

6-24-2004

## The Role of Intelligence and Coping Processes on Resilience in Adult Survivors of Childhood Sexual Abuse

Kelli-Lee Harford  
*University of South Florida*

Follow this and additional works at: <https://digitalcommons.usf.edu/etd>



Part of the [American Studies Commons](#)

---

### Scholar Commons Citation

Harford, Kelli-Lee, "The Role of Intelligence and Coping Processes on Resilience in Adult Survivors of Childhood Sexual Abuse" (2004). *USF Tampa Graduate Theses and Dissertations*.  
<https://digitalcommons.usf.edu/etd/1068>

This Thesis is brought to you for free and open access by the USF Graduate Theses and Dissertations at Digital Commons @ University of South Florida. It has been accepted for inclusion in USF Tampa Graduate Theses and Dissertations by an authorized administrator of Digital Commons @ University of South Florida. For more information, please contact [digitalcommons@usf.edu](mailto:digitalcommons@usf.edu).

The Role of Intelligence and Coping Processes on Resilience in Adult Survivors  
of Childhood Sexual Abuse

by

Kelli-Lee Harford

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Arts  
Department of Psychology  
College of Arts and Sciences  
University of South Florida

Major Professor: Bill Kinder, Ph.D.  
Vicky Phares, Ph.D.  
Marcia Finkelstein, Ph.D.

Date of Approval:

June 25, 2004

Keywords: hardiness, resiliency, maltreatment, iq, defenses

© Copyright 2004, Kelli-Lee Harford

## Acknowledgements

I am very grateful to all the people who helped me to complete this thesis. I would like to thank my advisor, Dr. Bill Kinder who meticulously reviewed countless versions of this work. I would also like to thank my committee members Dr. Vicky Phares and Dr. Marcia Finkelstein for their invaluable advice, and my colleagues Scott Young, Qutayba Abdullatif, and Jodi Savell for their help and support. Finally, I would like to express my gratitude to the psychology department for their help in funding this thesis.

## Table of Contents

List of Tables	ii
Abstract	iii
Background	1
Definition of Sexual Abuse	4
Resilience	5
Coping Processes as a resilience factor	7
Intelligence as a resilience factor	10
Hypotheses	15
Method	16
Participants	16
Measures	16
Procedure	21
Results	23
Discussion	30
References	36
Appendices	42
Appendix 1: Demographics	43
Appendix 2: Informed Consent	44
Appendix 3: Debriefing Form	46
Appendix 4: Sexual Abuse Screener	47

## List of Tables

Table 1	Independent Samples T-Test between Sexually Abused and Non-Sexually Abused Women	25
Table 2	Correlations of IQ and coping with the GSI for the sexually abused group	26
Table 3	Correlations of IQ and coping with the GSI for the non-sexually abused group	27
Table 4	Regression Analysis for Coping Variables Predicting Resilience in Survivors of Childhood Sexual Abuse	28
Table 5	Summary of the Simultaneous Regression Analysis for the Variables Predicting Resilience in individuals who have not been sexually Abused	29

The Role of Intelligence and Coping Processes on Resilience in Adult Survivors  
of Childhood Sexual Abuse

Kelli-Lee Harford

ABSTRACT

The relationship between intelligence as measured by the Shipley Institute of Living Scale, Coping Processes as measured by the Ways of Coping Scale and resilience as measured by Global Severity Index of the Brief Symptom Inventory, was examined in 88 individuals who had been sexually abused and 88 individuals who had not been sexually abused. The study attempted to assess whether more intelligent individuals and those who used certain coping styles would experience less distress in the face of adversity than individuals with lower levels of intelligence and who used different coping styles. The results indicated that intelligence was not associated with resilience in either the sexually abused or the non-sexually abused group. In the sexually abused group, the coping processes of Confronting, Distancing, Self Controlling, Accepting Responsibility, Escape Avoidance, Planful Problem Solving and Positive Reappraisal were all significantly positively correlated with the GSI. In the non-sexually abused group, however, the coping processes of Self Controlling, Accepting Responsibility and Escape Avoidance were all significantly positively correlated with the GSI. Results of a simultaneous regression indicated that in the sexually abused group, none of the variables that were correlated with resilience accounted for a significant amount of variance in GSI scores. In

the sample of individuals who had not been sexually abused, the coping strategy of Escape Avoidance was the only individual predictor accounting for a significant amount of the GSI variance in the model. Possible reasons and implications of these results are discussed.

## Background

Prevalence rates of child sexual abuse range from 6% to 62% (Finkelhor, 1987). Women who report a history of child sexual abuse often report more negative psychiatric symptomatology than women without histories of child sexual abuse. They have more problems with sexual disturbances or dysfunction, as well as reporting more homosexual experiences in adolescence and adulthood than women without histories of child sexual abuse. (Beitchman, Zucker, Hood, DACosta, Akman, & Cassavia, 1992).

Internalizing effects such as depression, anxiety, posttraumatic stress disorder (PTSD) fear, distress, guilt and shame have also been connected with women who have been sexually abused. These symptoms have been identified by a number of researchers (Browne & Finkelhor, 1986; Johnson & Kenkel, 1991; Kendall-Tackett, Williams, Finkelhor, 1993; Saywitz, Mannarino, Berliner & Cohen, 2000; Spaccarelli & Fuchs, 1997).

Some externalizing behaviors that have been identified by researchers as possibly stemming from abuse are aggression, over-sexualized behavior, eating disorders, substance abuse, self injurious behaviors and somatic complaints (Berliner & Cohen, 2000; Browne & Finkelhor 1986; Inderbitzen-Pisaruk, Shawchuck & Hoier 1992; Kendall-Tackett, Williams, Finkelhor 1993; Monahan & Forgash, 2000; Newman, Clayton, Zuellig, Cashman, Arnow, Dea, & Taylor, 2000; Saywitz, Mannarino, Smith M.S. & Smith M.T., 1999; Spaccarelli & Fuchs, 1997).



Lange, De Beurs, Dolan, Lachnit, Sjollema and Hanewald (1999) suggested that there were a variety of variables that played a role in the association between childhood sexual abuse and later psychopathology. Examples of these included: the specific characteristics of the abuse; the way it was experienced and processed; family factors; and individual characteristics of the victim (that is, age at first abuse).

While these and many other studies have reported a variety of negative consequences of child sexual abuse, many studies have also reported that not all victims of sexual abuse exhibit negative symptomatology. Estimates of asymptomatic children range from 31%-49%, approximately 1/3 of those in the studies reviewed. Kendall-Tackett, Williams, and Finkelhor (1993) have hypothesized that this may have been due to three main reasons: (1) the measures used were not sensitive enough to detect the symptoms present; (2) the symptoms have not yet manifested themselves; (3) there may be individuals who have been sexually abused who are more resilient than others and who are truly less affected by the abuse.

The quality of the relationship with the nonoffending parents has been found to be related to resilience in victims of sexual abuse (Spaccarelli & Kim, 1995). For example, Valentine and Feinauer (1993) interviewed sexual abuse survivors and found that the ability to find emotional support outside the family, self regard or the ability to think well of oneself, religion or spirituality, external attributions for blame and cognitive style, and an internal locus of control were all related to positive adaptation in their sample.

Feinauer and Stuart (1996) found that severity of abuse was significantly related to current level of trauma symptoms. In addition they also found that survivors who blamed themselves and/or fate or bad luck had more symptoms than those who did not

blame themselves. Their study also suggested that survivors who blamed the perpetrators had fewer symptoms than those who did not blame the perpetrator.

Liem, James, O'Toole and Boudewyn (1997) found that having more rather than less siblings seemed to offer some protection from depression and low self-esteem as long-term negative consequences of childhood sexual abuse. Contrary to other research, they found that resilient individuals seemed to have more internal versus external attributional styles that is, they were more likely to attribute to themselves rather than to some external force, the ability to bring about desired outcomes. Resilient individuals were also less likely to be chronically self-destructive. Risk factors seemed to include other co-occurring stressful family events such as parental illness, divorce, loss of a family member or physical or emotional neglect in the family. The resilient abused in this sample were less likely to blame themselves for the sexual abuse.

There appear to be different sets of predictors that correlate with internalizing and externalizing problems in girls who have been sexually abused. Low perceived social support from the non-offending parent, negative appraisals, and high usage of cognitive avoidance coping were found to be related to internalizing symptoms such as depression and anxiety. Abuse related stress and seeking to control others was related to externalizing symptoms such as aggressive behaviors, and sexual problems. The tendency to cope by seeking to control others was an important predictor of both aggressive behaviors and sexual problems (Spaccarelli & Fuchs, 1997).

In their review, Kendall-Tackett, Williams and Finkelhor (1993) suggested that the issue of asymptomatic children has been peripheral until recently, and there are few researchers who have looked at the correlates of being symptom free. The research that

has been conducted has found some factors that are associated with a greater number of symptoms for victims of sexual abuse. These include: molestations that included a close perpetrator, that is, a family member, a high frequency of sexual contact, a long duration, the use of force, and sexual acts that included oral, anal, or vaginal penetration, a lack of maternal support at the time of disclosure, and a victim's negative outlook or coping style.

Kendall-Tackett, Williams, and Finkelhor (1993) suggested that future studies should, however, address the issue of resilient children as a central research question. They suggested a number of factors for study as possible contributors to resilience in survivors of sexual abuse. These factors included intelligence, coping skills, prior adjustment, cognitive interpretation of the abuse, children's family and social environment and the actions taken by professionals in response to their disclosures. They also suggested taking into account the time that has elapsed since the abuse.

Trickett and McBride-Chang (1995) suggested that there needs to be more studies on adult survivors of childhood abuse and neglect in order to gain a better understanding of the long term effects. They suggested that in trying to assess these long term effects, university samples may not be useful because of the overselection of adults with less severe abuse. It is, however, also important to study these individuals to gain a better understanding of the processes that makes these individuals more resilient than their peers.

#### *Definition of sexual abuse*

Sexual abuse has been defined in a variety of ways by different researchers. The definitions of sexual abuse vary within the sexual abuse literature from no contact events

such as exhibitionism to fondling and sexual intercourse (Rumstein-McKean & Hunsley, 2001). One of the most widely used definitions is that of Finkelhor (1979) whose definition includes sexual activity between a child and an older person, including simulated, attempted or actual intercourse, kissing, hugging or fondling in a sexual manner, sexual overtures and exhibitionism. This contact was described as sexual abuse if it occurred between a child 12 or under and an adult over 18, or more than 5 years older than the child, or between an adolescent and an adult at least 10 or more years older than the adolescent. Russell (1986) defines sexual abuse as any sexualized behavior between a minor child and anyone who is 5 years older than the child.

### *Resilience*

Resilience has been defined as a process by which individuals demonstrate positive adaptation in the face of adversity or trauma. It is a dynamic process which may change based on context and time. It is not meant to describe a personality trait. Adversity refers to negative life situations that are known to be associated with difficulties in adjustment. Examples of these include abuse or neglect, and low socio-economic status. Positive adaptation can be seen in terms of high social competence or the absence of psychological distress. In circumstances where the adversities are very serious, the absence of psychiatric distress may be a more logical outcome indicator than measuring social competence. Three main factors have been associated with resilience: (1) personal characteristics of the individual such as intelligence; (2) aspects of the individual's families such as cohesion or discord; (3) characteristics of the individual's environment such as their social support systems. Due to the dynamic nature of resilience, however, even when personality characteristics of the individual are serving as

protective factors, these characteristics are always being shaped by interactions between the individual and their environment. Individuals who are able to successfully overcome adversities under certain conditions may not be able to do so under different conditions. Research seems to suggest, however, that while individuals may show changes over time, overall, individuals who do well in certain areas, continue to show positive adaptation over time. Protective factors may act in two ways: (1) by changing the meaning of the risk factors for the individual and (2) changing the individual's exposure to the risk factor. By changing the meaning of a risk factor, an individual with higher intelligence may have a greater ability to actively structure their experiences and therefore be better able to control them. Intelligence may also change the individual's exposure to a risk factor because more intelligent individuals may have more experiences of high prestige and success in a number of domains. This could, therefore act to minimize the risk from other adverse circumstances such as low SES (Luthar, Cicchetti & Becker, 2000; Luthar, Zigler & Goldstein, 1992; Rutter, 1987; Luthar & Cicchetti, 2000).

The majority of the research on resilience has been conducted on children. However, resilience can be an important variable at any point in human development. Therefore, Luthar, Cicchetti, and Becker (2000) have suggested that it is important to research resilience at different points in human development.

Spacarelli and Kim (1995) suggested three main reasons for studying resilience in individuals who have been sexually abused. First, it encourages the study of different kinds of variables because it encourages researchers to think in terms of protective as well as risk factors. Second, studying the processes involved in resilience may provide researchers with ways that different processes could be targeted for effective treatment

and preventive intervention efforts. Third, looking at resilient survivors may provide hope to other victims and their families.

*Coping processes as a resilience factor*

The coping strategies employed by individuals have long been seen as a protective factor of maltreated children, and this has translated specifically to the sexual abuse literature. Coping was initially viewed as a relatively stable personality trait, for example individuals were seen as having a defensive style of coping. More recent research has changed the conceptualization of coping to cognitions and behaviors that individuals engage in as a response to specific situations. The transactional theory views coping as a dynamic process which changes in response to the specific situation in which an individual is placed (Stone, Greenberg, Kennedy-Moore & Newman, 1991). Lazarus and Folkman's (1984) theory of coping divides the construct of coping into two main dimensions – problem-focused and emotion focused coping. Problem focused coping involves attempts by the individual to manage or change the environment. Emotion focused coping involves strategies of the individual aimed at accepting or handling events that cannot be changed. These two main dimensions are further divided into five strategies of coping: avoidance, nervousness and anxiety related behaviors, self-destructive behaviors, cognitive approaches and expressive responses.

Burt and Katz (1988) defined the construct of coping as efforts aimed at reducing the anxiety produced by any stimulus experienced as threatening or stressful, as well as efforts to reduce the interference of the threatening stimuli with the individual's ability to function. They found that expressive coping after sexual assault tended to increase over time and was therefore an indication of long-term recovery.

Steel, Wilson, Cross and Whipple (1996) suggested that sexual abuse may be an experience for which individuals use coping strategies that are adaptive for that experience but may be maladaptive in other situations. They investigated the mediational role of coping strategies using the Ways of Coping Questionnaire in the development of psychopathology in victims of childhood sexual abuse. While they did not find any significant differences of coping style between victims with high and low levels of psychopathology, they suggested that this may have been because of their definition of psychopathology as scores on the MMPI. They suggested that using a different definition of psychopathology may have different results.

Runtz and Schallow (1997) in their study of former victims of child sexual abuse, found that the coping strategy that involved expressing emotion and actively seeking change and understanding was associated with positive adaptation. These authors found that internal attributions of blame are maladaptive and that nonexpressive coping was associated with greater anxiety and depression. On the other hand, emotional expressiveness was associated with positive psychological functioning. The authors suggested that their findings indicated that how an individual copes with childhood trauma as an adult may be more relevant to adjustment than the actual extent of the maltreatment experienced.

The discrepancies between these two studies may be due to the samples that were studied. Burt and Katz's study was on adult survivors of rape, while Runtz and Schallow's study was on childhood survivors of sexual abuse. Therefore, the difference may have been due to the relative recency of the sexual assault in Burt and Katz's study. In addition, because the efficacy of a particular coping style is context specific, coping

strategies that are effective with rape or other types of trauma in adulthood such as those studied by Burt and Katz may differ from those that are most effective when dealing with child maltreatment (Runtz & Schallow, 1997).

Spaccarelli (1994) has proposed a transactional model of coping whereby sexual abuse is viewed as a series of stressful events, and the cognitive appraisals and coping responses of the victim constitute the risk or protective factors that mediate the effects of the abuse on the victim's psychological well-being. Other factors, whether developmental and environmental, may also moderate the relationship between the abuse stressors and the victim's responses. Spaccarelli's model predicts that negative symptomatology is more likely when the total amount of stressful life events is higher, and that higher stress will indirectly affect symptoms by increasing the likelihood that victims will employ maladaptive coping strategies, and will view abuse events in ways that erode positive self-image, sense of security and trust in others.

Johnson and Kenkel (1991) also found a relationship between an individual's coping strategy and their psychological adjustment. In their study of victims of incest, individuals who used the strategy of seeking social support and detachment/distancing were rated by their therapist as having the greatest degrees of psychopathology. The authors also concluded that the coping strategies used were more significant than the abuse characteristics in determining post disclosure distress.

Coffey, Leitenberg, Henning, Turner and Bennett (1996) studied women who had been sexually abused to determine if ways of coping with sexual abuse during childhood was uniquely associated with adult adjustment, taking into account, characteristics of the abuse and also the ways that the women coped with other recent stressful situations. They



found that the women who had been sexually abused coped with the abuse differently than they did with more recent stressors. They also found that using disengagement methods of coping with the abuse in adulthood was associated with higher levels of psychological distress.

Certain cognitive styles of adaptation have been associated with resilience. These styles included exaggerated perceptions of personal control, unrealistic optimism, disclosure and discussion of child sexual abuse, minimization, positive reframing, and consciously deciding not to dwell on the abuse (Himelein & McElrath, 1996).

#### *Intelligence as a resilience factor*

In studying intelligence as a resilience factor, it is important to note that not all experts agree with the use of conventional assessment scales to measure intelligence. In addition, while intelligence is often viewed as a trait, it may be influenced by a number of environmental factors such as the context of testing, social class, parental education, prejudice, and English as a second language (Vaillant & Davis, 2000).

Luthar, Zigler, and Goldstein (1992) found that high achieving, gifted adolescents showed more positive psychological adjustment than their peers who were not identified as gifted. They concluded that this may be due to the gifted adolescents being more cognitively mature, as well as from experiential factors like those associated with frequent past successes.

Luthar, Woolston, Sparrow, Zimmerman, and Riddle (1995) also found that achievement was strongly associated with social competence, and appeared to mediate associations between intelligence and aspects of competence. Academic achievement was also associated with adaptive behaviors in the contexts of personal care, domestic skills,

and skills used in the community. They concluded that success in one domain of competence is often linked with striving for success in other aspects as well. The authors suggested that these findings are useful for intervention and prognosis, as relatively high achieving hospitalized children seem to be those most likely to engage in adaptive behavior across different domains.

Cederblad, Dahlin, Hagnell, and Hansson (1995) found that intelligence and other beneficial temperamental traits such as high activity and energy level, high sociability and good impulse control and persistence were associated with lower frequencies of some psychiatric diagnoses. They also found that different traits seemed to be related to different diagnoses. For example, high intelligence was associated with a lower risk of depression, psychopathy, neurosis and alcoholism.

Werner (1994) reported on a longitudinal study of high risk children on the Hawaiian island of Kauai and suggested that the individual dispositions of the resilient individuals in the study led to them seeking out environments that rewarded their competencies. While parental competence and social support were important for adult competence, this impact was less direct than the individual's disposition.

Masten and Coatsworth (1998) suggested that there are three main predictors of competence in favorable and unfavorable environments– the parent-child relationship; good cognitive development or intellectual functioning; and the child's self-regulation of attention, emotion, and behavior. They suggested that children with good cognitive skills may be better able to cope with unfavorable situations, because they can manage the “cognitive load inherent in adverse situations.” Masten and Coatsworth (1998) also suggested that IQ may act as a moderator of risk by acting as a protective or risk factor in

the “processes linking adversity to social conduct.” The authors suggested that doing well on IQ tests requires a variety of information-processing skills that may also help the child to cope with adversity. For example, children with higher IQ’s may be able to solve problems or protect themselves better and/or have better self-regulation skills. On the other hand, children with below average IQ’s may be less able to cope with adverse situations or learn from their experiences to the same degree as children with higher IQ’s.

Intelligence has been shown to be correlated with competence among high risk children. At high levels of stress, however, children with high intelligence seem to lose their advantage and demonstrate school based competence levels more similar to their less intelligent peers. There are a variety of explanations offered for these interactions between intelligence and stressors as predictors of competence. Children with a high IQ may be better at problem solving and coping. They may be better able to evaluate the consequences of their behaviors, to delay gratification, and to contain impulses. Intelligence may act as a vulnerability factor because children with higher IQ may be more sensitive to their environments, which makes them more susceptible to life stressors than individuals with lower IQ’s. Intelligent inner-city youth were found to show considerably more variation in school based performance depending on levels of ego development than their less intelligent peers. Ego development was measured by an abbreviated version of the Loevinger’s (1985) Sentence Completion Test, Form 81. Increasing levels of ego development have been associated with increasingly mature functioning across the domains of impulse control, cognitive style, moral development, and interpersonal relations. Intelligent inner-city youth were also found to show more variation in school based performance depending on the degree to which they

experienced an internal locus of control than their less intelligent peers. However, their levels of competence never went below those of their less intelligent peers (Luthar & Zigler, 1992).

Tiet, Bird, Davies, Hoven, Cohen, Jensen, and Goodman (1998) found that while IQ had no impact in children at low risk for psychopathology, children at high risk for psychopathology and with higher IQ's may have coped better and therefore avoided the harmful effects of adverse life events. In their study, the children who showed positive adjustment also tended to live in higher functioning families, and receive more guidance and supervision from their parents and other adults in the family. These authors hypothesized that higher educational aspirations may also provide high-risk youth with a sense of direction and hope.

There have been a number of reasons suggested for the superior functioning of intellectually gifted children. They may have greater cognitive maturity, which leads to improvements in their ability to actively structure their experiences and therefore be better able to control them. Also, because their intellectual skills are developmentally advanced, they may have a relatively wide variety of modes for the adaptive handling of their experiences. Therefore, children who are intellectually gifted may show better psychological adjustment than their non-gifted peers because of the greater flexibility of their coping strategies. The psychological adjustment of gifted children may also be due to experiential variables. For example, intellectual achievement often leads to experiences of high prestige and success in the peer group, school, and family. This history of frequent successes could, therefore, in conjunction with these superior coping strategies

contribute to the better adjustment levels shown by academically and intellectually gifted children (Luthar, Zigler & Goldstein, 1992).

While intelligence has been found to be associated with positive adjustment in “at risk” children, there has been no research on the effect of intelligence on resilience in adults who were sexually abused as children. While intelligence may be conceptualized in a number of ways, for the purposes of this research, intelligence will be defined as the score on the Shipley scale (Shipley, 1939).

The work on coping is equivocal, with some research finding that internal attributional styles was associated with positive adjustment and other research concluding that internal attributional styles were associated with negative adjustment. Coping processes will be measured using the Ways of Coping Scale (Folkman & Lazarus, 1988)

## Hypotheses

The current study attempted to address some of the limitations of previous studies as well as to study new questions which previous researchers have not yet fully examined. Three main hypotheses were examined: (1) More intelligent individuals will be more resilient to sexual abuse, while less intelligent individuals will be less resilient to sexual abuse; (2) Individuals with certain coping styles will be more resilient to sexual abuse than individuals with other coping styles. Previous research suggests that the coping strategies of Distancing, Escape Avoidance and Accepting Responsibility will be associated with increased distress, while the coping strategies of Positive Reappraisal, Self Controlling, Confronting and Planful Problem Solving will be associated with less distress; (3) Individuals who are more intelligent and also utilize these adaptive coping styles will be most resilient to sexual abuse.

## Method

### *Participants*

Participants were female undergraduate students, 18-30 years, at the University of South Florida who received extra credit points for their participation. There were 88 females who were sexually abused and 88 females who were not sexually abused were randomly selected from 204 subjects. Power analysis using the software program SamplePower indicated that with 80 subjects and an alpha of .05, there was an 80% chance of detecting a small effect if it existed. The participants were told that the study was assessing a number of characteristics and behaviors, but were not be informed of the true nature of the study. This was to avoid participants feeling as if they had to answer in a certain way depending on whether or not they had been sexually abused. Participants were also told that they were not required to participate and could discontinue the study at any time without penalty.

### *Measures*

The Shipley Institute for Living Scale was used to assess intelligence. The Shipley Institute of Living Scale was designed as a quick way to measure intellectual impairment of individuals aged 16-74 in group settings. It was developed in 1939 by W.C. Shipley and consists of a 40 item Vocabulary, and a 20 item Abstraction test. Updated norms are also available (Paulson & Lin, 1970a). The Vocabulary test has the respondent choose which of four words is closest in meaning to a target word. The

Abstractions test consists of sequences of numbers, letters, or words with the final element in each sequence omitted. The respondent is required to complete each of the sequences. It is a pencil and paper test, which takes 20 minutes to administer – 10 minutes for each subtest, and can be administered individually or in groups. The total raw scores can also be converted to WAIS scores. Correlations between Shipley and WAIS IQ scores have been found to range from .70-.90.

Estimates of test-retest reliabilities based on studies published from 1966 through 1977 were based on college students. Testing intervals varied from 2 to 16 weeks across samples and reliability estimates ranged from .31 to .77 for the Vocabulary scores, .47 to .88 for Abstraction scores, and .62 to .82 for total scores. Split half reliability estimates were based on 322 army recruits. Item responses were split into odd and even items and values corrected for attenuation of .87, .89, and .92 were obtained for the Vocabulary, Abstraction, and total scores, respectively. The Shipley manual contends that because the test is graduated in difficulty, split-half reliabilities may be more a more appropriate measure of reliability than other measures of internal consistency like Cronbach's alpha. However, the standards for Educational and Psychological testing states that split half coefficients are inappropriate for highly speeded tests such as the Shipley (Shipley Institute of Living Scale, 2000).

According to Bowers and Pantle (1998), the Shipley is a useful measure when testing college students and above average readers who are accustomed to taking tests similar to the Shipley, and may, therefore be more comfortable with this format, than other tests such as the K-BIT. A major advantage of the test is that it is a quick way to estimate general levels of intellectual functioning and to screen for intellectual



impairment. In addition, it does not require a trained examiner as do many of the other intelligence tests and can be group administered.

The Shipley correlates well with other intelligence tests such as WAIS-R, Slosson Intelligence Test, Ravens Progressive Matrices and the Wechsler-Bellevue. Once again, however, these correlations are based on student and psychiatric samples. Because the norms for the test were based on college populations, and many studies have demonstrated the utility of estimating WAIS-R scores from the Shipley based on this population, the Shipley may be a useful screening for intelligence in this population.

The Ways of Coping Questionnaire was used to assess coping processes. It is a 66-item 4-point Likert type scale ranging from “does not apply” to “used a great deal.” It was designed to identify the thoughts and behaviors that individuals use when dealing with stress. The measure is founded on the premise that it is the way that an individual deals with a stressful situation, not the actual situation itself which will affect their functioning. The quality of a coping style is determined by the context in which it occurs and a coping style may be helpful in one context, but not in another. It was developed by Folkman and Lazarus in 1988, and was originally developed as the Ways of Coping Checklist. The questionnaire has eight scales to assess the different coping processes: Confrontive Coping; Distancing; Self-Controlling; Seeking Social Support; Accepting Responsibility; Escape-Avoidance; Planful Problem-Solving; and Positive Reappraisal (11 Mental Measurement Yearbook).

The authors contend that internal consistency is a better measure of reliability than test-retest reliability because coping changes across situations. The internal consistency reliabilities using Cronbach’s alpha, reported by the authors range from .61

to .79. The authors also contend that the measure has good face validity because the measure describes strategies that individuals reported using to cope with stressful situations. Folkman and Lazarus (1988) also reported that the Ways of Coping Questionnaire has good construct validity because the results of their studies were consistent with their theoretical predictions that coping consists of both problem-focused and emotion focused strategies and also that coping is a process.

A Brief Measure developed by Bartoi and Kinder (1999) was used to assess sexual abuse history. The child portion of this measure was to determine the types of sexual experiences the individual encountered before the age of 16. This consists of a 12 item measure consisting of “yes” or “no” questions about the types of sexual experiences that the individual may have experienced before the age of 16. If they participated in oral, vaginal or anal intercourse, or genital manipulation with someone at least 5 years older, was ever touched in a way that made her feel violated or was coerced into unwanted sexual activity, then that subject will be considered an adult survivor of child sexual abuse. Also, any participants who did not meet this specific definition, but felt that they had ever been touched in a way that made them feel violated, were considered adult survivors of childhood sexual abuse (Appendix 4).

The Brief Symptom Inventory is a 53 item self-report measure that serves as a short form to the Symptom-Checklist-90-Revised, and takes approximately 8-10 minutes to administer. Respondents are asked to identify how much a series of problems has distressed them in the past seven days, along a 5-point Likert type scale ranging from “not at all” to “extremely.” It was designed to show psychological symptomatology in psychiatric, medical, and non-patient populations, and may be administered in a group

setting. It can be used for adults and adolescents age 13 and older, and requires at least a sixth grade education. The BSI provides scores on somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychotism scales. It also provides three global indices: Global Severity Index, Positive Symptom Distress Index and Positive Symptom Total (10 Mental Measurements Yearbook). The Global Severity Index is a score which indicates the current level of distress being experienced. The Positive Symptom Total comprises all the positive responses endorsed. The Positive Symptom Distress Index is calculated by dividing the sum of the item values by the PST.

The internal consistency reliabilities are good ranging from .71 on psychotism to .83 on obsessive compulsive. The test-retest reliabilities over a two week period are also high, ranging from .68 on somatization to .91 on phobic anxiety. The three global scores all have test-retest reliabilities above .80. Factor analysis confirmed the dimensions of the scale, except for the four item interpersonal sensitivity scale. The BSI has good concurrent validity with the MMPI with correlations ranging from .30 to .72, although its discriminant validity is low. (10 Mental Measurements Yearbook).

Morlan and Tan (1988) suggested that due to its limited discriminant validity, the BSI may best be used to assess the presence of psychopathology but that it may not be a good indicator of the exact nature of the psychopathology. As a result, the present study will be primarily concerned with the scores on the Global Severity Index of the BSI, which is the most commonly used index used to assess psychopathology. Cochran and Hale (1985) suggest that the BSI is appropriate for use with college student and

developed norms for use with this population based on a sample of 204 females and 143 males at a four year college.

### *Procedure*

The participants were recruited in the fall semester online and by going into undergraduate psychology classes. There was an oversampling of those who had not been sexually abused to obtain the sexually abused sample. Eighty-eight individuals who had not been sexually abused were then randomly selected to act as a control for the sexually abused group. Thirty-nine participants were excluded because their responses on the packets were ambiguous. On these packets, the participants classified themselves as abused on the Bartoi and Kinder questionnaire, but then responded with a different stressful situation in mind to the Ways of Coping Questionnaire. The subjects were offered extra credit for their participation. The participants were given a packet with all the materials and asked to complete all the measures. The Shipley was administered first because it is a timed test. The Brief Symptom Inventory was administered second, so that the participants would not confound the responses to the other questionnaires with their response on the BSI. The Kinder and Bartoi (1999) screening questionnaire was administered next so that participants will know what experiences are being referred to as sexual abuse when answering the Ways of Coping Questionnaire. The Ways of Coping Questionnaire was administered last. For the Ways of Coping Scale, the participants were asked to think about the experience of being sexually abused if they were, or if they were not, some other stressful situation. If the participants were not sexually abused, they were given examples of stressful situations and then asked to write down the stressful situation they had in mind.

Upon completion of data collection, the individuals who had been sexually abused according to the Bartoi & Kinder questionnaire were grouped together, while the individuals who have not been sexually abused were grouped together as the comparison group and the data was analyzed. Abuse was defined as having a positive response to any question on the Bartoi and Kinder measure, except, 11a (whether the respondent had ever received psychological treatment).

## Results

Of the 331 participants that completed questionnaires, 27% ( $n = 88$ ) reported a history of sexual abuse as measured by the Kinder and Bartoi (1998) scale. Eighty-eight participants who did not report a history of sexual abuse were randomly drawn from the remaining sample, in order to have equal numbers for statistical comparisons. For the sexually abused group, participants ranged in age from 18 – 30 ( $M = 20.06$ ,  $SD = 2.48$ ). Forty-five percent of the sample identified as Caucasian, 21.6% as African American, 17% as Hispanic, 3.4% as Asian, 10.2% identified themselves in the “Other” category, while 2.3% of respondents did not provide information regarding their ethnicity. For the non-sexually abused group, participants ranged in age from 18-28 ( $M = 20.06$ ,  $SD = 2.28$ ). Sixty percent of the sample identified as Caucasian, 16% as African American, 12% as Hispanic, 3% as Asian, and 4% identified themselves in the “Other” category. None of the demographic variables measured (age, ethnicity or number of siblings) was significantly correlated with any of the other variables measured for either the sexually abused or non-sexually abused group.

ShIPLEY scores were converted to WAIS-R IQ scores using the table provided in the manual (ShIPLEY, 2000). The Global Severity Index (GSI) was calculated by summing all the items and then dividing by the total number of items, as per the criteria in the manual (Derogatis, 1993). The coping scales: Confronting, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape Avoidance, Planful Problem

Solving, and Positive Reappraisal were calculated by adding items in each scale as suggested by the manual (Folkman, & Lazarus, 1988). Of those who were not sexually abused, 35% reported that their stressful situation was related to the death of a loved one, 7% related to job or school stress, 7% to a car accident of themselves or a loved one, 12.5% to the illness and/or hospitalization of a loved one, 6% to a personal illness, 25% to stress resulting from the family or social network and 9% from other factors such as abortion, arrest and selling a house.

The variables were then analyzed using SPSS. Internal consistencies for the BSI ( $\alpha = 0.97$ ), Ways of Coping Scale ( $\alpha = 0.92$ ), and the Bartoi and Kinder ( $\alpha = 0.76$ ) measure were all within acceptable ranges. Independent Samples T-tests were conducted to determine if there were any significant differences between the sexually abused and the non-sexually abused groups. Correlations were conducted to see if intelligence and coping strategies were significantly associated with resilience, as measured by the GSI for both the sexually abused and non-sexually abused groups. The variables that were significantly correlated with the GSI were then entered simultaneously into the regression analysis to predict the variance accounted for by each of the variables. The GSI was used as the dependent variable because it provides the best measure of symptom severity and is the index that has been used most frequently in past research.

T-Tests indicated that sexually abused women ( $M = 8.49$ ) used the coping strategy of Distancing, significantly more than non-sexually abused women ( $M = 4.86$ ),  $t(173) = 6.86, p < .05$ . On the other hand, non-sexually abused women ( $M = 8.30$ ) used the coping strategy of Seeking Social Support significantly more than sexually abused women ( $M = 4.53$ ),  $t(171) = -5.84, p < .05$ . Non-sexually abused women ( $M = 10.14$ ) also

used the strategy of Escape Avoidance significantly more than sexually abused women ( $M = 7.35$ ),  $t(174) = -3.57$ ,  $p < .05$ . Non-sexually abused women ( $M = 11.00$ ) also used the coping strategy of Positive Reappraisal significantly more than sexually abused women ( $M = 8.49$ ),  $t(174) = -3.37$ ,  $p < .05$ . There was no significant difference in IQ between the sexually abused group and the non-sexually abused group  $t(174) = .75$ ,  $p > .05$ . In the sexually abused group, IQ ranged from 77-118 ( $M = 102.74$ ,  $SD = 8.12$ ), while in the non-sexually abused group, IQ ranged from 77-199 ( $M = 101.85$ ,  $SD = 7.57$ ). There were also no significant differences between the sexually abused and non-sexually abused groups in terms of age, ethnicity and number of siblings (Table 1).

Table 1  
Independent Samples T-Test between Sexually Abused and Non-Sexually Abused Women

Variable	Group	Mean	Standard Deviation	Degrees of Freedom	T
Age	Abused	20.06	2.48	174	.00
	Non-Abused	20.06	2.28		
Ethnicity	Abused	2.09	1.32	172	1.92
	Non-Abused	1.74	1.11		
Siblings	Abused	2.17	1.87	170	1.12
	Non-Abused	1.91	1.84		
IQ	Abused	102.74	8.14	174	.75
	Non-Abused	101.85	7.57		
Distancing	Abused	8.49	3.48	173	6.86*
	Non-Abused	4.86	3.51		
Seeking Social Support	Abused	4.53	4.41	171	-5.84*
	Non-Abused	8.30	4.16		
Escape Avoidance	Abused	7.35	5.74	174	-3.57*
	Non-Abused	10.14	4.53		
Positive Reappraisal	Abused	8.49	5.49	174	-3.37*
	Non-Abused	11.00	4.31		
BSI GSI	Abused	1.01	.68	174	1.97
	Non-Abused	.81	.62		

\*  $p < .05$ , two tailed

The sexually abused and non-sexually abused samples were also compared using Fisher's  $r - Z$  transformation. The correlations of the coping strategies Distancing,



Escape Avoidance, Accepting Responsibility, Positive Reappraisal, Self Controlling, Confronting, Problem Solving and Seeking Social Support were not significantly different for the sexually abused and the non-sexually abused groups.

For the sexually abused group, correlations between IQ, the coping strategies of Confronting, Distancing, Self- Controlling, Seeking Social Support, Accepting Responsibility, Escape Avoidance, Problem-Solving, Positive Reappraisal and the GSI, ranged from -.09 for IQ to .45 for Accepting Responsibility, for the GSI (Table 2). Confronting, Distancing, Self Controlling, Accepting Responsibility, Escape Avoidance, Planful Problem Solving and Positive Reappraisal were all significantly positively correlated with the GSI, indicating that higher utilization of these coping processes was associated with higher levels of symptom severity. IQ was not significantly correlated with any of the coping measures or the global indices and so was not included in the subsequent regression analyses.

Table 2  
Correlations of IQ and Coping with the GSI for the Sexually Abused Group

Variable	IQ	Cnfrntg	Dstncg	Cntrlg	Spprt	Resp	Avdnc	P. Slvg	P. Rpprsl	GSI
IQ	1	.09	.07	.05	.05	-.07	.02	.02	-.01	-.09
Cnfrntg	-	1	.15	.48**	.44**	.49**	.40**	.76**	.37**	.28**
Dstncg	-	-	1	.49**	-.06	.43**	.33**	.06	.14	.30**
Cntrlg	-	-	-	1	.36**	.48**	.66**	.51**	.48**	.34**
Spprt	-	-	-	-	1	.07	.21	.36**	.28**	-.06
Resp.	-	-	-	-	-	1	.53**	.41**	.38**	.45**
Avdnc	-	-	-	-	-	-	1	.33**	.29**	.42**
P. Slvg	-	-	-	-	-	-	-	1	.61**	.31**
P. Rpprsl	-	-	-	-	-	-	-	-	1	.37**
GSI	-	-	-	-	-	-	-	-	-	1

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

Note: Cnfrntg = Confronting; Dstncg = Distancing; Cntrlg = Self-Controlling; Spprt = Seeking Social Support; Resp = Accepting Responsibility; Avdnc = Escape Avoidance; P. Slvg = Planful Problem Solving; P. Rpprsl = Positive Reappraisal; GSI = Global Symptom Inventory

For the non-sexually abused group, correlations between IQ and the coping strategies of Confronting, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape Avoidance, Problem-Solving, Positive Reappraisal with the GSI ranged from .03 for Distancing to .32 for Escape Avoidance, for the GSI (Table 3). Self-Controlling, Accepting Responsibility and Escape Avoidance were all significantly positively correlated with the GSI, indicating that higher utilization of these coping processes was associated with higher levels of symptom severity. As with correlations found among the sexually abused group, within the non-sexually abused group, IQ was not significantly correlated with any of the coping measures or the global indices and so was not included in the subsequent regression analyses.

Table 3  
Correlations of IQ and Coping with the GSI for the Non-Sexually Abused Group

Variable	IQ	Cnfrntg	Dstncg	Cntrlg	Spprt	Resp	Avdnc	P. Slvg	P. Rpprsl	GSI
IQ	1	-.10	-.10	-.03	-.19	.01	-.01	-.14	-.16	.09
Cnfrntg	-	1	.44**	.44**	.46**	.32**	.33**	.62**	.17	.15
Dstncg	-	-	1	.55**	.21	.36**	.19	.48**	.25	.03
Cntrlg	-	-	-	1	.30**	.46**	.43**	.45**	.31**	.28**
Spprt	-	-	-	-	1	.15	.28**	.39**	.44**	.09
Resp.	-	-	-	-	-	1	.38**	.53**	.19	.23*
Avdnc	-	-	-	-	-	-	1	.27*	.21	.32**
P. Slvg	-	-	-	-	-	-	-	1	.38**	.04
P. Rpprsl	-	-	-	-	-	-	-	-	1	.09
GSI	-	-	-	-	-	-	-	-	-	1

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

Note: Cnfrntg = Confronting; Dstncg = Distancing; Cntrlg = Self-Controlling; Spprt = Seeking Social Support; Resp = Accepting Responsibility; Avdnc = Escape Avoidance; P. Slvg = Planful Problem Solving; P. Rpprsl = Positive Reappraisal; GSI = Global Symptom Inventory

As stated previously, because IQ was not correlated with any of the coping measures or any of the three global indices for either the sexually abused or non-sexually abused group, it was not included in the regression analysis. The sexually abused group's regression model that was used to predict GSI included the following seven coping

strategies as predictors because they significantly correlated with the GSI for the sexually abused group (N = 88): Confronting, Distancing, Self Controlling, Accepting Responsibility, Escape Avoidance, Planful Problem Solving and Positive Reappraisal. This overall regression equation was significant ( $F(7, 78) = 5.00, p < .01, R^2 = .31$ ), though no individual coping processes accounted for a significant amount of variance in GSI scores (Table 4).

Table 4  
Regression Analysis for Coping Variables Predicting Resilience in Survivors of Childhood Sexual Abuse.

Variable	B	SE B	$\beta$
Confronting	-.00	.19	-.06
Distancing	.00	.03	.16
Self- Controlling	-.00	.02	-.14
Accepting Responsibility	.01	.03	.22
Escape Avoidance	.00	.02	.26
Planful Problem Solving	.00	.03	.12
Positive Reappraisal	.00	.02	.21

Note:  $R^2 = .31$

The non-sexually abused group's regression model that was used to predict GSI used the following three coping strategies as predictors because they significantly correlated with the GSI for the non-sexually abused group (n = 88): Self Controlling, Accepting Responsibility, and Escape Avoidance. This overall regression equation was significant ( $F(3, 84) = 4.36, p < .01, R^2 = .14$ ), but the coping strategy of Escape Avoidance was the only individual predictor accounting for a significant amount variance in the model (Table 5).

Table 5  
 Summary of the Simultaneous Regression Analysis for the Variables Predicting Resilience in Individuals who have not been Sexually Abused.

Variable	B	SE B	β
Self- Controlling	.00	.02	.15
Accepting Responsibility	.00	.02	.08
Escape Avoidance	.00	.02	.23*

\* p < .05  
 Note: R<sup>2</sup> = .14

In this study, intelligence was not associated with resilience in either the sexually abused or non-sexually abused samples, and so the first hypothesis was not supported. Similarly, because there was no relationship between intelligence and resilience, the third hypothesis - that individuals with higher levels of intelligence and who use certain coping strategies would be most resilient of all could not be tested. There was, however, support for the second hypothesis. In the sexually abused sample, women who used Confronting, Distancing, Self Controlling, Accepting Responsibility, Escape Avoidance, Planful Problem Solving and Positive Reappraisal were less resilient than those who did not use these coping strategies. While, together these coping strategies significantly predicted resilience in the sexually abused sample, none of these strategies individually accounted for significant variance.

In the sample of individuals who were not sexually abused, those who used the coping strategies of Self Controlling, Accepting Responsibility, and Escape Avoidance were less resilient than those who did not. These coping strategies together significantly predicted resilience in this sample, though, Escape Avoidance was the only coping strategy that individually accounted for a significant amount of GSI variance.

## Discussion

This study examined the role of intelligence and specific coping strategies in resilience in adult survivors of childhood sexual abuse. In this study, resilience was defined as lower levels of distress as defined by the Brief Symptom Inventory. While resilience is often defined in terms of competence, Luthar, Cichetti and Becker (2000) have suggested that resilience may also be conceptualized in terms of the absence of emotional maladjustment.

Results indicated that intelligence, as measured by the Shipley Institute of Living Scale, is not associated with any of the coping strategies measured, or with resilience, for either the sexually abused or non-sexually abused groups. These results appear to differ from those of Cederblad, Dahlin, Hagnell, and Hansson (1995), Luthar, Zigler, and Goldstein (1992), and Luthar, Woolston, Sparrow, Zimmerman, and Riddle (1995), and others who found that higher levels of intelligence were related to higher levels of social competence and more positive psychological adjustment.

Research by Luthar and Zigler (1992) may shed some light on these results. They suggested that while there seems to be a relationship between intelligence and competence among high risk children, at particularly high levels of stress these children with high intelligence appear to lose their advantage, and demonstrate school based competence levels more similar to their less intelligent peers. In this study, it may be that abuse may present an especially high risk circumstance that contributes to individuals

with higher intelligence being more similar to those with lower levels of intelligence than anticipated. This does not, however, explain the similar findings in the non-abused sample. The findings in the non-abused sample may better be explained by Tiet et al.'s (1998) study which suggested that children at low risk for psychopathology may not benefit from having higher levels of intelligence. The current findings with the non-abused sample, therefore, are consistent with Tiet et al.'s research.

The results in this study may also be different from previous research because of method variance. The majority of studies investigating the relationship between intelligence and resilience have examined this relationship in children, while the current study examined this relationship in adults. In addition, unlike this study which used the Shipley Institute of Living scale to assess intelligence, previous studies have generally used other measures of intelligence, such as the Wechsler scales. While the correlations between the Shipley and WAIS IQ scores have been found to range from .70-.90, correlations between WISC IQ scores, which are traditionally used and the Shipley are not available. The use of the Shipley instead of the Wechsler scales in this study may therefore, also shed some light on the differing results. Unlike the current study which looked at resilience as lower levels of distress in the face of adversity, previous studies have generally examined resilience in terms of competence, or meeting developmentally appropriate milestones, even in the face of adversity. Luthar's (1991) research suggested that while intelligence may lead to increased competence in external measures such as achievement, there may be a price paid in terms of internal distress. The concepts of competence and absence of internal distress are, therefore distinct. It may be that while intelligence may help individuals in terms of competence it may have a different effect on

internal distress. Since the subjects in the sample were college students, it may be that the subjects were more resilient than the general population of sexually abused women and this difference may, therefore, also partially explain the differing results. The failure to replicate the findings in previous studies may also in part be due to the relatively small range of IQ scores in the current sample.

It might also be expected that given the nature of the sample, that the IQ scores would be higher. While this may lead to questions regarding whether the Shipley scores underestimated IQ, it has been found that this is only the case with individuals over the age of 44 (Zachary, Paulson, & Gorsuch, 1985). Because the individuals in the current study were between 18 and 30, it is unlikely that the Shipley scores underestimated IQ in the subjects in this study.

Results also indicated that there were specific coping strategies that were related to resilience, and these strategies differed for the two groups. For the sexually abused groups, using the coping strategies of Confronting, Distancing, Self Controlling, Accepting Responsibility, Escape Avoidance, Planful Problem Solving and Positive Reappraisal were associated with poorer adjustment. This suggests that the more these individuals used these coping strategies, the more symptoms of distress that they experienced. The results of the regression analyses indicated, however, that while together these coping strategies significantly predicted resilience in the sexually abused sample, none of these strategies individually accounted for significant variance. These results are also somewhat consistent with previous research. Johnson and Kenkel (1991) also found that the coping strategy of Distancing was associated with higher levels of psychopathology. These results are also similar to those of Himelein and McElrath

(1996), who found that disclosing and discussing the abuse led to better adjustment. The present results which indicated that the coping strategy of Escape Avoidance was associated with poorer adjustment are consistent with Himelein and McElrath's study, as well as Coffey et al's (1996) study. The current finding that Accepting Responsibility was associated with increased distress in our sample is also consistent with Runtz and Schallow's (1997) study which found that internal attributions of blame were associated with greater levels of anxiety and depression.

The results are, however, somewhat surprising. Previous research has suggested, contrary to the current results, that positive reframing and exaggerated perceptions of personal control have been associated with resilience (Himelein & McElrath, 1996). The results of the current study suggest that, on the other hand, Positive Reappraisal, which may be viewed as consistent with positive reframing was associated with increased distress in the sexually abused sample. In addition, contrary to expectations, the strategy of Self Controlling was also associated with worse outcomes (Himelein & McElrath, 1996). The results also contradict Runtz and Schallow (1997) who found that former victims of child sexual abuse who used coping strategies of expressing emotion and actively seeking change and understanding had better outcomes. In the current study, the active coping strategies of Confronting and Planful Problem Solving were associated with increased levels of distress.

For the non-sexually abused group, the coping strategies of Self Controlling, Accepting Responsibility, and Escape Avoidance were associated with lower resilience. Of these, the strategy of Escape Avoidance was the only coping strategy that individually accounted for a significant amount of variance in the regression equation. Again these



results are somewhat consistent with Himelein and McElrath's (1996) study in which subjects who disclosed and discussed abuse had better outcomes. Again, the results within the non-sexually abused group which indicated that Accepting Responsibility was associated with increased distress in our sample is also consistent with Runtz and Schallow's (1997) study in which internal attributions of blame was associated with greater levels of anxiety and depression. However, the finding that using the strategy of Self Controlling led to worse outcomes contradicts research by Himelein and McElrath (1996).

Overall, the results of research in the area of coping have been mixed, and the current study is no exception. This study, and others appear to point to the need for better measurement of these strategies, especially with regard to coping with situations that are more distal in time. The differences in the results with regard to coping in the sexually abused versus non-sexually abused groups may have been a result of a number of factors, including the adjustment to the instructions of the coping measures used for each group. On the other hand, these differences may reflect true differences in the ways that individuals who have been abused or not cope, and the effects of these coping strategies on current levels of distress.

This study has several limitations. Because the sample consisted of college students, the restriction of range with regard to IQ and levels of symptom distress may have impacted the results in a way that may be different than if the study was conducted in a clinical sample. Because this study was limited to females, the results cannot be generalized to males. In addition, many previous studies examining the relationship between intelligence and resilience have used more widely accepted measures of

intelligence such as the Wechsler scales, and have looked at competence in different ways than examined in this study, for example, by measuring social competence or achievement. In addition, the adjustment of the coping scale to have the individuals respond with situations that are more distal than recommended by the manual, may have influenced the results. The means and standard deviations of many of the coping strategies in both the sexually abused and non-sexually abused in this study were significantly larger than those reported by Folkman and Lazarus (1988) in the normative sample in the manual. This may indicate that the sample in this study may be different from others studied, which may in part explain the differing results. In addition, the Bartoi and Kinder measure that was used to classify individuals into sexually abused versus non-sexually abused group may have led to errors in classification. Future research may consider assessing the psychometric properties of this measure. Future research should also examine the relationships of intelligence, coping and resilience using different measures such as with the Wechsler scales, and other measures of distress, such as measures of depression and anxiety. It may also be helpful to examine these relationships in samples of confirmed abuse, such as those that have been referred by the Department of Children and Families (DCF), which would more accurately classify the samples. It is also very difficult to assess these relationships in adults who have experienced abuse and examining the associations between intelligence, coping and resilience in children and/or adolescents may provide more accurate representations.

## References

- Bartoi, M.G. & Kinder, B.N. (1998). Effects of child and adult sexual abuse on adult sexuality. *Journal of Sex & Marital Therapy*, 24, 75-90.
- Beitchman, J.H., Zucker, K.J., Hood, J.E., DACosta, G.A., Akman, D., & Cassavia, E. (1992). A review of the long-term effects of child sexual abuse. *Child Abuse & Neglect*, 16, 101-118.
- Bowers, T.L. & Pantle, M.L. (1998). Shipley Institute for Living Scale and the Kaufman brief intelligence tests as screening instruments for intelligence. *Assessment*, 5 (2), 187-195.
- Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin*, 99 (1), 66-77.
- Burt, M.R. & Katz, B.L. (1988). Coping strategies and recovery from rape. *Annals of New York Academy of Sciences*, 528, 345-358.
- Cederblad, M., Dahlin, L., Hagnell, O., & Hansson, K. (1995). Intelligence and temperament as protective factors for mental health. A cross-sectional and prospective epidemiological study. *European Archives of Psychiatry and Clinical Neuroscience*, 245, 11-19.
- Cochran, C.D & Hale, D. (1985). College student norms on the brief symptom inventory. *Journal of Clinical Psychology*, 41 (6), 777-779.

- Coffey, P., Leitenberg, H., Henning, K., Turner, T., & Bennett, R.T. (1996). The relation between methods of coping during adulthood with a history of childhood sexual abuse and current psychological adjustment. *Journal of Consulting and Clinical Psychology, 64* (5), 1090-1093.
- Derogatis, L.R. (1993). *Brief symptom inventory manual*. National Computer Systems: Minneapolis Minnesota
- Feinauer, L.L & Stuart, D.A. (1996). Blame and resilience in women sexually abused as children. *The American Journal of Family Therapy, 24* (1), 31-40.
- Finkelhor, D. (1979) *Sexually victimized children*. The Free Press. A division of Macmillan Publishing Co., Inc.
- Finkelhor, D. (1987). The sexual abuse of children: Current research reviewed. *Psychiatric Annals, 17*, 233-241.
- Folkman, S. & Lazarus, R.S. (1988). *Manual for the Ways of Coping Questionnaire*. Consulting Psychologists Press, Inc: Paulo Alto, CA
- Himelein, M.J. & McElrath, J.V. (1996). Resilient child sexual abuse survivors: Cognitive coping and illusion. *Child Abuse & Neglect, 20* (8), 747-758.
- Inderbitzen-Pisaruk, H., Shawchuck, C.R., & Hoier (1992). Behavioral characteristics of child victims of sexual abuse: A comparison study. *Journal of Clinical Child Psychology, 21* (1), 14-19.
- Johnson, B.K. & Kenkel, M.B. (1991). Stress, coping, and adjustment in female adolescent incest victims. *Child Abuse & Neglect, 15*, 293-305.

- Kendall-Tackett, K.A., Williams, L.M., & Finkelhor, D. (1993). Impact of sexual abuse on children: A review and synthesis of recent empirical studies. *Psychological Bulletin*, 113 (1), 164-180.
- Lange, A., De Beurs, E., Dolan, C., Lachnit, T., Sjollema, S., & Hanewald, G. (1999). Objective and subjective characteristics of the abuse and psychopathology in later life. *The Journal of Nervous and Mental Disease*, 187 (3), 150-158.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, Springer.
- Liem, J.H., James, J.B., O'Toole, J.G., & Boudewyn, A.C. (1997). Assessing resilience in adults with histories of child sexual abuse. *American Journal of Orthopsychiatry*, 67 (4), 594-606.
- Luthar, S.S. (1991) Vulnerability and resilience: A study of high-risk adolescents. *Child Development*, 62, 600-616.
- Luthar, S.S. & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Development and Psychopathology*, 12 857-885.
- Luthar, S.S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future research. *Child Development*, 71 (3), 543-562.
- Luthar, S.S., Woolston, J.L., Sparrow, S.S., & Zimmerman, L.O. (1995). Adaptive behaviors among psychiatrically hospitalized children: The role of intelligence and related attributes. *Journal of Clinical Child Psychology*, 24 (1), 98-108.
- Luthar, S.S. & Zigler, E. (1992). Intelligence and social competence among high risk adolescents. *Development and Psychopathology*, 4, 287-299.

- Luthar, S.S., Zigler, E., & Goldstein, D. (1992). Psychosocial adjustment among intellectually gifted adolescents: The role of cognitive-developmental and experiential factors. *Journal of Child Psychology and Psychiatry*, 33 (2), 361-373.
- Masten, A.S. & Coatsworth, J.D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, 53 (2), 205-220.
- 10 Mental Measurements Yearbook
- 11 Mental Measurements Yearbook.
- Monahan, K. & Forgash, C. (2000). Enhancing the health care experiences of adult female survivors of childhood sexual abuse. *Women & Health*, 30 (4), 27-41.
- Morlan, K.K. & Tan, S. (1998). Comparison of the brief psychiatric rating scale and the brief symptom inventory. *Journal of Clinical Psychology*, 54 (7), 885-894.
- Newman, M.G., Clayton, L., Zuellig, A., Cashman, L., Arnow, B., Dea, R., & Taylor, C.B. (2000). The relationship of childhood sexual abuse and depression with somatic symptoms and medical utilization. *Psychological Medicine*, 30 (5), 1063-1077.
- Rumstein-McKean, O., & Hunsley, J. (2001). Interpersonal and family functioning of female survivors of childhood sexual abuse. *Clinical Psychology Review*, 21 (3), 471-490.
- Runtz, M.G. & Schallow, J.R. (1997). Social support and coping strategies as mediators of adult adjustment following childhood maltreatment. *Child Abuse & Neglect*, 21 (2), 211-226.

- Russell, D.E. (1986). *The secret trauma: Incest in the lives of girls and women*. New York: Basic Books.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57 (3), 316-331.
- Saywitz, K.J., Mannarino, A.P., Berliner, L., & Cohen, J.A. (2000). Treatment for sexually abused children and adolescents. *American Psychologist*, 55 (9), 1040-1049.
- ShIPLEY, W. (2000). *ShIPLEY Institute of Living Scale – Revised Manual*. Western Psychological Services. Los Angeles, CA.
- Smith, M.S. & Smith, M.T. (1999). A stimulus control intervention in the gynecological exam with sexual abuse survivors. *Women and Health*, 30 (2), 39-51.
- Spaccarelli, S. (1994). Stress, appraisal, and coping in child sexual abuse: A theoretical and empirical review. *Psychological Bulletin*, 116 (2), 340-362.
- Spaccarelli, S. & Fuchs, C. (1997). Variability in symptom expression among sexually abused girls: Developing multivariate models. *Journal of Clinical Child Psychology*, 26 (1), 24-35.
- Spaccarelli, S. & Kim, S. (1995). Resilience criteria and factors associated with resilience in sexually abused girls. *Child Abuse & Neglect*, 19 (9), 1171-1182.
- Steel, J.L., Wilson, G., Cross, H., & Whipple, J. (1996). Mediating factors in the development of psychopathology in victims of childhood sexual abuse. *Sexual Abuse: A Journal of Research and Treatment*, 8 (4), 291-316.

- Stone, A.A., Greenberg, M.A., Kennedy-Moore, E., & Newman, M.G. (1991). Self-report, situation-specific coping questionnaires: What are they measuring? *Journal of Personality and social psychology*, 61 (4), 648-658.
- Tiet, Q.Q., Bird, H.R., Davies, M., Hoven, C., Cohen, P., Jensen, P.S., & Goodman, S. (1998). Adverse life events and resilience. *Journal of American Academy of Child & Adolescent Psychiatry*, 37 (11), 1191-1200.
- Trickett, P.K. & McBride-Chang, C. (1995). The developmental impact of different forms of child abuse and neglect. *Developmental Review*, 15, 311-337.
- Vaillant, G.E. & Davis, T. (2000). Social/Emotional intelligence and midlife resilience in schoolboys with low tested intelligence. *American Journal of Orthopsychiatry*, 70 (2), 215-222.
- Valentine, L. & Feinauer, L.L (1993). Resilience factors associated with female survivors of childhood sexual abuse. *The American Journal of Family Therapy*, 21 (3), 216-224.
- Werner, E. (1994). Overcoming the odds. *Developmental and Behavioral Pediatrics*, 15 (2), 131-136.
- Zachary, R. A; Paulson, M. J; Gorsuch, R. L. (1985). Estimating WAIS IQ from the Shipley Institute of Living Scale using continuously adjusted age norms. *Journal of Clinical Psychology*, 41(6) 820-831
- Zeidner, M.M. & Endler, N.S. (Eds) (1996) *Handbook of coping: Theory, research, applications*. John Wiley & Sons, Inc.



## Appendices

Appendix 1

Age \_\_\_\_\_

What is your ethnic/racial background?

- a. Caucasian
- b. Black
- c. Hispanic
- d. Asian
- e. Other \_\_\_\_\_

How many siblings do you have? \_\_\_\_\_

## Appendix 2

### **Consent for a study on intelligence and coping strategies as resilience factors**

**Study Location: Psychology Department, College of Arts and Sciences**  
**Principal Investigator: Kelli-Lee Harford, M.A.**

This is a research study on the role of intelligence and coping strategies as resilience factors. You are being asked to participate because we are interested in the role of intelligence and coping strategies in female college students' resilience. The following information is being presented to help you decide whether or not you want to take part in this minimal risk research study. Please read this carefully. If you do not understand anything, ask the person in charge of the study.

This is a study about the role that intelligence and coping style have on resilience to stressful situations. This information will aid professionals in trying to understand the role that intelligence and coping strategies play in mediating the negative effects of stressful situations that have taken place in our past.

Participation will involve completion of four questionnaires and a demographics sheet. One of these questionnaires is timed. The entire set of questionnaires should take approximately one hour to complete. You will be given two extra credit points for your participation in this research study.

Your participation will be confidential. None of the information gathered from the study can be linked to participants' names or other identifying information. The results of this study may be published, however, the results will only be reported for the entire group of students and no individual responses will be given to the university or any other organization. The only people who may be able to access the data include study staff and the Institutional Review Board, which ensures that this study is being conducted ethically. Authorized research personnel and employees of the Department of Health and Human Services may inspect the records from this research project. These individuals are also required to keep the information confidential.

The questionnaires contain several sensitive questions about sexual issues and prior sexual experiences. Exposure to these questions may cause some discomfort, and referrals for services will be provided. While there are no direct benefits to you, this study will help researchers to better understand the processes that help individuals to be more or less resilient.

Appendix 2 (Continued)

Your participation is voluntary, and you may withdraw at any time without penalty. Your decision about participation will in no way affect your student status. You will be given extra credit for your participation in this study.

If you have any questions about this study or this form, please contact Kelli-Lee Harford, M.A. (813) 767-5488 or Bill Kinder, Ph.D. (813) 974-0392 at the University of South Florida. If you have any questions about your rights as a person who is taking participating in a study, call USF Research Compliance at (813) 974-5638. If you agree to participate, please sign below.

By signing this form I agree that:

- 1 I have fully read or have had read and explained to me this informed consent form describing this research project.
- 2 I have had the opportunity to question one of the persons in charge of this research and have received satisfactory answers.
- 3 I understand that I am being asked to participate in research. I understand the risks and benefits, and I freely give my consent to participate in the research project outlined in this form, under the conditions indicated in it.
- 4 I have been given a signed copy of this informed consent form, which is mine to keep.

\_\_\_\_\_  
Signature of participant

\_\_\_\_\_  
Printed name of participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Last 4 digits of social security #

**Investigator Statement**

I have carefully explained to the subject the nature of the above research study. I hereby certify that to the best of my knowledge the subject signing this consent form understands the nature, demands, risks, and benefits involved in participating in this study.

\_\_\_\_\_  
Signature of investigator

\_\_\_\_\_  
Printed name of investigator

\_\_\_\_\_  
Date

## Appendix 3

### **Background and Purpose of this Study**

A history of childhood sexual abuse has been shown to have many negative short term and long term consequences. Research has also shown, however, that many individuals with histories of sexual abuse do not demonstrate these expected negative consequences.

In the current study, we will explore the hypotheses that levels of intelligence and specific coping styles will act as factors promoting resilience in victims of childhood sexual abuse. Also that these factors should also be advantageous to individuals who have not been sexually abused.

We appreciate your honesty in answering these sensitive questions. If participation in this study caused you discomfort, please refer to the following numbers:

Kelli-Lee Harford, M.A. (experimenter).....(813) 767-5488  
USF Counseling Center for Human Development...(813) 974-2831  
USF Psychological Services Center.....(813) 974-2496  
USF Victims' Advocate.....(813) 974-5757  
Crisis Center of Tampa Bay.....(813) 234-1234  
Hillsborough County Crisis Center.....(813) 238-8411

## Appendix 4

### Early Sexual Experiences

We would like to get an idea about the type of sexual experiences you may have had before the age of 16 (15 and younger). Please answer yes or no to the following questions in terms of that time.

#### Before the age of 16 (15 and younger)

	<u>No</u>	<u>Yes</u>
1. did you ever touch the genitals of someone at least 5 years older than you?	0	1
2. did someone at least 5 years older than you ever touch your genitals or breasts (besides for a physical examination)?	0	1
3. did you engage in oral sex (cunnilingus and/or fellatio) with someone at least 5 years older than you?	0	1
4. did you engage in vaginal intercourse with someone at least 5 years older than you?	0	1
5. did you engage in anal intercourse with someone at least 5 years older than you?	0	1
6. were you forced into genital manipulation that was unwanted by anyone of any age?	0	1
7. were you forced into oral sex (cunnilingus and/or fellatio) that was unwanted by anyone of any age?	0	1
8. were you forced into anal intercourse that was unwanted by anyone of any age?	0	1
9. were you ever touched in a way that made you feel violated?	0	1
10. did you engage in any unwanted sexual activity while too intoxicated or influenced by drugs to give consent?	0	1
11. did you receive psychological treatment?	0	1

Appendix 4 (Continued)

if yes, was sexual abuse one of the issues covered?

0 1

Kinder & Bartoi (1999)