculated and assessed. Values larger than 3.0 can be an indication of a model misfit that is not due to chance alone (Tate, 1998), and that other models or missing variables must be explored. The modification indices are reported by the LISREL output as identifying possible paths from latent to observed variables to be added to the model. These are reported as the amount of decrease in chi squared. High amounts of this indicator relative to other items may be an indication for need to remove or change the path of an item. No changes of items to other domains were supported theoretically. Therefore, no items were flagged for path changes. Guided by the LISREL output, the researcher used LISREL syntax allowing flagged error co-variances to correlate, each within its own subscale, if the modification indices predicted a statistically significant reduction in the resulting chi squared analyses by 10 or greater. Correlation suggestions between differing subscale covariances were not allowed to correlate. Additionally, subscales that correlate with each other, above .70 may need collapsing into one latent variable if supported by theory as well. Two subscales, Problem Solving and Hope correlated above this threshold; however, the researcher determined that no action would be taken as the items represented theoretically distinct concepts.

A major limitation of structural equation modeling is the assumption that residuals or missing variables are not correlated with the present variables (Tate, 1998). As the field of protective factors associated with resilience to violence in children is quite new, missing correlated factors may very well be affecting the model. Ultimate decisions, therefore, were not made solely on the outcomes of this procedure. Instead, item subscale location and retention decisions were made in conjunction with the other statistical procedures outlined.
**Standard error of measurement.** To lend support to the final factor structure and recalculated reliability testing, the standard error of measurement was used to estimate the standard deviation of the random error in the measured value of protective factor attributes along the subscales and global score compared to respondents’ possible true scores (McDonald, 1999). With this information, confidence intervals (CI) were calculated to determine the range of a respondent’s true score with 95% confidence. These confidence intervals are useful because they can be utilized to look at the estimated range of a given respondent’s true score.

**Item changes.** Based on the overall statistical data and conceptual pertinence, an item or items may be appropriate for changes based on the statistical information provided by the respondents about the item(s). Items were flagged for removal when deemed problematic based on statistical analyses calculated in the following order: skewness, kurtosis, redundancy, reliability indicators of alpha if item deleted, multiple group method CFA, and structural equation model outputs. Theoretical item relevance was considered at each step. The ultimate goal was to have five to seven questions for each domain to keep the measure manageable for children in both research and clinical settings. For a full overview of item removal decisions, see Table 8. After changes were determined, major statistical procedures were run again. Statistical reports are presented, utilizing the final item pool unless otherwise labeled.

**Convergent and discriminant construct validation.** In order to assess whether the measure tests what it was thought to test, the perceived presence of protective factors related to children’s positive adaptation, several measures of external convergent construct validity were conducted. Two strengths or resilience measures were used to assess the TRS-C. The BERS-2 parent report version, rather than the youth self report, was used to reduce fatigue on children during testing. The BERS-2 original psychometric study reported a global reliability of .95 with all subscales above .80 (Epstein, 2004). Reliabilities were calculated on the current sample. Association between the TRS-C global score and the BERS-2 global Strengths Index was hypothesized to be positive and significant as both scales are multidimensional measures of positive aspects in a child’s life. The Abbreviated Connor-Davidson resilience scale (CD-RISC 2) is a two item self-report assessment of general resilience (Vaishnavi, Connor & Davidson, 2007). It was also correlated with the global TRS-C score and hypothesized to be positive and significant. On the global scale, which had few assumption violations, a Pearson’s product moment correlation and \( r^2 \) were calculated with known related measures as hypothesized.
Prior to any calculations, BERS-2 subscales and Key Questions were scrutinized for similar item level and overall subscale conceptual content related to TRS-C subscales. As both the TRS-C and the BERS-2 are measures of positive aspects in the child’s life, all compatible content was hypothesized to be positively and significantly correlated with each other as outlined on pages 77 and 78. At the subscale level, TRS-C mean score normality was not met consistently. Additionally, not all indicators were on an interval scale. The Spearman’s rho or $r_s$ is a non-parametric calculation that measures the strength of association between two variables. Requiring only ordinal level data, Spearman’s rho is computed like the Pearson product moment correlation, except it is based on ranks (Siegel & Castellan, 1988). Therefore, it can be useful in comparing the outcomes with any parametric correlations. Spearman’s rho was calculated between: a) the appropriate mean score TRS-C constructs and b) BERS-2 subscale means and other ordinal indicators representing the subscale conceptual definitions. The BERS-2 Activities and Friends Key Questions were converted to ordinal data by entering the number of activities and friends listed by parents on the BERS-2 form. For the categorical hypothesis that the child’s neighborhood/school for which the child was zoned would be associated with the Community Safety and Support domain, the more appropriate measure of association, Goodman and Kruskall Lambda statistic, was chosen. This statistic is an asymmetric index of association, assuming nominal level data. It is useful for assessing the “relative reduction in error in predicting one variable” in this case the Community Safety and Support score, “when another is known” (Siegel & Castellan, 1988, p. 299). In this case neighborhood/school zone is the known antecedent.

It is important to assess whether or not the measure discriminates when non-related items are compared to it. Analysis of the measure for external discriminant validity was assessed with the chi square test, due to the categorical nature of the variable, test administration/location. Because of the theoretical concept that the clinical and non-clinical sites would be different, they were compared separately. The test administrations were coded separately for each location (School or CHS division) and differing waves of administration (Spring and Fall). It was hypothesized that site location also coded by time of year administered would not significantly correlate with any TRS-C subscale. The chi square test is a non-parametric test that can be used with nominal level data. A limitation is that the expected frequencies should be large enough to meet the assumptions of the chi squared statistic in that only 20% of the cells in the contingency table have values less than 5, and no cell has an expected frequency below 1. When run, this violation was present across subscales;
therefore, given the assumptions, the more powerful asymmetrical Kruskal-Wallis analysis of variance was calculated for each TRS-C subscale and global scale. It tests the null hypothesis that each test group is equal but comes from an unknown distribution. When all assumptions are met for parametric alternatives, The Kruskal-Wallis is very powerful in comparison, with a 95.5% robustness (Siegel & Castellan, 1988).

Under the assumptions of classical test theory, that the mean of observed scores are a summation of the true domain score plus error, omega can be defined as the squared correlation between the test score and the domain score. Internal convergent construct validity coefficients can be determined by calculating the square root of the omega. This gives us the correlation between the observed test score and the domain score or true score in classical test theory. To lend support for internal discriminant validity, items of the same construct should have higher validity coefficients between the true score and the observed score on the same subscale than on the other subscales where correlations between items and irrelevant constructs are low (McDonald, 1999). Although there is not a rule of thumb for magnitude in this comparison, consistent differences lend further support to the multidimensional structure of the TRS-C and its ability to discriminate between subscale constructs.

Differences between groups. To control for the possibility of confounding variables and to look at real differences between groups, four groupings were assessed: gender, ethnicity, age and testing location/administration (See Table 14). Test location/administration, tested as an external discriminant validity factor, also assessed for the confounding variable of children who experienced testing in differing locations and time periods (see Table 13). Since the normality assumptions were violated at the subscale levels, the non-parametric Kruskal-Wallis analysis of variance was calculated. This test was chosen because it tests for differences between more than two group options when the data are from an unknown distribution and are at least ordinal in level. As discussed, it is a very powerful non-parametric test compared to parametric alternatives when all assumptions are met (Siegel & Castellan, 1988) and is likely more powerful when assumptions are not met (Leech & Onwuegbuzie, 2002). Eta² effect sizes were calculated by a formula using information generated from Kruskal-Wallis calculations.

The hypotheses that subscale and global test scores would not be biased and therefore, would not significantly differ across the groupings of age, ethnicity and gender was also tested (see Table 14). The Kruskal-Wallis test was used for age and ethnicity. Gender, containing only two groupings
was tested by the more appropriate, Wilcoxon-Mann-Whitney test. This test is “one of the most powerful non-parametric tests” (Seigel & Castellan, 1988, p. 129). When all assumptions are met, this test becomes slightly more powerful than parametric alternatives under certain conditions. To test for concurrent criterion validity of the TRS-C, differences were assessed between the clinical and non-clinical samples. This hypothesis was also tested using the Wilcoxon-Mann-Whitney. Effect sizes were calculated for Gender and Clinical groups through the use of the probability of superiority ($PS$) statistic as it is highly robust with nonparametric data (Erceg-Hurn & Mirosevich, 2008). The $PS$ is calculated using the Wilcoxon-Mann-Whitney Statistic. It reflects the probability that a score from one population is larger than the score from another population.

**Scoring/ descriptive summary.** The descriptive statistical properties of the final scale were analyzed. This gives an overview of the data set to the reader (See Table 15). Mean and median scores for each of the final subscales and the final global scale are reported. Standard deviations and variances are also reported. Percentiles listed by mean scores are reported for interpretation of individual mean scores.
CHAPTER FOUR
RESULTS

Phase One: Initial Instrument Design and Development Groups

Adult Expert Panel

Considering the overall mean rating scores and the domain reflection mean scores, the two lowest performing items for each domain were removed except for two domains that contained fewer questions and removal scores were not as low. For these two domains, one question was removed for each domain. The item pool was reduced by a total of 18 items (see Table 2). Remaining items which fell under the thresholds on mean clarity but remained higher on mean domain reflection were highlighted to look at expert comments about changes in wording. They were also highlighted in the Rewording section of the children’s focus group forms. In doing so, the upcoming children’s comments about possible wording problems could be closely monitored for these particular questions.

Children’s Focus Groups

Resilience narratives. All older children responded clearly to the prompt about what helps them the most through hard things. Four children responded that talking to someone helped them the most. Three of these children mentioned staff members at the facility; one said a step-parent helped the most. One of these children also said that meeting together and talking about their feelings really helped. Another of the four added, “I keep it safe.” The other child said that writing in her diary and doing normal activities helped the most. She became very specific and wrote down a list of the things that help her to feel normal including going to the zoo or an activity center. She also said that helping the children find good clothes, shoes and doing their hair would help them feel more normal when going through hard things. It was very important to her that this information be included in the research so that adults know that this was vital for children to feel normal again.

Ratings. Scoring from each child was entered as 1, 2 or 3 into a spreadsheet. The mean scores and the standard deviation for each item were calculated. Items performing below a mean of 2 were highlighted for strong consideration of removal or rewording. Items with a calculated mean of exactly 2 were highlighted for possible removal or rewording.
Item Removal and Rewording

Children’s item mean rating scores were compared with adult ratings (see Table 2). In addition to the items already removed following the adult panel, items performing marginally with both groups were removed. Items performing inconsistently were considered for rewording. The comments of the adults and children’s narratives were stacked by item and consulted while making decisions about flagged items for inconsistent mean ratings. Items in which two respondents gave a similar recommendation for rewording were changed to match the suggestion. For example, in the domain Self Regulation two expert panelists independently rewrote the question in the exact same language, “I can talk about sad feelings.” This item was reworded and remained strong throughout all analyses. Items which the children said were confusing were rephrased after consulting the adult wording suggestions. The goal was to remove a large portion of the items to make the scale feasible for children in one sitting rather than two. After considering the responses from all the respondents and acknowledging the protective factor literature, 59 items, or a little over a third of the items were removed, and 28 were reworded.

Table 2

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*Note.* MRD= adult mean rating on item reflection of domain, MDA= adult mean rating on item developmental appropriateness/clarity, RMV = Removed the lowest performing items on each subscale following adult ratings and did not give to children’s focus groups.

SV= Self Value, SR = Self Regulation, O = Optimism / Motivation, PS = Creative Problem Solving, SB = Supportive Belief Structure, FA = Family Support / Healthy Caregiver, PR = Supportive Peer Relationships, SC = Supportive School / Academic Functioning, AC = Activity Involvement / Active Diversion, C = Community Safety and Support

**Consequences as a Source of Validity**

The children clearly marked some of the items as bad questions to ask other girls and boys about what helps them. However, the children did not appear to exhibit any outward manifestations of stress as a result of the items in a general sense. A few began to show a little fatigue, and thus took breaks due to the length of the test. Nonetheless, they helped to pare down the test by over a third, so this issue would become less of a problem in the general population.

The children all said that the test was a good experience in a general sense. Some went further. One said the test “feels good” and helps children, “thinking about feelings.” Another said that it “helped with strategy for what other kids might ask about.” One child worried that some of the questions might make a kid feel bad because, “not all kids have the same opportunities.” One responded that the questions might help children know, “how to make their
lives better.” The test, according to these two focus groups, appears to have more positive than negative consequences during administration.

**Preliminary Conclusions**

The procedure described above provides evidence of content validity resulting in a measure demonstrating: a) that the items reflect each of the domains contributing to resilience following violence, b) that the items are clear and understandable for children in the target population for this measure, and c) that children appear to have mostly positive reactions to the administration of this test. At the end of phase one of this study, the item wording was deemed stable, with an expectation for further item removal based on subsequent quantitative results. Therefore, at this point, the test was ready for phase two, the dissemination of the test to children in elementary schools and children at clinical sites for full validation and reliability testing.

**Phase Two: Full Validation Sample Analyses**

**Resilience Narrative Results**

The clustered responses of the children’s narratives to the resilience question yielded results outlined in Table 3. Activities were mentioned the most frequently. However, when mentioning supportive relationships, the children did not always specify the exact relation of the person that helps them. If all relationships (Family, Friends and a Person in General) are taken as a whole, fully 1/3 of the children stated that a relationship helps them through hard things, representing the highest total frequency of any other category totaling 52 responses.

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<td>Help from a Person in General (Did not clarify or listed multiple: friend, family, community member)</td>
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Table 3

*Qualitative Resilience Responses: In Order of Frequency*
Table 3 continued

*Qualitative Resilience Responses: In Order of Frequency*

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<tr>
<td>Other-Denial or Negative</td>
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<td>Friends</td>
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<td>Hope</td>
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<td>School/Teacher</td>
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<td>Spiritual Beliefs</td>
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<tr>
<td>Self Value</td>
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<td>.6%</td>
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**Demographics**

The gender of the children was very close to an even split. Children from several ethnicities were represented in the sample, lending support to the data applicability to diverse ethnic groups. A little over half of the children represented ethnic minority groups. According to the U.S. Census (2009) estimates of 2008, 12.8% of the U.S. population is of African American descent, 15.4% claim Hispanic origin, 4.5% are Asian and 1.7% are from two or more races. This study appears to proportionally represent major ethnicities present in the United States. Of those children (n=138) whose caretaker filled out the demographic forms, a total of 22.5% had experienced some type of violence, with the majority reporting domestic violence. Although 6-11 year olds were the targeted population, the sample ranged from 6-12 years of age. The twelve year olds came from a few children in the fifth grade classes who were older. The mean age of the sample was 9.43 years (standard deviation: 1.47).
Table 4

*Demographics of TRS-C General Validation Sample*

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<tr>
<td>Other</td>
<td>8</td>
<td>4.8%</td>
</tr>
<tr>
<td><strong>Violence History</strong></td>
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<tr>
<td>Domestic Violence</td>
<td>19</td>
<td>14.3%</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>5</td>
<td>3.8%</td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>13</td>
<td>9.8%</td>
</tr>
<tr>
<td>Other Life-Threatening</td>
<td>12</td>
<td>9.0%</td>
</tr>
<tr>
<td>Total Reporting at least one</td>
<td>30</td>
<td>22.5%</td>
</tr>
<tr>
<td>type of violence</td>
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<td>36.1%</td>
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<tr>
<td><strong>School Provided Information</strong></td>
<td></td>
<td></td>
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<tr>
<td>Parent/Caretaker Participants</td>
<td>138</td>
<td>66.3%</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;-5&lt;sup&gt;th&lt;/sup&gt;</td>
<td>1.47</td>
<td>Mean age:</td>
</tr>
<tr>
<td>Graders Date of Birth</td>
<td></td>
<td>9.6%</td>
</tr>
<tr>
<td>Age Range: 6-12</td>
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<td>9.43</td>
</tr>
</tbody>
</table>

*Note.* Valid Percent equals the percent of each demographic characteristic within non-missing data.

**Missing Data**

Due to the fact that the data were not MCAR, a combination of listwise deletion and multiple imputation techniques were employed. Listwise deletion resulted in the removal of four cases in which the children did not complete any questions. This resulted in a decrease in the sample size from 212 to 208. The multiple imputation using the Monte Carlo Marov Chain method created five data sets for the TRS-C. The mean of the five imputed values for each missing item was used as the final missing value replacement. Following this technique, all TRS-C analyses used this imputed data set. Although the BERS-2 missing data was imputed using information from the complete data set in the same manner as the TRS-C, for convergent validation analyses, listwise deletion was used for any case that contained no BERS-2 data. The remaining data contained the MI imputed data.
from before the listwise procedure was employed. This reduced the data set from 208 to 138 respondents in the BERS-2 external validation analyses.

**Assumptions**

In order to reduce the length of the test and to support the use of structural equation modeling (SEM), which assumes item level normality, it was determined that all items demonstrating unacceptable skew and/or kurtosis statistics would be removed from the final measure. According to Kline’s (2005) recommendations for SEM, items with skew at an absolute value of 3.0 or greater and a kurtosis absolute value of 10.0 or greater were removed (see Table 8). This resulted in the removal of seven items across four domains. With these removals, parametric measures which assume normality at the item level were conducted, such as ML based SEM.

Testing for assumptions related to reliability, Tukey’s test was calculated on the final scale items. The calculations did demonstrate significant additivity on the majority of subscales and the global scale. According to Zimmerman, Zumbo & Lalonde (1993), this means that coefficient alpha underestimated the reliability on these tests. Reliability testing, although calculated as an outcome goal of the research, also confirmed the unidimensionality assumption. Levene’s test for departures from homogeneity of variance was not significant for any subscale nor for the global subscale. However, departures from normality at the subscale and global scale levels were found to be significant by the Shapiro-Wilk W test as well as the Kolmogorov-Smirnov test. Therefore, the data do not fall in a normal distribution. Taking a closer look, using skew and kurtosis indicators, the global scale was acceptable with a skew of -1.2 and a kurtosis of 1.7. Yet, some subscales demonstrated higher kurtosis, ranging from 3.2 to 5.2. Therefore, as discussed on pages 99 and 101-103, less distribution dependent, non-parametric measures are reported for correlation and mean comparisons which take place at the subscale level.

**Redundancy**

Inter-item correlations were used to flag items with possible redundancy and begin the confirmatory factor analyses process. Items were scrutinized which correlated with each other above the .700 threshold indicating that a possible redundancy existed. Two items within the same domain correlated with one another well above all other item correlations at .725. Additionally, the researcher recalled being asked by a child during the test administration if the two items were asking the same question. The items were “When I get upset, I can calm myself down” and “I can calm myself down.” Therefore, based on content, one of these items was removed.
Reliability

The global scale and all subscales were tested for reliability using coefficient alpha and stratified alpha (Cronbach, 1951; Cronbach, Shonenman, & McKie, 1965). Alpha if item deleted was calculated using SPSS (version 17) software. This was used to further look for possible item removals from the scale. Items that either improved or had the lowest impact on the alpha at the subscale level were removed. According to Abell, Springer & Kamata (2009), in the past thresholds as low as .60 could be considered useful in scientific research. More recently, however, nothing below .70 is considered an acceptable reliability. According to Cortina (1993), alpha levels above .80 indicate that there is an acceptably small variance specific to individual items within each subscale. Additionally, Nunnally and Bernstein (1994), recommend that when a score is being used with individuals, a higher threshold of .90 should be applied. Therefore, item removal decisions were made keeping these thresholds in mind. Nevertheless, final item removal decisions were made looking at the entire psychometric strength of the test, not solely reliability as outlined in Table 5. Based on the reliability analyses, 14 items were removed and two were flagged for possible removal based on further psychometric consideration See Table 8. During item removal decision processes, the first priority was overall psychometric strength of the measure. Nearly as important was removal of as many items as possible to respect children’s short attention span. For parsimony, some alpha coefficients are lower in the final item pool, without dipping below acceptable standards.

Table 5

Reliability Analysis

<table>
<thead>
<tr>
<th>Scale</th>
<th>Initial Reliability Analysis</th>
<th>Resulting Reliability Analysis</th>
<th>Standard Error of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cronbach’s Alpha</td>
<td>Final item pool</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Initial Item Pool</td>
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<tr>
<td></td>
<td>104 items</td>
<td>64 items</td>
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<td>.95***</td>
<td>.097</td>
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</tr>
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<td>.72*</td>
<td>.284</td>
</tr>
<tr>
<td>Self Regulation</td>
<td>.74*</td>
<td>.77*</td>
<td>.445</td>
</tr>
</tbody>
</table>
Table 5 continued

Reliability Analysis

<table>
<thead>
<tr>
<th>Scale</th>
<th>Initial Reliability Analysis</th>
<th>Resulting Reliability Analysis</th>
<th>Standard Error of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cronbach’s Alpha</td>
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<td></td>
</tr>
<tr>
<td>Optimism/Motivation</td>
<td>.83**</td>
<td>.85**</td>
<td>.299</td>
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<tr>
<td>Problem Solving</td>
<td>.77*</td>
<td>.84**</td>
<td>.307</td>
</tr>
<tr>
<td>Supportive Beliefs</td>
<td>.84**</td>
<td>.82**</td>
<td>.273</td>
</tr>
<tr>
<td>Family Support</td>
<td>.83**</td>
<td>.78*</td>
<td>.263</td>
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<tr>
<td>Peer Relations</td>
<td>.76*</td>
<td>.82**</td>
<td>.335</td>
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<td>Academics</td>
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<td>.80**</td>
<td>.298</td>
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<td>Community Support</td>
<td>.69</td>
<td>.81**</td>
<td>.390</td>
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</tbody>
</table>

Note.***Alpha above .90, **Alpha above .80, *Alpha above .70,

Initial and final scale and subscale reliabilities as reported in Table 5, demonstrate that the
global TRS-C falls well above the .90 threshold and can be used with confidence, from a reliability
standpoint in making individual decisions. Additionally, all subscales fall above the.70 threshold, the
lower bound of acceptable reliability credible for research (Abell, Springer & Kamata, 2009)
with the large majority, seven out of 10 subscales, demonstrating reliabilities above .80.
When the stratified alpha is higher than coefficient alpha, it is an indicator that “correlations among components in the subtests are high and correlations among components in different subtests are low” (Osburn, 2000, p. 347). Stratified alpha was calculated using the following formula (Abell, Springer & Kamata, 2009):

\[
\alpha_{\text{stratified}} = 1 - \frac{\sum_i \sigma^2_{Oi} (1 - \alpha_i)}{\sigma^2_x}
\]

\(\sigma^2_{Oi}\) = variance of the total score for the \(i^{th}\) subscale  
\(\alpha_i\) = the coefficient \(\alpha\) for the \(i^{th}\) subscale  
\(\sigma^2_x\) = variance of the total global score

As calculated, the stratified alpha was .96. As a more accurate reliability indicator of multidimensional scales, this a) adds support to the multidimensional nature of the test, and b) indicates an even stronger overall measure that can be utilized across all major settings with confidence. The expected variation of the true scores is calculated by the Standard error of measurement. It is the theoretical “personal distribution of possible observed scores around the subject’s true score” (Abell, Springer & Kamata, 2009, p.95). This measure was calculated and reported for each subscale in Table 5.

**Confirmatory Factor Analyses**

Several analyses were conducted to assess the multidimensional properties of the TRS-C. As discussed, the content validation phase was used to formulate the items as they fall into distinct domains. Additionally, the increase in stratified alpha (to .96) from the coefficient alpha (.95) supported, at a basic level, the multidimensional nature of the TRS-C. The Nunnally and Bernstein (1994) multiple group method was used to both support item removal decisions and to further confirm the factor structure of the TRS-C. Based on both Pearson Product Moment and non-parametric Spearman’s Rho correlations, all items were tested for factor loading. Two items flagged for marginal contribution to reliability also had problems with domain loading. This included one item from the Problem Solving domain and one item from the Supportive Community domain. These items were immediately removed. Additionally, five items had problems with proper domain loading along columns: one from the Self Value domain, three from the Optimism/Motivation domain and one from the Problem Solving domain. One of these
items from the Optimism/Motivation scale was only low performing on the nonparametric grid. These were all removed. Although no items fell below the .400 correlation threshold within their own subscale, items were assessed for those that were the lowest correlation along their subscale, and did not harm the integrity of reliability. For being the lowest correlation on their subscale domain, 11 items were removed. As reported in Table 6, with the final 18 item removals based on CFA correlations in place, all items demonstrated stronger association with their own subscale mean compared to other subscale means along the columns. Additionally, along the rows, each individual item mean correlated with its own subscale mean stronger than other subscale means. Finally, correlations above .60 are considered a strong indicator of the subscale consistency (Nunnally & Bernstein, 1994). Correlations showed that the large majority of items (85%) correlated within their own subscales above this threshold. All others were near this mark, falling between .527 and .599. These multiple group method results demonstrate a strong confirmation of the outlined multidimensional domain structure of the TRS-C.

Table 6

Multiple Groups Method Final Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Self Value</th>
<th>Self Regulation</th>
<th>Hope</th>
<th>Problem Solving</th>
<th>Supportive Beliefs</th>
<th>Family</th>
<th>Friends</th>
<th>School</th>
<th>Activities</th>
<th>Community</th>
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**Multiple Groups Method Final Correlations**

Table 6 continued

<table>
<thead>
<tr>
<th>Item</th>
<th>Self Value</th>
<th>Self Regulation</th>
<th>Hope</th>
<th>Problem Solving</th>
<th>Supportive Beliefs</th>
<th>Family</th>
<th>Friends</th>
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<tr>
<td>PR6</td>
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<td>.235</td>
<td>.381</td>
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<td>.728</td>
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</table>
### Table 6 continued

**Multiple Groups Method Final Correlations**

<table>
<thead>
<tr>
<th>Item</th>
<th>Self Value</th>
<th>Self Regulation</th>
<th>Hope</th>
<th>Problem Solving</th>
<th>Supportive Beliefs</th>
<th>Family</th>
<th>Friends</th>
<th>School</th>
<th>Activities</th>
<th>Community</th>
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<tr>
<td>SC3</td>
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<td>.693</td>
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<td>.411</td>
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<td>.154</td>
<td>.392</td>
<td>.385</td>
<td>.364</td>
<td>.357</td>
<td>.314</td>
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<td>.370</td>
<td>.411</td>
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<td>.232</td>
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<td>.334</td>
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<td>.789</td>
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<tr>
<td>C9</td>
<td>.091</td>
<td>.049</td>
<td>.140</td>
<td>.235</td>
<td>.236</td>
<td>.324</td>
<td>.262</td>
<td>.354</td>
<td>.274</td>
<td>.658</td>
</tr>
</tbody>
</table>

*Note.* Spearman’s Rho Correlations Reported *Items correlating below .600 threshold.

SV = Self Value, SR = Self Regulation, O = Optimism / Motivation, PS = Creative Problem Solving, SB = Supportive Belief Structure, FA = Family Support / Healthy Caregiver, PR = Supportive Peer Relationships, SC = Supportive School / Academic Functioning, AC = Activity Involvement / Active Diversion, C = Community Safety and Support

Structural equation modeling (SEM) was completed to further test for the fit of the proposed domain model structure. Originally, the initial item pool was tested. On initial runs using LISREL (version 8.8) software several warnings, including an initial lack of convergence and parameter warnings, indicated too many items and parameters for the sample size. Therefore, initial fit indices are reported in Table 7, but should be approached with caution as they unreliable. However, on the final item pool with removals as outlined in Table 8 below, the SEM processes did not give any parameter or other warnings. Modification indices in the LISREL output were consulted for error covariance recommendations. Fifteen incidences of items within their own subscales fell above the
threshold of a 10.0 decrease in Chi Square. These items’ errors were allowed to correlate. Final
goodness of fit results as outlined are acceptable for the sample size in this project are reported in
Table 7.

The root mean square error of approximation (RMSEA) at .068 demonstrated a relatively
good fit. According to Hu & Bentler (1998), RMSEA values close to .06 are considered a relatively
good fit. Tate (1998) states that RMSEA values of .05 and less are interpreted as a close fit and less
than .08 is interpreted as an acceptable fit of the model to the data. The chi square to degrees of
freedom ratio appeared to be within the acceptable range, less than 2 or 3, as suggested by Abell,
Springer & Kamata (2009). The Tucker-Lewis Non-Normed Fit Index and the Comparative Fit
Index were both considered an acceptable fit, greater than .90, as outlined by Abell, Springer and
Kamata (2009). Finally, the Standardized Root Mean Square Residual calculation demonstrated a
good fit according to the .08 cutoff suggested by Hu & Bentler (1998).

Table 7

Structural Equation Modeling Goodness of Fit Indicators: Initial and Respecified Models

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>$\chi^2$/ df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>RMSEA CI</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Item Pool</td>
<td>2.59</td>
<td>0.83</td>
<td>0.83</td>
<td>0.078</td>
<td>0.076 ; 0.079</td>
<td>0.091</td>
</tr>
<tr>
<td>Final Item Pool</td>
<td>2.21</td>
<td>0.90</td>
<td>0.91</td>
<td>0.068</td>
<td>0.065 ; 0.071</td>
<td>0.079</td>
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</tbody>
</table>

Note: LISREL (version 8.8) output included a warning indicating that the Initial Item Pool
estimates are unreliable due to the small sample size and high number of parameters.
TLI - Tucker-Lewis/Non-Normed Fit Index, CFI - Comparative Fit Index, RMSEA - Root Mean
Square Error of Approximation, RMSEA CI - Root Mean Square Error of Approximation 90%
Confidence Interval, SRMR - Standardized Root Mean Square Residual.

The standardized covariance residuals were calculated and assessed. For this scale, the
figure used to assess problems with SEM model fit was any standard error less than .3 as
suggested as the upper bound by Tate (1998). Of the 4096 combinations of error terms between
each item with every other item in the scale, the large majority (98.4%) were within the acceptable
range. Covariance residuals with values larger than 3.0 can be an indication of a model misfit that is
not due to chance alone (Tate, 1998). Therefore, another positive indicator of the model fit was that
only 1.63% of the items fell above the 3.0 threshold. Of the error terms that did fall outside the
range, most (53.6%) fell just above the recommendation, between 3.0 and 3.5. The next 40.0% fell between 3.5 and 4.5 and only 3 fell between 4.5 and 5.3.

**Item Decisions**

As outlined throughout these discussions, it was noted that the test was too long for children as shown by missing data patterns and several anecdotal statements. A major goal of the analyses was to produce a final measure with a streamlined item pool which also demonstrated strong psychometric properties. This goal was met. Throughout the content validation and psychometric analyses, items were removed with consideration of several sources as described earlier. The final item decision process is outlined in Table 8. The columns from left to right represent the sequence of analyses. Items were removed or reworded at each stage as indicated. The CFA was an iterative process. As items were removed, reliabilities were recalculated to preserve the integrity of the psychometrics. If the psychometrics were maintained, other items were then removed and reliabilities recalculated again. As many items as possible were removed, at times reducing other psychometric indicators slightly. However, it was imperative to maintain accepted thresholds for psychometric strength. A total of 99 items were removed for a final item pool of 64 items.

**Table 8**

*Item Removal and Rewording Decisions*

<table>
<thead>
<tr>
<th>Procedure:</th>
<th>Adult Experts</th>
<th>Children’s Focus Groups</th>
<th>Rewording</th>
<th>Skew Kurtosis</th>
<th>Redundant</th>
<th>Coefficient Alpha</th>
<th>CFA Multiple Groups</th>
<th>Final Items Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Value</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>7</td>
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<tr>
<td>Self Regulation</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Optimism</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>11</td>
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<tr>
<td>Problem Solving</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1 flagged</td>
<td>2</td>
</tr>
<tr>
<td>Supportive Belief</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>9</td>
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</table>

113
Table 8 continued

*Item Removal and Rewording Decisions*

<table>
<thead>
<tr>
<th>Procedure:</th>
<th>Adult Experts</th>
<th>Children’s Focus Groups</th>
<th>Rewording</th>
<th>Skew</th>
<th>Kurtosis</th>
<th>Redundant</th>
<th>Coefficient Alpha</th>
<th>CFA Multiple Groups</th>
<th>Final Items Removed</th>
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</thead>
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<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>14</td>
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<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>11</td>
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<tr>
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<td>0</td>
<td>1</td>
<td>1</td>
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<td>10</td>
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<td>1</td>
<td>0</td>
<td>2</td>
<td>1 flagged</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>TRS-C Global</td>
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<td>41</td>
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<td>7</td>
<td>1</td>
<td>14</td>
<td>18</td>
<td>99</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Item decisions are presented from left to right in chronological order. *Rewording* numbers indicate items which remained in the scale, yet contained language changes from original item phrasing.

**External Convergent Validity Evidence**

The TRS-C was examined to determine if it is testing the overall construct it was meant to test. External convergent validation tests were conducted on the final item pool of the TRS-C global scale looking at associations with other external indicators containing concepts relevant to the TRS-C as hypothesized at the outset of the study. Before conducting the convergent validation, all cases where the parent information was missing completely were deleted from the analyses, yielding a sample of 138. The BERS-2 was first tested for reliability on the present sample. The subscales remained strong for research purposes with coefficient alphas ranging from .80 to .94 with the total Strength Index $\alpha = .96$. The CD-RISC 2 tested at a .52 coefficient alpha. However, because the measure only contains two items, reliability would be expected to be low. Nonetheless, it was still used in the convergent analyses due to the clear content relating to the conceptualization of the TRS-C. Although the global TRS-C normal assumption was not as problematic as the subscales, and therefore, parametric measures were useful, non-parametric results are reported for comparison purposes with the subscale results. Final correlations among all global scales
were positive and significant as hypothesized across both the parametric and non-parametric measures (see Table 9).

Table 9

Convergent Validity Indicators: Global Scale Correlations

<table>
<thead>
<tr>
<th>Scale</th>
<th>CD-RISC 2</th>
<th>BERS –2 Strength Index</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<td>Mean Score = 2.44</td>
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<tr>
<td></td>
<td>SD = .966</td>
<td>SD = .383</td>
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<tr>
<td></td>
<td>Variance = .933</td>
<td>Variance = .147</td>
</tr>
<tr>
<td></td>
<td>$r$</td>
<td>$r^2$</td>
</tr>
<tr>
<td></td>
<td>$p$ value</td>
<td>$p$ value</td>
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<tr>
<td>Global TRS-C</td>
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<td></td>
</tr>
<tr>
<td>Pearson’s Rho</td>
<td>.306***</td>
<td>.181* .033</td>
</tr>
<tr>
<td></td>
<td>.000***</td>
<td>.017*</td>
</tr>
<tr>
<td>Spearman’s Rho</td>
<td>.297***</td>
<td>.190*</td>
</tr>
<tr>
<td></td>
<td>.000***</td>
<td>.013*</td>
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<tr>
<td>Mean Score =</td>
<td>4.38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD = .454</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variance = .206</td>
<td></td>
</tr>
</tbody>
</table>
| Note. *p ≤ .05, ***p ≤ .001

Each subscale was also tested for convergent validity as hypothesized. Due to the normality assumption violation at the subscale level, the non-parametric Spearman’s Rho was calculated for hypotheses at the ordinal to continuous variable level. The Community Subscale was hypothesized to be associated with neighborhood, a nominal level variable. Therefore, the non-parametric Lambda Statistic was calculated. All subscales were correlated in the hypothesized direction, except for the association with the parent reported number of Activities in which a child was involved and the child’s self report on the TRS-C Activities subscale, which had a very loose negative correlation at -.008. Not all the correlations were statistically significant. Table 10 displays several subscales that were significantly and positively associated with the relevant hypothesized indicators including Self Value, Self Regulation, Optimism, Problem Solving, Family, and Supportive Belief Structure. The Lambda statistic demonstrated that the nominal variable of neighborhood/school boundary for which a child is zoned,
significantly predicted an association in score for the Community Safety and Support TRS-C subscale. Some subscales, including Self Value, Hope and Problem Solving, although significantly associated with other relevant BERS-2 indicators, were not significantly associated with the BERS-2 Intrapersonal subscale as hypothesized. Finally, three subscales, Friends, Academic Support and Activities were not significantly associated with their respective BERS-2 indicators.

Table 10

*Convergent Validity Indicators: Subscale Correlations*

<table>
<thead>
<tr>
<th>Scale</th>
<th>BERS Interpersonal</th>
<th>BERS Intrapersonal</th>
<th>BERS Affective Strength</th>
<th>BERS Family</th>
<th>BERS Key Question</th>
<th>Single Item BERS Functioning</th>
<th>BERS Key Question Activities</th>
<th>Neighbor -hood Lambda Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean:2.24</td>
<td>mean:2.56</td>
<td>mean:2.52</td>
<td>mean:2.57</td>
<td>mean:2.41</td>
<td>mean:2.41</td>
<td>mean:2.41</td>
<td>mean:2.41</td>
</tr>
<tr>
<td></td>
<td>SD:.493</td>
<td>SD:.392</td>
<td>SD:.449</td>
<td>SD:.363</td>
<td>SD:.478</td>
<td>SD:.478</td>
<td>SD:.478</td>
<td>SD:.478</td>
</tr>
</tbody>
</table>

1. Self Value
   *p* value
   - mean: 4.47
   - *SD*: .502
   - .225**
   - .086
   - .144*
   - .046*

2. Self Regulation
   *p* value
   - mean: 3.89
   - *SD*: .944
   - .252***
   - .160*
   - .173*
   - .021*

3. Optimism
   *p* value
   - mean: 4.41
   - *SD*: .752
   - .167*
   - .088
   - .147*
   - .042*

4. Problem Solving
   *p* value
   - mean: 4.34
   - *SD*: .727
   - .155*
   - .107
   - .105
   - .035*

5. Family
   *p* value
   - mean: 4.56
   - *SD*: .454
   - .187*
   - .199**
   - .147*
   - .042*
Table 10 continued

**Convergent Validity Indicators: Subscale Correlations**

Spearman’s Rho measure of associations

<table>
<thead>
<tr>
<th>Scale</th>
<th>BERS Interpersonal</th>
<th>BERS Intrapersonal</th>
<th>BERS Affective Strength</th>
<th>BERS Family</th>
<th>BERS Key Question Friends</th>
<th>Single Item BERS School Functioning</th>
<th>BERS Key Question Activities</th>
<th>Neighborhood Lambda Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean:2.24</td>
<td>SD:.493</td>
<td>mean:2.56</td>
<td>mean:2.57</td>
<td>mean:2.41</td>
<td>mean:2.41</td>
<td>mean:2.41</td>
<td>SD:.478</td>
</tr>
</tbody>
</table>

6. Friends
   p value
   mean:4.28  .082  .082  .137
   SD:.829 .168 .170 .061

7. Supportive Belief
   p value
   mean:4.51  .244**
   SD:.601 .002**

8. Academic Support
   p value
   mean:4.49  .052
   SD:.725 .273

9. Activities
   p value
   mean:4.56  -.008
   SD:.588 .463

10. Community
    p value
    mean:4.16  .384***
    SD:.803 .000***

*Note. Results calculated and reported for hypothesized associations only. Means and standard deviations reported for n=138 sample. For full sample see Table 15.
BERS-2 Subscales n=138, KQ Friends n=128, KQ Activities n=131, Neighborhood n=111
*p ≤.05, **p ≤.01, ***p ≤.001

**Internal Convergent and Discriminant Evidence**

To look at the internal structure of the scale, coefficient omega was calculated for each subscale utilizing the covariance matrix and lambda output from LISREL. The subscale indicators
demonstrated high correlation coefficients of the estimated correlation between test scores and the unobserved domain score (McDonald, 1999). All convergent validation indicators, Correlation Coefficient ρ, fell at .850 or above (see Table 11).

Table 11
*Internal Convergent Validity Calculations.*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Coefficient Omega</th>
<th>Summed Covariance</th>
<th>Sum of (Lambda)^2</th>
<th>Correlation Coefficient ρ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Value</td>
<td>0.722</td>
<td>14.102</td>
<td>10.176</td>
<td>0.850</td>
</tr>
<tr>
<td>Self Regulation</td>
<td>0.732</td>
<td>21.44</td>
<td>15.697</td>
<td>0.856</td>
</tr>
<tr>
<td>Optimism</td>
<td>0.850</td>
<td>21.502</td>
<td>18.261</td>
<td>0.922</td>
</tr>
<tr>
<td>Creative Problem Solving</td>
<td>0.794</td>
<td>21.254</td>
<td>16.867</td>
<td>0.891</td>
</tr>
<tr>
<td>Supportive Belief Structure</td>
<td>0.796</td>
<td>20.373</td>
<td>16.209</td>
<td>0.892</td>
</tr>
<tr>
<td>Caregiver/Family Support</td>
<td>0.743</td>
<td>20.036</td>
<td>14.961</td>
<td>0.862</td>
</tr>
<tr>
<td>Supportive Peer Relationships</td>
<td>0.846</td>
<td>30.547</td>
<td>25.837</td>
<td>0.920</td>
</tr>
<tr>
<td>Supported Academic Functioning</td>
<td>0.853</td>
<td>27.868</td>
<td>23.775</td>
<td>0.924</td>
</tr>
<tr>
<td>Activity Involvement/Active Diversion</td>
<td>0.809</td>
<td>11.075</td>
<td>8.96</td>
<td>0.899</td>
</tr>
<tr>
<td>Community Safety and Support</td>
<td>0.810</td>
<td>28.787</td>
<td>23.319</td>
<td>0.900</td>
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</table>

Evidence for internal discriminant validity was also confirmed across all subscales. All outside domain factor correlations multiplied by the appropriate Correlation Coefficient ρ were lower than the correlations within the domain (Compare Table 11 and Table 12). All discriminant validity correlation coefficients fell at or below .622, well below every convergent indicator. This demonstrates that the scale converges where each cluster sum is highly correlated.
with its own factor, but has suitably low correlations with the other factors justifying that the sets of subscales have convergent and discriminant validity.

Table 12

<table>
<thead>
<tr>
<th></th>
<th>SV</th>
<th>SR</th>
<th>O</th>
<th>PS</th>
<th>SB</th>
<th>FA</th>
<th>PR</th>
<th>SC</th>
<th>AC</th>
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<tbody>
<tr>
<td>SR</td>
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<td></td>
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<td>0.492</td>
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<tr>
<td>PS</td>
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<td>0.622</td>
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<tr>
<td>SB</td>
<td>0.252</td>
<td>0.127</td>
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<td>0.353</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>FA</td>
<td>0.370</td>
<td>0.274</td>
<td>0.427</td>
<td>0.419</td>
<td>0.404</td>
<td></td>
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<tr>
<td>PR</td>
<td>0.290</td>
<td>0.330</td>
<td>0.336</td>
<td>0.379</td>
<td>0.400</td>
<td>0.432</td>
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<td></td>
</tr>
<tr>
<td>SC</td>
<td>0.317</td>
<td>0.255</td>
<td>0.484</td>
<td>0.427</td>
<td>0.388</td>
<td>0.440</td>
<td>0.461</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC</td>
<td>0.287</td>
<td>0.234</td>
<td>0.379</td>
<td>0.412</td>
<td>0.299</td>
<td>0.284</td>
<td>0.385</td>
<td>0.471</td>
<td></td>
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<tr>
<td>C</td>
<td>0.166</td>
<td>0.140</td>
<td>0.226</td>
<td>0.287</td>
<td>0.277</td>
<td>0.334</td>
<td>0.317</td>
<td>0.460</td>
<td>0.343</td>
</tr>
</tbody>
</table>

*Note. SV = Self Value, SR = Self Regulation, O = Optimism / Motivation, PS = Creative Problem Solving, SB = Supportive Belief Structure, FA = Family Support / Healthy Caregiver, PR = Supportive Peer Relationships, SC = Supportive School / Academic Functioning, AC = Activity Involvement / Active Diversion, C = Community Safety and Support*

**External Discriminant Validity**

As planned at the outset of the study, the test administration/location for both the clinical respondents and the school respondents was assessed for impact on the final TRS-C global scale and each subscale. The Kruskal-Wallis analysis of variance was conducted due to the normal assumption violation of subscales. As hypothesized, the calculations with the general population demonstrated lack of significance across all subscales except the Community and Academic subscale. Additionally, with the clinical sample, the means of groups as identified by location only differed
significantly across the Self Regulation subscale and also demonstrated a significant difference on the Global TRS-C scale (See Table 13).

Table 13

*Discriminant Validity: Test Administration*

<table>
<thead>
<tr>
<th>Test Location/Administration</th>
<th>General n=175</th>
<th>Clinical n=33</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>p = .294</td>
<td>p = .150</td>
</tr>
<tr>
<td></td>
<td>η² = .014</td>
<td>η² = .119</td>
</tr>
<tr>
<td>Self Value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Regulation</td>
<td>p = .491</td>
<td>p = .034*</td>
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<tr>
<td></td>
<td>η² = .008</td>
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</tr>
<tr>
<td>Optimism</td>
<td>p = .154</td>
<td>p = .236</td>
</tr>
<tr>
<td></td>
<td>η² = .022</td>
<td>η² = .090</td>
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<tr>
<td>Problem Solving</td>
<td>p = .541</td>
<td>p = .161</td>
</tr>
<tr>
<td></td>
<td>η² = .007</td>
<td>η² = .114</td>
</tr>
<tr>
<td>Supportive Belief</td>
<td>p = .917</td>
<td>p = .114</td>
</tr>
<tr>
<td></td>
<td>η² = .001</td>
<td>η² = .136</td>
</tr>
<tr>
<td>Family</td>
<td>p = .255</td>
<td>p = .800</td>
</tr>
<tr>
<td></td>
<td>η² = .016</td>
<td>η² = .014</td>
</tr>
<tr>
<td>Friends</td>
<td>p = .876</td>
<td>p = .176</td>
</tr>
<tr>
<td></td>
<td>η² = .002</td>
<td>η² = .109</td>
</tr>
<tr>
<td>Academic</td>
<td>p = .019*</td>
<td>p = .220</td>
</tr>
<tr>
<td></td>
<td>η² = .046</td>
<td>η² = .095</td>
</tr>
<tr>
<td>Activities</td>
<td>p = .242</td>
<td>p = .326</td>
</tr>
<tr>
<td></td>
<td>η² = .016</td>
<td>η² = .070</td>
</tr>
<tr>
<td>Supportive Community</td>
<td>p = .001***</td>
<td>p = .227</td>
</tr>
<tr>
<td></td>
<td>η² = .076</td>
<td>η² = .093</td>
</tr>
<tr>
<td>TRS-C</td>
<td>p = .068</td>
<td>p = .043*</td>
</tr>
<tr>
<td>Global</td>
<td>η² = .031</td>
<td>η² = .196</td>
</tr>
</tbody>
</table>

*p ≤ .05, **p ≤ .001
Group Differences

It was hypothesized that the children’s gender, ethnicity and age would not cause TRS-C global or subscale scores to differ significantly. The non-parametric Kruskal-Wallis one-way ANOVA was used to assess the distribution of the TRS-C across the variables of Age and Ethnicity. As hypothesized, except for the Activity subscale in relation to Ethnicity, none of the analyses were significant (See Table 14). Every ethnic minority group demonstrated higher perceived activity involvement and satisfaction as compared with Caucasian children, whose scores were the lowest. The highest mean scores belonged to those children whose parents classified them in the category, the research labeled as “other,” which included children of mixed ethnicities. The next highest mean scores belonged to children of Asian descent followed by those of African American ethnic identity. The Wilcoxon-Mann-Whitney test was used to test for differences in distribution of the two Gender groups. As hypothesized, except again for the Activity subscale, the groups did not differ significantly from each other on the global or any other subscale. For the children who had gender data reported, the boys, n=84 reported higher perceived activity involvement and satisfaction than did the girls, n=83.

To test whether or not the TRS-C discriminated between clinical and general population respondents, the Wilcoxon-Mann-Whitney test was also used to test group differences. As hypothesized, the global TRS-C score and the Self Value, Supportive Beliefs, and Family subscale distributions were deemed significantly different across clinical and non-clinical populations. Other subscales were not significant (See Table 14). In all cases, except for the perceived Community Safety subscale, clinical respondents had higher mean scores than the general population sample. This provided some backing for the concurrent criterion validity with respect to clinical and non-clinical respondents across these measures.
Table 14

*Group Comparisons by TRS-C Subscales and Global Scale*

<table>
<thead>
<tr>
<th>Group Differences</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Age</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=167</td>
<td>n=166</td>
<td>n= 188</td>
<td>n =33</td>
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<tr>
<td></td>
<td>Males=84</td>
<td>Females=83</td>
<td></td>
<td>General</td>
</tr>
<tr>
<td></td>
<td>n = 175</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean</td>
<td>4.43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>.536</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kruskal-Wallis</td>
<td>p =.100</td>
<td>p = .512</td>
<td></td>
<td>1992.5**</td>
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<tr>
<td></td>
<td>η² = .047</td>
<td>η² = .025</td>
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<td>PS = .345</td>
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<tr>
<td>Mann Whitney</td>
<td>3288.0</td>
<td></td>
<td>2323.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p=.524</td>
<td>PS = .472</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Regulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean</td>
<td>3.86</td>
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<tr>
<td>SD</td>
<td>.926</td>
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<tr>
<td>Kruskal-Wallis</td>
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<td>p = .227</td>
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<td>2323.5</td>
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<tr>
<td></td>
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<td>η² = .039</td>
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<td>PS = .402</td>
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<tr>
<td>Mann Whitney</td>
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<tr>
<td></td>
<td>p=.525</td>
<td>PS = .472</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Hope</td>
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<td></td>
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</tr>
<tr>
<td>mean</td>
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<td></td>
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<td>SD</td>
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<td>p =.748</td>
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</tr>
<tr>
<td></td>
<td>p=.831</td>
<td>PS = .491</td>
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<td></td>
</tr>
<tr>
<td>Problem Solving</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>mean</td>
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</tr>
<tr>
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<tr>
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<td>p = .296</td>
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<tr>
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<td>η² = .035</td>
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<tr>
<td>Mann Whitney</td>
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<tr>
<td></td>
<td>p=.600</td>
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</tbody>
</table>
Table 14 continued

*Group Comparisons by TRS-C Subscales and Global Scale*

<table>
<thead>
<tr>
<th>Group Differences</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Age</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=167</td>
<td>n=166</td>
<td>n= 188</td>
<td>n =33</td>
</tr>
<tr>
<td></td>
<td>Males=84</td>
<td></td>
<td></td>
<td>General</td>
</tr>
<tr>
<td></td>
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**Supportive Belief**

<table>
<thead>
<tr>
<th></th>
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<th>SD</th>
<th>Kruskal-Wallis</th>
<th>Mann Whitney</th>
<th>η²</th>
<th>Mann Whitney</th>
<th>PS</th>
<th>η²</th>
<th>Mann Whitney</th>
<th>PS</th>
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<tbody>
<tr>
<td></td>
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<td>3397.0</td>
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<td>2205.5*</td>
<td>.487</td>
<td>.004</td>
<td>.487</td>
<td>.382</td>
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<tr>
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<td>mean</td>
<td>SD</td>
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<td>.482</td>
<td>.018</td>
<td>.261</td>
<td>.378</td>
</tr>
<tr>
<td><strong>Friends</strong></td>
<td>mean</td>
<td>SD</td>
<td></td>
<td></td>
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<td></td>
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<td><strong>School</strong></td>
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<td>SD</td>
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<td>.041</td>
<td>2400.5</td>
<td>.431</td>
<td>.012</td>
<td>.879</td>
<td>.416</td>
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</table>

123
Table 14 continued

*Group Comparisons by TRS-C Subscales and Global Scale*

<table>
<thead>
<tr>
<th>Group Differences</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Age</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=167</td>
<td>Males=84</td>
<td>n=166</td>
<td>n= 188</td>
<td>n =33</td>
</tr>
<tr>
<td>Females=83</td>
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<td></td>
<td>General</td>
</tr>
<tr>
<td></td>
<td>n = 175</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Activities
mean = 4.50
SD = .665
Kruskal-Wallis
\[ p = .049^* \]
\[ \eta^2 = .057^* \]
Mann Whitney
\[ 2779.0^* \]
\[ p = .019^* \]
\[ PS = .400 \]

Supportive
Community
mean = 4.12
SD = .894
Kruskal-Wallis
\[ p = .169 \]
\[ \eta^2 = .039 \]
Mann Whitney
\[ 3196.0 \]
\[ p = .351 \]
\[ PS = .458 \]

TRS-C
Global
mean = 4.34
SD = .487
Kruskal-Wallis
\[ p = .093 \]
\[ \eta^2 = .048 \]
Mann-Whitney
\[ 3425.0 \]
\[ p = .845 \]
\[ PS = .491 \]

*Note.* Probability of superiority (PS) effect size calculations based on Erceg-Hurn & Mirosevich (2008). Cut score interpretation: \( PS = .50 \) virtually no effect size, \( PS = .56 \) small effect size, \( PS = .64 \) medium effect size, \( PS = .71 \) large effect size. All effect PS sizes are trivial.

\*p < .05, \**p < .01

**Descriptive/Scoring Summary**

As was the goal at the outset of this study, the final TRS-C ended with a tighter scale of 64 items and acceptable psychometric properties across the large majority of analyses. Subscales ended...
with 5 to 8 items per domain. No reverse coded items made it into the final scale. To give meaning to a particular TRS-C score, the mean score of respondents, the standard error of the mean, the standard deviation, variance and standard error of measurement of the global scale and subscales are reported (See Table 15). If items are parallel, the observed score is “the best possible estimate of the true score of an examinee” (McDonald, 1999). The reported confidence intervals for the global TRS-C score and each subscale are reported. It can be calculated around the mean score of an examinee to capture the true score with 95% confidence.

Table 15

<table>
<thead>
<tr>
<th>TRS-C Mean Score Properties</th>
<th>Mean</th>
<th>Standard Error of the Mean</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRS-C Global</td>
<td>4.339</td>
<td>.0338</td>
<td>.4868</td>
<td>.237</td>
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</tr>
<tr>
<td>Self Value</td>
<td>4.428</td>
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<td>.5365</td>
<td>.288</td>
<td>x= ± .557</td>
</tr>
<tr>
<td>Self Regulation</td>
<td>3.861</td>
<td>.0642</td>
<td>.9261</td>
<td>.858</td>
<td>x= ± .872</td>
</tr>
<tr>
<td>Optimism</td>
<td>4.381</td>
<td>.0536</td>
<td>.7729</td>
<td>.597</td>
<td>x= ± .586</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>4.285</td>
<td>.0533</td>
<td>.7684</td>
<td>.590</td>
<td>x= ± .602</td>
</tr>
<tr>
<td>Supportive Belief</td>
<td>4.461</td>
<td>.0447</td>
<td>.6448</td>
<td>.416</td>
<td>x= ± .535</td>
</tr>
<tr>
<td>Family</td>
<td>4.508</td>
<td>.0389</td>
<td>.5609</td>
<td>.315</td>
<td>x= ± .515</td>
</tr>
<tr>
<td>Peer Relations</td>
<td>4.248</td>
<td>.0547</td>
<td>.7895</td>
<td>.623</td>
<td>x= ± .657</td>
</tr>
</tbody>
</table>
Table 15

TRS-C Mean Score Properties

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Mean</th>
<th>Standard Error of the Mean</th>
<th>Standard Deviation</th>
<th>Variance</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>4.455</td>
<td>.0523</td>
<td>.7541</td>
<td>.569</td>
<td>$x = \pm .533$</td>
</tr>
<tr>
<td>Activities</td>
<td>4.496</td>
<td>.0462</td>
<td>.6656</td>
<td>.443</td>
<td>$x = \pm .584$</td>
</tr>
<tr>
<td>Community Support</td>
<td>4.116</td>
<td>.0620</td>
<td>.8942</td>
<td>.800</td>
<td>$x = \pm .764$</td>
</tr>
</tbody>
</table>

$x = \text{respondent mean score of given scale or subscale}$

Percentile rankings of each mean score are reported in Table 16. These are numbers that show how any particular score falls in relation to other children who have taken this test. For full norming of the TRS-C in this manner, a larger sample is warranted.

Table 16

TRS-C Mean Score Percentiles for Global and Subscales

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Percentiles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Self Value</td>
<td>3.286</td>
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<tr>
<td>Self Regulation</td>
<td>1.800</td>
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<tr>
<td>Hope</td>
<td>2.833</td>
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<tr>
<td>Problem Solving</td>
<td>2.667</td>
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</tbody>
</table>
Table 16 continued

TRS-C Mean Score Percentiles for Global and Subscales

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Percentiles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Supportive Beliefs</td>
<td>3.105</td>
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<tr>
<td>Family</td>
<td>3.368</td>
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<tr>
<td>Friends</td>
<td>2.714</td>
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<tr>
<td>School</td>
<td>2.810</td>
</tr>
<tr>
<td>Activities</td>
<td>3.000</td>
</tr>
<tr>
<td>Community</td>
<td>2.333</td>
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</tbody>
</table>
CHAPTER FIVE

CONCLUSION

The Trauma Resilience Scale for Children is a new scale with exciting implications for use in interdisciplinary clinical practice and research. It is the result of a meticulous process consisting of pilot survey and validation work with adults, an extensive review and clustering of domains in the empirical literature, and a comprehensive study which included both qualitative and quantitative support for the validity, reliability, and factor structure of the scale.

Conceptualization

Before the onset of this study, it was determined that solidifying the conceptual support of this measure was of utmost importance, giving the resulting scores strength and meaning in the context of prior experimental and theoretical work. A very challenging process ensued. Resilience, the conceptual perspective guiding this project, is fraught with definitional disagreements. These discrepancies initially created difficulties in attempting to operationalize the concept for the purposes of measurement. Walter Hudson (1978), the author whose impetus emphasized empirically based knowledge as fundamental to social work practice, states “if you cannot measure the client’s problem, then it doesn’t exist…[and] you cannot treat it” (p. 65). This may seem an extreme point of view because, for example, we may not have discovered the technology which allows us to precisely measure a very real problem quite yet, but have discovered some solutions that alleviate it. However, the essence of the message was foundational to the TRS-C research. Accurately measuring a concept is imperative in order to most effectively impact an issue. Therefore, the major resilience related works were scrutinized specifically for definitions and methods of measurement. Additionally, the author followed the historical trail of references in the major resilience works. This helped to shape the discussion about related theories and models and the background influences of the concept. This comprehensive conceptual literature review resulted in a concrete definition of resilience and decisions that help to make a measure possible.

Across the literature as overviewed in Chapter 2, resilience definitions range from an individual: a) trait or ability, to b) cut score level of functioning across various symptom and strength indicators, to c) process of positive functioning over time. The concept of resilience focused solely on the individual whether it is defined as a trait, ability, level of functioning, or process was rejected by the author because it became too limiting. The author recognized, through her work with children
who had experienced violence and her study of the empirical works, that resilience encompasses and is influenced by a great deal more than just individual factors. For example, the support from people that surround the child and safety in the school and greater community are associated with positive adaptation as measured as a point in time or several points across time. The varied definitions became extremely confusing in their differing approaches which in turn became impossible to operationalize and consequently quantify.

Resilience developed into the integrating perspective that addresses the phenomena that, in conjunction with each other, enable a child to pursue recovery following violence. These phenomena are identified as protective factors and emerged from the authors who conduct research from a resilience viewpoint. Protective factors are coherent, clearly definable, supported in the empirical literature, straightforward to measure, and contribute to positive adaptation over time. Therefore, in this research, the final decision was to utilize resilience as the conceptual perspective that includes the composite of protective factors that allow a child to do well despite difficulties such as violence. The protective factors associated with overcoming the negative effects of violence were thoroughly reviewed and clustered into relevant domains related to positive adaptation following violent events. Each TRS-C domain represents an empirically supported protective factor. These factors, as a whole implicitly reflect the concept of resilience as they collectively contribute to bouncing back following violent events. This extensive overview which clearly defines resilience and then shifts the measurement focus to protective factors which enable positive adaptation is a positive contribution to the resilience literature as researchers and practitioners now have clear and measurable concepts as the basis of a scale that shows ample psychometric support for its use with children.

**Psychometric Properties**

**Phase I**

**Strengths.** The reviews by adult experts and children, coupled with an extensive literature review and pilot work resulted in a measure with strong content and face validity. A major strength of the Phase I analyses was the nation-wide response from nine adults who were either a) experts in the field of child welfare, or b) resilient adults, all of whom also had training in either linguistics or child development. These experts took the time to rate items from every domain; and, the large majority also gave extensive comments about the test in general and/or
individual items as they a) apply to each domain and b) as they are clear and understandable for children. This offered preliminary support to both the domain structure and the wording of individual items.

The children’s focus groups were also extremely informative. All children were currently removed from their homes and engaged in group home care within the foster care system. Consequently, they represented the population for which the measure was created. The group also represented an even representation of gender. The large majority of the children remained engaged in the research process throughout. Additionally, older children gave insightful feedback on concepts, domains and questions that were not easy to understand. As outlined, the children expressed having mostly positive reactions to the test. This added to the validity from the perspective of consequences of test administration (see Messick, 1995).

The net result of this phase of the study was the gathering of in-depth, important information helpful in a) paring down the test to a more reasonable length, b) refining questions to be clear and developmentally appropriate for children ages 6-11, and c) providing validation related to content and consequences.

**Limitations.** The children’s focus group was limited by a predominant representation of one ethnic group, African American. Supplying more diversity, the expert respondents had Caucasian and Hispanic representation, therefore as a whole, the combined adult and children’s groups had greater diversity. Additionally, the younger children were not able to answer questions about every item, rendering half the items rated by only the older children. Despite these limitations, a great deal of information was gathered from these groups.

**Phase II**

**Strengths.** This phase of the study provided support across several analyses for the conceptual and psychometric strengths of the Trauma Resilience Scale for Children (TRS-C). The sample, made up of children from both clinical and general school settings, represented diverse ethnicities and consisted of an almost identical male to female ratio.

The children’s narratives that preceded the testing revealed a pattern that reflected the basic structure of the TRS-C in all but the community domain. In response to the prompt: “When something hard happens, what helps you the most?” children’s narrative clusters demonstrated noteworthy association with the measure as conceptualized. Interestingly, on
many occasions, children used language similar to TRS-C items. For example, several children wrote they can “calm down.”

The TRS-C demonstrated strong reliability, $\alpha_{stratified}.96$, at the global level and acceptable coefficient alpha reliability ranging from .72 to .87 across subscales. Several analyses, including the confirmatory factor analyses, supported the proposed multi-dimensional structure of the TRS-C. All final TRS-C items were appropriately correlated with their own subscale mean to a larger degree than other subscale means as assessed by the multiple group method. All appropriate SEM fit indicators: $\chi^2/df$, TLI, CFI, RMSEA, and SRMR tested within acceptable thresholds, lending an overall picture of good model fit. Although a slight amount of the factor analytic residuals fell outside of the ideal range, the large majority were acceptable. Item changes, as supported by the analyses, reduced the scale to a reasonable length for children while retaining the vital reliability and factor structure necessary for a psychometrically supported measure.

The external convergent validation conducted on the final item pool demonstrated significant association with two other known strengths-based measures at the global level demonstrating strong confirmation for the full TRS-C external validity. At the subscale level, the external convergent validation demonstrated at least one positive and significant association with the hypothesized indicators on seven of ten subscales. Due to the fact that the scale demonstrated internal convergent validity evidence, the three non-significant associations could be due to real differences in caretakers’ and children’s perceptions of the children’s friends, school and activities; venues that a caretaker does not observe as closely as other areas such as the family interactions. These differences in perception may actually lend support to the need for creating the TRS-C as a self-report measure. These differences are a recommended subject for further empirical inquiry in the future.

As hypothesized, the external discriminant validation showed non-significant associations of test location/administration with the TRS-C scores and all subscales except the Community and School for the general population sample and the Self Regulation and Global score for the clinical sample. Because internal discriminant validity evidence was justified, further inquiry into these aspects as possible real differences is also a recommended aspect for future research. It was not hypothesized at the outset of the study, but the significant result in relation to the Community and School subscales and test location/administration could make
theoretical sense. Although the high number of analyses could cause spurious results, the fact that the Community and Academic subscales are significantly associated with the test location/administration may actually provide some backing to the convergent validation of that subscale. The test location separated children by communities and schools. It would be interesting to further analyze their actual communities and schools for safety and supportive climate to determine if the children were reporting actual differences.

When analyzing the test for the impact of ethnicity, gender and age on the outcome scores, all associations were not significant as hypothesized, except across the Activities subscale. The measure appears to be unbiased for the majority of subscales and the Global TRS-C scale across these three variables.

Looking at concurrent criterion validity across the clinical and non-clinical respondents, the TRS-C demonstrated significant differences on the Global, Self Value, Supportive Beliefs, and Family scales. Interestingly, the Activities and Supportive Community subscales were the least strongly associated with the clinical versus non-clinical categories. In all cases, the clinical sample had higher mean rank scores than the general sample. It would be interesting to conduct research to see if children involved with direct services including group home care related to their status in the foster system strengthens their sense of safety in their community. Furthermore, activities were very prominent in several of the clinical settings in which the author visited. In the focus groups and larger sample narratives, the children talked in depth about the importance of activities. As noted in the literature review, fewer articles have looked at activities and the community level of protection following violence. It would be very timely and relevant to comprehensively study the role that the community and activities play for children who have experienced violence.

**Limitations.** Despite the diversity of the sample, one limitation of the sample was that the children were not randomly selected and therefore, the outcomes became sample dependent. A random selection of participants was not practical when specifically attempting to collect data for large numbers of children who demonstrate ethnic diversity and various experiences of violence. Therefore, at each location all children who qualified, based on research protocols, were allowed to participate. Classical test theory supports the fact that the day and time of test administration was a random sample of each child’s true score, lending randomness at the individual level to the study. Another limitation of the sample was the size. This is especially apparent in the clinical sample due to the difficulty in obtaining responses from those children involved with the foster
care system. Notwithstanding these difficulties, appropriate statistical analyses that remain strong with smaller samples were utilized based on the procedural need. Another limitation of the sample was that research protocol required that no children who had just been removed from their home be included as participants in the study. This was a wise decision for the safety of the children, but may have confounded the results of the clinical sample as some scores could have been the result of treatment effects. The impact of a safe clinical intervention may have been the reason that across the TRS-C global scores and all subscales, except the community scores, the mean protective factor scores were higher in the clinical sample than in the general sample from the schools. Further study of the treatment effects of children in care under the hypothesis that treatment does positively impact TRS-C scores, could yield interesting results.

One limitation of the data was that they did not meet all the assumptions for analyses that had originally been planned. Most notably, the majority of mean subscale scores violated normality across several tests. Therefore, appropriate non-parametric alternatives were utilized and compared with parametric analyses where appropriate. Additionally, Tukey’s test for additivity was significant; therefore, the coefficient alpha most likely underestimated the reliability of the global and subscale scores.

Due to the short attention span of children, a noteworthy amount of missing data existed in their responses. Multiple imputation (MI) was the best replacement technique given the missingness patterns in the data. However, due to software limitations for converging the five MI datasets following SEM and reliability analyses, the mean of the five imputed data sets was calculated before point estimate analyses were calculated. Although this should have only a slight effect on the actual point estimates, the standard error of parameters are not able to take advantage of the multiple imputations. As such, it ignores the information about the uncertainty of imputed values. This will typically result in somewhat underestimated standard errors.

The SEM requires normality and a large sample, the Global Scale and the items were within acceptable limits for skew and kurtosis, but the subscales were not normally distributed and most exhibited skewed and kurtotic properties. Hu and Bentler’s (1998) recommendations for calculating the strongest fit indicators under these circumstances were followed.

It appears that the test may be an unbiased measure for children from differing backgrounds, with the exception of Activities. However, a larger sample is necessary to test the measure for bias at the item level using Differential Item Functioning with Item Response Theory (IRT) based analyses.
for polytomous scales. This is an important area for future research as it can help tease out individual items that may exhibit bias with these differing groups. Unfortunately, this analysis was planned for this dissertation, but due to difficulties collecting data, this is one of the changes to the original prospectus that was necessary (see Appendix J).

One limitation of the scoring reports is that some confidence intervals at the subscale level show that the estimated true score could be a score that would cross more than one percentile ranking. Therefore, some subscales, although still very useful for research and treatment planning purposes, should not be utilized to create a cut score for an individual in the raw form. To truly determine how scores compare to the greater population, a much larger sample is needed. At that point, transforming these scores to standardized z scores could address this problem.

**Children as Research Participants**

This study undertook testing with children both in the foster care system and in the general school population. Despite the crucial need to study children from these populations, access is extremely difficult and time consuming. Even though the author had extensive clinical experience with young children who had experienced abuse, the necessary requirements to meet with these children for research purposes became almost impossible to hurdle. All requirements individually made sense, such the need for a full state and federal background check. However, as a whole, the demands of each reviewer made the study of this population nearly prohibitive. It took a year to obtain all necessary approvals from the four formal research review committees, all the administrative entities, the research directors for each individual agency, and their legal and academic counsel. Following these approvals, the research protocols became an iterative process where one agency would make a request, or have the need to change protocol and, due to the change, other review bodies would require a re-examination of the study. Due to the differing perspectives and needs of the reviewers from each location, several sites where approvals and/or training had occurred fell through.

It is clear that these children are precious and need intense care for their safety and security. However, with such limited access, we cannot know if our interventions are working. From a policy perspective, in order to provide evidence-based practice for children who have experienced violence, we must encourage protocols that are consistent across venues, such as certifications or consistent requirements across cooperating agencies. In this way, those whose passion is listening to these children’s voices and creating solid research to improve their lives can have adequate access.
Implications

As outlined, the literature review, including the conceptual discussion, overviewed several years of research across disciplines culminating in relevant definitions and domain clusters supported by the empirical literature. Additionally the TRS-C demonstrated acceptable psychometric properties across several reliability and validity indicators. Social work and other relevant disciplines can be aided by this information. Information contained in this project that led to the scale development pushes child maltreatment theory, practice and research forward.

Theory

Throughout the literature review, several discrepancies were noted relating to resilience definitions, research and clinical applications as discussed. The theoretical concept of resilience was refined by acknowledging a vast body of empirical literature and subsequently providing clear, workable definitions. The evidence surrounding the protective factors related to children and experiences of abuse were clustered, tested, and empirically supported as unique. This allows us to understand posttraumatic functioning in new ways. Many times, following violence, medical or traditional therapeutic models based on trauma symptom research are implemented. These can be extremely beneficial. However, the TRS-C protective factor domains can act as the theoretical basis of a more comprehensive view. Children who have experienced violence or other trauma may not fit into a traditional medical or mental health symptom-based model. Unfortunately, anyone from the general population has a chance of experiencing violence. Testing only behavioral or mental health symptoms resulting from violence is not the most accurate portrayal of a child’s recovery trajectory. In addition to monitoring symptoms, through the use of protective factors, counselors and researchers working with these children can be encouraged to view progress as a) an increase in the child’s personal strengths and b) improved connection with the influences in a child’s natural environment that are associated with better chances of positive adaptation. This shift in theoretical emphasis may enhance the benefits of any interventions taking place following the violent event; and according to the research as overviewed, may have positive implications later in life in terms of positive functioning and outcomes.

Practice

As outlined earlier, several scales are helpful for looking at symptoms following experiences of trauma. At this time, no known scales measure specific protective factors related
to positive adaptation following children’s exposure to violent events. The TRS-C can now fill that gap allowing clinicians and service providers that help individual children look at the global TRS-C score as a measure of a child’s overall presence of cumulative protective factors. Then, using subscale scores, these service providers can delve deeper into specific protective factors that could use improvement. In treatment planning, therefore, a child can now set goals for a) overcoming symptoms based on other available measures and b) strengthening specific protective factor areas that could use improvement based on utilization of the TRS-C. According to the literature review, these protective factors, overtime, have been found to reduce the harmful effects of the violent event(s). Thus, the young client may experience increased chances of better outcomes in the therapeutic process.

In this study, the literature review of protective factors, creation of items, research questions and study design were devised and integrated to specifically focus the scale for the specific population of children who have experienced violence. Due to this constant focus, this scale is the most suitable for this group of children. However, they may not be the only clinical population for which the scale may be useful and beneficial. Because the study respondents came from varied backgrounds, the scale should also be appropriate to assess the perceived presence of protective factors in children who have experienced other traumatic events that are not related to overt interpersonal violence. For example, this could include children who have experienced: displacement as refugees, neglect, difficult medical procedures, and natural disasters. Research, as described subsequently, could further strengthen confidence in using the scale with these and many other varied clinical populations.

**Research**

Reviewing 21 studies on resilience and child maltreatment, Walsh, Dawson & Mattingly (2010) explain that most studies on resilience following child maltreatment focus on only one or two aspects of positive functioning rather than multiple domains. Additionally, according to an overview of resilience in children and families in relation to community violence research, Aisenberg & Herrenkol (2008) state the need for studying multiple protective influences. They conclude that a “fundamental shift” is needed to include more research to understand resilience at the family and community levels (2008). The TRS-C; which has shown strong psychometric properties across several domains ranging from the individual to the family, school, and
This scale opens the door for many research questions to be asked relating to how the perceived presence of multiple protective factors are associated with and influence outcomes of children from varied backgrounds and experiences. This could include studies that look at positive adaptation over time watching for differences across ethnicity, nationality, gender, socio-economic status, urban v. rural communities, and developmental milestones. Studies could also be formulated to track protective factors following any number of varied forms of trauma and difficult life experiences. Differences can also be measured looking at the nature, duration, and severity of maltreatment or the cumulative effects of multiple forms of violent experiences. Additionally, contrasting posttraumatic intervention techniques such as play therapy, academic services, family therapy or community organization can now be assessed for their impact on children’s perceived presence of protective factors. Another intriguing area of research would be to look at aspects of children’s natural attributes and surroundings that can be strengthened to increase overall functioning of both the child and the environment in pre or posttraumatic experiences. This research could be particularly interesting as information from the research could drive new violence prevention strategies.

Creating a connection between research and direct practice, the TRS-C can be used by trained service providers to prompt treatment goals and intervention strategies. In return, the test can be utilized to study increases in these factors throughout the intervention process. These results can then be utilized to refine interventions to reflect the best practices for children, their families, schools and communities. The ultimate goal of the TRS-C would be to combine it with other measures and study long-term gains in productive functioning across settings and services looking at how these gains are associated with other well-being indicators, such as real educational achievement, stable long term relationships, lower incidents of violence, and productive community involvement.
APPENDIX A

INITIAL PROPOSED ITEMS WITH READING LEVEL

Self Value: the child’s emotional and behavioral expressions of self are positive and constructive.
1. I like myself.
2. Even when bad things happen, I am still a good person.
3. I can help out.
4. I can do good stuff.
5. I am important.
6. Mostly, I am pretty cool.
7. I love being me.
8. I am a strong during hard times.
9. I care about myself.
10. I take care of myself.
11. I am good at being me, even when things are tough.
12. I try to be at my best.
13. I try to always do my best in every situation.
14. I really don’t like myself.
Flesch-Kincaid: 1.3

Self-Regulation: the emotional and behavioral self management a child employs to work toward resolution of violence rather than self-destructive or aggressive behavior.
1. I keep myself in control, even when bad things happen.
2. I have good behavior.
3. I am out of control.
4. I get in trouble a lot.
5. I sometimes hurt people.
6. I sometimes hurt myself.
7. I fight a lot.
8. I calm down when I am upset
9. I deal with my anger.
10. I talk about sad feelings.
11. I can handle being afraid.
12. I feel a mix of feelings, at times.
13. I share my feelings.
15. My feelings overwhelm me.
16. I lose my temper often.
Optimism/ Motivating Power: perceived energy towards positive expectations about life and future outcomes.
1. No matter how bad I feel, it will get better.
2. I will grow up to have a happy life.
3. I will get past sad times.
4. Even when bad things happen, I keep trying to make my life better.
5. I am hopeful.
6. I can get past yucky feelings.
7. I will make it through hard feelings.
8. Tough things will make me stronger.
9. I will overcome my struggles.
10. I look forward to cool things I will do.
11. I will always be a good person.
12. I can overcome anything with time.
13. Bad things will get better.
14. I will be a great kid no matter what.
15. I will make it through hard times.
16. It seems like I will never feel better.
17. Hard things make me feel like giving up.

Creative Problem Solving: the child’s perceived ability to find unique solutions to difficult situations.
1. I can think of ways to get to my goals.
2. I think of a way out of hard places.
3. I think of ways to get out of bad spot.
4. I figure out ways to make my life better.
5. I am a good thinker.
6. I know how to solve problems.
7. When hard things happen, I figure out a solution.
8. I fix my problems.
9. I make changes in my life.
10. If I need to, I change my plans to do something better.
11. I have a hard time solving problems.
12. I make time to do good things.
13. I figure out changes to make my life better.
14. Changing yucky things is hard for me.
15. In a hard situation, I can adapt.

Flesch-Kincade: 1.5

Supportive Belief Structure: deeply personal and/or sacred beliefs and practices that give support and meaning to life beyond the material or worldly.

1. I have strong beliefs that help me.
2. My life has meaning.
3. I have faith in something important.
4. I have a strong purpose in life.
5. I like to pray or meditate.
6. I am part of a community of believers.
7. I have a light inside that helps me feel better.
8. I feel better when I pray or meditate.
9. Something peaceful helps me when things are tough.
10. Something peaceful helps me when I am alone.
11. My beliefs give me comfort.
12. I believe that God helps me.
13. God helps me through hard times.
15. When I am in need, I can turn to God.
16. When things are hard, I can tell God is there.

Flesch-Kincade: 2.2

Healthy Caregiver / Family Support: stable care including meeting survival and emotional needs by at least one core long-term caregiver. This includes socio-emotional and instrumental aspects.

1. I feel safe at home.
2. I have all the things I need at home.
3. I talk to my parent about hard things.
4. When things go wrong, my family helps me.
5. My parent keeps me safe.
6. Mom helps me when things are tough.
7. Dad helps me when hard things happen.
8. My family supports me.
9. If I had another family, things would be better.
10. At home, we help each other.
11. I don’t feel safe with my parent.
12. My parents talk about violence the right amount.
13. My parent helps me feel less afraid.
14. A person at home watches me.
15. A person at home keeps me safe.
16. We have rules at home to keep us safe.
17. A person at home always knows where I am.
18. A person at home looks out for me.
19. My family is strong during hard times.
20. A family member comforts me.
21. Sometimes, I don’t get what I need at home.
22. My needs are met at home.

Flesch-Kincaid: 1.9

Supportive Peer Relationships: perceived ability to generate and maintain constructive mutual friendships.

1. I have a friend who helps me when things are hard.
2. I get along with kids at school.
3. I enjoy being with a friend.
4. I talk to a friend when life gets tough.
5. My friends and I, we help each other.
6. I have a very good friend.
7. I can talk to my friend about hard things.
8. My friend helps me with problems.
9. Kids don’t like me.
10. I don’t have friends.
11. I have a friend who sticks by me when things are tough.
12. I feel safe with my friends.
13. Kids, we stick together.
14. I don’t get help from friends.
15. I am a good friend.
16. A friend looks out for me.
17. A friend comforts me.
18. A friend helps me with the things I really need.

Flesch-Kincaid: early reader

Supported Academic Functioning: a child is supported in his or her efforts to work consistently at his or her ability level and attain educational goals.

1. A teacher helps me do my best.
2. The people at school help me get good grades.
3. I have a teacher who cares what I learn.
4. At school, I am assisted when I don’t understand something.
5. The people at school help me be safe.
6. Problems at school are dealt with quickly.
7. My school helps me achieve.
8. I am supported at school.
9. The people at school are there for me when things are tough.
10. People at school are helping me do well.
11. When things are hard, a teacher helps me.
12. At school, we help each other.
13. A teacher helps me with tough things.
14. A teacher looks out for me.
15. An adult helps me do well in school.
Flesch-Kincade: 1.5

Activity Involvement/Active Diversion: a child is involved in positive non-academic endeavors in the community, school and home.
1. I am in a great group or team.
2. I do many fun things.
3. I have an interest that I do well.
4. After school, I do activities.
5. I like the activities I do.
6. My activities help me feel good.
7. I enjoy a special activity.
8. My team or group helps me.
9. I like a sport or creative hobby (like music, art or scouts).
10. I have a hobby I really enjoy.
11. I have a hobby that I do well.
12. When I have a bad day, an activity makes me feel good.
13. I enjoy doing things after school.
14. When things are tough, I do fun things after school.
15. I enjoy the extra activities at school.
Flesch-Kincade: 2.9

Community Safety/Support: the child perceives the area in which he or she lives is a secure place to obtain resources.
1. Other than at home, I have an adult I can turn to.
2. Other than at home, I know an adult I can talk to about anything.
3. I get help from an adult in my neighborhood.
4. I have helpful neighbors.
5. I feel safe in my neighborhood.
6. I like my neighbors.
7. Our community has a safe place for kids to go.
8. My community supports me.
9. My neighbors are there for me when things are tough.
10. My neighborhood is helpful during tough times.
11. I am not safe in my neighborhood.
12. The police keep us safe.
13. Our neighbors look out for each other.
14. The people who live around us are helpful.
15. The people who live around us are not safe.
Flesch-Kincade: 2.9
Imbedded: Safety/Violence Reduction, perceived control
APPENDIX B

HUMAN PARTICIPANT PROTECTIONS CERTIFICATIONS

Completion Certificate

This is to certify that

Machelle Thompson

has completed the Human Participants Protection Education for Research Teams online course, sponsored by the National Institutes of Health (NIH), on 01/15/2008.

This course included the following:

- key historical events and current issues that impact guidelines and legislation on human participant protection in research.
- ethical principles and guidelines that should assist in resolving the ethical issues inherent in the conduct of research with human participants.
- the use of key ethical principles and federal regulations to protect human participants at various stages in the research process.
- a description of guidelines for the protection of special populations in research.
- a definition of informed consent and components necessary for a valid consent.
- a description of the role of the IRB in the research process.
- the roles, responsibilities, and interactions of federal agencies, institutions, and researchers in conducting research with human participants.
CITI Collaborative Institutional Training Initiative

Human Research Curriculum Completion Report

Learner: Machelle Thompson (username: machellet)
Institution: Florida Department of Children and Families
Contact Information
Florida State University College of Social Work
Department: Florida State University College of Social Work
Researcher
Email: machelle_t@hotmail.com

Social & Behavioral Research Investigators:

Stage 2. Refresher Course Passed on 07/10/09 (Ref # 2975046)

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<td>Refresher Course 101 Introduction</td>
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<td>SBR 101 REFRESHER MODULE 4. Vulnerable Subjects</td>
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<td>SBR 101 REFRESHER MODULE 5. Additional Topics</td>
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<td>How to Complete The CITI Refresher Course and Receive the Completion Report</td>
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For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator
APPENDIX C
PHASE I AGENCY APPROVALS AND AGREEMENTS

Human Subjects
Florida State University Office of Research
2010 Levy Avenue, Bldg. B, Suite 276
Tallahassee, FL 32312

Re: HSC#: 2007.939, Face Validation Groups for the Trauma Resilience Scale for Children

Human Subjects Committee:

The following is the letter of approval from the State of Florida, Department of Children and Families (DCF), Office of Family Safety, Human Protections Review Committee.
Two considerations were expressed by the committee as outlined in the letter signed by Ms. Badland dated December 8, 2008.

According to my understanding, in a conference call with my Dissertation chair, myself, and Ms. Lyons, the Human Protections Administrator the following measures will suffice:

I will not be including children who have been removed very recently from their home environment. Two precautions are taking place as outlined in my proposal already reviewed by FSU. I am only including children deemed stable enough to handle the research process by the Tree House. The BHOS counselor is available for support of the children if needed as recorded in the email from Ms. Uchenna Nwafor of Children’s Home Society dated 9/11/08. I also have extensive professional experience in this field prior to entering the doctoral program at FSU.

Additionally, you will also find in this FAX packet all the agreement forms between myself & DCF, and myself & Children’s Home Society. These are copies of originals which are being mailed and will be stored at the respective agencies.

Regards,

Machelle D. M. Thompson, MSW, LCSW (UT)
PhD Candidate, FSU College of Social Work
December 11, 2008

TO: Machelle D. Madsen Thompson, Florida State University College of Social Work

FROM: Becky Lyons, Human Protections Administrator

SUBJECT: DCF Approval of Research Project: Trauma Resilience Scale for Children, Phase I.

Your project has been approved under the requirements of the Department’s Human Protections Research Committee. The letter of support from Family Safety Program Director Pat Badland is enclosed.

Also enclosed are an Individual Investigator Agreement, and a Privacy and Confidentiality form, for you to complete and return. These forms are required by the program office, though they are more typically used in cases where the individually identifiable information is to be furnished by the program to the researcher. If you have any questions or concerns about them in the context of your project, I would be glad to put you in touch with the program office’s subject expert.

This approval is valid until the date specified by your IRB’s approval. Please forward any modifications or continuing approvals of the IRB documentation to me at the address below. Also, as mentioned in the Program’s approval letter, we would like to receive copies of your results when available.
December 8, 2008

Machelle D. Madsen Thompson
Florida State University College of Social Work

Dear Ms. Thompson:

I am pleased to express the support of the Office of Family Safety for Phase I of your proposed project on Trauma Resilience Scale for Children. We appreciate your interest in the individuals we serve. You are also to be commended for your willingness to engage in research that will expand the knowledge base of the social services profession.

Since your project requires you to obtain individually identifiable information about our clients, we request that you complete and return the attached Confidentiality and Security Agreement to the following:

Department of Children and Families, Office of Family Safety
1317 Winewood Boulevard
Tallahassee, FL 32399-0700

The program staff who reviewed this request wanted to express the following considerations for you to address as you proceed with the project.

- The effects of placement history on the subjects' response and participation needs to be considered. For example, the length of time since removal; if removal was recent, participants in the focus group or other research activity may have stronger adverse reactions. The proposed site has both short- and long-term residents.
- It is critical to take extreme care to judge the comfort level of each child during discussions, especially with respect to home and parents. The team felt interviewer's level of expertise would create the necessary sensitivity to the reactions of the participants, but this is important for all the members of the research team to understand and honor.

I understand you have already worked out most of the details with the organization where you propose to do the research (Children's Home Society, Tree House Dependency Program). Please provide copies of any local confidentiality agreements or related documentation to Becky Lyons. This applies particularly to anything required by the Lead Community Based Care agency on whose behalf Children's Home Society is providing

1317 Winewood Boulevard, Tallahassee, Florida 32399-0700

Mission: Protect the Vulnerable, Promote Strong and Economically Self-Sufficient Families, and Advance Personal and Family Recovery and Resiliency
Machelle D. Madsen Thompson  
December 8, 2008  
Page 2

services, as well as the CHS Corporate approval you mention in your proposal. Becky will be providing information about this project to the Department's operational staff in the local region, and requesting they contact you if there are any issues.

As you pursue the various review and approval processes necessary for protecting the rights of the subjects in your project, please let us know if you need any additional assistance. As you enter subsequent phases of your research, please get back in touch with us to update the approvals and other records prior to interaction with additional children. We request that you send us the results of the research, once in final form.

Again, thank you for your interest and efforts on behalf of the child welfare profession.

Sincerely,

Patricia Badland  
Director  
Office of Family Safety

Enclosure

cc: Human Protections Review Committee
Individual Investigator Agreement

Name of Institution with the Federal-wide Assurance (FWA): Florida Department of Children and Families

Applicable FWA #: FWA00004629

Individual Investigator's Name: ___________ Machelle D. Madson Thompson

Specify Research Covered by this Agreement: Trauma Resilience Scale for Children

Institutional Review Board: Florida State University; reviewed by State of Florida Department of Children and Families, Office of Family Safety

(1) The above-named Individual Investigator has reviewed: a) The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research (or other internationally recognized equivalent; see section B.1. of the Terms of the Federal-wide Assurance (FWA) for International (Non-U.S.) Institutions); b) the U.S. Department of Health and Human Services (HHS) regulations for the protection of human subjects at 45 CFR part 46 (or other procedural standards; see section B.3. of the Terms of the FWA for International (Non-U.S.) Institutions); c) the FWA and applicable Terms of the FWA for the institution referenced above; and d) the relevant institutional policies and procedures for the protection of human subjects.

(2) The Investigator understands and hereby accepts the responsibility to comply with the standards and requirements stipulated in the above documents and to protect the rights and welfare of human subjects involved in research conducted under this Agreement.

(3) The Investigator will comply with all other applicable federal, international, state, and local laws, regulations, and policies that may provide additional protection for human subjects participating in research conducted under this agreement.

(4) The Investigator will abide by all determinations of the Institutional Review Board (IRB)/Independent Ethics Committee (IEC) listed above and will accept the final authority and decisions of the IRB/IEC, including but not limited to directives to terminate participation in designated research activities.

(5) The Investigator will complete any educational training required by the Institution and/or the IRB/IEC prior to initiating research covered under this Agreement.

(6) The Investigator will report promptly to the IRB/IEC any proposed changes in the research conducted under this Agreement. The investigator will not initiate changes in the research without prior IRB/IEC review and approval, except where necessary to eliminate apparent immediate hazards to subjects.

(7) The Investigator will report immediately to the IRB/IEC any unanticipated problems involving risks to subjects or others in research covered under this Agreement.
Individual Investigator Agreement

(8) The Investigator, when responsible for enrolling subjects, will obtain, document, and maintain records of informed consent for each such subject or each subject’s legally authorized representative as required under HHS regulations at 45 CFR part 46 (or any other international or national procedural standards selected on the FWA for the institution referenced above) and stipulated by the IRB/IEC.

(9) The Investigator acknowledges and agrees to cooperate in the IRB/IEC’s responsibility for initial and continuing review, record keeping, reporting, and certification for the research referenced above. The Investigator will provide all information requested by the IRB/IEC in a timely fashion.

(10) The Investigator will not enroll subjects in research under this Agreement prior to its review and approval by the IRB/IEC.

(11) Emergency medical care may be delivered without IRB/IEC review and approval to the extent permitted under applicable federal regulations and state law.

(12) This Agreement does not preclude the Investigator from taking part in research not covered by this Agreement.

(13) The Investigator acknowledges that he/she is primarily responsible for safeguarding the rights and welfare of each research subject, and that the subject’s rights and welfare must take precedence over the goals and requirements of the research.

Investigator Signature: _______________________________ Date 1/5/09

Name: Thompson, Machelle D. M. Degree(s): BS, MSW, PhD Candidate

(Last) (First) (Middle Initial)

Address: ___________ Phone #: ___________

City: ___________ State/Province: ___________ Zip/Country: ___________

FWA Institutional Official (or Designee): _______________________________ Date 1/5/09

Name: Rebecc M. (Becky) Lyons Institutional Title: Human Protections Administrator

(Last) (First) (Middle Initial)

Address: ___________ Phone #: ___________
PRIVACY AND SECURITY AGREEMENT
Florida Department of Children and Families
Office of Family Safety

Pursuant to ss. 39.202 (2) (i), Florida Statutes (F.S.), the Florida Department of Children and Families Office of Family Safety ("Department") and __Machelle D.M. Thompson__ ("requester"), located at __hereby enter into this Privacy and Security Agreement for access to and use of the following Department confidential records:

Names of children under Department of Children and Families care

1. Access to and use of the above-listed records are limited to the following purposes:

Research for creating the Trauma Resilience Scale for Children

2. This agreement will end on __January 8, 2010__ or the date that the data is no longer needed for the requester’s purposes, whichever is sooner.

3. Requester agrees to the following terms and conditions for access and use:

   a. If utilized, any random selection methodology including the number of cases to be selected is subject to review at the discretion of the Department’s Data Support Administrator prior to access.

   b. Requester shall not have on-line access to any client data. Access shall either be to hard copy printout(s) or electronic file(s) produced by the Department. Printouts/files shall not contain the name or any identifiers of the abuse reporter.

   c. At the discretion of the Department, access to records may be limited to examination on-site at Department offices, of hard copy printouts of the specified records listed above. Authorized agents of the requester shall be allowed to take notes of information contained in the hard copy printouts, but shall not be allowed to copy any printout or remove any printout or portion thereof from the Department premises.

   d. Access to information that may be used to identify individuals\(^1\) shall be strictly limited to the stated purposes and to those authorized agents of the requester specified in a written list provided to the Department’s Data Support Administrator prior to

\(^1\) _Individually identifiable data_ is data that can be readily associated with a specific individual or family, including data that identifies relatives, employers, or household members. Examples would be a name, a personal identifier from a data system, or a full street address. Where health information is involved, see further definitions that may apply, for example at http://www.wedi.org/public/articles/HIPAAGLOSSARY.pdf
Privacy and Security Agreement
Office of Family Safety

receiving the information. Disclosure of individually identifiable data to any person or entity
other than among authorized agents of requester may subject the discloser to criminal
penalties as well as civil liability.

e. The requester and all authorized agents must comply with the
requirements of Subsections 39.202(2)(i), 119.07, 409.175, 394.4615, 414.295, Florida
Statutes (F.S.); 45 CFR, 42 CFR 431,302-.306, and 42 USC 1396a, Federal Regulations.

f. Only summary results of any analysis, audit, or research shall be
made available to any person or entities not directly involved in such analysis, audit, or
research.

g. All individually identifiable or confidential\(^2\) data provided to the
requester must be stored on a secure system with restricted access. Such data stored on
removable media (disks, flash drives, portable hard drives, etc.) shall also be adequately
secured.

h. All individually identifiable or confidential data shall be retained
only for the term of this agreement, and at the end of this term must be destroyed in a manner
acceptable to the Department’s Data Support Administrator. All individually identifiable or
confidential data that is stored on small removable media shall be destroyed or deleted such
that it cannot be restored. All such data that has been stored on desktops, mainframes, or
servers shall be similarly destroyed or deleted such that it cannot be restored. All such data
that has been printed out or stored in hard copy shall also be destroyed.

i. The requester shall notify the Department in writing, via email,
immediately in the event any breach of confidentiality.

j. Prior to being given access to individually identifiable or
confidential data, each authorized agent of requester shall be required to sign and submit to
the Data Support Administrator an electronic copy of the attached Affidavit of Understanding.

g. This Agreement may be modified by written agreement of both parties, or
terminated, by written notice, at the discretion of either party.

h. At the discretion of the Department, the requester will provide the
Department with draft results of the analyses of data provided under this agreement, and draft
copies of any written documents, or any materials to be presented verbally or otherwise,
including results such as findings and conclusion; allowing a minimum of two weeks review
by the Department prior to proceeding to release such materials to others. If the Department
provides comments or exclusions, these will be incorporated in a manner acceptable to the
Department.

\(^2\) Confidential Record. A public record that is exempt from the provisions of section 119.07(1), F.S. and which
is not open for public inspection or copying except in those instances as specified by applicable law. Copies of
confidential records will be provided only to those individuals or agencies as specified by law.

Revised 9/5/2008
i. Where applicable, the requester agrees to comply with the Health Insurance Portability and Accountability Act (42 U.S. Section 210 et seq) as well as all regulations promulgated thereunder (45 CFR Parts 160, 162, 164).


3. The Department designates the following individual as the Department’s point of contact for this agreement:
   Keith A. Perlman
   Data Support Administrator
   Bldg 6, Room 163
   1317 Winewood Blvd
   Tallahassee, Florida 32399-0700
   850-922-2195

4. The requester names the following individual custodian of the data on behalf of the requester:
   Name: Machelle D. M. Thompson
   Street Address: 
   City, State, Zip: 
   Phone Number: 

APPROVED:

[Signature]
Pat Badland, Director
Office of Family Safety
Department of Children & Families

DATE: 01.23.09

[Signature]
Requester

DATE: 1/5/09

Attach: Form - Affidavit of Understanding

Revised 9/5/2008
AFFIDAVIT OF UNDERSTANDING

I, [Name], an authorized agent of [Self] ("Requester"), accept the records listed in the Privacy and Security Agreement dated [Date], with the understanding that I am required by state law, section 39.202, Florida Statutes, to hold this information confidential and cannot release any confidential information to any person or entity except another authorized agent of requester. Further, I understand that I may be guilty of a misdemeanor of the second degree and/or liable to civil suit if I violate that confidentiality per section 39.205, Florida Statutes.

Signed: [Signature]  
Date: [January 5, 2009]

Witness: 
Date: [ ]
The research committee at CHS has approved this project for implementation. They are concerned that the letter to the parent may be too hard for them to understand. We are hesitant to ask you to go back to the IRB to adjust these, but it may be a significant issue, so we will leave it at your discretion.

Thanks,

David Congdon

David C. Congdon, Ph.D., LCSW
Corporate Director of Operations and Research
Director of CBC Learning Institute Training
The Children's Home Society of Florida

embracing children, inspiring lives
Children’s Home Society of Florida

Confidentiality and Non-Disclosure Agreement

I understand that I am employed in a position of trust and in the course of my employment will have access to confidential information relating to Children’s Home Society, its operations and clients. The value and sensitivity of information is protected by law and by the strict policies of Children’s Home Society of Florida. The intent of these laws and policies is to assure that confidential information will remain confidential. I am required to conduct myself in strict conformance with applicable laws and policy.

As a condition to employment at Children’s Home Society of Florida, and to be allowed access to any form of confidential information, I agree to comply with the following terms and conditions:

1. If my position requires that I am issued a User Name and Password, I understand that my User Name and Password is equivalent to my LEGAL SIGNATURE and I will not disclose this code to anyone or allow anyone to access the system using my User Name and Password.

2. I am responsible and accountable for all entries made and all retrievals accessed under my User Name and Password, even if such action was made by me or by another due to my intentional or negligent act or omission. Any data available to me will be treated as confidential information.

3. I will not attempt to learn or use another’s User Name and Password.

4. I will not access any on-line computer system using a User Name and Password other than my own.

5. I will not access any other confidential information, including patient, personnel, billing or private information unless I have a need to know to perform my assigned tasks.

6. If I have reason to believe that the confidentiality of my User Name and Password has been compromised, I will immediately change my password and notify Children’s Home Society Chief Information Officer.

7. I will not disclose any confidential information unless required to do so in the official capacity of my employment or contract. I also understand that I have no right or ownership interest in any confidential information.

8. I will not leave a secured computer application unattended while signed on.

9. I understand that my use of computer systems will be periodically monitored to ensure compliance with this agreement.

10. I agree not to use the information in any way detrimental to the organization and will keep all such information confidential.

11. I agree that disclosure of confidential information is prohibited indefinitely, even after termination of employment or business relationship, unless specifically waived in writing by the authorized party.

I acknowledge that under the new Health Insurance Portability and Accountability Act (HIPAA) regulations, the consequences for violating this agreement are: disciplinary action, including discharge, loss of privileges, termination of contract, criminal prosecution, legal action for monetary damages or injunction, or both, or any other remedy available to an employer under the regulations.

Children’s Home Society requires that all employees, volunteers, students, contractors, or authorized record reviewers execute this Confidentiality and Non-Disclosure Agreement.
Children's Home Society of Florida

Confidentiality and Non-Disclosure Agreement

This portion of the agreement must be returned to Human Resources to be filed in your records.

I acknowledge that I have read and understood the Confidentiality and Non-Disclosure Agreement.

I have been given an opportunity to ask questions about any portions of this agreement that I do not fully understand.

I will comply with CHS, State and Federal law concerning the confidentiality of information relating to Children's Home Society, its operations and clients.

User's Name: Michelle D. M. Thompson
(Please Print) Date: Sun. 5, 2009

User's Signature: ___________________________

Dept/Unit: ___________________________

Social Security Number: ___________________________

Company/Other: FSU College of Social Work

CHS1017 Form C Confidentiality and Non-Disclosure Agreement
Effective Date: 01/21/03
Revision Date: 06/17/04

Page 2 of 2
APPENDIX D

PHASE I CONTENT VALIDATION EXPERT TEST PACKET

Trauma Resilience Scale for Children:
Validation of Protective Factors Associated with
Positive Adaptation Following Violence

Content Validation Experts Informed Consent

Thank you for agreeing to help rate items for the Trauma Resilience Scale for Children. Please feel free to ask any questions you may have before choosing to take part in this study.

The goal of this study is to create a valid, reliable and unbiased measure of protective factors associated with children’s resilience following violence. As an expert in the field of childhood maltreatment, you will help us refine and pare down the items attached to this email. Refined items will be included in the final scale to later be given to children research participants.

I greatly appreciate your help. Although there are no major benefits to you if you rate these items, such involvement may in the future help children in both research and clinical settings who have experienced violence. The final version of this instrument may be made available for professionals to acquire.

The records of this study will remain confidential. Neither your name nor identifying characteristics will be included in final study reports; however, a description of your basic qualifications as an expert will be included. These records will be kept in a password protected file for three years after this study ends.

Participation in this study is completely voluntary. Your decision whether or not to take part will not affect your current or future relationship with Florida State University or myself.

If you have any questions please feel free to contact me:
Machelle Thompson, MSW, LCSW(Utah), PhD Candidate, Florida State University.
Phone: , Email:

If you have any questions about the review of this research or your rights as a research subject, you may contact the Human Subjects Internal Review Board (IRB) at 644-8633 or you may access the website at http://www.fsu.research.edu. By completing these questions, you acknowledge voluntary consent to participate in this study.
You may want to print this page as a reference while you rate the items.

Please rate the items 1-5 according to the two criteria below:

- **A)** Does each item reflect its domain well -- does the content of the item accurately reflect the definition provided for the domain?
  1 = Poor reflection of domain
  2 = Minimal reflection of domain
  3 = Adequate reflection of domain
  4 = Good reflection of domain
  5 = Excellent reflection of domain

- **B)** Thinking about children ages 6-11, please respond to the clarity in relation to the developmental appropriateness of each question.
  1= Not clear, too difficult to understand.
  2= Minimally clear question.
  3 = Adequately clear question.
  4 = Mostly clear question.
  5 = Extremely clear and understandable.

Feel free to comment on questions and add those you think may be essential to the domain. Each group of items is written at a second grade reading level or below.

<table>
<thead>
<tr>
<th>Items</th>
<th>Does this question reflect the domain well --Does the item fit well in this section?</th>
<th>For Children, is this a clear/understandable question?</th>
<th>How could this be better? (OPTIONAL)</th>
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</thead>
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<td></td>
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<td>1)</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
<td>New Questions:</td>
</tr>
</tbody>
</table>

Rewording: 1)

THANK YOU very much for your time!
APPENDIX E
PHASE I INFORMED CONSENTS

Parent/Caretaker Informed Consent

My name is Machelle Madsen Thompson. I am a PhD student from the College of Social Work at Florida State University (FSU). I am inviting your child to be in a study to help create a measure of resilience. Please read this form and ask any questions you may have before choosing to allow your child to be part of this study.

The Study: The goal is to create a valid, reliable and unbiased measure of protective factors associated with children’s resilience following violence. We want to create a strong test for what helps kids after a harmful experience. If you agree for your child to help out, he or she will be part of a focus group. The group will have 4-5 children and will last 1 1/2 hours. I will ask the children if our new measure makes sense to them. Their participation is voluntary. All answers will be kept confidential. You, but not your child, will be asked four simple yes no questions about violence your child may have seen or experienced. Children will not be asked these questions directly. In the future, the test may be available for professionals to acquire.

Risks and Benefits: The risk in this study is that questions such as how safe your child feels may be sensitive. There are no major benefits to you or your child if he or she takes part in the study. But it may help other children who have experienced violence. Thinking about the support your child feels in life may be a good experience.

Compensation: Each child in this study can choose a book. It is to thank them for participating. Your child will receive the gift even if he or she stops early.

Confidentiality: The records of this study will remain confidential, as permitted by law. Federal laws require that physical and sexual abuse have been reported to the proper authorities. If not, we are required to do so. The questions from the study will not have your child’s name on them. They will only have their answers and basic information. The records will be kept locked up for three years after the study ends.

Voluntary Participation: Taking part in this study is completely voluntary. Your decision to allow your child to take part will not affect your current or future relationship with FSU, your child’s school, or agency. You and/or your child can skip any questions. Even if you decide that your child can take part, it is okay if your child doesn’t want to participate. Your child can stop at any time. You can withdraw your child at any time. It won’t affect your relationship with Ms. Thompson or FSU.

Contact Information: Machelle Thompson, MSW, LCSW (UT) Phone: Email: Please ask me any questions you have now or later. For any questions or concerns about your child’s rights as a research subject, please contact the FSU Institutional Review Board (IRB) at 644-8633. You can also go online to You will get a copy of this form for your records. Please sign below if you give consent for your child to be in this study. Thank you!

Child’s name: ___________________ Your signature ___________________ Date ___________________

FSU Human Subjects Committee Approved on 1/15/09 Void After 1/13/2010
HSC No. 2008.2059

SAMPLE
Phase I Child Assent

My name is Machelle Thompson. I am a student from Florida State University. I am asking if you want to join in a study. It will help us find good questions for kids and how they are helped when getting over hard things.

If you want to be in this study, you will help us make some questions better for kids. There are no right or wrong answers. You will not get a grade. You will work in a group of five other kids. Ms. Thompson will ask you to rate questions about kids, families, school and the area where kids live. It might take us about an hour and a half to finish.

Talking about the questions might make you feel a little stressed. But, this study could help us learn how kids get over tough things.

Your name will not be on our papers. So, no one, except Ms. Thompson will know which answers came from you. Your answers will help us learn about kids.

Please talk with your parents before you choose to help us with the questions. We asked your parent (or caretaker) if it is okay for you to help out. Even if your parent said “yes” to this study, you can still choose not to do it. That will be fine.

If you do not want to answer any questions, then you do not have to. This study is voluntary. That means you decide whether or not to be in the study. Being in this study is up to you. No one will be upset if you do not want to help out. Also, you can change your mind and stop if you want to. If you do finish the answers, it could help us support kids who are trying to handle hard things in their lives.

You can ask any questions about this study. If you have a question later that you did not think of now, please call me at.

If you sign your name, it means that you say “yes.” You want to be in this study. You and your parents will get a copy of this form after you sign it.

Child’s Name ___________________________

Child’s Signature _______________________ Date ______________

Thank you!

Flesh Kincade Reading Level: Grade 3.5

FSU Human Subjects Committee Approved on 1/15/09 Void After 1/13/2010
HSC No. 2008.2059

161
Information to give when asking parents/caretakers and children if they want to participate:

Parent/Legal Guardian:

- Participation in this study is completely voluntary.
- Parent permission must be obtained before your child can participate.
- Even if Parent(s) give the child permission to participate, the child can still say “no.”
- If either the Parent or the Child do not want to participate, it will not affect the child’s services in any way.
- The child can quit the study at any time without any pressure or consequence.
- Children who come to the focus group will receive a book to compensate them for their time even if they want to stop participation during the group.
- Parents, but NOT children will be asked four short questions about the child’s prior exposure to violence or abuse.
- All information will be kept strictly confidential, except as mandated by reporting laws.

Please tell the Child:

- To participate in this study, your Parent (Legal Guardian) will need to give permission for you to participate.
- Even if your parent says “yes, you can participate”, you can still decide if you want to be in the study. You are a volunteer.
- If you say “yes” to this study, you will be helping Ms Machelle learn about things that help kids get over hard things.
- Four other kids will be there with you.
- You can stop at any time.
- You will get a book for coming, even if you want to stop early.
APPENDIX F

CHILDREN’S FOCUS GROUP OUTLINE: QUESTIONS CONDUCTED VERBALLY

When something really hard happens, what helps you the most?

We are asking kids about what helps them get over hard things.

Please tell us if each question is:

1 = Bad question  2 = Just okay question  3 = Great question

Is this a clear question; a good question to ask kids?

1= Too hard to understand  2= Kind of hard to understand  3 = Clear and easy to understand

<table>
<thead>
<tr>
<th>Item Domain:</th>
<th>Is this a good question?</th>
<th>Is this a clear question?</th>
<th>(Consequences) How did you feel about this question?</th>
<th>How could we make this question better?</th>
</tr>
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163
APPENDIX G

PHASE II AGENCY APPROVAL DOCUMENTS

July 22, 2009

Machelle D. Madsen Thompson
Florida State University College of Social Work

Your project "Trauma Resilience Scale for Children, Phase II" has been approved under the requirements of the Department's Human Protections Research Committee. The Family Safety Program Office commends you for your dedication to enhancing professional knowledge about children and the effects of violence.

This approval is valid until the date specified by your IRB's renewal (4/7/2010). Please forward any modifications or continuing approvals of the IRB documentation to me at the address below. We would like to receive copies of your results when available, as with the first phase. The Privacy and Security Agreement that was executed on 1/23/09 is still in effect and appears to cover the data needs for this project. However, if you think there will be any expanded data needs you must complete a new agreement form and forward it for processing.

Since this phase involves children in different geographic locations than Phase I, please ensure the CHS site staff have communicated with the relevant Community Based Care Lead Agencies, so that they are aware of the project's protocols and are in support of any workload this may entail. Let me know if there are any issues that we can assist with resolving.

If you have any questions please do not hesitate to contact me.

Sincerely,

Becky Lyons, Human Protections Administrator
Office of Family Safety

1317 Winewood Boulevard, Tallahassee, Florida 32399-0700

Mission: Protect the Vulnerable, Promote Strong and Economically Self-Sufficient Families, and Advance Personal and Family Recovery and Resiliency
From: Kathryn Brohl

Date: Mon, May 18, 2009 at 9:24 AM
Subject: 
To: Machelle Madsen Thompson
Cc: Lynn Thomas

Michalle,

The research committee at Children's Home Society of Florida had approved your project for
implementation last year and with the additional suggested and approved revisions approves proceeding
with Phase II of your project.

Thank you.

Kathryn Brohl

Kathryn Brohl, M.A., L.M.F.T.
Children's Home Society of Florida
The Center for Applied Innovation
Mr. Mike Watkins,

Thank you for talking with me on the phone. As requested, I am including a brief overview of the research below and the forwarded email from Ms. Becky Lyons, DCF Human Protections Administrator, which includes her clarification of the CBC role. I have also included the DCF letter of approval for this project.

The research is taking place in the North Central Division under the supervision of Ms. Jane Johnson, the Executive Director and Ms. Leah Kulakowski, the Clinical Program Supervisor for the sexual abuse treatment programs. Ms. Kymberly Cook, the Executive Director of the Buckner Division, wanted me to notify you that research occurring in the Jacksonville area may include some children under courtesy supervision from the CHS North Central area. Ms. Becky Lyons and Ms. Kathryn Brohl of the State of Florida CHS Research Division have been notified that I am beginning data collection in Tallahassee and Jacksonville areas. I have signed the CHS confidentiality agreement outlining the confidentiality standards that all CHS employees are held to. This document is on file at the North Central Division.

Please feel free to contact me with any questions or further information that you may need.

Sincerely,

Machelle

Machelle Madsen Thompson, PhD Candidate
Florida State University
College of Social Work UCC 2500
APPROVAL MEMORANDUM

Date: 4/16/2009

To: Machelle Thompson

Address:
Dept.: SOCIAL WORK

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Full Validation of the Trauma Resilience Scale for Children

The application that you submitted to this office in regard to the use of human subjects in the research proposal referenced above has been reviewed by the Human Subjects Committee at its meeting on 04/08/2009. Your project was approved by the Committee.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 4/7/2010 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Neil Abell, Advisor
HSC No. 2009.1815
Please fill out electronically. Direct questions or concerns to the FSUS Research Director.

Date (mm/dd/yyyy): 08/27/2009

The request is for Fall 2009 Spring 20

Course instructor (coordinator): Abell, Neil Dissertation Chair

Supervising professor, if course instructor is a TA:

Department/University: College of Social Work, Florida State University

Program: PhD

Department Address: 2500 University Center Bldg. C

E-mail address: machelle@thompson.org

Phone number(s) (work/home/mobile): 850-509-8950 850-907-9358

This field experience is (Underline one):

1. Observation only  2. Observation and instruction  3. Other Children will take a survey

   Incl. tutoring, instructional assistance, teaching  E.g., counseling, assessment

Title of the activity: Trauma Resilience Scale for Children

Course number and course title: Dissertation

Projected start date and end date of activity: Began collecting FSUS data May, 2009

Describe the visitation requirements for your students – please be specific and complete (e.g., one hour a week for 10 weeks, or 4-8 hours/week for a total of 36 hrs and 1 full week, etc.):

45 minutes to meet with the students from each P. E. course whose caretakers have signed an informed consent form. This can take place at the convenience of the school and the teachers. In May this took place over two days.

Number of students that will visit FSUS: 1

(Note: Please send a list with the names of your students to the Research Director – see instructions on the last page)
Are FSUS students pulled out of the classroom? Yes ❌ No **
If “Yes,” how many students and how many times per student? 

**If a similar protocol from May data collection is followed, the students will remain in their classroom while non-participating students leave for P.E. Or, they will be pulled from P.E. back to their classrooms if they need to check in at P.E. for some reason. Upon the one time completion of the measure, students can return to their P.E. class.

♦ Briefly describe the nature and objectives of your activity (Please type a paragraph of no more than 100 words):
I have been approved by FSU IRB team, CHS Applied Innovation Team and Florida, and DCF State Office of Family Safety to collect dissertation data to create the Trauma Resilience Scale for Children, a measure of protective factors associated with positive adaptation following experiences of violence in a child’s life. Under the supervision of my dissertation chair, Dr. Neil Abell, I have already completed extensive work on this project including: pilot work with adults (in press), completing the background literature review, and collecting content validation data with experts across the nation and with children in the foster care system. I had begun collecting the general validation data with FSUS Elementary School students in May 2009. At this time, I am hoping to: a) complete gathering the data from the FSUS students for whom I already have informed consent and b) provide an opportunity for the other children to participate in the research at a less eventful time of year.

♦ List special requirements, endorsements or certifications required from FSUS faculty (e.g., clinical training certificate, minimum of 3 years in-service experience, ESOL endorsement, etc.): None

♦ If known, list FSUS faculty members with whom you would like to place your students (e.g., you have a history of working with particular teachers): N/A

♦ List the expected responsibilities and tasks required of FSUS faculty (e.g., observe your students and provide feedback, conference, fill out evaluation form, etc.):
  1. Teachers send home Informed Consent Letters for Parents to sign.
  2. Having children in 2nd-5th grade take the test.
     It takes the youngest children about 40+ minutes to complete the test. The second graders feel most
comfortable having the test read aloud *(Based on administrations at FSUS). It takes the oldest children about 15+ minutes to complete the test.

3. Teachers send home a form for the child’s caretakers to fill out about the child. It takes the caretaker about 15+ minutes to fill out the information about the child.

* 2nd and 3rd graders may need the measure read to them. But, this can be accomplished by Ms. Thompson

♦ Briefly describe the benefits of the activity to our teachers / staff:
The principle investigator has agreed to share the findings of the research with the agencies helping her to collect the data. Teachers may benefit from improved understanding of resilience following violence.

♦ Briefly describe the benefits of the activity to our students:
Children may benefit from teachers’ improved understanding of resilience following violence. In a general sense, if this measure is validated, children, their caretakers and their professional helpers can use the measure to conduct research in the field of resilience, and to improve assessment and treatment planning for children who may have witnessed or experienced violence.

♦ Any comments you would like to add to clarify your request:
The parents/legal caretakers are asked four simple questions about the history of violence in the child’s life. The children are not exposed to these questions.
APPROVAL MEMORANDUM

TO: Brenda Jarmon
   Department of Social Work

FROM: Tony Manson, Ph.D.
      Vice Chair, Institutional Review Board (IRB)

DATE: December 4, 2009

RE: “Full Validation of the Trauma Resilience Scale for Children: FAMU DRS” (009-79)

The Florida A&M University Institutional Review Board (IRB) has reviewed and approved the above name project and no other revisions are necessary.

The IRB has not evaluated your project for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If the project has not been completed by December 4, 2010 you must request a renewed approval for continuation of this project.

You are advised that any changes in the protocol in this project must be resubmitted to the committee for approval. Also, the principal investigator must promptly report, in writing, any unexpected problems causing risks to research subjects or others.

Please ensure in your research that you only utilize the approved and stamped consent form.

The institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is FWA00005391.
APPENDIX H

PHASE II CONSENT AND PARTICIPANT CONTACT LETTERS

Parent/Caretaker Informed Consent

My name is Machelle Madsen Thompson. I am a PhD student from the College of Social Work at Florida State University (FSU) working under the supervision of my advisor, Dr. Neil Abell. I am inviting you and your child to be in a study to help create a measure of resilience. Please read this form and ask any questions you have before choosing to be part of this study.

The Study: The goal is to create a valid and unbiased measure of protective factors related to children’s resilience following violence. We want to create a strong test for what helps kids after a harmful experience. If you agree to help out, you and your child will fill out separate surveys. It may take your child up to an hour to finish the survey. It may take you up to 30 minutes to complete the survey of your child. Participation is voluntary. All answers will be anonymous. You, but not your child, will be asked four simple yes/no questions about violence your child may have experienced. Children will not be asked these questions directly. If your child has experienced violence that has not been reported to the proper authorities, it is your responsibility to do so. In the future, the test may be available for professionals to acquire with a royalty to the author.

Risks and Benefits: Taking the survey might be stressful for your child. There are no major benefits to you or your child if he or she takes part in the study. But, it may help other children who have experienced violence. Thinking about the support your child feels may be a good experience.

Confidentiality: The records of this study will remain anonymous to the extent allowed by law. The questions from the study will not have your child’s name on them. Answers will only have their initials and date of birth for identification. Data will be kept for five years after the study ends. Paper data will be kept in a locked filing cabinet. Electronic data will be password protected on a computer.

Voluntary Participation: Taking part in this study is voluntary. Your decision to allow your child to take part will not affect your relationship with FSU, your child’s school, or agency. You and/or your child can skip any questions. Even if you decide that your child can take part, it is okay if your child doesn’t want to participate. You can stop at any time. You can withdraw your child at any time.

Contact Information: Machelle Thompson, MSW, LCSW (UT) Phone: ................................. Email: machelle.thompson@fsu.edu
                     Neil Abell, PhD Phone: ................................. Email: n_abell@fsu.edu. Please ask any questions you have now or later. For questions or concerns about your child’s rights as a research subject, please contact the FSU Institutional Review Board (IRB) Phone: (850) 644-8633. Email: humansubjects@magnet.fsu.edu.

Please sign below if you give consent for your child to be in this study. THANK YOU!

Child’s name: ______________________ Your signature ______________________ Date __________

FSU Human Subjects Committee Approved on 4/16/09 Void After 4/7/10 HSC# 2009.1815

172
Resilience Survey Child Assent

My name is Machelle Thompson. I am a student from Florida State University working under the supervision of my advisor Dr. Neil Abell. I am asking if you want to join in a study. It will help us find good questions for kids and how they are helped when getting over hard things.

If you want to be in this study, you will help us make some questions better for kids. There are no right or wrong answers. You will not get a grade. Ms. Thompson will ask you to take a survey about kids, families, school and the area where you live. It might take about an hour to finish.

Talking about the questions might make you feel a bit stressed. But, this study could help us learn how kids get over tough things.

Do not put your name on your paper. Only give us your initials and birthday. So, no one will know which answers came from you. Your answers will help us learn about kids.

We asked your parent (or caretaker) if it is okay for you to help out. Even if your parent says “yes” you can still choose not to take the survey. That is fine.

If you do not want to answer some questions, you do not have to. This study is voluntary. That means you decide whether or not to be in the study. Being in this study is up to you. No one will be upset if you do not want to help out. Also, you can change your mind and stop if you want to. If you do finish the answers, it could help kids who are trying to handle hard things in their lives.

You can ask any questions about this study. If you have a question later that you did not think of now, call me at

If you sign your name, it means that you say “yes.” You want to be in this study.

Your Name____________________________________

Your Signature __________________________ Date ______________

Thank you!

FSU Human Subjects Committee Approved on 4/16/09 Void After 4/7/10 HSC# 2009.1815
Children’s Verbal Assent -Read before children sign written informed consent

I am Machelle Thompson. I go to school at FSU. I am supervised by my advisor Dr. Neil Abell. I am making a test to find out things that help kids after going through something hard.

You can help us. We are finding good questions to ask kids what helps them get over hard things. If you want to take the test, you will help us make the questions better for other kids.

Do you have any questions about the reason for this group?

There are no right or wrong answers. You will rate questions about you, family, school and the area where you live. It will take about an hour.

The test might make you feel a bit stressed. But, this test could help us learn how kids get over tough things.

Are you okay with how this test works? (Raise of hands for “yes” in classroom setting)

Do not put your name on the test. Only put your initial and birthday on the paper. So, no one will know which answers came from you.

We asked your parent or caretaker if it is okay for you to help out. You can still choose not to do it. That is fine.

If you do not want to answer a question, you don’t have to. You decide to answer or not. Taking the test is up to you. No one will be upset if you do not want to do it. And, you can change your mind and stop any time. If you do finish the answers, it could help kids who are trying to handle hard things in their lives.

Did you hear me and understand? (Raise of hands in classroom setting)

Do you have any questions?

If you have a question later, please call me at [redacted].

Do you want to take this test? (Raise of hands in classroom setting)

(Flesh Kincaid Reading Level: 2.6)
Children’s Home Society Caseworker,

I am looking for children who could participate in a research project as a joint venture between myself (an FSU PhD Candidate), the State of Florida DCF, and Children’s Home Society. I greatly appreciate that you are considering joining this project. For this project, I am validating a resilience scale that will measure the protective factors in children’s lives that have been shown to increase positive outcomes following violence. The scale questions have been based on several years of research on this subject.

Please choose children who fall within the 6-11 year old age range and who exhibit enough stability and emotional maturity to take a test that will last about an hour. Children for whom parental rights have not been severed please obtain consent from parents.

Please tell the parents/legal guardians the following:

- Participation in this study is completely voluntary.
- Your permission must be obtained before your child can participate.
- We will ask your child right before the survey administration if they want to participate.
- Even if you give permission for your child to participate, it is okay for your child to say “no.”
- If either you or child do not wish to participate, it will not affect the child’s relationship with DCF, CHS or FSU in any way.
- Your child can quit the study at any time without any pressure or consequence.
- You will be asked to fill out an information sheet and a survey about your child. You, but NOT your child will be asked four short questions about your child’s prior exposure to violence or abuse.
- Your child will only fill out the Resilience survey.
- All information will be kept anonymous. You and your child will place his/her initials and date of birth on the survey rather than a name. All information will be kept in a secure location.

If you agree to help with this valuable research, please tell the child the following:

- To participate in this study, your Parent (Legal Guardian) will need to give permission for you to participate.
- Even if your parent says “yes, you can participate”, you can still decide if you want to be in the study. You are a volunteer.
- If you say “yes” to this study, you will be helping Ms. Machelle learn about things that help kids get over hard things.
- You can stop at any time.

If you decide to help us with this valuable research, please contact Ms. Thompson. You will then be given the test packet for the families to fill out. If you have any questions at all, please feel free to contact me. Phone: [Redacted] Email: [Redacted]

Thank you so much for considering participation in this project.

Machelle Thompson, MSW, LCSW (UT), PhD Candidate
Florida State University College of Social Work
Dear FSUS Parent,

You and your child have been chosen for possible participation in a research project which is a joint venture between myself (an FSU PhD Candidate) and FSUS. For this project, I am validating a resilience scale that will measure the positive aspects of your child’s life. The survey questions have been based on several years of research on this subject.

Before you decide to participate, here is some information that may help you.

- Participation in this study is completely voluntary.
- Your permission must be obtained before your child can participate.
- We will ask your child right before the survey administration if they want to participate.
- Even if you give permission for your child to participate, it is okay for your child to say “no.”
- If either of you do not wish to participate, it will not affect your child’s grades or relationship with FSUS.
- Your child can quit the study at any time without any pressure or consequence.
- You will be asked to fill out an information sheet and a short questionnaire about your child. You, but NOT your child, will be asked four short questions about your child’s prior exposure to violence.
- Your child will only fill out the Resilience survey.
- All information will be kept anonymous. You and your child will place his/her initials and date of birth on the survey rather than a name. All information will be kept in a secure location.

If you agree to help with this valuable research, please tell your child the following:

- For you to participate in this study, I (your parent or legal guardian) will need to give permission.
- Even if I, your parent, say “yes, you can participate”, you can still decide if you want to be in the study. You are a volunteer.
- If you say “yes” to this study, you will be helping Ms. Machelle learn about things that help kids get over hard things.
- You can stop at any time.

If you decide to participate, please return the enclosed informed consent to your child’s teacher. Your child will then be given the opportunity to participate in the survey at school and will receive a test packet for you to fill out at home. If you have any questions at all, please feel free to contact me. Phone: [redacted] Email: [redacted]

Thank you so much for considering participation in this project.

Machelle Thompson, MSW, LCSW (UT), PhD Candidate
Florida State University College of Social Work
March 11, 2009

RE: Machelle Madsen Thompson’s research project
“Resilience Scale Research”

Florida State University Human Subjects Committee:

Florida State University School (FSUS) is the developmental research school affiliated with the FSU College of Education. We work with researchers on projects that are within the scope of our research and developmental mission. Researchers who approach FSUS for their research complete the FSUS research request form and submit it to the Research Director. Research at FSUS cannot begin without review by and approval from the Research Director.

As the FSUS Research Director, I hereby acknowledge that I have received a request for the research referred to above and am willing to allow the scale to be distributed to approximately three hundred fifteen students at FSUS with appropriate informed consent. The project is pending review of IRB documentation and further consultation on the project’s implementation.

Sincerely,

Gary Habib
Research Director
My name is Machelle Thompson. I am a student from Florida State University working under the supervision of my advisor Dr. Neil Abell. For FAMU DRS, I am also under the direction of Dr. Brenda Jarmon. I am asking if you want to join in a study. It will help us find good questions for kids and how they are helped when getting over hard things.

If you want to be in this study, you will help us make some questions better for kids. There are no right or wrong answers. You will not get a grade. Ms. Thompson will ask you to take a survey about kids, families, school and the area where you live. It might take up to an hour to finish.

Talking about the questions might make you feel a bit stressed. If you need a break, please let us know.

Do not put your name on your test paper. Only give us your initials and birthday. So, no one will know which answers came from you. Your answers will help us learn about kids.

We asked your parent (or caretaker) if it is okay for you to help out. Even if your parent says "yes" you can still choose not to take the survey. That is fine.

If you do not want to answer some questions, you do not have to. This study is voluntary. That means you decide whether or not to be in the study. Being in this study is up to you. No one will be upset if you do not want to help out. Also, you can change your mind and stop if you want to. If you do finish the answers, it could help kids who are trying to handle hard things in their lives.

You can ask any questions about this study. If you have a question later that you did not think of now, ask your parent or the person who takes care of you to contact me.

If you sign your name, it means that you say "yes." You want to be in this study.

Your Name ________________________________
Your Signature ___________________________ Date __________________

FAMU IRB Approval
FWA 00005391
IRB Number: D09-79
From: 12-4-09
Thru: 12-4-2010

Thank you!

FSU Human Subjects Committee approved on 12/14/09 VOID after 4/7/2010 HSC# 2009.3417
Parent/Caretaker Informed Consent

My name is Machelle Madsen Thompson. I am a PhD student from the College of Social Work at Florida State University (FSU) working under the supervision of my advisor, Dr. Nell Abell at FSU. For FAMU DRS, I am also under the direction of Dr. Brenda Jarmon. I am inviting you and your child to be in a study to help create a measure of resilience. Please read this form and ask any questions you have before choosing to be part of this study.

The Study: The goal is to create a valid and unbiased measure of protective factors related to children's resilience following violence. We want to create a strong test for what helps kids after a harmful experience. If you agree to help out, you and your child will fill out separate surveys. It may take your child up to an hour to finish the survey. It may take you up to 30 minutes to complete the survey of your child. Participation is voluntary. All answers will be anonymous. You, but not your child, will be asked four simple yes/no questions about violence your child may have experienced. Children will not be asked these questions directly. If your child has experienced violence that has not been reported to the proper authorities, it is your responsibility to do so. In the future, the test may be available for professionals to acquire with a royalty to the author.

Risks and Benefits: Taking the survey might be stressful for your child. There are no major benefits to you or your child if he or she takes part in the study. But, it may help other children who have experienced violence. Thinking about the support your child feels may be a good experience.

Confidentiality: The records of this study will remain anonymous to the extent allowed by law. The questions from the study will not have your child's name on them. Answers will only have their initials and date of birth for identification. Data will be kept for five years after the study ends.

Voluntary Participation: Taking part in this study is voluntary. Your decision to allow your child to take part will not affect your relationship with FSU, your child's school, or agency. You and/or your child can skip any questions. Even if you decide that your child can take part, it is okay if your child doesn't want to participate. You can stop at any time. You can withdraw your child at any time.

Contact Information: Machelle Thompson, MSW, LCSW (UIAH) Email: Nell Abell, PhD Email: Brenda Jarmon, PhD Email: Please ask any questions you have now or later. For questions or concerns about your child's rights as a research subject, please contact the FSU Institutional Review Board (IRB) Phone: (850) 644-8633. Email: humansubjects@magnet.fsu.edu or the FAMU IRB Phone: (850) 412-2526 Email: IRB@famu.edu

Please sign below if you give consent for your child to be in this study. THANK YOU!

Child's name: ___________________ Your signature ___________________
IRB Date: ___________________
From: 12-4-09
Thru: 12-4-2010

FAMU IRB Approval
FWA 00005391

FSU Human Subjects Committee approved on 12/14/09 VOID after 4/7/2010 HSC# 2009.3417
Dear FAMU DRS Parent,

You and your child have been chosen for possible participation in a research project which is a joint venture between me (FSU PhD Candidate) and FAMU DRS. For this project, I am validating a resilience scale that will measure the positive aspects of your child’s life. The scale will be used to test for protective factors in children’s lives that may be present to help them overcome trauma. Children at FAMU DRS form the normal sample. Foster children’s scores will be compared with FAMU DRS children’s scores. The survey questions have been based on several years of research on this subject.

Before you decide to participate, here is some information that may help you.

- Participation in this study is completely voluntary.
- Your permission must be obtained before your child can participate.
- We will ask your child right before the survey administration if they want to participate.
- Even if you give permission for your child to participate, it is okay for your child to say “no.”
- If either of you do not wish to participate, it will not affect your child’s grades or relationship with FAMU DRS.
- Your child can quit the study at any time without any pressure or consequence.
- You will be asked to fill out an information sheet and a short questionnaire about your child. You, but NOT your child, will be asked four short questions about your child’s prior exposure to violence.
- Your child will only fill out the Resilience survey.
- All information will be kept anonymous. You and your child will place his/her initials and date of birth on the survey rather than a name. All information will be kept in a secure location.

If you agree to help with this valuable research, please tell your child the following:

- For you to participate in this study, I (your parent or legal guardian) will need to give permission.
- Even if I, your parent, say “yes, you can participate”, you can still decide if you want to be in the study. You are a volunteer.
- If you say “yes” to this study, you will be helping us learn about things that help kids get over hard things.
- You can stop at any time.

If you decide to participate, please return the attached informed consent to your child’s teacher. Your child will then be given the opportunity to participate in the survey at school and will receive a test packet for you to fill out at home. If you have any questions at all, please feel free to contact me. Email: Machelle@Thompson.org.

Thank you so much for considering participation in this project.

Machelle Thompson, MSW, PhD Candidate
Florida State University College of Social Work
APPENDIX I

PARENT DEMOGRAPHIC FORM

Demographic Form Filled Out by Adult
Child’s Initials: ___  ___  ___ Date of Birth: ___/____/______
Gender: ___ Male ___ Female
Ethnic Group(s): ___ Caucasian  ___ African American  ___ Hispanic  ___ Asian American  ___ Other (please list)
Method of Administration: _____ Group _____ Individual
Child needs Reading Assistance on Questions: ____ Yes ____ No
Neighborhood: 1) ___________________ School for which Child is zoned

<table>
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<th>Usual Grades on average (Older Children):</th>
<th>Usual Grades on average (Young Children):</th>
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<tr>
<td>___ Mostly As</td>
<td>___ Mostly Es</td>
</tr>
<tr>
<td>___ A mix of As and Bs</td>
<td>___ A mix of Es and Ss</td>
</tr>
<tr>
<td>___ Mostly Bs</td>
<td>___ Mostly Ss</td>
</tr>
<tr>
<td>___ A mix of Bs and Cs</td>
<td>___ A mix of Ss and Ns</td>
</tr>
<tr>
<td>___ Mostly Cs</td>
<td>___ Mostly Ns</td>
</tr>
<tr>
<td>___ A mix of Cs and Ds</td>
<td>___ Working below grade level</td>
</tr>
<tr>
<td>___ Mostly Ds</td>
<td>“Some Progress”</td>
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<tr>
<td>___ Child is failing several classes</td>
<td>___ Working below grade level</td>
</tr>
<tr>
<td>“Some Progress”</td>
<td>“No Progress”</td>
</tr>
<tr>
<td>___ Working below grade level</td>
<td></td>
</tr>
<tr>
<td>“No Progress”</td>
<td></td>
</tr>
</tbody>
</table>

History of Violence Exposure:
Child has experienced or witnessed the following (your child is not asked this question):

___ No ___ Yes  Domestic violence:  A child has witnessed any parent or caretaker being
injured, assaulted and/or seriously threatened physically or sexually by the
parent or caretaker’s intimate partner.

___ No ___ Yes  Sexual abuse/rape:  The child has been coerced to participate in sexually
explicit conduct and/or has experienced sexual contact/exploitation by a
person in a position of power and/or authority over her or him.

___ No ___ Yes  Physical abuse:  The child has experienced non-accidental physical injury by
someone with power and/or authority over him or her.

___ No ___ Yes  Other life-threatening event:  The child has experienced and/or witnessed a
severe and violent event which presents a threat or actual physical injury,
a threat of death or actual death, or an imminent risk of serious injury or
harm, other than
those mentioned above.

• If you have answered “yes” to an abuse incident that has not been reported to Child
Protective Services, it is your legal responsibility as the caretaker of your child to do
so.  The Florida Child Abuse Hotline is: 1(800)962-2873.
APPENDIX J

RESEARCH CHANGES FROM PROSPECTUS TO DISSERTATION

Collection Location

The proposed out of state data collection sites including a children’s medical center, a residential treatment center and one school became prohibitive from a time and cost standpoint. This was partially due to FSU’s IRB requirements of obtaining legal counsel in each state to verify the law in relation to children as wards of each state and their participation in research. Therefore, all out of state locations were not included as data collection sites. Florida State University Schools, Florida A & M Developmental Research School, and Children’s Home Society sites in Florida were included.

Research Questions and Hypotheses

Before data collection took place, the Trauma Symptom Checklist was determined to be costly and time prohibitive for parent/caretaker respondents. It was, therefore, determined that the BERS-2 and the CD-RISC 2 would be the only measures used for convergent validation. Any time a BERS-2 subscale or indicator could be used as a construct validation hypothesis, it was. Research hypotheses were changed as outlined above.

Sample Size

After very difficult and considerable effort including traveling to test locations and obtaining, at times, only one or more responses, the ideal sample size was less than anticipated for all analyses. For phase one, the original prospectus for this dissertation stated that the total participants in the focus groups would range between 16 and 20. A total of ten respondents were obtained. For phase two, the prospectus read, “data collection will continue until a sample of 300 usable cases from both clinical and non-clinical sites, for a total of 600 children is obtained.” A total of 208 usable cases were obtained. Most originally proposed analyses, with the appropriate missing data replacement procedures, could be calculated. However, differential item function bias indicators, requiring a larger sample size and greater number of responses within each response option, were not calculated. The proposed hypothesis, “The probability of endorsing each item, given the same trait level, will not be biased based on age, gender or ethnicity” was removed. This was approved by the dissertation committee as the data collection was drawing to a close.
REFERENCES


Garmezy, N. (1996). Reflections and commentary on risk, resilience, and development. In R. J. Haggerty, L. R. Sherrod, N. Garmezy & M. Rutter (Eds.), *Stress, risk, and resilience in


Machelle Madsen Thompson received her Bachelor of Science in Social Psychology with a minor in Music from Brigham Young University. She began advocating for children who have experienced violence while obtaining her MSW at the University of Utah. At the Utah Division of Child and Family Services, she worked in family preservation with families who had substantiated cases of child abuse. She then began focusing on the youngest children who had experienced violence creating a preschool group intervention model incorporating cognitive-behavioral therapy coupled with play and music therapy models. At Primary Children’s Medical Center, Center for Safe and Healthy Families and The Children’s Justice Center of Utah County, she worked as a Licensed Clinical Social Worker with children who had experienced non-accidental traumas, primarily preschoolers who had been sexually abused. She supervised the preschool group programs. She also began a community prevention program in the most vulnerable neighborhoods of Utah. Using an ecologically based model and an empirical approach to prevention, she brought together teachers, parents, young students and counselors to promote early detection and prevention of childhood difficulties.

To conduct original research on interventions that help children overcome violence, she came to Florida State University to study Social Work at the doctoral level. While at FSU, she taught several courses and earned the university-wide recognition of Teaching Associate with the Program for Instructional Excellence. Among Social Work doctoral and adjunct teachers, she was ASSW teacher of the year. She served as the Social Work Doctoral Student Organization President and served on the Doctoral Teaching Competencies Committee with Social Work Faculty. Obtaining a doctoral certification in Statistics and Measurement helped her to co-author the Trauma Resilience Scale for adults (Madsen & Abell, 2010). Using the information from this work, she began work on the Trauma Resilience Scale for Children which earned her the Harrison award for best dissertation prospectus.

While obtaining her doctorate, she remained involved in the community volunteering in the local schools and serving on the Safe and Nurturing Environment action team for children in Leon County. She serves as a precinct committeewoman for the Leon County Democratic Executive Committee. She is on the board of directors as a supervisor of the social service team for Love at Work Missions, a faith-based home repair and poverty outreach organization in Gadsden County. She is the mother of three who enjoys music, dance and mountain biking.