COPING STYLES, QUALITY OF LIFE, AND SEXUAL TRAUMA IN WOMEN VETERANS

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The purpose of the following study was to evaluate sexual trauma and the effects on women veteran's quality of life ratings and current and past coping strategies. Participants were screened for sexual trauma history and divided into five mutually exclusive categories: 1)childhood sexual trauma, 2)civilian adult sexual trauma, 3)military sexual trauma, 4)multiple sexual trauma, and 5)no sexual trauma.

Results of the study were mixed, retaining some hypotheses and rejecting others. Results regarding differences in QOL for the sexual trauma groups were rejected, as none of the QOL analyses were significant. Issues of small effect size for the QOL measure and low power to detect differences are discussed as limitations in the current study. Several significant findings were detected in the coping analyses. As predicted, the no trauma group was found to use significantly more approach coping strategies than the sexual trauma group for the past problem. Additionally, the sexual trauma group used significantly more avoidant coping techniques for past problem than the no trauma group. No between group differences were detected for sexual trauma type, however, several significant differences emerged in the comparisons of the multiple sexual trauma and military sexual trauma group's past coping compared to the no sexual trauma group's coping strategies. For past coping, the no trauma group used more approach strategies than the military or multiple trauma group. Past and current significant CRI subscale

differences were also detected. Results regarding the relationship between QOL and CRI were rejected, as the two scales were not found to correlate significantly. Trauma history and avoidant coping were also nonsignificant predictors for General Life Satisfaction on the QOL measure. Additional exploratory analyses are presented as well as implications for research, theory and clinical practice.

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INTRODUCTION

Traumatic events once were thought to be outside the range of normal human experience. However, current research has shown that as many as three-quarters of the population in the United States has been exposed to a traumatic event in their lifetime (Green, 1994). Kessler, Sonnega, Bromet, and Nelson (1995) found that as many as 60% of men and 51% of women in the general population reported at least one traumatic event in their lifetime. Other studies have found similar rates, ranging from 39% to 69%, depending on the sample studied (Breslau, Davis, Andreski, & Peterson, 1991). In 1994, due to the growing prevalence of persons exposed to traumatic events, the Diagnostic and Statistical Manual-IV (DSM-IV; American Psychiatric Association, 1994) changed its criteria for Post-traumatic Stress Disorder (PTSD), modifying the definition of the stressor. Sexual abuse or assault is one such traumatic event that is unfortunately no longer considered uncommon.

Sexual Assault Prevalence

The term sexual assault, as used in the literature, encompasses a wide range of acts ranging from unwanted petting to rape. Ledray (1986) stated that the terms sexual assault, rape and sexual conduct are often used interchangeably and refer to "any type of sexual contact without consent between two or more people, regardless of their sex or marital status" (p. 20). Sexual violence against women is widespread. Prevalence rates

for sexual assault and harassment among adult civilian women have been shown to be as high as 13% to 20% (Freeman & Ryan, 1997). Estimates from several large community samples have found as many as one in five women being a victim of completed rape (Kercher & McShane, 1984; Russell, 1983). Sexual assaults are often underreported, particularly if the victim is assaulted by an acquaintance, friend or family member (Goodman, Koss, & Russo, 1993). Therefore, these numbers are considered an underestimate of the actual prevalence rates of adult sexual assault in the general population.

Child Sexual Abuse

While many studies have found a decrease in reported sexual offenses of children since the 1970s, others have suggested an increase in prevalence in more recent studies (Kutchinsky, 1994). Some authors have suggested that there may not be a true increase in prevalence of child sexual abuse, only an increase in societal concern and awareness of this issue which may have led to more cases being reported to the police (Eberle & Eberle, 1986; Pride, 1987). Kutchinsky (1994) reviewed the literature and found that depending on definitions, age limits and methodology used, the prevalence of child sexual abuse in the general population ranged from 10% to 40% in women and 5% to 20% in men. Studies sampling clinical populations have suggested even higher rates, from 36% to 62% (Finkelhor, 1991; Wyatt, 1985; Bryer, Nelson, Miller, & Drol, 1987).

The National Center for Child Abuse and Neglect (NCCAN) published a report in 1988 estimating that 2.5 children per 1,000 in the population were sexually abused in 1986 (as cited in Green, 1993). This figure was said to be three times the estimate

reported in the 1980 NCCAN report. Green (1993) stated that the incidence and prevalence studies carried out in the past ten years suggest that childhood sexual abuse is a common feature of North American societies.

This literature suggests childhood abuse rates as high as 40% in the general population, and 62% in the clinical population. While some have suggested a decline in reported childhood abuse rates, the 1988 NCAAN report indicated an increase three times higher than the rates reported in 1980.

Military Sexual Assault

The 1991 Tailhook convention incident in Las Vegas contributed to the awareness of sexual harassment and sexual assault in the United States military. Given the unique environment that women in the military face (i.e., being a minority in an organization that is primarily male) it is not surprising that studies have found higher harassment rates experienced by women in the military than for civilian women (Niebuhr, 1997). Information from the Freedom of Information Act indicates that women serving in the military were 50% more likely to be raped than a civilian; data suggested the rate of military reported rapes was 129/100,000 while the civilian rate was 81/100, 000 (as cited in Young, 1995).

A Department of Defense study in 1988 reported a 5% prevalence rate for rape/attempted rape, 15% rate for sexual harassment and a 37% rate for unwanted touching among a sample of 12,500 female military personnel (as cited in Freeman & Ryan, 1997). Wolfe, Young, & Brown's 1992 study of 142 female Gulf War Veterans

found an 8% incidence of attempted or completed military sexual assault and 63% incidence of verbal harassment (as cited in Freeman & Ryan, 1997).

Freeman and Ryan (1997) surveyed a group of women veterans utilizing outpatient and/or inpatient services at a Midwestern VA hospital. Their results found 89% of the participants reporting at least one incident of physical abuse, sexual abuse, rape and/or sexual harassment during their lifetime. Additionally, 71% of their sample experienced at least one incident of sexual assault or harassment during active duty, with 13% reporting being raped while on active duty (Freeman & Ryan, 1997). These authors suggest that while the 13% incidence rate is consistent with civilian figures, the civilian figures are based upon lifetime prevalence. However, the rates for military assault are based on a much shorter period of time, typically between 2 to 6 years.

In summary, research studying military sexual trauma prevalence has found rates similar to childhood and civilian sexual assault figures. However, rates for military sexual assault are based on a time period of 2 to 6 years, while studies of civilian sexual assault are typically based on lifetime prevalence, suggesting increased risk for sexual assault for active duty military women.

Childhood Trauma Among Military Women

Martin, Rosen, Durand, Stretch and Knudson (1998) recently surveyed 555 male and 573 female soldiers on active duty for their sexual trauma history. They found that among female victims, 75% of sexual assaults occurred prior to entering the military, 12% occurred while enlisted, and 12% of the women reported at least one incident before the military and another after joining the military. These authors found a 50% lifetime

history of any type sexual assault for women. They also suggested that a history of attempted and completed rape in childhood may be more prevalent among women in the military than among civilian women (Martin, Rosen, Duran, Stretch & Knudson, 1998).

Rosen and Martin (1996) surveyed 1, 365 soldiers in the U.S. Army to examine prevalence rates for childhood trauma for enlisted personnel. These researchers found that 15% of the men and 49% of the female soldiers reported a history of childhood sexual abuse. These authors compared the results of their study with Finkelhor, Hotaling, Lewis and Smith's (1990) study that found 16% of civilian men and 27% of civilian women reporting a childhood sexual abuse history. Based on the results of the previous study, Rosen and Martin stated that soldiers appear to have a significantly higher rate of sexual abuse histories than do civilian women.

These studies report prevalence rates from 49% to 75% for active duty military women with childhood sexual abuse histories. This suggests that women entering the military have higher rates of childhood sexual trauma than do civilian women.

Consequences of Sexual Assault

Sexual assault is an alarmingly prevalent traumatic event that can occur during a woman's lifetime. There have been numerous studies examining both the short and long-term consequences of sexual assault. A wealth of research is available examining the psychological, social and medical sequelae of sexual trauma. However, just as the prevalence rates differ for timing of the sexual trauma (i.e., childhood, adulthood, in the military) so do the health and mental health consequences.

Psychological Outcomes

Children

Children who have experienced sexual abuse often experience fearfulness and anxiety symptoms as short-term consequences (Green, 1993). Numerous studies have documented the prevalence of PTSD in children who were sexually abused (Goodwin, 1985; Kiser et al., 1988; McLeer, Deblinger, Atkins, Foa, & Ralphe, 1988). The symptoms associated with PTSD in these studies was similar to those seen in adult victims of sexual assault with PTSD (i.e., numbing and avoidance, hyperarousal, intrusive recollections of the trauma, nightmares).

Depression and suicidal ideation are also more prevalent among sexually abused children than those with no sexual abuse history (Cavaiola & Schiff, 1988; Friedrich & Reams, 1987; Achenback & Edelbrock, 1979). Finkelhor and Browne (1986) suggest that depression is caused by sensations of powerlessness, exploitation and stigmatization, resulting in feelings of badness or shame. For child victims of incest, there is also a greater sense of betrayal of the trusted parent figure. Feelings of vulnerability, lack of trust and shattered beliefs that their world is a safe place during this critical developmental period can have devastating effects on a survivor's functioning as an adult.

Adults

Studies have shown that adults who enduree sexual abuse during childhood experience extreme psychological effects. Kirpatrick and Edmunds 1992 study of 4,008 women found that 31% of the rape victims assaulted during childhood had developed

PTSD sometime during their lifetime. Additionally, these researchers found 30% having experienced at least one major depressive episode, 33% having considered suicide, and 13% having attempted suicide. Rowan and Foy (1993) suggested that PTSD is the diagnosis that best fits the psychiatric syndrome seen in adult survivors of child sexual abuse. However, Finkelhor (1991) stated that depression is the most common symptom reported in adult survivors.

In addition to high rates of PTSD and depressive disorders found in adults with a sexual abuse history, other studies have documented a higher incidence of substance abuse, borderline personality disorder, multiple personality disorder, sexual dysfunction, eating disorders, and somatization disorder among adult survivors of child sexual abuse as compared to the non-abused control subjects (Courtois, 1993; Walker et al.,1992; Herman, 1981; Herman, Perry, & van der Kolk, 1989; Morrison, 1989; Putnam, Guroff, Silberman, Borban, & Post, 1986). Studies have also suggested that individuals abused as children are more vulnerable to revictimization in later life (i.e., through rape or battery) than nonvictimized women (Roth & Lebowitz, 1988; Russell, 1983).

While many of the symptoms exhibited by survivors of sexual abuse are similar to those seen in recently abused children, Green (1993) suggests that there are also many differences in how an adult adapts to the trauma. Some of the differences may be due in part to advanced age and psychological development (e.g., sexual dysfunction, eating disorders) while other differences may result from the symptoms being carried over from childhood, resulting in a more chronic condition.

Burgess and Holstrom, in their now famous 1974 study, coined the term “rape trauma syndrome” for what they described as a two-phase crisis reaction after rape. These authors described an acute disorganization phase, involving acute physical symptoms and disorganization in the woman’s lifestyle, with fear the most prominent emotional reaction. A second phase, called the reorganization phase was said to be characterized by nightmares, “traumatophobia” and increased motor activity.

Many studies have generally supported Burgess and Holmstrom’s rape trauma theory, suggesting that immediately after the assault, rape victims are likely to experience shock, intense fear, confusion, helplessness, numbness and extreme disbelief (Koss & Harvey, 1991). Research suggests that overall symptom elevation subsides by the third month following the trauma, however, Hanson (1990) found that up to one-quarter of rape victims go on to experience severe and long-term psychological symptoms. While it has been shown that mental health status after the third month is a good indicator of long-term adjustment, some women may have no symptomatology immediately after the trauma, with significant distress appearing several months after the assault (Forman, 1980).

While many of the psychological symptoms experienced by child sexual abuse survivors are similar to adult sexual assault victims, adult victims of rape often face an added stress involving cultural myths about rape. Women may be subjected to cultural beliefs that the victim provoked the assault, that she enjoyed it, that she is now damaged goods, or that only promiscuous women get raped. Other rape myths include the belief that any healthy woman can stop rape if she really wants to, women frequently make

false accusations of rape after they have second thoughts about their prior consensual behavior, and that only truly deviant men rape and they rape strangers at night (Roth & Lebowitz, 1988). These notions can shape the victim's perceptions of the event and lead to increased shame, guilt and self-blame (Roth & Lebowitz, 1988).

Goodman, Koss and Russo (1993) in their review of the physical and mental health effects of sexual assault found that anxiety and fear, depression, sexual dysfunction, substance abuse and PTSD were the most common psychiatric outcomes of adult sexual assault. Najavits, Weiss, and Shaw (1997) in their review of the literature found that 30% to 59% of the women substance abusers had a dual diagnosis of PTSD, and that PTSD was most commonly predicted by a history of sexual assault. Foa, Olasov, and Steketee (1987) stated that rape victims are the largest single group of PTSD sufferers (as cited in Goodman, Koss, & Russo, 1993).

Prior victimization is also related to future psychological distress. Studies have shown that first-time victims often show more psychological distress after the rape, while prior victims have increased distress over time. These victims are thought to become even more distressed (long-term) than first time victims (Ruch & Leon, 1983; Ruch, Gartrell, Amedeo, & Coyne, 1991). Kilpatrick et al. (1987) found that women who have been revictimized are more likely to have a lifetime diagnosis of depression and Ruch et al. (1991) stated that women who have experienced more than one rape are more likely to abuse substances than first-time victims.

The relationship of the offender to the victim has also been shown to be related to post-assault distress. Women who have been assaulted by an acquaintance or family

member may show more symptoms of depression (Frank & Stewart, 1984), possibly reflecting their shattered sense of safety and trust for the offender. In Dahl's (1993) comprehensive study of rape in Scandinavia, he found that the main predictor for PTSD was the violence/threat factor, while development of depressive symptoms was related to factors associated with violation of worth. Depression was also predicted by former traumatization, more than one offender, and a negative reaction from the police (Dahl, 1993).

In summary, the effects of childhood sexual abuse and adult sexual assault on childhood and adult functioning appear to be similar. A high incidence of anxiety disorders (particularly PTSD), depressive disorders, eating disorders and substance abuse after a sexual trauma have been well documented in the literature. Studies have also suggested childhood sexual victimization may lead to increased vulnerablity to subsequent sexual trauma in later life. However, women assaulted as adults have to cope with cultural rape myths and can be subsequently revictimized by society.

Military

The stressful experiences of women serving in the military have been of increasing concern. With more than 229,000 women currently on active duty and 1,106,443 women veterans, this unique population of women has been increasingly studied (Skinner & Furey, 1998). While there have been few outcome studies directly comparing sexually assaulted military and civilian women, the studies examining the prevalence of psychological disorders such as PTSD, substance abuse and depression in women veterans exposed to sexual trauma seem to parallel the rates experienced by

civilian women (Davis & Wood, 1999). However, these authors suggest that the prevalence rates for substance abuse, in particular, for sexually assaulted female veterans may be an underestimate since a proportion of these veterans cannot or do not seek treatment. Additionally, Willer and Grossman (1995) found that the diagnosis of PTSD in the veteran population was given more frequently to men than women, in a psychiatric outpatient sample at a VA Hospital, even though a higher percentage of women reported at least one traumatic event. These researchers found that all types of trauma, except combat trauma, were found to be more frequent in the female population than in the male. Willer and Grossman suggested that PTSD in female veterans, particularly in veterans hospitals, may be underdiagnosed.

Fontana and Rosenheck (1998) studied 327 women veterans treated in a VA clinical program for stress disorders. These researchers found that 63% of their sample reported experiencing physical sexual harassment during their military service, with 43% reporting rape or attempted rape. They found that both duty-related stress and sexual stress contributed separately and significantly to the development of PTSD. Additionally, they found that sexual stress was three and a half times more influential than duty related stress in the development of PTSD.

Engel et al. (1993) studied 297 male and female Desert Storm veterans on their self-reported precombat sexual and physical abuse, precombat psychiatric problems, combat exposure and PTSD symptomatology. They found that the female veterans with precombat sexual abuse reported more frequent precombat psychiatric histories. Additionally, veteran women with sexual abuse histories reported greater PTSD

symptoms than did women with no sexual abuse history. These authors suggested that chronic PTSD initiated at the time of the abuse may be exacerbated by combat exposure.

While there is some disagreement in the literature, some research suggests that rates of PTSD, depression, and substance abuse may be higher for women assaulted in the military, as compared to civilian sexually assaulted women. Women assaulted in the military must also face additional duty-related stressors, with psychological distress being exacerbated by combat exposure.

Medical Consequences

In rape cases it has been estimated that 3% to 30% of rape victims develop one of 15 different sexually transmitted diseases (Koss & Heslet, 1992; as cited in Goodman, Koss, & Russo, 1993). Rape results in pregnancy in approximately 5% of the cases (Koss, Woodruff, & Koss, 1991). Acute medical conditions may also include genital and nongenital physical injury, including head injuries, abrasions and fractures.

There have been several studies examining causal relationships between sexual abuse and subsequent medical problems in adult women. Felitti (1991) studied the relationship between obesity and childhood sexual abuse. This author found that 60% of 131 patients seen in a general medical practice who reported a sexual abuse history were 50 pounds or more overweight, compared to 28% of the patients with no sexual abuse history.

Other studies have found significant relationships between both childhood and adult sexual assault and adult chronic pain, chronic pelvic pain, functional bowel disorders, headaches, gynecological difficulties, gastrointestinal problems, sexually

transmitted diseases and HIV infection (Springs & Friedrich, 1992; Courtois, 1993; Bolen, 1993; Fry, 1993; Walker, Dalton, Harrop-Griffiths, Holm, Russ, & Hickok, 1988). Additionally, women with a history of childhood sexual abuse have been found to engage in higher risk health behaviors, such as cigarette smoking, young age at first intercourse, increased numbers of sexual partners before age 18, and higher percentage of teen pregnancy than comparison groups with no abuse history (Springs & Friedrich, 1992; Laws, 1993).

Causal relationships between sexual abuse and subsequent medical problems have been studied extensively in the literature. Sexual victimization has been linked to obesity, chronic pain, gynecological problems, gastrointestinal distress, and sexually transmitted disease. Additionally, women with a sexual trauma history have been found to engage in more high risk behaviors, such as cigarette smoking, early sexual intercourse, and increased teen pregnancy.

Utilization of Health Services and Cost

Koss et al. (1991) studied the long-term consequences of criminal victimization of 390 women (74 nonvictims and 316 crime victims) on physical health and utilization of medical health services. These researchers found that the greater the severity of criminal victimization during the woman's life, the higher the number of physician visits and outpatient expenses. Women who were multiply victimized visited their physician almost seven times per year, compared to nonvictimized women who made an average of 3.5 visits. High utilization of service did not predate victimization in their study. The cost of treating a multiply victimized woman was $401 for the index year studied, 2.5 times

higher than the $161 cost of treating a nonvictim. The authors also found that increases in service usage did not occur in the first year of victimization, but were delayed until the following year.

Walker et al. (1999) recently studied the cost of health care use by women HMO members with a history of childhood abuse. One thousand two-hundred and twenty five surveys were completed and analyzed. Results found that women who reported a child abuse history had a median total health care cost $97 greater than women with no maltreatment history. Women who reported a sexual assault history had health care costs $245 greater than women with no maltreatment history. When these researchers removed the cost of mental health treatment, the differences were $55 greater for women who experienced any form of maltreatment compared to no maltreatment, and $119 greater for women who experienced sexual maltreatment compared to no maltreatment.

In a study of female veterans, Murdoch and Nichol (1995) found that persons who reported a history of sexual harassment of assault also reported more frequent surgical procedures, poorer health perceptions, more emergency room visits and more hospitalizations during the previous year.

The annual cost of anxiety disorders, including PTSD, panic disorder, agoraphobia, and phobic disorders was studied by Greenberg et al. in 1999. These researchers used multivariate regression analyses to analyze the costs associated with anxiety disorders using the National Comorbidity Study, a congressionally mandated survey, as a primary data source. After demographic characteristics and co-morbid psychiatric conditions were controlled, the study estimated the annual costs of anxiety

disorders to be approximately $42.3 billion or $1,542 per person. This figure includes nonpsychiatric medical treatment costs, psychiatric treatment costs, direct and indirect workplace costs, mortality costs and prescription pharmaceutical costs. Within the classification of anxiety disorders, PTSD and panic disorders had the highest rates of service use.

In summary, this research suggests that women who have been sexually victimized have significantly greater health care usage than women with no sexual trauma history. Sexually abused women visit their physician more and seek emergency department services more often than nonvictimized women. Additionally, the cost of treating a sexually abused woman is significantly greater than the cost for treating a woman with no history of sexual assault.

Quality of Life

While there are significant deleterious psychological, medical and cost factors associated with sexual trauma described in the literature, research focusing on the sexual trauma survivor's perspective on what they have, how they are doing, and how they feel about their life circumstances is more limited. Within the last decade, more researchers are beginning to recognize the need to include outcome assessments that involve the patient's perspective. This body of research is concerned with measures of patient "quality of life." Quality of life measures include a person's subjective sense of well-being, as well as perceptions of how they are doing (functional appraisal) and what they have (access to resources and opportunities; Lehman, 1996). While some studies

have used objective measures of quality of life (i.e., Quality of Life Inventory; Quality of Life Scale) others have relied upon more qualitative, subjective measures of this concept.

Zatzick et al. (1997) studied PTSD and quality of life outcomes in 7,000 women veterans as part of the National Vietnam Veterans Readjustment Study (NVVRS). Outcome measures included: 1)bed day in the past 3 months (staying in bed all day or part of the day because of physical illness), 2)working versus not working (role functioning), 3)subjective well-being, 4)self-reported physical health status, 5)current physical functioning, 6)perpetration of violent interpersonal acts in the past year. Results indicated that among female Vietnam veterans, PTSD was associated with a broad range of functional impairment including increased bed days, physical limitations, currently not working, poorer physical health status, and diminished subjective well-being. These authors stated that "the difficulties associated with PTSD among female veterans extends beyond the signs and symptoms of the disorder to multiple domains in functional impairment" (Zatzick et al., 1997, p. 664).

Warshaw et al. (1993) examined the effects of trauma and PTSD on the quality of life of 688 men and women diagnosed with an anxiety disorder. Comparisons were made between subjects with no history of trauma, subjects with a history of trauma but not PTSD, and subjects with PTSD, on several outcome measures of psychosocial functioning. Childhood sexual abuse included 27% of the sample and accounted for the largest type of reported trauma; rape accounted for 13%. Other traumas included: childhood physical abuse, witness to violence, accident or death, war, assault, accident and other (i.e., nature disaster, etc.). Results suggested that subjects with no trauma

history reported better health and better role function than the PTSD or trauma groups. The subjects with PTSD scored significantly worse than the other two groups on emotional health. Interestingly, the three groups did not significantly differ in social functioning. Generally, the results indicated that the subjects with PTSD were functioning poorly in most areas of their lives when compared to subjects with anxiety disorders but no PTSD. Subjects with a trauma history were found to have some deficits in perceived quality of life, but these deficits were less significant than for the subjects with a PTSD diagnosis. The authors point out, however, that their findings show that a history of trauma has a lasting impact on individuals with anxiety disorders.

Skinner and Furey (1999) reported data from the VA Women's Health Project, a national cross-sectional observational study describing the health quality of life of women veterans who use VA ambulatory care services. Seven hundred and nineteen women completed questionnaires assessing their military service, VA health care utilization, current medical status and health related quality of life. Health related quality of life was examined using the Short Form 36 (SF-36) which includes eight domains: physical functioning, role limitations attributable to physical health, bodily pain, general health perceptions, energy and vitality, social functioning, role limitations attributable to emotional problems, and mental health. Data from the SF-36 scores for veteran women were compared to a sample of noninstitutionalized nonveteran women from the Medical Outcomes Study. The comparisons indicated that veteran women scored lower on every scale compared to the nonveteran women. While these results indicated substantial differences between veteran and nonveteran women's quality of life, the authors

acknowledge several methodological differences between the two studies under comparison and present the data as solely descriptive in nature.

Today, more researchers are beginning to address a woman's subjective sense of well-being, or quality of life, in response to trauma. The literature indicates that women with a diagnosis of PTSD rate their overall functioning much poorer than women with no trauma history. Additionally, health quality of life ratings have also been shown to be lower for veteran women than civilian women.

Coping

Research examining the mediating role of coping on psychological functioning after a traumatic event is also a relatively new area. Coping has been defined as "the processes individuals use to modify adverse aspects of their environments as well as to minimize internal threat produced by stress" (as cited in Fairbank, Hansen, & Fitterling, 1991, p. 274). Roth and Cohen (1986) identified two basic modes of coping with extreme stress: approach and avoidance. Approach strategies are said to maximize the possibility of gathering information necessary to take action, provide an opportunity for emotional release and integrate the stressful experience into their perceptions of self and world (Roth & Lebowitz, 1988). These strategies may result in negative consequences, however, as approach strategies "increase the experience of negative affect, potentially to a dysfunctional level" (Roth & Lebowitz, 1988, p. 80). Avoidant strategies attempt to reduce the emotional impact of a stressful event. These strategies serve a protective function, minimizing the possibility that the individual may become emotionally overwhelmed and dysfunctional. Avoidance strategies hinder the individual from learning

from the trauma and may promote emotional numbness or lifestyle restrictions (Roth & Lebowitz, 1988).

Some researchers have subdivided coping strategies into problem-focused and emotion-focused domains. Problem-focused strategies include efforts to recognize, modify or eliminate the impact of the stressor; emotion-focused strategies aim to regulate emotional states that are associated with or are the direct result of exposure to stress (Auerback, 1989; Lazarus & Folkman, 1984). Moos (1997) devised an instrument called the Coping Responses Inventory (CRI) that measures coping in four domains: approach versus avoidant and cognitive versus behavioral. Within the framework of his theory, on the CRI the approach coping scales tend to reflect problem-focused coping as previously defined, and the avoidant scales reflect emotion-focused coping strategies.

Coping and Childhood Sexual Trauma

Sigmon, Greene, Rohan and Nichols (1996) studied coping and adjustment among 19 male and 59 female adult survivors of child sexual abuse. Results indicated that males reported significantly greater use of acceptance strategies in coping with a current stressor than did females. Females utilized significantly more emotion-focused strategies than did males in dealing with a current problem. When abuse-specific strategies were analyzed, no significant gender differences were found. However, both males and females used significantly more avoidant strategies than problem-focused, emotion-focused or acceptance. These authors suggest that the differences between current coping strategies and abuse-specific strategies may be related to the idea that coping styles are not trait-like but vary depending on the context of the situation (Sigmon et al., 1996).

Long and Jackson (1993) also studied childhood coping strategies among female survivors of sexual abuse. These researchers examined a sample of 66 college students with a history a childhood sexual abuse. Analyses controlled for the age at onset of abuse as some research has suggested that coping strategies differ by age. These researchers found a general trend for more victims to rely on emotion-focused strategies when dealing with the victimization. They found that 21% of the victims reported that they had not used problem-focused strategies, while only 2% of the victims did reported not using any emotion-focused techniques. The authors suggested that child victims lack of problem-focused strategies may be related to their perceptions of the consequences of their actions, (i.e., that these strategies would be unlikely to succeed).

Coffey, Leitenberg, Henning, Turner, and Bennett (1996) studied a community sample of 192 women who had been sexually abused during childhood. These researchers were interested in the relationship of methods of coping in adulthood with childhood sexual abuse to current symptoms of psychological distress. They also examined the types of coping strategies used to deal with the past childhood abuse and strategies employed to cope with a current problem or situation. Results indicated that women reported utilizing different strategies for the past sexual abuse compared to recent stressor. Women reported using disengagement methods more often in response to the childhood sexual trauma. However, engagement methods were used more often in response to the current problem or situation. The authors also found disengagement methods of coping during adulthood, in response to the childhood sexual trauma, as accounting for more variance in current psychological distress. These authors suggested

that these results are consistent with prior findings that "avoidant methods of coping are associated with higher levels of psychological distress in child sexual abuse survivors" (Coffey et al., 1996, p. 1092).

Leitenberg, Greenwald, and Cado (1992) also looked at long-term methods of coping associated with childhood sexual abuse. They studied 54 female nurses who had reported a childhood history of sexual assault. These researchers developed a coping questionnaire similar to those used in the literature but designed to contain items specific to childhood sexual abuse. Their instrument contained nine subscales: 1)denial, 2)emotional suppression, 3)emotional expression, 4)cognitive reappraisal, 5)spiritual or religious support, 6)cognitive rumination, 7)confrontation, 8)seeking social support, and 9)avoidance. Their results suggested that the more severe the abuse (longer duration, greater force, higher level of sexual intimacy), the greater the use of social support, action related to the offender, spiritual comfort, and emotional suppression. The use of denial coping strategies was more often employed if the abuse took place at a younger age. Coping strategies used most frequently from the time the abuse began to the present included emotional suppression and denial. Results also indicated that the use of denial and avoidance coping strategies was associated with greater psychological distress.

Other researchers have found similar results suggesting that childhood sexual abuse survivors report using more emotion-focused coping strategies than problem-focused ones for abuse-specific events. Some authors have suggested that events appraised as being outside the individual's control are best handled by emotion-focused strategies (Long & Jackson, 1993). Conversely, with stressors within a persons control,

approach rather than avoidant methods are associated with higher levels of adjustment (Valentiner, Holahan, & Moos, 1994). Others have stated that emotion-focused strategies are utilized more often in the case of childhood sexual abuse since there is a greater sense of secrecy, shame, embarrassment, and powerlessness associated with this type of trauma (Coffey et al., 1996). Many problem-solving strategies would only serve to expose the individual to increased scrutiny. However, the literature also suggests that while avoidant, emotion-focused strategies are understandable these types of coping are associated with poorer adult adjustment, with active problem-solving strategies more effective for long-term psychological health (Coffey et al., 1996: Leitenberg et al., 1992; Morrow & Smith, 1995; Runtz & Schallow). While emotion-focused, avoidant strategies may provide short-term relief from emotional pain, these studies suggested that they may prove harmful in the long-term in coping with childhood sexual abuse.

Results of the studies examining coping and childhood sexual trauma indicate that women who have been sexually abused as children reported using more avoidant, emotion-focused methods of coping with the trauma rather than approach, problem-solving methods. Additionally, avoidant methods are more strongly associated with increased poorer psychological adjustment. Child victims lack of problem-focused strategies may relate to the child's perception that these types of strategies are unlikely to succeed and the greater sense of shame, secrecy, and powerlessness associated with child sexual abuse.

Coping and Adult Sexual Trauma

While there have been several recent studies examining coping strategies utilized by women with a history of childhood sexual abuse, strategies used by adult sexual assault victims have been less frequently studied. In response to the lack of research in this area, Valentiner, Foa, Riggs, and Gershuny (1996) studied a group of 215 female assault victims (103 rape victims and 112 nonsexual assault victims) recruited through advertisements, emergency room staff or police officers. Victims coping strategies were assessed two weeks after the assault and then again three months later. Exploratory factor analysis resulted in three coping strategies utilized: mobilizing support, positive distancing, and wishful thinking. These three strategies have been identified previously as emotion-focused coping techniques (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986).

In Dahl's 1993 comprehensive study of rape in Scandinavia, coping strategies were assessed in terms of mainly avoidance-oriented, mixed avoidance-approach strategies and mainly approach-oriented strategies. Coping strategies were further assessed in relation to psychiatric outcome. The results suggested that the role of coping strategy in rape recovery revealed a significant difference between the psychiatric outcome group and nonpsychiatric group. Victims using mainly avoidant strategies (as the only type of strategy employed) were associated with the worst psychiatric outcome. Dahl also found that using both approach and avoidance strategies or mainly approach strategies was significantly more strongly related to recovery.

Proulx, Koverola, Fedorowicz, and Kral (1995) compared the coping strategies and psychological distress between single and multiply sexually victimized women and nonvictimized controls. Subjects included 833 female undergraduate students. Forty-four women who reported both child and adult sexual trauma made up the revictimization group; 54 women who reported only one incident of sexual abuse comprised the single victimization group; and 256 women who reported no history of sexual assault comprised the nonvictimized group. Results indicated that the revictimized group indicated greater use of total coping strategies than did the nonvictimized group. Revictimized women used more self-blame, negotiation, escapism, and instrumental action strategies than did the nonvictimized group. The once-victimized group also used more escapism coping strategies than the nonvictimized. Escapist strategies include things like withdrawal, denial, and dissociation. The authors suggest that the mixed approach and avoidant strategies used by revictimized individuals may be due to the need to find solutions through various means. Results of this study also found that coping strategies were significant predictors of emotional distress in the victimized and nonvictimized groups. Escapism used as a coping strategy was more highly associated with distress symptomatology than any other coping technique. The authors state that these results suggest "coping responses may play a mediating role in distress symptomatology" (Proulx et al., 1995, p. 1476). However, given the correlational nature of this study it is possible that level of distress predicts coping strategy. High levels of ongoing distress could increase the use of avoidant coping strategies, such as escapism.

The studies reviewed indicate that women sexaully assaulted as adults tend to use similar coping strategies as child victims, including more avoidant coping responses than approach strategies. Revictimized women have been found to use mixed avoidant and approach methods, suggesting a desire to find solutions through any means possible. Avoidant, emotion-focused strategies were also more predictive of poor psychological outcome in adult sexually victimized women.

Coping and PTSD

While numerous studies have examined the coping strategies used by victims of sexual assault, another body of literature exists studying coping and its relationship to post-traumatic stress disorder. Blake, Cook, and Keane (1991) studied PTSD and coping in 369 veterans seeking medical treatment at a VA hospital. While PTSD-positive combat veterans did not use significantly less problem solving strategies, they did rely more on emotional focused strategies than non-PTSD veterans, but not to a significant degree. Coping strategies were also compared with subjects who had received past mental health treatment and those who had no treatment history. Results indicated no differences in problem-focused coping.

Solomon, Avitzur, and Mikulincer (1989) studied the coping resources and social functioning of 262 soldiers two and three years after combat in the Lebanon war. Coping strategies was assessed along four dimensions: problem-focused coping, emotion-focused coping, seeking social support, and distancing. Results indicated that subjects who reported more problems in functioning used more emotion-focused strategies and fewer problem-focused techniques in dealing with stressful events. Social dysfunction at both

two years and three years after combat was negatively related to problem-focused coping and positively related to emotion-focused. Emotion-focused coping and functioning changed over time, while none of the other strategies did so. The authors suggested that while good functioning seems to include problem-focused strategies, changes in problem-focused coping do not make any significant contributions to functioning changes. Based on these results, clinical interventions for combat veterans should attempt to reduce emotion-focused coping rather than attempting to increase problem-solving ones to improve social functioning over time.

Solomon, Mikulincer, and Avitzur (1988) also used this sample of post Lebanon war combat veterans and assessed coping, locus of control, social support and combat related PTSD. Their results suggested as locus of control became more internal, coping strategies became less emotion-focused. After both the second and third year, PTSD was associated with external locus of control, emotion-focused coping and lack of social support.

Mikulincer and Solomon (1989) examined the role of coping in mediating the effects of causal attribution for negative events in PTSD in this same sample of 282 Lebanon war veterans, two and three years after the war. Their results indicated that the veterans that tended to attribute stressful events to more internal/unstable/controllable causes were more likely to use problem-focused strategies and fewer emotion-focused techniques. Subjects who tended to attribute bad events to more external/stable/uncontrollable causes tended to use more emotion-focused strategies and less problem-focused coping. Additionally, they found that as subjects attributed bad

events to more stable and uncontrollable causes and used more emotion-focused coping, they reported more severe PTSD symptoms two and three years post-combat.

Wolfe, Keane, Kaloupek, Mora, and Wine (1993) studied the patterns of positive readjustment in Vietnam combat veterans. These authors examined 153 combat veterans who responded to an advertisement seeking veterans who had adjusted adequately since the Vietnam war. They studied the effects of combat exposure, war-zone stressors and coping strategies and found that avoidant coping strategies were the strongest predictor of current functioning. Veterans who utilized externalization, wishful thinking and extreme avoidance showed significantly more psychological symptomatology than those veterans using more active forms of coping.

Other studies have assessed the relationship between coping strategies, non-combat PTSD and other psychiatric diagnoses in the nonveteran population. Bryant and Harvey (1995) examined the relationship between coping styles and PTSD in 56 motor vehicle accident survivors 12 months after their accident. These researchers found that the main predictor of PTSD symptoms was an avoidant coping style. Folkman and Lazarus (1986) found that in a general sense coping responses are associated with higher psychological functioning, and specifically that depressed persons use more emotion-focused strategies when dealing with a stressful event. Billings and Moos (1983) found that reliance on emotion-focused coping was associated with lower psychological functioning among a sample of alcoholic and depressed patients. Problem-focused strategies were associated with fewer physical and depressive symptoms, in this study.

The research examining the relationship between coping responses and PTSD suggests that avoidant, emotion-focused strategies are also utilized more frequently by persons with any form of trauma history. Veterans attributing events to external causes also appear to utilize more emotion-focused strategies, a finding similar to the coping and child sexual abuse literature. Research also suggests that for veterans with a diagnosis of PTSD it may be important to help reduce emotion-focused strategies, rather than increase problem-solving ones. Research examining the relationship of coping and PTSD for sexual assaulted women is an area understudied to date.

The Present Study

Summary

Sexual assault is an alarmingly prevalent traumatic event that many women face during their lifetime. Studies of both childhood sexual abuse and adult sexual assault and rape have found prevalence rates ranging from 10% to 62%, depending up on the sample tested (Freeman & Ryan, 1997; Finkelhor, 1991). Women in the military have been found to have an increased incidence for childhood sexual abuse in comparison to civilian women (Martin et al., 1998; Rosen & Martin, 1996).

The prevalence of rape in the military has recently come under increased scrutiny. Given the high rates of military sexual assault, in 1992 Congress mandated the Department of Veteran Affairs to provide treatment to all traumatized veterans who experienced a sexual assault while in the military (Suris, Davis, Kashner, Gillaspy, & Petty, 1998). As of 1995, 51% of the 136 VA medical centers surveyed had some form of organized sexual trauma treatment team (Suris et al., 1995).

Sexually assaulted women in the military may face additional burdens not faced by their civilian peers. For instance, women may feel their trust in fellow male soldiers and superiors is violated (something vital in combat), significant distress over reporting to duty with, or being commanded by, the perpetrator (or risk disciplinary action), and reporting for duty 24 hours a day, 365 days a year. In the case that the assault occurs off the military station, they must deal with unwillingness to prosecute due to confusion as to who is responsible (the military or civilian legal system) and they may be forced to choose between their career or justice, issues not faced by civilian victims of sexual assault.

The psychological and medical consequences of sexual assault have been well documented in the literature. All the studies previously reviewed found significantly poorer psychological and medical functioning among sexual assault victims when compared to subjects with no history of sexual trauma. Post-traumatic stress disorder and depressive disorders appear to be most associated with a history of sexual assault. Sexual assault has other societal implications, in terms of high health care costs and subsequent increased insurance premiums affecting the general public. Koss et al.'s study in 1991 found that women who had been multiply victimized had health care costs 2.5 times higher than the costs of treating a nonvictim.

Studies examining the sexual trauma survivor's perceptions of quality of life has recently gained more attention in the literature. More studies are beginning to recognize the need to include outcome measurements that involve the patient's perspective. Rather than solely focus on psychiatric diagnoses researchers are beginning to look at how

trauma affects a woman's sense of well-being and perceptions of how they are doing. In studying the quality of life of Vietnam veterans Zatzick et al. (1997) found that a diagnosis of PTSD was significantly associated with poorer overall quality of life ratings. Warshaw et al. (1993) similarly found that PTSD and a history of trauma significantly predicted poorer subjective functioning. While these studies suggest poorer quality of life ratings for women who have experienced a trauma, those with PTSD diagnoses and for veteran women, none of these studies looked at the impact of type of trauma on quality of life. Additionally, other than looking at health-related quality of life, the literature reviewed suggested that there are no studies to date examining women veterans quality of life using an objective, standardized instrument.

Coping is increasingly recognized as an important mediating variable in adjustment. Numerous studies have examined coping responses in relation to sexual trauma, combat trauma and various psychiatric diagnoses. Most of the studies divide coping techniques into one of two domains: approach versus avoidant and problem-focused versus emotion emotion-focused. Studies have shown that emotion-focused and/or avoidant coping techniques are more strongly associated with greater levels of psychological distress, regardless of type of trauma. However, research has also suggested that emotion-focused strategies may be more heavily utilized when events are considered uncontrollable or just after a traumatic event, where threatening emotional issues are temporarily repressed to allow for more adaptive daily functioning. No studies to date have examined coping strategies and their relationship to differences in type of sexual trauma (e.g., childhood, adult, military).

The high prevalence rates of sexual trauma along with the devastating psychological and medical sequelae and significant increase in cost of care for victimized women deem this group of women an at-risk population and worthy of further study. Sexually traumatized women veterans face many unique challenges both in the military and in their subsequent adaptation to civilian life. Given the high rates of childhood sexual abuse, premilitary adult assault and military sexual assault, this group of women provides an excellent sampling for the study of quality of life and coping among traumatized women.

Statement of Purpose

The present study is part of a larger study funded by the Veterans Integrated Service Network (VISN) 17 of the Department of Veteran Affairs entitled: Military Sexual Trauma: Effects on Health, Quality of Life, and Cost. The larger study examined the effects of military sexual trauma as a predictor of a diagnosis of PTSD, more severe PTSD symptoms, more severe depression symptomatology, alcohol dependence, poor health functioning, poor quality of life, and high health care costs. The larger, two-year study had a proposed sample size of 270 women veterans.

The purpose of the present study was to evaluate type of sexual trauma and effects on women veterans quality of life ratings and current and past coping strategies. Participants were screened for sexual trauma history and divided into five mutually exclusive groups: 1)childhood sexual trauma, 2)civilian adult sexual trauma, 3)military sexual trauma, 4)multiple sexual trauma, and 5)no sexual trauma history. An objective measure of quality of life was used, as was a coping response inventory categorizing

coping strategies into approach and avoidance domains and cognitive and behavioral coping styles.

Hypotheses

Hypothesis 1a. Women veterans who have experienced a sexual trauma will significantly differ in their quality of life ratings than those women with no sexual trauma history.

Hypothesis 1b. Multiply sexually traumatized women veterans will have poorer quality of life ratings than all other groups.

Hypothesis 2a. Women veterans who have experienced a sexual trauma will significantly differ in coping responses utilized compared to women with no sexual trauma history.

Hypothesis 2b. Multiply sexually traumatized women veterans will utilize more avoidant coping responses as compared to approach coping responses than all other groups.

Hypothesis 3a. Approach coping strategies will be positively correlated with increased quality of life ratings, while avoidant coping strategies will be positively correlated with poorer quality of life ratings.

Hypothesis 3b. Avoidant coping strategies will be a stronger predictor of poorer quality of life ratings and sexual trauma history as compared to approach coping strategies.

Exploratory analyses were conducted to further clarify the relationships among the variables being studied. Analyses included comparisons for Total QOLI scores

between trauma groups and examination of the QOLI and sexual trauma history relationship. Additionally, trauma group comparisons for past and current CRI cognitive and behavioral domains were explored. Changes in coping from the past to the present and total number of coping strategies were examined for trauma history, frequency and type of trauma differences.

CHAPTER II

METHOD

Participants

A total of 221 women veterans eligible for VA care and who received services at any ambulatory care, mental health, or medicine outpatient clinic at the Dallas VA facility within a 15-month period of time were recruited for this study. Based on their responses to the Screening Questionnaire (see instrumentation section), eligible subjects were divided into five mutually exclusive groups: 1)No History, patients who have no history of sexual assault; 2)Child History, patients who have had at least one sexual assault as a child (i.e., age 14 or younger); 3)Civilian History, patients who have had at least one sexual assault while a civilian adult, but not while on active duty; 4)Military History, patients who had at least one sexual assault while on active duty; or 5)Multiple History; patients that have had two or more sexual assaults in their lifetime. Sexual assault was defined as unwanted vaginal, anal or oral sex. A participant experiencing unwanted sexual attention or talk or unwanted sexual touching did not meet criteria for inclusion in one of the sexual trauma groups, based on the larger study's criteria. Therefore, the same classification procedure was used in this study.

The convenience sample was recruited to participate via flyers distributed throughout the hospital and outpatient clinics advertising the opportunity to participate in a women's research study. Participants were also approached in clinic waiting rooms and

through telephone calls (telephone numbers acquired through the Dallas VA computerized patient database) asking for study volunteers. To increase the likelihood of participation, potential subjects were informed at time of recruitment that participation would enter their name into a drawing for various prizes (e.g., car wash certificates, free dinner coupons at area restaurants, bath and lotion gift baskets, etc.) for the month in which they participated and would enter their name into a final drawing at completion of the study for $100.

The current study was comprised of a subset of the larger study sample, which included a total of 270 women participants. Recruitment procedures were the same for both studies; only instrumentation differed.

Instruments

Personal Information Sheet. The Personal Information assesses basic demographic information age, ethnicity, education, employment history, and marital status (See Appendix A). It was administered verbally by the investigator.

Screening Questionnaire. The Screening Questionnaire consists of definitions of sexual assault and sexual harassment that was read by the investigator to the subject aloud. Additionally, information about type and history of sexual trauma (i.e., childhood, civilian adult, military) was assessed with this instrument which allowed for sexual trauma group classification (See Appendix B).

Quality of Life Interview, Brief Version (QOLI; Lehman et al., 1995). The QOLI was used to assess subjects' perceived quality of life. The QOLI is a 74-item measure derived from the Quality of Life Interview, Full Version that provides a broad

based assessment of recent and current life experiences in eight domains: 1)living situation, 2)daily activities and functioning, 3)family relations, 4)social relations, 5)finances, 6)work and school, 7)legal and safety issues, and 8)health. Additionally, a measure of overall general life satisfaction is included for the instrument, for a total of nine QOL subscales. Both objective (measures of functioning and measures of access to resources and opportunities) and subjective (measures of satisfaction) quality of life indicators are included in each domain. For the purposes of studying subject's perceptions or satisfaction with their quality of life, only the subjective measures will be used. Questions are answered using a 1-to-7 "Delighted-Terrible" scale. The scale is scored with 1 ("terrible") reflecting the least satisfaction and 7 ("delighted") reflecting the most satisfaction. Higher scores reflect more subjective satisfaction. Psychometric properties are similar to the original full version, with internal consistency reliability coefficients ranging from .70 to .87 for global life satisfaction and from .56 to .82 for objective measures of quality of life scales (Lehman et al., 1995).

Coping Responses Inventory-Adult Form (CRI; Moos, 1997). The CRI is a measure of eight different types of coping responses to stressful life events. The subject is asked to describe a problem or situation. Part I of the inventory requests information about how an individual perceives the particular problem or stressor. This section of the CRI is not scored and therefore was not included as part of this study. Part II of the instrument consists of 48 questions. Respondents are asked how often they engaged in a particular strategy in connection with the problem identified. For purposes of this study, part II of the CRI was divided into two sections. Part II (a) inquires about coping

responses used to handle a past trauma or problem. Part II (b) asks about coping responses used to deal with a current problem. Questions are answered using a Likert-type scale format ranging from "no, not at all" to "yes, fairly often." Four of the scales, i.e., Logical Analysis (LA), Positive Reappraisal (PR), Seeking Guidance and Support (SG), and Problem Solving (PS) measure approach coping. The last four, i.e., Cognitive Avoidance (CA), Acceptance or Resignation (AR), Seeking Alternative Rewards (SR), and Emotional Discharge (ED) measure avoidance coping. The first two scales in each set measure cognitive coping strategies; the third and fourth scales measure behavioral coping strategies (see Table 1). Descriptions of the scales are listed in Table 2. Internal consistency reliability coefficients for women range from .58 to .71 for the eight scales. The eight scales are moderately positively correlated (average rs = .29 for men and .25 for women; Moos, 1997). This instrument was specifically chosen as it was written by a Veterans Affairs Psychologist in Palo Alto, California and has been widely used with the veteran population.

Procedure

Participants for the current study were recruited during year two of the 18-month, larger study. The instruments used for the larger study are listed in Table 3. The current study used the Quality of Life Interview, Brief Version and Screening Questionnaire from the larger study. Also included was the Coping Responses Inventory-Adult Form, which was not used in the larger study. Subjects participating before January, 2000 were administered only part II(b) of the CRI (i.e., responding to a current problem or situation.) After January, 2000 the procedure of the study was altered to

include part II (a) of the CRI (i.e., responding to a past trauma or problem), as well as part II (b). For the purposes of classification, those subjects participating prior to January, 2000 will be referred to as Group 1, while those responding to both part II (a) and II (b) will be referred to as Group 2. Both groups received all other instruments.

Once the patient was selected, written and verbal informed consent was obtained for each subject in a private room. Then, in an interview format, the demographic information from the Personal Information Sheet was gathered. Following procedures established for the larger study, three separate structured interviews were then administered: 1)the Utilization and Cost Questionnaire (UAC), an instrument designed by researchers in the Department of Psychiatry at the University of Texas Southwestern Medical Center to measure self-reported use of care, 2)the Clinician Administered PTSD Scale (CAPS; Blake et al., 1990), and 3)the Quality of Life Interview-Brief Version (QOLI) that provides a broad based assessment of recent and current life experiences in the eight domains listed previously. The Screening Questionnaire was administered after the UAC, to determine the trauma history of the subject for group classification. Participants were then given a packet of written questionnaires, including: the Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982), Iowa Center for Epidemiologic Studies Depression Scale short form (CES-D, Iowa version; Kohut, Berkman, Evans & Cornoni-Huntley, 1993), the TWEAK alcoholism rating scale (Russell, 1994) and the 36-item Short Form Health Survey (SF- 36; Ware & Shelbourne, 1992) as measures for the larger study.

Finally, the CRI was given to the subjects to complete. Group 1 participants were asked to complete the CRI, part II (b), responding to coping behaviors utilized when dealing with a current (within the last 12 months) problem or trauma. Group 2 was instructed to complete part II (a), responding to coping behaviors utilized when dealing with a past (12 months ago or longer) sexual trauma or, if the participant has no sexual trauma history, responding to a past significant problem. Participants classified as having experienced a sexual trauma (based on the Screening Questionnaire) were instructed to use their most recent sexual trauma as the problem to which they would be responding. Next, Group 2 participants were instructed to complete part II (b), responding to current problem.

When the subject completed the CRI any questions were answered and then they were free to leave. If any participant became emotionally distressed by the sensitive nature of the study (i.e., sexual trauma), mental health referrals were arranged if requested, or if deemed necessary by the investigator. Participation in the study lasted approximately one and one half to two hours, depending on trauma history.

To increase the amount of data gathered, twenty of the subjects in Group 1 (n = 92) were reached by phone during the final three months of data collection. They agreed to complete part II (a) via a phone interview, regarding coping responses for a past problem or sexual trauma.

CHAPTER III

RESULTS

Demographic Characteristics

Demographic characteristics for the subjects comprising both the current study and larger study are presented in Tables 4 and 5, respectively. Overall, subjects for the current study were middle aged (M = 46.78, SD = 11.53, range = 23-79), had greater than a high school education (M = 14.4, SD = 1.9, range = 10-20), and above average yearly family income (M = $29,423, SD = 22,152, range = $0 to $192,000). Fifteen percent of the sample reported a family income of less than $10,000, 35% reported an income between $10,000 and $25,000, 40% between $25,000-$50,000, and 10% making over $50,000. The majority of the sample was Caucasian (62.4%), with approximately one-third of the total sample married (31.8%) and one-third divorced (34.5%). Approximately one-quarter of the sample reported having never been married (24.1%), with a small percentage reporting "separated" (3.6%) or "widowed" (5.9%) as their marital status at time of participation. With regard to work, there was virtually no difference in employment status, with 49.8% of the sample reporting being employed, and 50.2% reporting that they were unemployed at time of the study.

The majority of the sample was classified as having a sexual trauma history (61%). Twenty-five percent of the sample endorsed having experienced more than one sexual assault during their lifetime (i.e., Multiple History), while thirty-eight percent

reported no sexual trauma history. The remainder of the sample either reported a history of sexual assault prior to age 14 (8.1%), a sexual trauma as a civilian adult (16.7%), or reported having been sexually assaulted while during active duty in the military (10.9%). A breakdown of types of trauma experienced by the Multiple History group is listed in Table 6.

Analyses of variance and Chi square analyses were performed on the current study to evaluate demographic differences by group. No significant differences were found between the five groups (i.e., no trauma, child trauma, adult civilian trauma, military trauma, multiple trauma) for ethnicity, age, education, or employment status. However, the groups differed significantly by marital status, χ^2 (16,1) = 30.16, p = .017. Interestingly, while there was no difference between groups for women who had never been married, more women with a trauma history were married (67%) as compared to women with no trauma (32%). Additionally, more traumatized women were separated (87%) or divorced (69%) compared to the no trauma groups separated (12%) or divorced (30%) women. More women in the no trauma reported being widowed (61%) than women in the trauma group (38%).

Psychometric Analyses

Quality of Life Interview (QOLI)

Cronbach's Alpha reliability coefficients were calculated for each of the nine subscales of the QOLI. The coefficients were fairly high for general life satisfaction (.86), living situation (.83), daily activities (.85), family relations (.92), social relations (.77), finances (.92), job/school (.68), legal and safety issues (.91) and health (.81) subscales.

Means and standard deviations for the nine subjective subscales of the QOLI for the total sample are listed in Table 7. A review of the means suggests that subjects rated satisfaction with finances lower than all other scales, (M = 3.9), and this subscale showed the most variance (SD = 1.62).

Hypothesis 1a. It was hypothesized that women veterans who had experienced a sexual trauma would differ significantly in their quality of life ratings from women with no sexual trauma history. Eighty-two participants were classified as the "no trauma" group, while 133 met criteria for having a history of at least one sexual trauma. Individual t-tests were performed comparing the means for all nine subjective QOLI subscales between the two groups (see Table 8). There were no significant differences found between the groups on any of the nine subscales. Therefore, the hypothesis that women with a positive sexual trauma history would rate their quality of life differently than women with no such history was not retained. Differences related to satisfaction with social relationships came close to reaching statistical significance, with the no trauma group reporting slightly more satisfaction in this area, t (213) = 1.80, p = .07. While statistically nonsignificant, a review of the means suggests that the trauma group scored lower than the no trauma group on all nine QOLI subscales.

Notably, significant differences were found in the larger study for all subjective scales on this measure. Given this discrepant finding, a power analysis was employed to better understand this difference in outcomes. The analysis indicated that the current study did not have adequate power to reject the null hypothesis and therefore, no significant differences were detected between the two groups on the QOLI.

Hypothesis 1b. It was expected that women veterans who had experienced more than one sexual trauma would have poorer quality of life ratings than all other groups. For this statistical analysis, a one-way ANOVA was used. No significant differences resulted for any of nine subjective QOLI subscales between the five groups.

Given the lack of significant findings in the primary analysis and considerable evidence in the literature for quality of life rating differences among sexually abused and non-sexually abused individuals, a one-way ANOVA was performed with frequency of sexual trauma as the independent variable (i.e., no sexual trauma, one sexual trauma, two or more sexual traumas). However, again, for the nine objective QOLI subscales, no significant differences emerged for frequency of sexual trauma. Therefore, this hypothesis was also rejected, again due to lack of statistical power.

Coping Responses Inventory (CRI)

For the CRI, participants were asked to describe a trauma or problem that occurred 12 or more months ago and a current problem or situation. For the past problem analysis subjects who disclosed having a sexual trauma history in the earlier screening questionnaire were instructed to use this as the "problem" to which they were responding. A listing of the types of problems reported for "past" and "current" problem by group is found in Tables 9 and 10. Overall, military sexual trauma was most frequently reported for past problem (28%). Health/Mental Health problems were most frequently reported for current problem (29.4%), followed closely by Interpersonal/Relationship problem (25.9%). No significant differences were found for type of current problem reported based on trauma history, χ^2 (9, 1) = .675, $p > .05$.

Data for those subjects who received the phone interview to complete part II (a) of the CRI for past problem (n = 20) was compared to those participants (n = 123) that completed both sections of the CRI during the formal interview. T-tests were performed for the mean scores for current and past problem Approach and Avoidant subscales of the CRI for both these groups and found to not significantly differ (for mean scores see Tables 11 and 12, respectively). Therefore, data for these two groups were pooled (n = 143) and is used in all subsequent analyses. Since complete data was not available for those subjects completing only part II (b), i.e., for past problem, these subjects data (n = 72) for all subsequent analyses involving the CRI was not included.

Cronbach's Alpha reliability coefficients were calculated for each subscale of the CRI and for the Approach and Avoidant scales. For past problem, the coefficients for the subscales were as follows: Approach (.92), Logical Analysis (.73), Positive Reappraisal (.77), Seeking Guidance and Support (.82), Problem Solving (.81); Avoidance (.80), Cognitive Avoidance (.78), Acceptance or Resignation (.62), Seeking Alternative Rewards (.69), Emotional Discharge (.52). Cronbach's Alpha reliability coefficients were also calculated for each CRI subscale for current problem. The coefficients for the current problem for the approach and avoidance subscales were as follows: Approach (.91), Logical Analysis (.75), Positive Reappraisal (.78), Seeking Guidance and Support (.69), Problem Solving (.81); Avoidance (.77), Cognitive Avoidance (.73), Acceptance or Resignation (.51), Seeking Alternative Rewards (.69), Emotional Discharge (.58).

Hypothesis 2a. It was hypothesized that women veterans who had experienced a sexual trauma would significantly differ in coping responses utilized when compared to

women with no sexual trauma history. For the purpose of this analysis, coping responses to a current problem or situation and coping responses utilized for a past trauma or problem were studied. CRI Approach and Avoidance scores and subscale scores were calculated by converting subjects raw scores to standard scores, a procedure included in the CRI professional manual, resulting in uniform T scores, with means of 50 and standard deviations of 10. Criteria for interpreting the CRI standard scores were also reported in the CRI professional manual and are presented in Table 13.

Trauma History

For coping with a past problem, results indicated that those with a sexual trauma history used significantly more avoidance strategies (M = 57.26, SD = 7.28) than women with no trauma history, (M = 54.20, SD = 6.73), t (141) = -2.49, p < .05. Alternatively, women with no trauma history utilized significantly more approach strategies (M = 47.61, SD = 9.50) than did women with a past history of sexual trauma (M = 40.63, SD = 8.94), t = 4.40 (141), p < .001. For current problem, there were no significant differences found between the two groups. However, while nonsignificant, the sexual trauma group appears to have utilized more avoidant strategies for dealing with a current problem (M = 53.43, SD = 6.89), than did the no trauma group (M = 50.47, SD = 6.92), with the analysis closely approaching statistical significance, t = 1.77 (70), p = .08 (See Table 11).

Individual approach and avoidant CRI subscales were also examined for group differences. First, past approach and avoidance subscales were analyzed to explore differences for trauma history. Results of the t-tests found significant differences for all past approach subscales, with the trauma group scoring significantly lower than the no

trauma group on these measures. Significant differences were also obtained for the CA and ED avoidant subscales of the CRI, with the trauma group scoring higher on these two scales (see results previously reported in Table 11).

For current coping, the same analyses for trauma relationships were run. T-tests were employed to test the groups for current coping differences by trauma history. These analyses produced significant results, where the trauma group was found to use significantly more ED avoidance strategies than the no trauma group, t (140) = - 2.81, p < .01. Additionally, for approach coping, the trauma group used significantly more SG strategies than the no trauma group, t (140) = - 2.07, p < .05.

Hypothesis 2b. It was predicted that women with multiple sexual traumas would utilize more avoidant than approach coping strategies in dealing with a past problem, when compared to all other groups. Using the interpretive guide presented in Table 13, the no trauma group scored in the average range for both approach (M = 47.71) and avoidant coping (M = 54.20). However, the trauma group scored well below average for approach coping (M = 40.63) and somewhat above average for avoidant coping (M = 57.26). In examining coping by trauma type, the child trauma group scored somewhat below average for approach coping (M = 43.68) and somewhat above average for avoidant coping (M = 57.83). The remaining three groups, adult trauma, military trauma and multiple trauma all scored well below average for approach coping (M = 40.97, 37.75, and 40.84, respectively) and somewhat above average for avoidant coping (M = 56.53, 58.22, and 57.01, respectively).

Trauma Type

The hypothesis that women with multiple sexual traumas would utilize more avoidant than approach coping strategies in dealing with a past problem, when compared to all other groups was not retained. A one-way ANOVA resulted in no significant differences for avoidant strategies for the five groups, F (4, 138) = 1.69, p = .155. However, significance was obtained for approach strategies, F (4, 138) = 5.64, p < .001. Scheffe's post-hoc analyses revealed significant differences for approach strategies utilized for both the multiply traumatized group and the military sexual trauma group when compared to the no trauma group. The analysis found that the no trauma group utilized significantly more approach strategies than women who experienced more than one trauma, (p = .016), and used more approach coping than those women who were sexually assaulted while in the military, (p = .005).

Several differences emerged when the CRI subscales were examined by trauma type, with all four avoidance subscales revealing significant differences when analyzed using one-way ANOVAs. However, when Scheffe's post hoc analyses were performed, differences were revealed for only two of the subscales. For the approach coping subscale SG the adult trauma group, military trauma group and multiple trauma group scored lower than the no trauma group, F (4, 138) = 7.88, p < .05 and ps < .01, respectively. The only other significant difference was for the avoidant CRI subscale CA, where the no trauma scored significantly lower than the multiple trauma group, F (4, 138) = 5.33, p < .01.

No significant differences were found for coping with a current problem or situation for the five groups. All groups scored in the average range for current approach and avoidant coping strategies (see Table 14 for mean scores). However, for the trauma type analyses for CRI subscales, one-way ANOVAs revealed significant differences for current ED avoidance coping, F (4, 137) = 2.75, $p < .05$. Post hoc testing revealed that the multiple trauma groups differed from the no trauma groups, scoring lower on this scale, while the other trauma groups did not differ.

Trauma Frequency

The sample was also tested to determine if there were any differences by trauma frequency (i.e., no sexual trauma, one sexual trauma, more than one sexual trauma). One-way ANOVAs were used, finding significance all four approach scales and the CA avoidance subscale. Post hoc testing revealed that for the approach scale LA the multiple trauma group scored significantly lower than the no trauma group, F (2, 140) = 4.72, $p < .05$. For the PR scale both trauma groups scored lower than the no trauma group, F (2,140) = 6.99, $p < .05$ and $p < .01$, respectively. For SG, again both trauma groups scored significantly lower than the no trauma group on this approach measure, F (2,140) = 15.17, $p < .01$, respectively. For the PS approach subscale only the multiple trauma group and no trauma groups differed, with the multiple trauma group scoring significantly lower on this measure, F (2,140) = 4.16, $p < .05$. For the avoidant subscale, both trauma groups scored significantly lower than the no trauma group on CA, F (2,140) = 9.68, $p < .01$, respectively.

Current coping differences were also examined by frequency of trauma. Results of the one-way ANOVA found significant differences for the ED avoidance strategy, F (2, 139) = 4.32, p < .05. Scheffe's post hoc testing revealed significant differences for the multiple trauma group and no trauma groups, with the multiple trauma group scoring significantly higher on this measure.

Hypothesis 3a. It was expected that approach coping strategies would be positively correlated with higher QOL ratings or subjective ratings of general life satisfaction, and avoidant strategies positively correlated with lower QOL ratings. For this analysis a Pearson product-moment correlation was utilized with the past problem approach scale of the CRI and general life satisfaction (GLS) subscale of the QOLI used as the testing variables. The results of this analysis revealed that for past problem, GLS scores and CRI approach coping responses were not significantly correlated, r (142) = .117, p = .165, nor were GLS scores and avoidant coping strategies, r (142) = - .051, p = .543. Results were similar when current CRI approach strategies and general life satisfaction, r (142) = .099, p = .241, and CRI avoidant strategies and GLS scores were tested, r (142) = - .054, p = .528. However, it is important to note that while statistically nonsignificant, the relationships were in the predicted direction.

When trauma history was included, several significant results emerged. For past problem, trauma and approach strategies were found to be significantly negatively correlated, r (143) = -.348, and past trauma history and avoidant coping were significantly positively correlated, r (143) = .206. A positive trauma history was also significantly negatively correlated with all CRI approach subscales: Logical Analysis

(LA), Positive Reappraisal (PR), Seeking Guidance and Support (SG), and Problem Solving (PS) and positively correlated with two of the four avoidance CRI subscales: Cognitive Avoidance (CA) and Emotional Discharge (ED). While not statistically significant, it is noteworthy that trauma history and the avoidant coping strategy Seeking Alternative Rewards (SR) were negatively related, a result not in the predicted direction. A correlation matrix for GLS, trauma history and the subscales for past approach and avoidant coping strategies of the CRI are listed in Tables 15 and 16, respectively.

For current problem, trauma history was not significantly correlated with the Approach scale of the CRI, GLS or LA, PR, or PS subscales of the CRI. Trauma history was positively correlated with SG, a behavioral approach strategy, $\underline{r}$ (142) = .173, $\underline{p} < .05$. On the avoidance subscale of the CRI, trauma history was only significantly correlated with the ED subscale, $\underline{r}$ (142) = .231, $\underline{p} < .01$. Correlational results for current approach and avoidance strategies are presented in Tables 17 and 18.

Hypothesis 3b. For the final hypothesis, it was predicted that avoidant coping strategies would be a stronger predictor of poorer quality of life ratings and sexual trauma history as compared to approach coping strategies. Results of the multiple regression analysis were nonsignificant. Trauma history, current coping strategy and current avoidant coping accounted for approximately 2% of the variance ($\underline{R^2}$ = .018) for general life satisfaction (GLS). None of the three predictor variables were significant for predicting GLS.

In a second regression analysis, to better understand what predictors might be impacted by quality of life, Total QOL score was used as the dependent variable and

trauma type and overall coping strategy included as predictor variables. Type of trauma and coping strategy were found to be significant predictor variables for Total QOL in this analysis, where $p < .05$, respectively. R^2 increased to .061, tripling the amount of variance attributed to these variables (See Table 19).

Exploratory Analyses

Total QOLI score

Additional exploratory analyses were performed on the QOLI. Total QOLI scores were calculated, with a larger QOLI total score reflecting more subjective life satisfaction. T-test revealed nonsignificance for the two groups for differences of total life satisfaction, t (213) = 1.71, p = .08. However, a trend toward significance was found for the five groups tested on total QOL scores, F (4, 210) = 2.32., p = .058. Scheffe's post hoc analyses did not reveal significant between group differences. A review of the means reveals that the adult sexual trauma group reported the lowest total QOL mean scores (M = 35.88, SD = 7.94), while the child sexual trauma group (M = 40.89, SD = 7.50) and no trauma groups reported the highest (M = 40.25, SD = 8.80).

QOLI subscales and Trauma Relationship

A Pearson product moment correlation was employed to examine the relationships of the nine subjective subscales of the QOLI by trauma history. For all comparisons, no significant correlations emerged. However, trauma history and satisfaction with social relationships came closest to meeting statistical significance, r (215) = - .123, p = .073 (See Table 20 for correlational matrix).

CRI Coping Style

In order to explore the preferred coping style used by the subjects rather than assessing Approach and Avoidance strategies as two discreet variables, the CRI Approach and Avoidant subscales were recoded with a negative value added to all Avoidance subscale scores to produce a negative score. The difference was then obtained by summing the total Approach and Avoidant subscale scores, yielding a coping style difference score. Approach coping styles were designated by a positive CRI score and Avoidant styles designated with a negative score. The larger the number, the more reliance on that particular coping style.

T-tests were first used to assess coping style strategies for past problem by the trauma/no trauma grouping. A significant finding was obtained, with the trauma group using significantly more overall avoidant-type strategies than the no trauma group, t (141) = 5.99, $p < .01$. One-way ANOVAs were then employed to explore differences between the five groups. Again, strong significant results emerged for the five groups, F (4, 138) = 10.05, $p < .01$. Scheffe's post hoc analyses revealed that the adult, military and multiple trauma groups used significantly more avoidant-type strategies than the no trauma group. No differences were found between the child trauma and no trauma groups nor were there significant differences by trauma type. Notably, the military sexual trauma group's avoidant-type coping style scores were highest among the five groups.

Coping style for current problem was also studied. No differences were found for current coping styles used by the trauma and no trauma groups, t (140) = .610, $p > .05$. Additionally, no differences emerged for the five groups, F (4, 137) = 1.46, $p > .05$.

However, a review of the means again reveals the military sexual trauma group used more avoidance-type coping than all other groups. Table 21 lists means and standard deviations for past and current coping style by group.

Total Coping Strategies

In order to examine quantitative differences in coping (i.e., total number of coping strategies endorsed), total number of coping strategies was tested for past and current coping for the trauma and no trauma groups. For this analysis, the mean Approach subscale and mean Avoidant subscale were summed to produce a total coping strategy score. For total past problem coping strategies, results revealed no significant differences between the two groups, t (141) = 1.71, p = .08. Additionally no differences emerged for total current strategies, t (141) = - 1.30, p > .05.

To examine changes in past and current coping, the total number of coping strategies endorsed on the CRI for current and past problem was examined with the total current strategies score subtracted from total past strategies. Significant differences were revealed, with the trauma group utilizing significantly more total coping strategies for current problem than for past problem, compared to the no trauma group, t (140) = 2.82, p < .01. Significance was not obtained when a one-way ANOVA was used to test for differences between the five groups, F (4,137) = 2.21, p = .07. (See Table 22).

Cognitive Versus Behavioral Coping Strategies

The CRI provides measures of both approach and avoidant coping responses and scores for cognitive and behavioral strategies. While not included in the primary analyses, these measures were analyzed in an exploratory manner, for both past and

current coping by group. For past problem, the no trauma group was found to use significantly more behavioral strategies than the sexual trauma group, t (141) = 2.35, p <.05. No differences were found between the groups for use of cognitive strategies for past problem, t (141) = .520, p > .05. When all five groups were tested, significant differences were not found for past behavioral strategies, F (4,138) = 2.00, p >.05, or cognitive strategies, F (4, 138) = .190, p > .05. It is interesting to note, that while not to a statistically significant degree, the military sexual trauma group used fewer behavioral strategies than all other groups.

For current coping, opposite findings emerged for the cognitive versus behavioral analyses. The trauma group used significantly more behavioral strategies than the no trauma group, t (140) = - 1.96, p < .05. Again, no significance was found when the five groups were included in the analysis, F (4, 137) = 1.59, p > .05. Additionally, no differences were found for current cognitive coping strategies for the two group analysis, t (140) = - .358, p > .05, or when the five trauma groups were studied, F (4, 137) = .491, p > .05 (see Table 23 for subscale means and standard deviations for past and current coping).

CHAPTER IV

DISCUSSION

Implications for Theory

Quality of Life

Quality of life assessment has become a major area of interest in the last decade. In fact, in the early 1990s the NIMH identified QOL as one of the major outcome areas to be assessed in future research efforts for the severely and persistently mentally ill (Lehman, Postrado & Rachuba, 1993). In this study QOL was measured by using the QOLI-BV objective scales of subjective life satisfaction. One purpose of this study was to answer the question if women who had experienced a sexual trauma would rate their quality of life differently than women with no such trauma history. Results of this study found that there were no differences in quality of life ratings for women with a trauma history compared to women with no sexual trauma history. Additionally, no differences were observed for QOL ratings by type of sexual trauma or by frequency of sexual trauma.

Given the wealth of significant findings in the literature for QOL differences for persons with PTSD and healthy controls, these findings were somewhat surprising. In the present study women veterans were equally satisfied with their QOL, regardless of trauma history or type of trauma. However, the larger study using the sample of women, did find significant differences between trauma groups for all scales. The lack of

statistical significance may only be an artifact of the testing instrument and small, unequal cell sizes when groups were separated by trauma type. Since no differences were found, it will have to be assumed that the effect size was not large enough for significant differences to be detected in the current study.

For the purposes of discussion, the general trends observed will be discussed. In the current study a trend revealed the sexual trauma groups scoring lower on all scales of the QOLI compared to the no trauma group. This trend is similar to other research finding traumatized women scoring lower on subjective rates of life satisfaction, in comparison to healthy controls. Additionally, differences for satisfaction with social relationships came closest to reaching statistical significance. Given the impact of trauma on interpersonal relationships, this finding makes intuitive sense.

The fact that no significant differences emerged may relate to the findings of Skinner and Furey's (1999) research that compared health related QOL among women veterans in VA medical centers and noninstitutionalized nonveteran women. These researchers found veteran women scoring lower on every QOL scale compared to the nonveteran women. It is possible that women veterans, regardless of trauma history, share many similarities not found in the nonveteran women studied in previous QOL research that found differences for traumatized and nontraumatized women. Veteran women, regardless of trauma history, may view their QOL more similarly than those women who have not been in the military, resulting in less variance for this measure.

Several studies have also looked at the influence of PTSD on QOL for traumatized men and women (Warshaw et al., 1993; Zatzick et al., 1997). The research

comparing subjects with and without a trauma history, with and without PTSD diagnoses, indicates that those with PTSD report lower QOL in comparison to those with trauma and anxiety disorders but no PTSD and lower than those with no trauma history. Persons with a trauma history reported deficits in perceived quality of life, but these were less significant than those reported by individuals with a PTSD diagnosis. Warshaw et al. studied trauma by type and again found that type of trauma was less significant than whether the participant had PTSD for lower QOL ratings. In the current study the influence of PTSD on QOL was not studied. However, since PTSD affects a significant number of women who have been sexually traumatized, it can be assumed that a percentage of the current sample met criteria for a diagnosis of PTSD. It is possible that significant group differences would have been found should women with PTSD diagnoses have been studied as a separate independent variable.

Past Coping

Research examining the role of coping on emotional functioning after a traumatic event is also a relatively new area being studied. The purpose of this study was to examine differences in type of coping strategies used by women with and without a sexual trauma history. Coping both with the past trauma or problem and current coping strategies were tested. Many significant results emerged for these analyses.

Trauma History

For past problem, women with a sexual trauma used more avoidant coping strategies than women with no trauma, while women with no trauma used more approach strategies than the sexually traumatized women. While the no trauma group was in the

average range, in comparison to a normative sample (Moos, 1997), the trauma group was well below average for approach coping and somewhat above average for avoidant coping. While both groups used an overall avoidant coping style, rather than a mixed style or approach coping style, the trauma group used a dramatically more avoidant style of coping than the no trauma for past problem. The no trauma group was also found to use more behavioral strategies than the trauma group, while no differences were found for the use of cognitive strategies.

For the CRI subscales for past problem, results found that women veterans with a sexual trauma history scored lower on all Approach subscales (i.e., LA, PR, SG, and PS) and scored higher on the CA and ED avoidance subscales than women with no trauma history.

The results for coping with a past problem are consistent with the previous literature in that sexually traumatized individuals used more avoidant, emotion-focused coping strategies in dealing with the trauma. It is theorized that avoidant coping strategies attempt to reduce the impact of the stressful event. These strategies may serve a defensive, protective function by decreasing the negative affect and internal threat accompanied by the stressor. In contrast, approach strategies increase the experience of negative affect. Approach strategies are generally active, and may include attempts to restructure the meaning of the problem, seeking information, guidance or support or taking action to deal directly with the problem. Women who have experienced a sexual trauma may feel powerless to do anything about the problem. Based on the results of this study, traumatized women engaged in more cognitive avoidance (avoiding thinking

realistically about the trauma) and emotional discharge (reducing tension by expressing negative feelings). No differences were found in the avoidance strategies involving acceptance or resignation or substituting new activities to create new sources of satisfaction between the trauma and no trauma groups.

Given that the types of problems reported were significantly different depending on the group classification (i.e., those with a sexual trauma history were instructed to use the past sexual trauma as their problem, while the no trauma group was given no specific instructions regarding type of problem), no interpretations can be made about overall style differences in coping for traumatized and non-traumatized women. However, it is clear from these results that coping strategies differ by type of problem.

Trauma Type

This study also examined differences in coping by type of sexual trauma. The results suggested that all the trauma groups used more avoidant and less approach coping mechanisms compared to the no trauma group. However, the groups did not differ by type. In general, women who were traumatized as children used similar avoidant coping strategies as those sexually assaulted as adults, in the military and those with multiple sexual assaults. Interestingly, while not statistically significant, trends were found for differences for those women assaulted while in the military. The military sexual trauma group had the highest avoidant-type coping scores and used the fewest behavioral strategies in dealing with the past trauma in comparison to the other trauma groups. Additionally, the military group used more cognitive avoidance as an avoidant coping strategy, with scores well above the average range, in comparison to the other trauma

groups, and used significantly more cognitive avoidance in comparison to the no trauma group.

It was expected that the multiple trauma group would use more avoidant coping than all other groups, based on the literature suggesting that sexually traumatized women who have been revictimized use more total avoidant strategies than women with one or no sexual trauma history (Proulx et al., 1995). However, these types of findings did not emerge in this study. The multiple trauma group did not differ significantly from the other trauma groups in types of coping. One difference was in the use of problem solving strategies, an approach coping strategy; the multiple trauma group used significantly fewer problem solving strategies than the no trauma group, while the other trauma groups did not differ significantly from the no trauma group on this measure. Additionally, the multiple trauma group used fewer logical analysis approach strategies than the no trauma group, while there were no differences for women experiencing only one sexual trauma during their lifetime.

Results for the child trauma group were also somewhat surprising. While the military, multiple trauma and adult trauma groups differed from the no trauma groups in their lesser use of seeking guidance and support, no differences were found between the child trauma group and no trauma group for this coping strategy.

The overall trend suggested that women who have been sexually assaulted while in the military used somewhat different methods of coping with the past trauma. These women tended to use fewer behavioral strategies than the other groups and used a more avoidant style than all other groups. While serving active duty, these women face

additional burdens not faced by their civilian peers. Reporting the perpetrator as a means of dealing directly with the problem, an approach coping strategy, could bring reduced trust from fellow soldiers and possible "informal" unit disciplinary action, for violating certain unspoken "codes". Additionally, reporting the assault could bring added distress in having to report to duty where the perpetrator works. The women used more cognitive avoidance, which involves cognitive attempts to avoid thinking realistically about the problem. This defensive coping style may have been the only way to continue with their military duties while keeping the emotional impact of the trauma repressed. In addition, having to choose justice or career after the military sexual assault may have left these women feeling immobilized in their problem solving, with avoidant coping a result.

The results involving lesser use of seeking guidance and support as a coping strategy for those experiencing a trauma as an adult may relate to issues of shame involved in adult sexual trauma. Due to cultural rape myths, women who have been sexually assaulted as an adult may feel more responsible for the assault than child victims of abuse. The adults may attempt to hide the rape or sexual assault from family and friends due to feelings of shame and guilt. These individuals, therefore, may be less likely to turn to others for support or guidance. The findings that child victims of sexual assault used seeking guidance and support as much as the women with no trauma history suggests that as children these women may have felt less responsible for the abuse and therefore, felt more comfortable seeking support from others in coping with the trauma.

Trauma Frequency

In the analyses for frequency of trauma, women with a history of more than one sexual trauma were found to use fewer problem solving and logical analysis approach techniques than those with no sexual trauma history. It is possible that over time with multiple assaults, these women found taking actions for dealing directly with the problem (i.e., such as pressing charges against their perpetrator) left them revictimized. They appear to be more disengaged in their coping efforts and may have believed that preparing for this type of stress and its consequences would not be worthwhile.

Current Coping

For current coping, the groups were not asked about coping with a sexual trauma but were informed to respond to any significant current problem or situation. Interestingly, health/mental health and interpersonal/relationship problems were the most frequently reported, however these did not differ by group.

Trauma History

Overall, fewer differences emerged between the groups for current coping strategies. Both the trauma and no trauma groups continued to use a more avoidant style but the groups did not differ for specific approach and avoidant coping. For current coping, all five groups' approach and avoidant scales were in the average range. Overall, the military trauma group continued to utilize the most avoidant-type strategies, while the adult trauma group used a more mixed approach/avoidant type overall strategy for current problem. The child, military, multiple and no trauma groups continued to use an overall avoidant type strategy, but not to a significant degree. All groups used more approach and

fewer avoidant strategies than were used for past problem. Additionally, all the trauma groups used more total coping strategies for the current problem, while the no trauma group used fewer strategies, but not to a significant degree.

Differences were observed when CRI subscales were analyzed. The trauma group was found to use more emotional discharge avoidant strategies for current problem than the no trauma group. Additionally, the trauma group used more seeking guidance and support, an approach strategy. When the groups were analyzed for type and frequency the multiple trauma group was found to consistently use more emotional discharge avoidance coping than the no trauma group, while the other trauma types did not differ from the no trauma group on this measure. Additionally, while the trauma group was found to use fewer behavioral strategies than the no trauma group for past problem, for current problem the trauma group used significantly more behavioral strategies. However, the military trauma group again, as a general trend, used the fewest behavioral strategies in comparison to all other groups.

The significant increase in total coping responses for trauma group in comparison to the no trauma group may involve the trauma group having more options in dealing with a current non-trauma related problem than with the past trauma. These results suggest that trauma history does not significantly affect current coping style, as the two groups, in general, did not differ. Interestingly, the trauma group used more seeking information, guidance and support for current problem than the no trauma group. Based on the general trend of results finding the trauma group using fewer approach coping skills compared to the no trauma, these results were somewhat surprising. It is possible

that the trauma group has found the use of general support and guidance a positive coping mechanism, possibly through sexual trauma psychotherapy groups or via general women's group providing information and support. Additionally, the significant findings for the multiple trauma group using more emotional discharge in their current coping, an avoidant strategy, suggests a more emotion-focused rather than problem focused style. Long and Jackson (1993) suggested that persons appraising events outside of their control may best cope through the use of emotion-focused strategies. After experiencing more than one sexual trauma, these women may have a decreased sense of their world as a safe place and may come to rely on an external locus of control, as they no longer feel in control of what happens to them.

Regardless of trauma history, the groups used similar cognitive coping when dealing with the past trauma or current problem. However, for the current problem the trauma group used more behavioral strategies. It is possible that the no trauma group used these strategies equally as often for past and current problem. However, the trauma group may have felt these active-type strategies were not helpful in dealing with the sexual trauma but recognized their utility in the present and therefore, began relying on them more heavily in the present compared to the no trauma group. Both groups used significantly more avoidant-type strategies, rather than a mixed approach or more approach in the past and both used more mixed strategies in their present coping. Perhaps over time, regardless of trauma history, the women using the mixed approach and avoidance techniques are attempting to find solutions through various means, rather than focusing on one strategy over another, an idea proposed by Proulx et al. (1995).

Overall, these results suggest that coping strategies change over time and are problem dependent, rather than trait-like. These findings corroborate the results of Sigmon et al. (1996), who found that current coping and abuse-specific coping varied depending on the context of the situation. In general, for all the groups, coping strategies appear to be more alike than different in the present. The major differences related to the trauma group; specifically, the multiple trauma group was found to use more emotional discharge as an avoidance mechanism compared to the women with no sexual trauma history. In addition, this group used more seeking information, guidance and support as an approach coping mechanism for their current problem. Coping may have been similar in the past, too, if the type of problems they reported were controlled. Having the experience of sexual trauma may affect certain aspects of women's current coping, particularly those women who were assaulted more than one time in their past, or women assaulted while in the military. However, it is less evident that trauma history affects overall current coping, but does seem clear from the current study that coping responses for dealing with a past trauma differ from those used by women with dealing with a different, non-trauma, type of problem.

Relationship of QOL and Coping

The literature on coping suggests that the use of avoidant coping strategies is more predictive of poorer psychological distress (Coffey et al., 1996; Leitenberg, Greenwald & Cado, 1992; Long & Jackson, 1993; Dahl, 1993; Proulx et al., 1995). Given these results, it was expected that coping would be strongly correlated with subjective rates of satisfaction. Results from the correlational analyses did not support these

expectations. For the current study both general life satisfaction and total QOL responses were found to not significantly relate to approach or avoidant coping for past or current problem. It was expected that the QOL ratings used in this study would be inversely correlated to other studies measures of psychological distress. However, for the current study this may not have been the case. Perhaps subjective levels of satisfaction do not equate to distress reported in the previous studies, as measured by meeting criteria for a psychiatric disorder or the reporting of psychiatric symptomatology. Results of the multiple regression analysis confirmed this suspicion, with very little variance attributed to general life satisfaction when trauma history and coping were used as predictor variables. Avoidant coping may predict poorer psychological outcome when different outcome measures are used than the QOLI used in the current study.

Trauma Relationships

The current study found that for this convenience sample, the majority of the women had experienced a sexual trauma during their lifetime. It is unclear if this would have been the case should a random sample have been taken. Many of the participants were recruited from the mental health clinics, including the PTSD/anxiety disorders outpatient clinic that serves women with a history of military sexual trauma. Therefore, because the sample was not randomly selected it cannot be concluded that more veteran women have experienced a sexual trauma than nonveterans. However, it is clear that sexual trauma among veteran women is prevalent. These results support the work of Coyle, Wolan and Van Horn (1996) who surveyed abuse experiences among veteran

women and found that sexual abuse was the most common form of abuse experienced, with 55% of their sample reporting a prior sexual abuse experience.

When trauma history was included in the correlational analyses for QOL and coping, several significant relationships emerged. For past trauma the relationships were all in the predicted direction, with those with a history of trauma scoring lower on approach coping and higher on avoidant; conversely, those with no trauma scored higher on approach coping and lower on avoidant coping.

For current problem, fewer significant relationships emerged. The lack of significant findings corroborate the results reported earlier that in general, current coping based on trauma history is not significantly different. For the approach scale, trauma history was only significantly related to seeking support and guidance, with a positive relationship emerging. These findings suggest that those with a positive trauma history also tended to use more seeking guidance and support for their current problem. Interestingly, for past problem the direction of this relationship changed from negative relationship to a positive relationship for current problem. This suggests that while those with a trauma relied less on seeking guidance and support from others in dealing with the past trauma, for current problem this group began to use this strategy more. However, those with no trauma used this strategy less in dealing with a current problem. For current avoidant coping and trauma history, few significant relationships emerged. Only emotional discharge was found to significantly relate to trauma history. Women who had been sexually traumatized in the past tended to use more emotional discharge while women with no trauma history coped less often by expressing negative feelings. Overall,

these results again suggest that overall current coping style and trauma history are not significantly related.

Implications for Practice

Results from the study suggest that women who have been sexually traumatized in the past used different methods of coping to deal with the past trauma than are used in handling current problems or situations. In general, women who are found to use a more avoidant style may benefit from learning more adaptive, problem-focused coping strategies and reducing emotion-focused ones. Research has shown that persons relying more heavily on avoidant, emotion-focused coping have poorer psychiatric outcome than women using more mixed approach/avoidant or more overall approach coping styles. Individuals with a trauma history may use avoidant strategies to reduce the emotional affect associated with dealing directly with the problem. However, this strategy may exacerbate denial and distortion of the event so that it is unable to be processed and coped with in the present.

Trauma research suggests that avoidant coping is more predictive of PTSD than any other psychiatric outcome. It could be assumed that the two are highly correlated as many of the symptoms involved in PTSD involve avoidant coping strategies. Clinicians working with individual sexual trauma patients may use the CRI in a psychoeducational manner to introduce the topic of coping and coping styles and may use the instrument to create a coping style profile for the problem being addressed in treatment.

More specifically, in working with women who have experienced multiple sexual traumas, clinicians may attempt to reduce their reliance on emotional discharge as an

avoidant coping technique. Solomon, Avitzur and Mikulincer (1989) found that in working with combat veterans, reducing emotion-focused strategies rather than increasing problem-focused coping led to more improvement in social functioning over time. While the results of this study were not definitive, previous studies have found that revictimized women are at greater risk for poor psychological outcome. Special attention should be given to this trauma group with regards to assessment of coping. The results regarding greater use of current avoidant coping styles of women assaulted in the military suggests therapeutic discussions regarding the benefits of their current coping style could be helpful. Women assaulted in the military were generally found to use less behavioral strategies in their current coping compared to the other groups. While it is not clear that the reliance on cognitive strategies is problematic to their functioning, these women could be assisted in learning alternative techniques to primarily cognitive coping strategies.

The CRI and QOLI can be used together in clinical practice in working with individuals who have experienced a sexual trauma. Information regarding a woman's current life satisfaction via the use of the QOLI can be used to aid in treatment planning decisions. Should the woman score low in a one domain, administering the CRI could assist in examining less adaptive coping techniques for that particular area of her life and be used to increase the use of other coping strategies. Use of these instruments both before and after an intervention can monitor the impact of the intervention. The QOLI might be included in treatment to monitor change in subjective rates of well-being over time. The CRI could be used with a variety of problems to assess the utility of different

coping responses on different types of problems or situations to improve coping style flexibility. Additionally, use of the QOLI in clinical practice may assist in understanding resistance to intervention should the client score higher on an area of her life satisfaction than what would have been expected based on what is known about her life circumstances. Resistance to treatment or poor motivation to change could be better understood by knowing the subject's perceptions of her own well-being. Additionally, a better understanding of the patient's self-assessment of life satisfaction could aid in fostering the treatment alliance, where the clinician may not challenge the patient to change an area of her life that she rates as satisfactory. Lehman (1994) suggests that patients may not want to change if offered the hope of change as they may have accommodated to their adverse circumstances. Use of the QOLI could help clinicians be aware of how interventions that change the patients life circumstances may produce decreases in life satisfaction.

Implications for Research

In general, limitations for the current study include the small, uneven cell size when the sample was divided by sexual trauma type. Cell sizes ranged from 12 for childhood sexual assault to 55 for women classified as having no sexual trauma history. Additionally, given Skinner and Furey's (1999) results suggesting veteran and nonveteran women are more different than alike, especially related to issues of QOL, results from this study cannot be generalized outside of the veteran population.

Future research should include larger sample sizes and include comparisons between veteran and nonveteran women. Additionally, a randomized sampling should be

used to address issues of generalizability and so that the frequency of sexual trauma in the veteran and nonveteran population can be assessed.

QOL

The QOLI has been used extensively in the literature to examine individuals subjective satisfaction with various aspects of their life. However, this instrument was specifically designed to assess life circumstances of persons with severe mental illness. While it has been used in previous studies of veteran mental health outpatients, it is unclear if the instrument is a valid measure in its assessment of less severely ill patients or patients with no mental health concerns. Since this study examined patients from both mental health and ambulatory care clinics, some of the patients did not have a mental illness diagnosis and received medical care only from the VA. Therefore, data from these patients may more questionable in terms of validity. However, results of the Cronbach's Alpha reliability analyses indicated that the subscale internal consistencies were equivalent to or better than the coefficients for the QOLI standardization sample.

Based on the significant findings in the larger study for the QOLI and no significant differences found in the current study, it appears that the effect size for the QOLI was small and therefore required a larger sample size to detect differences among the trauma groups. Future research should re-examine QOL in sexually traumatized women veterans using the QOLI to better understand if true differences do not exist between traumatized women and those with no trauma or if these lack of differences are a statistical artifact involving small sample (cell) size and lack of power.

The QOLI surprisingly was not significantly correlated with the coping measure used in this study. Past research has shown coping to be related to various psychological outcome measures. Future research may include other QOL inventories such as the Quality of Life Scale (Heinrichs, Hanlon & Carpenter, 1984) or more qualitative, subjective measures, such as work role functioning, days spent in bed in past month, physical health status, etc., as was used by Zatzick et al. (1997) that may better relate to current psychological functioning or distress. Additional studies should examine the relationship of the QOLI to psychiatric conditions such as anxiety disorders, specifically PTSD, depressive disorders, somatoform disorders, etc. Information regarding the patients subjective ratings of distress in comparison to ratings from other professionals could be helpful in treatment planning and needs assessment.

Coping

In the future, researchers might study coping in relation to additional psychological outcome measures. Extraneous variables may affect current coping styles, including psychological functioning before and after the trauma, personality characteristics and mental health treatment history. Various researchers have studied the relationship of PTSD and coping, however few have looked specifically at sexual trauma types and differences in coping. Continuing this line of research, particularly using larger samples warrants further exploration. Other studies could also assess current coping with the past sexual trauma. It is clear from these results that coping with a past sexual trauma differs from coping strategies used to handle other types of problems. However, it is not clear if women with a sexual trauma history continue to use avoidant type coping in

dealing with current problems related to the past trauma, or if their coping has changed over time in dealing with the past incident(s). Information regarding the utility of mostly mixed versus mostly avoidant versus mostly approach coping styles on current functioning in clinical and nonclinical populations should continue to be examined.

Table 1

CRI-Adult Scale

	Approach coping responses	Avoidance coping responses
Cognitive	1. Logical Analysis	5. Cognitive Avoidance
	2. Positive Reappraisal	6. Acceptance or Resignation
Behavioral	3. Seeking Guidance and Support	7. Seeking Alternative Rewards
	4. Problem Solving	8. Emotional Discharge

Table 2

CRI-Adult Scale Descriptions

Scale	Description
Approach coping responses	
1. Logical Analysis	Cognitive attempts to understand and prepare mentally for a stressor and its consequences
2. Positive Reappraisal	Cognitive attempts to construe and restructure a problem in a positive way while still accepting the reality of the situation
3. Seeking Guidance and Support	Behavioral attempts to seek information, guidance, or support
4. Problem Solving	Behavioral attempts to take action to deal directly with the problem
Avoidance coping responses	
5. Cognitive Avoidance	Cognitive attempts to avoid thinking realistically about a problem
6. Acceptance or Resignation	Cognitive attempts to react to the problem by accepting it
7. Seeking Alternative Rewards	Behavioral attempts to get involved in substitute activities and create new sources of satisfaction
8. Emotional Discharge	Behavioral attempts to reduce tension by expressing negative feelings

Table 3

Larger Study Measures

1. Personal Information Sheet
2. Utilization and Cost Questionnaire (UAC)
3. Screening Questionnaire
4. Clinician Administered PTSD Scale (CAPS)
5. Quality of Life Interview–Brief Version (QOLI-BV)
6. 36-item Short Form Health Survey (SF-36 Health Status)
7. TWEAK alcohol screen
8. Iowa Center for Epidemiologic Studies Depression Scale short form (IOWA CES-D)
9. Brief Symptom Inventory (BSI)

Table 4

Current Study Demographic Data

Variable	Total Sample	Child History	Civilian History	Military History	Multiple History	No History
Total N, (%)	221 (100)	18 (8.1)	37 (16.7)	24 (10.9)	57 (25.3)	84 (38)
Age, M (SD)	46.78 (11.53)	46.04 (11.35)	46.51 (10.54)	45.57 (9.53)	46.81 (10.53)	48.68 (12.96)
Marital Status						
Never Married, N (%)	53 (24.1)	9 (15.8)	14 (16.7)	11 (17.5)	8 (14.3)	28 (33.3)
Married, N (%)	70 (31.8)	18 (31.6)	24 (28.6)	22 (34.4)	15 (26.8)	23 (27.4)
Separated, N (%)	8 (3.6)	1 (1.8)	6 (7.10)	4 (6.3)	3 (5.4)	1 (1.2)
Divorced, N (%)	76 (34.5)	26 (45.6)	38 (45.2)	26 (40.6)	29 (51.8)	23 (27.4)
Widowed, N (%)	13 (5.9)	3 (5.3)	2 (2.4)	0 (0)	1 (1.8)	9 (10.7)
Years of Education						
<12th grade, N (%)	6 (2.7)	0 (0)	2 (2.4)	2 (3.2)	2 (3.6)	4 (4.8)
12th grade, N (%)	31 (14)	7 (12.3)	16 (19)	12 (18.8)	10 (17.9)	8 (9.5)
>12th grade, N (%)	184 (83)	50 (87.8)	82 (78.6)	50 (78.2)	44 (78.6)	72 (85.7)
Ethnicity						
Caucasian, N (%)	138 (62.4)	37 (64.9)	52 (61.9)	41 (64.1)	35 (62.5)	49 (58.3)
African American, N (%)	73 (33.0)	16 (28.1)	29 (34.5)	19 (29.7)	17 (30.4)	31 (36.9)
Asian, N (%)	1 (.5)	1 (1.8)	0 (0)	1 (1.6)	1 (1.8)	0 (0)
Hispanic, N (%)	8 (3.6)	3 (5.3)	3 (3.6)	2 (3.1)	3 (5.4)	4 (4.8)
Native American, N (%)	1 (.5)	0 (0)	0 (0)	1 (1.6)	0 (0)	0 (0)
Employment Status						
Employed, N (%)	110 (49.8)	30 (52.6)	44 (52.4)	30 (46.9)	30 (53.6)	43 (51.2)
Unemployed, N (%)	111 (50.2)	27 (47.4)	40 (47.6)	34 (53.1)	26 (46.4)	41 (48.8)

Table 5

Larger Study Demographic Data

Variable	Total Sample	Child History	Civilian History	Military History	Multiple History	No History
Total N, (%)	270 (100)	74 (27.20)	106 (38.97)	89 (32.72)	--[a]	96 (35.29)
Age, M (SD)	46.6 (11.6)	45.2 (9.78)	45.23 (9.04)	45.11 (8.12)	--	48.91 (14.02)
Marital Status						
Never Married, N (%)	59 (21.8)	12 (16.4)	18 (17.0)	17 (19.1)	--	27 (28.1)
Married, N (%)	88 (32.4)	22 (30.1)	37 (34.9)	26 (29.2)		30 (31.3)
Separated, N (%)	15 (5.5)	4 (5.5)	7 (6.6)	6 (6.7)		4 (4.2)
Divorced, N (%)	93 (34.2)	31 (42.5)	40 (37.7)	36 (40.4)		27 (28.1)
Widowed, N (%)	16 (5.9)	4 (5.5)	4 (3.8)	4 (4.5)		5 (8.3)
Years of Education						
<12th grade, N (%)	7 (2.6)	2 (2.7)	2 (1.9)	1 (1.1)	--	4 (4.2)
12th grade, N (%)	37 (13.6)	10 (13.5)	18 (17.0)	11 (12.4)		13 (13.5)
>12th grade, N (%)	228 (83.8)	62 (83.8)	86 (81.1)	77 (86.5)		79 (82.3)
Ethnicity						
Caucasian, N (%)	173 (63.6)	46 (62.2)	72 (67.9)	61 (68.5)	--	57 (59.4)
African American, N (%)	89 (32.7)	24 (32.4)	30 (28.3)	25 (28.1)		36 (37.5)
Asian, N (%)	1 (0.4)	0	1 (0.9)	0		0
Hispanic, N (%)	8 (2.9)	4 (5.4)	3 (2.8)	2 (2.2)		3 (3.1)
Native American, N(%)	1 (0.4)	0	0	1 (1.1)		0
Employment Status						
Employed, N (%)	120 (49.6)	36 (57.1)	48 (51.6)	35 (45.5)	--	41 (46.6)
Unemployed, N (%)	122 (50.4)	27 (42.9)	45 (48.4)	42 (54.5)		47 (53.4)

Note. [a]Dashes indicate no data is available to report as the larger study did not include a "Multiple History" group.

Table 6

Frequencies of Multiple Sexual Traumas by Type

Type of Trauma History	N (%)
Multiple History	57 (25.3)
Childhood and Civilian Adult History	16 (7.2)
Childhood and Military History	10 (4.5)
Military and Civilian Adult History	17 (7.7)
Childhood, Military and Civilian Adult History	13 (5.9)

Table 7

Quality of Life Interview Subscale Scores for Total Sample

Subscale	M	SD	N
Satisfaction with:			
General Life (GLS)	4.59	1.39	217
Living Situation (LIV)	4.86	1.61	217
Daily Activities (DAILY)	4.42	1.31	217
Family Relations (FAM)	4.91	1.49	217
Social Relations (SOC)	4.82	1.09	217
Finances (FIN)	3.98	1.63	217
Job/School[a] (JOB)	4.60	1.15	103
Legal and Safety Issues (SAFETY)	4.98	1.36	217
Health (HEALTH)	4.01	1.35	217

Note. Higher scores reflect more satisfaction.

[a]Only those subjects currently employed or in school responded to this item.

Table 8

Quality of Life Interview Subscale Scores By Sexual Trauma Group Classification

Subscale	Group	M	SD	t	Sig. (2-tailed)
Satisfaction with:					
GLS	No Trauma	4.74	1.35	1.33	.18
	Trauma	4.48	1.39		
LIV	No Trauma	5.02	1.62	1.19	.24
	Trauma	4.75	1.60		
DAILY	No Trauma	4.52	1.33	.88	.38
	Trauma	4.36	1.30		
FAM	No Trauma	5.04	1.42	.95	.35
	Trauma	4.84	1.56		
SOC	No Trauma	4.99	1.03	1.80	.07
	Trauma	4.72	1.13		
FIN	No Trauma	4.19	1.68	1.49	.14
	Trauma	3.84	1.59		
JOB	No Trauma	4.72	1.14	.82	.42
	Trauma	4.54	1.16		
SAFETY	No Trauma	5.11	1.44	1.08	.28
	Trauma	4.90	1.31		
HEALTH	No Trauma	4.19	1.36	1.66	.10
	Trauma	3.89	1.3		

Table 9

CRI Past Problem Types By Sexual Trauma Group Classification

Problem	Total Sample	Child Trauma	Adult Trauma	Military Trauma	Multiple Trauma	No Trauma
Past	N (%)					
Financial	3 (2.1)	0	0	0	0	3 (5.8)
Work/School	5 (3.5)	0	0	1 (5.6)	0	4 (7.7)
Interpersonal/Relat.	8 (6.3)	0	0	0	0	8 (15.4)
Health/Mental Health	12 (8.4)	0	1 (5.3)	0	0	11 (21.2)
Death/Loss	7 (4.9)	0	0	0	0	7 (13.5)
Legal/Safety/Housing	3 (2.1)	0	0	0	0	3 (5.8)
Childhood Sexual Trauma	26 (18.2)	12 (100)	2 (10.5)	1 (5.6)	6 (14.6)	5 (9.6) [a]
Adult Civilian Sexual Trauma	27 (18.9)	0	15 (78.9)	0	12 (29.3)	0
Military Sexual Trauma	40 (28)	0	1 (5.3)	16 (66.7)	22 (53.7)	1 (1.9) [a]
Other Traumatic Event	11 (7.7)	0	0	0	1 (2.4)	10 (19.2)
Other Nontraumatic Event	0	0	0	0	0	0

Note. [a]Subjects reported a sexual trauma type problem but did not meet criteria for sexual trauma group classification

Table 10

CRI Current Problem Types By Sexual Trauma Group Classification

Problem	Total Sample	Child Trauma	Adult Trauma	Military Trauma	Multiple Trauma	No Trauma
Current	N (%)					
Financial	17 (11.9)	2 (16.7)	1 (5.3)	2 (11.1)	7 (17.1)	5 (9.6)
Work/School	16 (11.2)	2 (16.7)	0	2 (11.1)	4 (9.8)	8 (15.4)
Interpersonal/Relat.	37 (25.9)	2 (16.7)	8 (42.1)	5 (27.8)	10 (24.4)	12 (23.1)
Health/Mental Health	42 (29.4)	4 (33.3)	4 (21.1)	8 (44.4)	9 (22)	17 (32.7)
Death/Loss	15 (10.5)	0	4 (21.1)	0	4 (9.8)	7 (13.5)
Legal/Safety/Housing	2 (1.4)	0	0	0	1 (2.4)	1 (1.9)
Childhood Sexual Trauma	2 (1.4)	0	1 (5.3)	1 (5.6)	0	0
Adult Civilian Sexual Trauma	1 (0.7)	0	0	0	1 (2.4)	0
Military Sexual Trauma	0	0	0	0	0	0
Other Traumatic Event	7 (4.9)	2 (16.7)	1 (5.3)	0	2 (4.9)	2 (3.8)
Other Nontraumatic Event	3 (2.1)	0	0	0	3 (7.3)	0

Table 11

Past Problem CRI Subscale Scores for Phone Interviewed and Formal Interviewed Subjects

CRI Subscale	Trauma History	N	M	SD	t
Approach	No Trauma	53	47.61	9.50	4.40**
	Trauma	90	40.63		
LA	No Trauma	53	44.05	11.26	2.89**
	Trauma	90	38.54	10.86	
PR	No Trauma	53	48.88	10.15	3.56**
	Trauma	90	42.75	9.81	
SG	No Trauma	53	49.52	12.58	5.40**
	Trauma	90	38.71	10.92	
PS	No Trauma	53	47.98	11.11	2.72**
	Trauma	90	42.52	11.81	
Avoidance	No Trauma	53	54.20	6.73	- 2.49*
	Trauma	90	57.26	7.28	
CA	No Trauma	53	53.47	10.33	- 4.27**
	Trauma	90	61.40	10.92	
AR	No Trauma	53	52.26	8.99	- .73
	Trauma	90	53.51	10.31	
SR	No Trauma	53	54.69	9.78	.52
	Trauma	90	53.76	10.43	
ED	No Trauma	53	56.37	11.27	- 2.15*
	Trauma	90	60.38	10.41	

* $p < .05$
** $p < .01$

Table 12

Past Problem CRI Subscale Scores for Phone Interview Group Only

CRI Subscale	Trauma History	N	M	SD	t
Approach	No Trauma	42	47.20	9.56	3.87**
	Trauma	81	40.28	9.29	
LA	No Trauma	42	42.76	10.88	2.24*
	Trauma	81	38.09	10.94	
PR	No Trauma	42	48.52	10.18	3.34**
	Trauma	81	42.16	9.91	
SG	No Trauma	42	49.88	12.57	4.91**
	Trauma	81	38.83	11.34	
PS	No Trauma	42	47.64	11.57	2.45*
	Trauma	81	42.03	12.24	
Avoidance	No Trauma	42	54.27	6.66	- 1.70
	Trauma	81	56.55	7.24	
CA	No Trauma	42	53.52	10.23	- 3.39**
	Trauma	81	60.48	11.03	
AR	No Trauma	42	51.85	8.50	- .423
	Trauma	81	52.64	10.33	
SR	No Trauma	42	55.94	10.01	1.53
	Trauma	81	52.98	10.27	
ED	No Trauma	42	55.76	11.37	- 2.10*
	Trauma	81	60.12	10.66	

* $p < .05$
** $p < .01$

Table 13

Criteria for Interpreting CRI Standard Scores

T-score range	Equivalent percentile range	Description
≤ 34	≤ 6	Considerably below average
35-40	7-16	Well below average
41-45	17-33	Somewhat below average
46-54	34-66	Average
55-59	67-83	Somewhat above average
60-65	84-93	Well above average
≥ 66	≥ 94	Considerably above average

Table 14

Current Problem CRI Subscale Scores by Trauma History

CRI Subscale	Trauma History	N	M	SD	t
Approach	No Trauma	52	49.07	8.47	- .638
	Trauma	90	50.04	8.96	
LA	No Trauma	52	45.09	10.61	- .617
	Trauma	90	46.28	11.35	
PR	No Trauma	52	49.84	9.62	.606
	Trauma	90	48.81	9.91	
SG	No Trauma	52	50.67	10.76	- 2.08*
	Trauma	90	54.37	9.90	
PS	No Trauma	52	50.65	11.06	- .024
	Trauma	90	50.70	10.80	
Avoidance	No Trauma	52	51.26	6.49	- 1.62
	Trauma	90	53.06	6.30	
CA	No Trauma	52	51.73	11.51	- .881
	Trauma	90	53.30	9.41	
AR	No Trauma	52	50.19	9.15	.061
	Trauma	90	50.10	8.45	
SR	No Trauma	52	50.50	9.78	- .468
	Trauma	90	51.26	9.16	
ED	No Trauma	52	52.63	9.89	- 2.81**
	Trauma	90	57.60	10.28	

* $p < .05$
** $p < .01$

Table 15

Past Problem Correlation Matrix for CRI Approach Subscales, General Life Satisfaction and Trauma History

Variable	1	2	3	4	5	6	7
Trauma History (1)	--	.009	-.348**	-.236**	-.287**	-.414**	- .224**
GLS (2)		--	.117	.070	.069	.110	-.120
Approach (3)			--	.866**	.819**	.799**	-.177**
Logical Analysis (4)				--	.728**	.514**	-.056
Positive Reappraisal (5)					--	.459**	-.065
Seeking Guidance and Support (6)						--	-.262
Problem Solving (7)							--

* $p < .05$
** $p < .01$

Table 16

Past Problem Correlation Matrix for CRI Avoidance Subscales, General Life Satisfaction and Trauma History

Variable	1	2	3	4	5	6	7
Trauma History (1)	--	.009	.206*	.339**	.061	-.044	.179*
GLS (2)		--	-.051	-.120	-.082	.117	-.046
Avoidance (3)			--	.749**	.737**	.501**	.735**
Cognitive Avoidance (4)				--.	.516**	.108	.375**
Acceptance or Resignation (5)					--	.098	.419**
Seeking Alternative Rewards (6)						--	.190*
Emotional Discharge (7)							--

* $p < .05$
** $p < .01$

Table 17

Current Problem Correlation Matrix for CRI Approach Subscales, General Life Satisfaction and Trauma History

Variable	1	2	3	4	5	6	7
Trauma History (1)	--	- .091	.054	.052	- .051	.173*	.002
GLS (2)		--	.099	.040	.029	.145	.114
Approach (3)			--	.863**	.821**	.788**	.857**
Logical Analysis (4)				--.	.693**	.521**	.644
Positive Reappraisal (5)					--	.488**	.579**
Seeking Guidance and Support (6)						--	.615**
Problem Solving (7)							--

* $p < .05$
** $p < .01$

Table 18

Current Problem Correlation Matrix for CRI Avoidance Subscales, General Life Satisfaction and Trauma History

Variable	1	2	3	4	5	6	7
Trauma History (1)	--	- .091	.136	.074	- .005	.040	.231**
GLS (2)		--	- .054	- .093	- .019	.144	- .154
Avoidance (3)			--	.775**	.663**	.435**	.760**
Cognitive Avoidance (4)				--.	.449**	.084	.472**
Acceptance or Resignation (5)					--	- .019	.378**
Seeking Alternative Rewards (6)						--	.109
Emotional Discharge (7)							--

* $p < .05$
** $p < .01$

Table 19

Multiple Regression Analysis

Dependent Variable	Predictors	t	? ?	R^2
General Life Satisfaction	Trauma history	.152	.013	.018
	Current Avoidant Coping	- .098	- .009	.018
	Current Coping Strategy	1.39	.131	.018
Total QOL	Trauma type	2.25*	.186	.061
	Current Coping Strategy	2.09*	.173	.061

* $p < .05$

Table 20

Correlational Matrix for QOLI Subscales and Trauma History

Subscale	1	2	3	4	5	6	7	8	9	10
Trauma (1)	--	- .091	- .081	- .060	- .065	- .123[a]	- .102	- .081	- .074	- .112
GLS (2)		--	417*	.738*	.368**	.579**	.543**	.482**	.347**	.689**
LIV (3)			--	.433*	.219**	.285**	.401**	.255**	.494**	.252**
DAILY (4)				--	.415**	.645**	.513**	.520**	.253**	.595
FAM (5)					--	.264**	.223**	.214*	.167*	.294*
SOC (6)						--	.327**	.431**	.241**	.374
FIN (7)							--	.464**	.333**	.429**
JOB (8)								--	.205*	.421**
SAFETY (9)									--	.255**
HEALTH (10)										--

* $p < .05$
** $p < .01$

Table 21

Past versus Current Coping Styles By Sexual Trauma Groups

Group	Approach (M, SD)	Avoidant (M, SD)	Coping Difference Score	P-value (F/t)
Past Coping				
No Trauma	47.61 (9.50)	-54.20 (6.73)	- 6.58	5.99**
Trauma	40.63 (8.94)	-57.26 (7.28)	- 16.63	
No Trauma	47.61 (9.50)	-54.20 (6.73)	- 6.58	10.05**
Child Trauma	43.68 (9.65)	-57.83 (8.86)	- 14.14	10.05
Adult Trauma	40.97 (7.37)	-56.53 (5.80)	- 15.56	10.05**
Military Trauma	37.75 (7.05)	-58.22 (7.70)	- 20.47	10.05**
Multiple Trauma	40.84 (10.01)	-57.01 (7.42)	- 16.17	10.05**
Current Coping				
No Trauma	49.06 (8.47)	-51.26 (6.49)	- 2.19	.610
Trauma	50.04 (8.96)	-53.06 (6.30)	- 3.02	
No Trauma	49.06 (8.47)	-51.26 (6.49)	- 2.19	1.46
Child Trauma	50.41 (7.76)	-54.25 (6.64)	- 3.83	1.46
Adult Trauma	52.38 (9.27)	-52.26 (6.63)	.118	1.46
Military Trauma	46.20 (7.57)	-53.08 (4.61)	- 6.87	1.46
Multiple Trauma	50.53 (9.46)	-53.08 (4.61)	- 2.54	1.46

Note. Positive coping difference scores reflect Approach coping strategies; negative scores reflect Avoidant coping strategies.

Post hoc testing for mean group differences compares the no sexual trauma group to all other sexual trauma groups.

** $p < .01$

Table 22

A Comparison of Total Mean Coping Responses for Past versus Current Problem

Group	Past (M, SD)	Current (M, SD)	Difference
No Trauma	101.81 (13.27)	100.33 (11.97)	- 1.65
Trauma	97.90 (13.18)	103.11 (12.37)	+ 5.21
Child Trauma	101.52 (17.13)	104.66 (12.60)	+ 3.14
Adult Trauma	97.51 (10.51)	104.64 (12.62)	+ 7.13
Military Trauma	95.97 (11.34)	99.29 (10.85)	+ 3.31
Multiple Trauma	97.86 (13.98)	103.62 (12.90)	+ 2.69

Note. Positive scores reflect increased coping responses for current problem

Table 23

Cognitive versus Behavioral Coping Strategies by Group

Group	Cognitive (M, SD)	Behavioral (M, SD)
Past Coping		
No Trauma	49.66 (6.87)	52.14 (8.15)
Trauma	49.05 (6.85)	48.84 (8.04)
Child Trauma	50.06 (7.78)	51.45 (10.71)
Adult Trauma	49.46 (5.68)	48.05 (7.40)
Military Trauma	48.97 (6.34)	47.00 (6.30)
Multiple Trauma	48.60 (7.45)	49.26 (8.17)
Current Coping		
No Trauma	49.21 (6.97)	51.11 (6.69)
Trauma	49.62 (6.30)	53.48 (7.07)
Child Trauma	51.22 (5.68)	53.43 (7.56)
Adult Trauma	49.92 (6.51)	54.72 (6.91)
Military Trauma	48.01 (5.81)	51.27 (7.08)
Multiple Trauma	49.72 (6.64)	53.89 (7.05)

APPENDIX A

PERSONAL INFORMATION SHEET

TRAUMA FORM

Personal Information Sheet

Study PIN Number: ___ ___ ___ ___.

DEMOGRAPHIC INFORMATION

(1) What is your current address?

STREET _____ .

STREET _____ .

CITY _____ .

STATE _____ .

ZIP _____ .

(2) How long have you lived there?

MONTHS _____ .

YEARS _____ .

(3) How far have you gotten in school?

No School.....00
Elementary.....01, 02, 03, 04, 05, 06, 07, 08
High School.....09, 10, 11, 12
College.....13, 14, 15, 16
Post College.....17, 18, 19, 20

(A) Did you graduate from High School

No 0
Yes .....1 (go to Q. 4)

(B) *If no...* Did you graduate with a G.E.D. (General Equivalency Diploma)?

No 0
Yes 1

(4) What is your marital status?

Never Married.....01
Married.....02
Separated.....03
Divorced.....04
Widowed.....05

(5) What is your date of birth? (__ __ / __ __ / __ __)
mm dd yy

(6) Gender?

Male 0
Female.....1

(7) Ethnicity?

White 1
African American.....2
Asian.....3
Hispanic.....4
American Indian.....5
Other 6

APPENDIX B

SCREENING QUESTIONNAIRE

SCREENING QUESTIONNAIRE

Study PIN Number: ___ ___ ___ ___.

[Read the following definitions to the subject.]

Sexual harassment: Uninvited and unwanted sexual advances, physical contact, verbal comments and/or similar behavior of a sexual nature. Some examples are: demands for sexual favors, jokes, references to body parts, innuendoes, and gestures.

Sexual assault: Any type of sexual conduct including: vaginal, anal, or oral sex, achieved or attempted without the person's consent and with the use of threat or force.

Unwanted sexual attention or talk includes things like: 1)demands or suggestions for sexual favors, unwanted phone calls, being followed or 2) whistles, jokes, looks, gestures, etc.

Unwanted sexual touching includes things like: being patted on the bottom, being rubbed up against, being fondled.

Unwanted sex: Unwanted vaginal sex includes sexual intercourse (penis inserted in vagina) or having items (or fingers) inserted in to the vagina. Unwanted oral sex includes being forced to take a man's penis/ in your mouth or being forced to submit to him performing oral sex on you. Unwanted anal sex includes having a penis or any other object (including fingers) inserted in your anus.

[*Then say,* ***"Now I'm going to ask you a few questions about your experiences with sexual harassment and assault."*** *Then ask the questions below placing checks in the boxes for all items that apply to subject.*]

Event	Civilian				Military		None
	Child (<14)		Adult				
	YES	NO	YES	NO	YES	NO	
1.Unwanted sexual talk/ attention							
2. Unwanted sexual touching							
3. Unwanted vaginal, oral, or anal sex							
4. Other:							

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