Women's Abuse Experiences and Health:
Mediators of the Abuse-Health Relation
and Factors Influencing Healthcare Avoidance

by

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A thesis submitted to the Faculty of Graduate Studies and Research in partial
fulfilment of the requirements for the degree of

Doctor of Philosophy

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Abstract

This survey-based study of 153 women (18-63 years; 102 survivors of child abuse, 51 nonabused) investigated whether participants' experiences of familial childhood emotional, physical and sexual abuse, and other traumatic life experiences were, a) associated with negative physical health outcomes (digestive, cardiovascular, genitourinary and menstrual cycle symptoms; functional effects of symptoms) and treatment seeking (amount of treatment seeking; psychological and physical discomfort during treatment), and b) whether affective psychological distress (anger/irritability, anxiety, depression), cognitive assumptive beliefs and cognitive-behavioural coping strategies mediated abuse-health and abuse-treatment seeking relations. Correlational analyses indicated that women's experiences of childhood abuse and later-life retraumatization were associated with increases in, a) adult physical health symptoms (digestive, cardiovascular, genitourinary and premenstrual symptoms), b) functional effects of symptoms, c) amount of treatment seeking, and d) discomfort during treatment. Subsequent path analyses indicated that abuse-health and abuse-treatment seeking relations were not carried by later-life retraumatization. Instead, the hypothesized mediational model was partially supported. That is, abuse-health and abuse-treatment seeking relations were not mediated by molar cognitive assumptive beliefs nor cognitive-behavioural coping strategies, but rather, were mediated by proximal psychological distress such as anger/irritability, anxious arousal and depression. Implications include the following: a) theoretical knowledge regarding the importance of understanding 'hot' emotional systems (e.g., psychological distress) versus 'cool' cognitive systems (e.g., assumptive beliefs, coping strategies) in discussions of physical health outcomes of survivors of familial childhood abuse and/or other trauma; and b) applied work to develop healthcare interventions/protocols for survivors of abuse and other trauma. Finally, quantitative analyses of the extent to which women avoid healthcare and follow-up thematic analyses of 89 women's (67 survivors, 22 nonabused) specific reasons for healthcare avoidance provided additional insight into the findings from the mediational model.

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Women's Abuse Experiences and Health: Mediators of the Abuse-Health Relation and Factors Influencing Healthcare Avoidance

Child maltreatment is an ongoing social problem, and perhaps a social epidemic.² North American prevalence estimates reveal that child emotional, physical and sexual abuse are common (Finkelhor, Hotaling, Lewis, & Smith, 1990; Hart & Brassard, 1987; Kent & Waller, 1998; Vogeltanz et al., 1999; Wyatt, Burns Loeb, Solis, & Vargas Carmona, 1999), with 20 to 30% of women and 10 to 15% of men reporting having been sexually abused before adulthood (Bagley, 1996; Finkelhor, 1979; Finkelhor et al., 1990; Leserman & Drossman, 1995; Pearse, 1994; Russell, 1986; Wyatt, 1985). Another 10% of adults report having been physically abused in childhood (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993; Sorensen, Stein, Siegel, & Golding, 1987). In addition to retrospective reports by adult survivors, the recent American National Incidence Study (NIS-3) estimated that 217,000 children were sexually abused in 1993 (Sedlak & Broadhurst, 1996), a number that is likely to be conservative given that up to 98% of abuse cases are unreported (Arnold, Rogers, & Cook, 1990; Markow, 1988; Russell, 1986). Further, the vast majority of maltreated children experience more than one form of abuse and/or neglect (Leserman & Drossman, 1995; Ney, Fung, & Wickett, 1994), most often within a context of notable family dysfunction (Bagley, 1996).

In addition to documenting the numbers of individuals affected by child abuse, research has also examined its immediate and long-term psychological,

² Maltreatment is used here as a comprehensive term encompassing all forms of childhood neglect and abuse, ranging from emotional neglect (e.g., failure to meet a child's basic emotional needs) and physical neglect (e.g., failure to provide basic necessities for physical well-being), to emotional abuse (e.g., chronically denigrating), physical abuse (e.g., slapping or striking) and sexual abuse (e.g., molestation).

psychosocial and interpersonal consequences (Berkowitz, 1998). The immediate (e.g., post-traumatic stress disorder; Kendall-Tackett, Meyer Williams, & Finkelhor, 1993) and long-term psychological sequelae of abuse are well documented (e.g., depression; Ackerman, Newton, McPherson, Jones, & Dykman, 1998; Bagley, 1996; Beitchman et al., 1992; Benedict, Paine, Paine, Brandt, & Stallings, 1999; Briere & Runtz, 1988a; Bryer, Nelson, Baker Miller, & Krol, 1987; Calam, Horne, Glasgow, & Cox, 1998). Equally well documented are the psychosocial (e.g., delinquency, suicide attempts, and sexual risk-taking; Chandy, Blum, & Resnick, 1996; Malinosky-Rummell & Hansen, 1993; Spatz Widom & Raskin White, 1997) and behavioural consequences (e.g., enuresis and encopresis; Bachman, Moeller, & Bennett, 1988).

Survivors' maltreatment experiences have also been associated with immediate and long-term physical health concerns. Paediatrics research draws attention to the genital injury and sexually transmitted diseases associated with child sexual abuse (e.g., Socolar, 1996; Thomas & Jamieson, 1995) and the emergency department visits of physically abused children (Berkowitz, 1998; Finkel, 1998; Heger, 1996). Other research comments on the short-term physical health symptoms experienced by adolescent survivors of rape, such as chronic headaches and abdominal pain (e.g., see Berkowitz, 1998; Heger, 1996). However, the long-term effects of childhood victimization on physical health, such as poor self-rated health status and high rates of hospitalization, have only recently been documented (Koss, Koss, & Woodruff, 1991; Salmon & Calderbank, 1996; Sansone, Sansone, & Wiederman, 1996, 1997; Sansone, Wiederman, & Sansone, 1997). Even less is known about the psychological processes that may underlie the long-term effects of

child abuse on survivors' adult physical health. The effects of child abuse on adult health may be psychologically mediated and therefore open to intervention and change. Therefore, the first goal in the current study was to assess possible psychological mediators of this abuse-health relation, including survivors' psychological distress, core assumptive beliefs and coping strategies.

Given the documented psychological, psychosocial and physical health sequelae of child maltreatment, it is not surprising that survivors' abuse experiences also affect patterns of treatment seeking in adulthood. Research documents an association between women's childhood and adulthood victimization and increased use of general healthcare services (Koss et al., 1991; Leserman & Drossman, 1995; Salmon & Calderbank, 1996; Sansone et al., 1996; Sansone, Sansone, et al., 1997; Sansone, Weideman, et al., 1997). Related research indicates that although survivors report poorer health, more hospitalizations and general healthcare use than nonabused women (Golding, Stein, Siegel, Burnam, & Sorenson, 1988; Kimerling & Calhoun, 1994; Koss et al., 1991; Moeller, Bachman, & Moeller, 1993), survivors are likely to avoid gynaecologic treatment despite compromised gynaecologic health (Chapman, 1989; Draijer, 1989; Robohm & Bittenheim, 1996). These studies also testify to the social cost of child abuse. Research indicates that the psychological, psychosocial and physical health effects of abuse, including patterns of treatment seeking, constitute a "major public health problem" (Chu & Dill, 1990, p. 891). In Canada, for example, the annual health-related cost of violence against women, including childhood abuse, is estimated to be \$1,539,650,387 (Day, 1995; see also Kinnon & Hanvey, 1996).

Despite evidence regarding the long-term physical effects of child maltreatment, the treatment seeking patterns of female survivors, and the related healthcare costs, little is known about survivors' experiences of treatment seeking. One established finding is that women's healthcare typically does not include discussion of past abuse and related health concerns (Felitti, 1991; Lechner, Vogel, Garcia-Shelton, Leichter, & Steibel, 1993; Leserman & Drossman, 1995; Moeller, et al., 1993; Springs & Friedrich, 1992). Rather than investigating the healthcare experiences of adult survivors, studies in the 1980s and 1990s investigated issues related to the treatment of abused children (Chadwick, 1998; Dorsey et al., 1996; Dubowitz, 1998; Socolar, 1996; Summit, 1983; Thomas & Jamieson, 1995). Various authors examined the retraumatizing effects of medical examinations for suspected child abuse (Britton, 1998). Others developed protocols for examining children in a noninvasive manner (Gully, Britton, Hansen, Goodwill, & Nope, 1999; Heger, 1996). The focus of such research, however, concerned technological advances in the conduct of physical examinations of abused children (Finkel, 1998; Levitt, 1998).

This research was not followed by studies investigating similar healthcare concerns for adult survivors. Various authors write about the need to improve healthcare providers' capacities to address domestic violence (Bolen, 1993; Burke Draucker, 1993; Eby, Campbell, Sullivan, & Davidson, 1995; Kitzinger, 1990a, 1990b); however, there is little research on the potentially retraumatizing effects of medical examinations for adult survivors of earlier abuse (Kitzinger, 1990a, 1990b). Nor is there much psychological research on the development of protocols for the noninvasive examination of adult survivors, or inquiries into past maltreatment.

Much of the current research suggests that inquiries about abuse should be integrated into medical history-taking (Felitti, 1991; Lechner et al., 1993; Leserman et al., 1996; Leserman et al., 1997; Leserman, Drossman, & Li, 1995; Scarinci, McDonald-Haile, Bradley, & Richter, 1994; Springs & Friedrich, 1992), yet there is little research investigating how such history-taking should best occur. There is even less research concerning survivors' treatment seeking more generally. Therefore, the second goal in the present study was to investigate women's treatment seeking in terms of both the psychological processes mediating the child abuse-treatment seeking relation and women's reasons for healthcare avoidance.

The Child Abuse-Physical Health Relation

Felitti et al.'s (1998) research recently showed that exposure to multiple forms of child abuse was related to physical disease in adulthood. Felitti et al.'s (1998) large-sample ($N = 9,508$) postal survey revealed that the number of categories of adverse childhood experiences, including emotional, physical and sexual abuse, violence within the home and/or the degree of overall household dysfunction in childhood, showed a positive linear relation to the presence of later disease in adulthood, including heart disease and cancer. In short, multiple exposures to multiple categories of abuse were associated with multiple health risk factors for disease in adulthood. Some of the leading causes of death in North America (e.g., heart disease and cancer) are related to lifestyle factors, with such factors occasionally referred to as the 'actual' cause of death (Felitti et al., 1998; McGinnis & Foege, 1993). Felitti et al. (1998) conclude that, because abuse and other adverse childhood experiences contribute to risky lifestyle choices and health behaviours,

such “childhood exposures should be recognized as the basic causes of morbidity and mortality in adult life” (p. 246).

Related research also documents relations between child sexual abuse (Eby et al., 1995), child physical abuse (Leserman & Drossman, 1995) and long-term physical health sequelae. This research reveals that child emotional abuse also relates to poor physical health outcomes, although it may be more commonly related to long-term psychological sequelae and greater use of counselling services (Moeller et al., 1993). Studies comparing clinic patients with histories of child sexual abuse to matched controls report more general somatic symptoms among survivors (e.g., headaches, morbid obesity, and genitourinary, gastrointestinal and psychosomatic symptoms) (Felitti, 1991; Leserman & Drossman, 1995; Rimsza, Berg, & Locke, 1988). Surveys of university students and medical populations have also found relations between historical abuse and somatic complaints ranging from gastrointestinal symptoms and pelvic pain to bladder infections (Briere & Runtz, 1988b; Lechner et al., 1993; Leserman & Drossman, 1995; Springs & Friedrich, 1992). In addition to experiencing high rates of physical health symptoms, survivors may subsequently make more frequent use of medical services and experience more hospitalisations than nonabused individuals (Felitti, 1991; Koss, Woodroff, & Koss, 1990; Leserman & Drossman, 1995; Rimsza et al., 1988).

Similar relations between child abuse and adult health have also been observed within samples of the general population. In Golding's (1994) survey of randomly selected general population participants ($N = 1,610$), and relative to women who had never been assaulted, women who experienced childhood or adult

assault reported poorer general health status, more chronic disease and somatic symptoms. The finding that past assault was associated with a wide variety of health symptoms indicates that “associations of sexual assault with physical health problems are more general” than previously believed (Golding, 1994, p. 135).

However, most studies investigating associations between past abuse and later-life physical health involve patients with chronic gynaecologic or gastrointestinal illness (e.g., chronic pelvic pain, irritable bowel syndrome) who were sampled from referral clinic populations rather than general healthcare populations (e.g., family practice patients). After sampling from specific clinic populations, such studies attempt to determine if persons with abuse histories have more severe symptoms (e.g., gastrointestinal distress) than nonabused patients. Such research also attempts to determine if patients with functional disorders (disorders that appear to have no structural, infectious or metabolic basis) have more symptoms than patients with organic disease (disorders with identifiable structural, infectious or metabolic basis). Findings indicate that patients with functional pain, as opposed to organic disease, are more likely to have experienced sexual or physical abuse (Haber & Roos, 1985; Leserman & Drossman, 1995; Rapkin, Kames, Darke, Stamper, & Naliboff, 1990; Reiter, Shakerin, Gambone, & Milburn, 1991; Scarinci et al., 1994; Talley, Fett, Zinsmeister, & Milton, 1994; Walker et al., 1988; Walker, Katon, Roy-Byrne, Jemelka, & Russo, 1993).

Within these findings, gastrointestinal disorders are discussed as common long-term physical concerns that may relate to abuse in childhood (Leserman & Drossman, 1995; Scarinci et al., 1994; Talley et al., 1994). Walker, Gelfand,

Gelfand, Koss, and Katon (1995) found that almost 50% of their sample of patients with inflammatory bowel disease and irritable bowel syndrome (IBS) reported child sexual abuse histories, in comparison to general population prevalence estimates of 20 to 30% of women and 10 to 15% of men (Finkelhor et al., 1990; Hart & Brassard, 1987; Leserman & Drossman, 1995; Pearse, 1994; Resnick et al., 1993; Sorensen, Stein, Siegel, Golding, & Burman, 1987). In another study, one-third of abuse survivors reported gastrointestinal symptoms in contrast to 10% of a nonabused comparison group (Drossman, 1992). Indeed, studies in the 1980s and 1990s frequently reported a link between sexual abuse and gastrointestinal disorders (Drossman, 1992; Drossman et al., 1990; Drossman, Talley, Leserman, Olden, & Barreiro, 1995; Leserman et al., 1996; Scarinci et al., 1994; Talley et al., 1994; Walker et al., 1993; Walker et al., 1995; Whitehead, Bosmajian, Zonderman, Costa, & Schuster, 1985). As noted by Berkowitz (1998), such an association may not be surprising given the effects of stress on gastric secretion and gastrointestinal motility (see also, Wolf, 1997).

However, this line of research is not without limitations. Participants drawn from gastroenterology clinics logically endorse questionnaire items related to gastrointestinal distress; therefore, when asked to concurrently report on abuse-related items, a confirmatory bias toward endorsing items may be established (e.g., see Bishop, 1994). Recent studies partially address this limitation by comparing abuse-reporting across different groups of differentially diagnosed gastroenterology patients. Each of these groups is likely to endorse similar numbers of gastrointestinal distress items; therefore, differences in their concurrent abuse

reporting are unlikely to be entirely due to a confirmatory response bias.

For example, the gastrointestinal disturbances frequently studied in relation to abuse are those classified as functional (Berkowitz, 1998; see also Drossman, McKee, & Sandler, 1988; Lydiard, Fossey, Marsh, & Ballenger, 1993), such as irritable bowel syndrome (IBS), non-ulcer dyspepsia and chronic abdominal pain. Although early work in this area was limited to studies of clinic rather than general populations, these studies revealed increased self-reported abuse in people suffering from functional gastrointestinal disorders. One such study took place in a gastroenterology clinic where self-report data were gathered regarding women's healthcare use, current symptomatology and past abuse (Drossman et al., 1990). As a group, 44% of the female gastroenterology patients reported past abuse. However, 53% of the patients with functional complaints reported past sexual abuse, in comparison to 37% of the patients with organic diagnoses.

Felitti (1991) reported similar findings, as did Walker et al. (1993) in an interview-based study. Rather than comparing two broad groups of gastrointestinal patients (i.e., those reporting functional vs. organic complaints), Walker et al. (1993) compared a group of patients experiencing a particular functional complaint (IBS) to a group experiencing a particular organic complaint (inflammatory bowel disease). In this study, 54% of the IBS patients reported abuse experiences in contrast to 5% of the inflammatory bowel disease group. Thus, there appear to be different abuse rates reported among different groups of gastrointestinal patients (e.g., groups otherwise similar in their positive endorsing of multiple gastrointestinal distress items). Therefore, the high reporting of abuse experiences by functional

gastrointestinal disorder patients may not be entirely attributed to a positive response bias guided by responding to multiple physical health symptoms.

Research continues to contribute to the literature on the medical sequelae of sexual and physical abuse, but does so with increasingly refined measures of abuse history. Leserman, Drossman and Li (1995) presented the first standardized screening instrument for the identification of both sexual and physical abuse histories among adult sufferers of gastrointestinal disorders. While earlier work aggregated all forms of abuse (e.g., Felitti et al., 1998), recent research examined the effects of different abuse types. Leserman et al. (1996) demonstrated that historical sexual abuse was associated with more functional disability, pain, non-gastrointestinal symptoms, bed disability days, lifetime surgeries and more psychological distress among adult female patients in a gastroenterology clinic. Further, more serious adult health outcomes resulted from more severe child sexual abuse (e.g., penetrative sex rather than sexual touching). Child physical abuse was also associated with worse outcomes on adult health indicators, with life-threatening child abuse having more detrimental effects on adult health than less severe physical abuse (Leserman et al., 1996).

More recently, Leserman and her colleagues (1997) identified the dimensions of each child abuse type that are most strongly associated with long-term physical health. Dealing with gastroenterology samples, Leserman et al. (1997) note that serious injury during child abuse, victimization by multiple perpetrators, and being raped accounted for 24% of the variance in the current health status of women with histories of sexual abuse. For women with histories of physical abuse, rape, life

threat and multiple life-threatening incidents accounted for 39% of the variance in overall health (Leserman et al., 1997).

Researchers such as Leserman, Drossman and Hu (1998) also sought to identify the specific medical symptoms most likely to be affected by histories of child sexual and physical abuse. Focusing on a specific set of medical symptoms, these authors examined how abuse, medical symptoms and functional disability affected healthcare visits in a gastroenterology sample. Their results showed that women with abuse histories reported more somatic symptoms related to panic (e.g., shortness of breath, heart palpitations) and more depressive symptoms (e.g., sleep difficulties, loss of appetite). These women also reported more musculoskeletal disorders (e.g., muscle aches) and genitourinary disorders (e.g., pelvic pain, painful intercourse). Overall, the severity of abuse history, somatic symptoms and functional disability predicted 30% of the variance in healthcare visits in the following year.

Finally, the above clinic-based findings appear to be supported by the few population-based studies available. For example, Talley et al. (1994) questioned a random sample of 919 persons living in the American mid-west and found that 26% reported some form of past child or adult abuse. In line with the findings of clinic-based studies, Talley et al. (1994) found a clear association between past abuse (particularly sexual abuse) and current functional gastrointestinal symptoms. Therefore, despite limitations, the current literature reports a link between childhood maltreatment and gastrointestinal illness.

As noted earlier, high rates of sexual and/or physical abuse have also been

reported among patients with gynaecologic disorders such as chronic pelvic pain (Berkowitz, 1998; Leserman & Drossman, 1995; Scarinci et al., 1994; Talley et al., 1994), premenstrual difficulties (Friedman, Hurt, Clarkin, Corn, & Aronoff, 1982; Miccio-Fonseca, Jones, & Futterman, 1990; Paddison et al., 1990) and dysmenorrhoea and menstrual irregularities (Walker et al., 1988). Chronic pelvic pain complaints relate to 5% to 25% of all diagnostic laparoscopic procedures (Levitan, Eibschitz, DeVries, Hakim, & Sharf, 1985; Reiter et al., 1991). Following laparoscopic examination, chronic pelvic pain is the indication for 10% to 19% of hysterectomies (Berkowitz, 1998). In 1991 in the U.S., for example, chronic pelvic pain complaints resulted in 78,000 hysterectomies (Reiter et al., 1991). Berkowitz (1998) notes that the systemic costs of chronic pelvic pain are also high in terms of time lost from work and lower earning potential (see also, Harrop Griffiths et al., 1988). Therefore, women's past abuse contributes not only to their experience of gynaecologic disturbances, but also to considerable exposure to later diagnostic and operative procedures and time lost from work (Berkowitz, 1998; Harrop Griffiths et al., 1988).

The association between childhood sexual abuse and chronic pelvic pain in adulthood has been noted since the 1950s (Fry, Crisp, Beard, & McGuigan, 1993; Haber & Roos, 1985; Walker, Katon, Hansom, et al., 1992; Walker, Katon, Neraas, et al., 1992). In one study, 64% of women with chronic pelvic pain reported sexual abuse in childhood, as compared to 23% of a comparison group (Walker et al., 1988). However, as with the research on the link between abuse and gastrointestinal distress, this line of research is not without controversy. Various

authors have suggested that women who report chronic pelvic pain may be more likely to over-endorse questionnaire items regarding abuse and/or exaggerate reports of sexual trauma (Reiter et al., 1991). Further, several studies have not shown a clear increased incidence of past abuse in adult sufferers of chronic pelvic pain when compared to all women in a gynaecology practice (e.g., Fry et al., 1993; Reiter et al., 1991; see also, Berkowitz, 1998). These discrepancies may be accounted for by methodological limitations such as the lack of control groups, inadequate questionnaires and/or interview protocols, small samples and variable assessments of organic pathology (see Berkowitz, 1998; Reiter & Gambone, 1990). These studies also use variable definitions of 'chronic,' with chronic pelvic pain diagnosed at three months of pain by some investigators (e.g., Harrop-Griffiths et al., 1988; Walker et al., 1988) and at six months by others (e.g., Reiter et al., 1991). Despite such limitations, the most frequently replicated findings indicate that chronic pelvic pain is consistently associated with women's histories of both physical and sexual abuse.

More generally, the abuse-health relation has been discussed in conjunction with research on stress and health (Friedman & Schnurr, 1995; Leserman & Drossman, 1995). Life stressors are known to impact on variables associated with health status (Friedman & Schnurr, 1995). Sexual and physical abuse constitute extreme stressors, and have also been associated with a wide range of negative health outcomes (Leserman & Drossman, 1995; see also, Cohen, 1996; Folkman et al., 1986; Kennedy et al., 1988; Kessler et al., 1985; Kiecolt-Glaser & Glaser, 1992). Irrespective of the proposed underlying explanatory mechanisms and the particular

samples studied (i.e., general, family practice, or specific referral-based populations), child maltreatment is consistently associated with adverse adult health outcomes and increased exposure to the healthcare system (Koss et al., 1991; Salmon & Calderbank, 1996; Sansone et al., 1996, Sansone, Sansone, et al., 1997; Sansone, Wiederman, et al., 1997). Therefore, although the relation between child abuse and adult health is correlational, and although there are likely many women for whom earlier abuse does not contribute to poor adult health, there is ample evidence that women's experiences of child physical and/or sexual abuse, and possibly other forms of child maltreatment (e.g., emotional abuse), are associated with physical health sequelae. Further, several specific medical conditions appear to be consistently related to abuse, including functional gastrointestinal disorders such as IBS and gynaecologic complaints such as chronic pelvic pain.

Thus, the existent research evidences an abuse-health relation; however, several general critiques of this research can be summarized as follows. For example, such research typically samples from clinic populations. Findings from populations using medical services to a greater degree than the general population may not be representative of survivors more generally (Berkowitz, 1998; Felitti, 1991). Current research tells us about the prevalence of abuse in, for example, diagnosed IBS patients; however, this finding does not necessarily work in reverse to tell us about the prevalence of gastrointestinal symptoms in adult abuse survivors in general. Further, it is not known whether associations between abuse and physical health symptoms are unique to gastrointestinal or gynaecologic patients (i.e., those with specific syndrome diagnoses) or whether this association is "part of a more

generalized association between abuse history and somatization and reporting of symptoms” (Drossman et al., 1995, p. 782).

Another feature of the literature investigating the health sequelae of abuse is that paediatric medical researchers focus primarily on child sexual abuse and immediate genital injuries (Heger, 1996; Roberts & Moran, 1995; Socolar, 1996), childhood venereal diseases (Socolar, 1996; Thomas & Jamieson, 1995), and immediate behavioural correlates such as encopresis (Bachman et al., 1988), enuresis and sleep disturbance (Berkowitz, 1998). Studies of the long-term (rather than immediate) after-effects of abuse typically evaluate long-term psychological and psychosexual sequelae rather than long-term physical consequences (Berkowitz, 1998). Only recently has attention has been paid to the physical concomitants of child abuse types, the association of abuse with various physical conditions, and the effects of abuse on adult healthcare seeking (e.g., Drossman et al., 1995).

Similarly, the research on the physical health consequences of abuse for adult survivors tends to focus on sexual abuse, although many adult research participants reporting sexual abuse also report high rates of past and current physical abuse. On occasion, this overlap leads to the aggregation of survivors’ sexual and physical abuse experiences without mentioning other forms of maltreatment such as emotional abuse and various forms of neglect. It is conceivable that the mechanisms proposed to account for sexual and physical abuse survivors’ frequent use of general healthcare services (e.g., beyond immediate physical need) may play a role for survivors of childhood emotional abuse or neglect more generally (e.g., Berkowitz, 1998).

Further, it has been suggested that the frequent division of abuse-related concerns into physical versus psychological may represent an artificial dichotomization given the intimate relation between body and mind (Berkowitz, 1998; Wolf, 1997). Several studies indicate that this distinction may not be clinically useful given the overlap between the medical and psychological disturbances associated with abuse (Berkowitz, 1998). It has also been suggested that psychological and somatic factors do not act independently of one another (Berkowitz, 1998; Briere, 1992) to the extent that Berkowitz (1998) asks whether all medical assessments should also include a psychological assessment. However, much of the research on the long-term sequelae of abuse still tends to examine psychological rather than physical consequences, and has only infrequently examined the two together. As noted earlier, when physical health consequences are examined, this research is typically limited to specific medical conditions (e.g., gastrointestinal or gynaecologic conditions) rather than symptom reporting by more general populations.

Another question is whether certain medical outcomes relate not so much to the abuse itself, but rather to health-risk behaviours which themselves may be consequences of abuse (Berkowitz, 1998). Health-risk behaviours are associated with survivors' abuse experiences and adult medical concerns (Berkowitz, 1998; Springs & Friedrich, 1992). Authors such as Briere (1992) and Berkowitz (1998) suggest that health-risk behaviours may constitute the mechanism by which abuse leads to medical sequelae. Alternatively, the abuse-health relation may occur through the "transformation of psychological trauma to physical dysfunction"

(Berkowitz, 1998, p. 545), from the effects of chronic stress on the immune system or autonomic arousal levels (Berkowitz, 1998; Friedman & Schurr, 1995), or as an indirect result of treatment avoidance.

Overall, the various mechanisms proposed to account for the observed relations between abuse and physical health symptoms include physiological theories which postulate that traumatic stimulation in the abdominal/pelvic area in childhood may increase survivors' sensitivity to abdominal or pelvic pain in adulthood (Leserman & Drossman, 1995; Mayer & Gebhart, 1994). Psychodynamic theories suggest that the shame associated with abuse may be "expiated through physical pain or suffering" in adulthood (Leserman & Drossman, 1995, p. 72) and psychiatric perspectives postulate the "communicating of psychological distress via bodily symptoms" (Leserman & Drossman, 1995, p. 73). Cognitive views, on the other hand, propose that an abuse-elicited hypervigilance to pain leads to increased pain reporting (Leserman & Drossman, 1995; Scarinci et al., 1994; see also Weiss & Wagner, 1998), whereas behavioural theories suggest that attention paid to illness behaviours in childhood may reinforce illness behaviours in adulthood (Drossman, 1991; Leserman & Drossman, 1995; Lowman, Drossman, Cramer, & McKee, 1987). Given that abuse survivors experienced caregiver-induced pain rather than caring attention to expressions of pain (Bolen, 1993), it is equally reasonable to posit that survivors were not reinforced for illness behaviour. Beyond such proposals, however, the literature does not yet answer questions regarding the underlying mechanisms relating survivors' past abuse to current physical concerns.

Potential Mediators of the Child Abuse-Adult Physical Health Relation

As noted above, childhood abuse is associated with adult physical health sequelae such as chronic pelvic pain; however, survivors with chronic pelvic pain frequently experience concurrent psychological and psychosocial difficulties in adulthood. These include greater prevalence of life-time psychological disorders such as depression, psychosocial concerns such as substance abuse, adult sexual dysfunction (Gross, Doerr, Caldirola, Guzinski, & Ripley, 1980; Harrop-Griffiths et al., 1988; Schei, 1990; Walker et al., 1988) and the use of dissociative processes such as derealization and depersonalization (e.g., Walker, Katon, Neraas, et al., 1992). As with dissociation, somatization also relates to prior child abuse (Berkowitz, 1998; Briere & Runtz, 1988a, 1988b; Morrison, 1989) and may be attributable to an ongoing hypervigilance toward bodily processes (Briere & Runtz, 1988a, 1988b). Somatization following childhood abuse typically involves the gastrointestinal tract or pelvic area (Briere & Runtz, 1988a, 1988b) and frequently co-occurs with chronic pelvic pain to the extent that some researchers postulate that chronic pelvic pain may itself be a symptom of somatization (Berkowitz, 1998). Thus, research on the psychological and psychosocial sequelae of abuse suggests that psychological processes may underlie the child abuse-adult physical health relation.

Ample evidence documents both the psychological and psychosocial sequelae of abuse. For example, surveys of both community and clinical samples reveal that child abuse has multiple psychological sequelae (Dansak, 1998; Bagley, 1996). A prospective study of 144 children examined for suspected abuse noted that two-thirds continued to show indicators of emotional distress at a two-year

follow-up (Calam et al., 1998). Further, Kendall-Tackett et al. (1993) reported that 53% of sexually abused children suffer from post-traumatic stress disorder (PTSD), with those who experienced both physical and sexual abuse (Ackerman et al., 1998) and multiple abusive episodes (Briggs & Joyce, 1997) being at highest risk for PTSD.

The psychological after-effects of child abuse are equally diverse among adult survivors for whom child sexual abuse is associated with negative self-esteem (e.g., Campbell, 1989), depression (Bernstein, 1979; Drossman, 1992; Felitti, 1991; Gelinas, 1983), anxiety disorders (Bachman et al., 1988), somatization (Briere & Runtz, 1988; Morrison, 1989) and diagnoses of dissociative identity disorder and borderline personality disorder (Lazar, 1997). Briere and Runtz (1988a) noted such long-term psychological effects of child sexual abuse in a sample of 278 university-aged women. The 15% who reported child abuse reported higher levels of acute and chronic dissociation, somatization, anxiety and depression than did nonabused women, findings congruent with work done in other community and nonclinical samples (e.g., Arnstein, 1995; Sedney & Brooks, 1984; regarding dissociation and somatization, see also Escobar, Canino, Rubio-Stipec, & Bravo, 1992; Oxman, Rosenberg, Schnurr, & Tucker, 1985; Saxe et al., 1994).

Further, contemporaneous work notes high rates of prior abuse among adult psychiatric inpatients (Bryer et al., 1987) for whom childhood abuse has been associated with increased suicidality, longer psychiatric hospitalization, earlier age at first admission (Read, 1998) and high rates of dissociation (Chu & Dill, 1990). Inpatient survivors' dissociative symptoms have been found to co-occur with

symptoms of somatization (Pribor, Yutzy, Dean, & Wetzel, 1993; Saxe et al., 1994; Solomon & Mikulincer, 1987; Morrison, 1989) and, relative to individuals with other affective disorders, psychiatric populations with somatization experienced more child abuse (Morrison, 1989). Finally, as with child survivors, PTSD has also been observed among adult survivors (e.g., Ackerman et al., 1998; Bremner & Narayan, 1998; Drossman, 1992; Herman, 1992; Schaaf & McCanne, 1998), with rates of lifetime PTSD ranging from 69% to 86% (Rodriguez, Ryan, Rowan, & Foy, 1996; Rowan, Foy, Rodriguez, & Ryan, 1994). As with many other psychological sequelae, such post-traumatic stress also co-occurs with somatic symptoms (McFarlane, Atchison, Rafalowicz, & Papay, 1994; Shalev, Bleich, & Ursano, 1990).

In contrast, research also evidences possible psychological buffers against the deleterious long-term health effects of abuse. Such buffers include dispositional optimism (e.g., see Scheier & Carver, 1985), with more optimistic persons reporting more physical wellbeing (Scheier & Carver, 1987) than persons who score high on measures of negative affectivity (Watson & Pennebaker, 1989). Variables related to optimism such as assumptive beliefs in the benevolence of the world (e.g., Janoff-Bulman, 1992), psychological hardiness (Kobasa, 1979) and resilience (Milling Kinard, 1998) may also play a role. Such research investigates competent functioning despite acute and/or chronic life stressors and recovery from trauma such as childhood abuse (Milling Kinard, 1998; Rutter, 1993; Smith & Prior, 1995); however, studies of psychological resilience in maltreated individuals are few in number and there is little consensus regarding the operationalization of the term 'resilience' (Cicchetti, Rogosch, Lynch, & Holt, 1993; Herrenkohl, Herrenkohl, &

Egolf, 1994; Milling Kinard, 1998; Spaccarelli & Kim, 1995). Researchers have reconceptualized psychological resilience as the combination of competence and adaptive behaviour rather than the absence of post-abuse psychopathology *per se* (e.g., Grizenko & Fisher, 1992; Luthar & Zigler, 1991). Other researchers define children who have adapted to adversity as behaviourally competent 'survivors' rather than psychologically 'resilient' "because [such children's] experiences of stress and adversity have not been without consequences" (Milling Kinard, 1998, p. 670). Further, early life resilience defined according to external measures of functioning does not necessarily signify long-term psychological health, particularly "with regard to internalizing problems like depression" (p. 677) or low self-esteem (Milling Kinard, 1998; see also Luthar & Zigler, 1991).

Recent work by Bell and Belicki (1998) supports this notion. In a sample of 109 Canadian community-based adults, participants reporting a history of child abuse (sexual, physical and/or emotional) did not differ from nonabused participants on objective measures of life circumstances (e.g., income, employment status and quality of housing). However, survivors reported less subjective wellbeing, as indicated by higher levels of depression and stress and lower levels of physical fitness and healthcare behaviour. Research by Chambers and Belicki (1998) further supported the finding that resilience may relate to measures of observable social-behavioural functioning rather than psychological wellbeing. In short, resilience to trauma cannot be simply equated with long-term psychological wellbeing. As Chambers and Belicki (1998) note, "resilience is better described as social-behavioural competency;" however, "such competence can conceal emotional pain"

(p. 753).

Psychosocial, psychosexual and related behavioural concerns are also associated with child abuse and, like the aforementioned psychological sequelae, may vary across abuse types. Psychosocial concerns include increased risk for eating disorders (Hall, Tice, Beresford, Wooley, & Hall, 1989; Ono et al., 1996), substance abuse (e.g., Miller, Downs, & Gondoli, 1987; Rosenhow, Corbett, & Devine, 1988; Spatz Widom & Raskin White, 1997; Walker et al., 1988), self-injurious behaviour and suicide attempts (e.g., Felitti et al., 1998; Malinosky-Rummell & Hansen, 1993; Springs & Friedrich, 1992; Wiederman, Sansone, & Sansone, 1999), violence and/or delinquency (e.g., Campbell, 1989; Malinosky-Rummell & Hansen, 1993; Spatz Widom & Raskin White, 1997), and increased risk of revictimization in adulthood (Benedict et al., 1999; Dansak, 1998). In regard to psychosexual concerns, child abuse, particularly sexual abuse, has been associated with sexual dysfunction (Walker et al., 1988), unsafe sexual practices with multiple partners (e.g., Wingood & DiClemente, 1997; Zierler et al., 1991), promiscuity (Herman, 1981; Meiselman, 1994), prostitution (Nakashima & Zakus, 1977; Spatz Widom & Kuhns, 1996) and adolescent pregnancy (Herman, 1981). Interpersonal relationships more generally may be problematic for abuse survivors, particularly in regard to interpersonal issues involving control, anger and trust (Drossman, 1992).

In addition to these psychosocial and psychosexual correlates of abuse, related health risk behaviours also play a role in survivors' adult health status. Walker and Katon (1996) note that the effects of abuse on health involve two pathways. First, the association may be accounted for by direct effects of abuse

including injuries resulting from physical violence or infections incurred during sexual abuse and more latent effects including the gradual decline in fertility following chronic sexually transmitted disease (Walker & Katon, 1996). Second, child abuse may have indirect effects on later medical morbidity mediated by the psychosocial effects of variables such as lowered self-esteem or depression that result in the development of high-risk health behaviours (e.g., substance abuse, over- or under-eating and unsafe sexual practices) (Walker & Katon, 1996). Whether by direct or indirect routes, survivors' experiences of childhood abuse are associated with increased health risk behaviours in adulthood. Springs and Friedrich (1992) noted that over 22% of a sample of 511 female patients at a rural family practice clinic reported child sexual abuse and, relative to the nonabused women, survivors had more medical problems and reported higher health risk behaviours, including smoking, drinking and more sexual partners. More severe past abuse was correlated with both more severe medical problems and higher rates of health risk behaviours.

Felitti et al.'s (1998) study also revealed that health risk behaviours in adulthood related to the degree and breadth of exposure to child abuse. Compared to persons who had no experience of childhood emotional, physical or sexual abuse, or violence within the home, those who had experienced four or more of these categories of child maltreatment were four to twelve times more likely to report adult alcoholism, drug abuse, depression and suicide attempts, and a two to four-fold increase in smoking and poor self-rated health. Survivors also reported more lifetime sexual partners and more sexually transmitted disease. Comparable

findings were observed in Spatz Widom and Kuhns' (1996) prospective longitudinal study investigating adult survivors' health risk behaviours. Within their sample of 676 abuse and/or neglect survivors and 520 control participants, the authors found that childhood neglect or sexual abuse predicted adult engagement in prostitution. In addition to the health risks associated with having multiple sexual partners (e.g., sexually transmitted disease), the health risks of substance abuse must also be taken into account in the context of prostitution. For example, in Bagley and Young's (1987) study of sex trade workers, one reason listed for entering prostitution was the need to support a substance abuse habit (see also, Zieler et al., 1991). Sex trade workers also report using drugs to endure their ongoing interactions with clients (C. Kristiansen, personal communication, March 15, 2000). Therefore, both increased risk for prostitution and concurrent substance abuse may also be health-risk factors for survivors.

Research indicates that these psychosocial, psychosexual and related behavioural concerns vary not only according to abuse type but also as a function of gender. Chandy et al. (1996) examined gender differences in the health risk behaviours reported by 370 male and 2,681 female adolescent abuse survivors. Female survivors reported more internalizing (e.g., suicidal ideation) and health risk behaviours (e.g., disordered eating) whereas male survivors reported more externalizing (e.g., delinquency) and health risk behaviours (e.g., unprotected sex, substance abuse). Chandy et al. (1996) are representative of researchers who note the importance of assessing abuse type (e.g., sexual and/or physical), characteristics of the abuse (e.g., age at onset, frequency, source and duration) and

survivors' gender. However, even research that more broadly defines abuse consistently observes relations between child abuse and detriments to adult psychological and psychosocial health (Malinosky-Rummell & Hansen, 1993).

Finally, just as psychological variables such as optimism and resilience may buffer individuals against the deleterious long-term effects of abuse, so too may psychosocial variables. Perceived social support (Burke Draucker, 1997; Springs & Friedrich, 1992) and coping strategies, such as seeking support and/or talking about abuse (e.g., Perrott, Morris, Martin, & Romans, 1988), are candidates in this regard. Like psychological buffers, however, the possible effects of psychosocial buffers do not negate the broader research findings regarding the relation between abuse and long-term negative psychological and psychosocial outcomes. In sum, research documents not only a relation between child abuse and adult physical health (e.g., Friedman & Schnurr, 1995; McFarlane et al., 1994; Wagner, Wolfe, Rotnitsky, Proctor, & Erickson, 2000; Zoellner, Goodwin, & Foa, 2000), it also documents a link between women's experiences of childhood abuse and deleterious psychological, psychosocial and behavioural outcomes (e.g., Briere & Runtz, 1988b; Calam et al., 1998; Lee, Vaillant, Torrey, & Elder, 1995; Roszell, McFall, & Malas, 1991). Further, these long-term psychological and psychosocial sequelae frequently co-occur with survivors' adult physical health concerns (Berkowitz, 1998; Briere & Runtz, 1988a, 1988b; McFarlane et al., 1994; Shalev et al., 1990). This research suggests that both the type of abuse (emotional, physical, sexual) and/or other trauma, in addition to psychological, psychosocial and behavioural processes, may underlie the child abuse-adult physical health relation (e.g., Coffey, Leitenberg, Henning, Turner, &

Bennett, 1996; Kimerling, Clum, & Wolfe, 2000). The following sections discuss the types of child abuse and other trauma that were considered as predictor variables in the current study's proposed mediational model of the abuse-health relation. The proposed psychological mediators – including affective mediators such as psychological distress, cognitive mediators such as assumptive beliefs, and cognitive-behavioural mediators such as coping strategies – between the predictors (abuse, other trauma) and the physical health outcomes are then discussed.

Abuse types and other trauma. Characteristics of the abuse experience itself may account for some of the variability in long-term physical health outcomes (Coffey et al., 1996). Research has shown that more frequent sexual abuse, experience of multiple abuse types, greater force perpetrated during the abuse, and close relationship of the perpetrator to the survivor are associated with poorer long-term health in survivors (e.g., Ackerman et al., 1998; Briggs & Joyce, 1997; Browne & Finkelhor, 1986; Rowan & Foy, 1993). Recent research (e.g., Schaaf & McCanne, 1998) also notes the importance of separating rather than aggregating experiences across different types of abuse.

Therefore, the current study hypothesized that three types of child maltreatment (emotional, physical and sexual abuse) would have effects on long-term physical health and, given research indicating the particular impact of abuse perpetrated by close family members (e.g., Bagley, 1991; Browne & Finkelhor, 1986; Finkelhor et al., 1990; Melchert, 2000; Russell, 1983), the current study investigated the influence of childhood familial emotional abuse (e.g., being criticized, belittled), physical abuse (e.g., being slapped, struck) and sexual abuse (e.g., sexual kissing,

touching, or penetrative sex). In addition to investigating the impact of three types of familial childhood abuse, the current study considered the frequency of each abuse type, and, for physical and sexual abuse, the degree of force perpetrated during the abuse.

Given the observed links between women's abuse experiences and later-life retraumatization (e.g., Beitchman et al., 1992), it was hypothesized that other life trauma (e.g., retraumatization) may also influence women's health status. Therefore, in addition to assessing the possible influence of other trauma on physical health outcomes, other trauma was also assessed as a possible mediator of the abuse-health relation. Given that later-life retraumatization follows temporally from early-life abuse, it was important to ascertain whether the abuse-health relation was mediated by other trauma.

Affective mediators. In addition to the possible mediation of the abuse-health relation by women's experiences of later-life retraumatization, the current study investigated the possible mediation by psychological distress. Research evidencing links between trauma and physical health (e.g., Beckham et al., 1997; Davidson, Hughes, Blazer, & George, 1991; Friedman & Schnurr, 1995; Golding, Stein, Siegel, Burnam, & Sorensen, 1988; Kimerling & Calhoun, 1994; Koss, Woodruff, & Koss, 1990; Sutker, Allain, & Johnson, 1993; Sutker, Uddo, Brailey, Allain, & Errera, 1994) suggests that it may be the psychological sequelae associated with trauma (e.g., post-traumatic stress; Briere et al., 1997; Briere & Runtz, 1986, 1988b; Briere & Zaidi, 1989; Cameron, 1994; Finkelhor & Browne, 1985; Greenwald & Leitenberg, 1990; Herman, 1992; Lee, Vaillant, Torrey, & Elder,

1995; Lindberg & Distad, 1985; Melchert, 2000; Rodriguez et al., 1996; Roszell, McFall, & Malas, 1991; Rowan & Foy, 1993; Rowen et al., 1994; Whitfield, 1998; Wolfe, Gentile, & Wolfe, 1989), beyond the trauma itself, that impacts on physical health (e.g., Wagner et al., 2000; Zoellner, Goodwin, & Foa, 2000). Support for this hypothesis is found in research evidencing the co-occurrence of psychological aftereffects such as PTSD with physical symptoms ranging from gastrointestinal symptoms (e.g., Litz, Keane, Fisher, Marx, & Monaco, 1992; Shalev, Bleich, & Ursano, 1990), to chronic pain (e.g., McFarlane et al., 1994; Resnick et al., 1993; Shalev et al., 1990), to cardiovascular concerns (e.g., Litz et al., 1992). This research suggests that it may be stressor response (e.g., psychological distress following trauma) in addition to stressor exposure (e.g., abuse and/or other trauma) that contributes to physical health outcomes (e.g., Wagner et al., 2000).

Few studies have directly assessed the relations between abuse or other trauma, psychological sequelae and physical health outcomes (Zoellner et al., 2000). Cohen and Williamson (1991) expanded research detailing the association between PTSD and physical symptoms by investigating factors that might underlie this relation. Cohen and Williamson's (1991) findings suggested that extreme stress (e.g., traumatic life events) increases risk susceptibility to infectious disease via trauma-related psychological distress such as anxiety and depression (Cohen & Williamson, 1991; see also, Cohen, Evans, Stokols, & Krantz, 1986).

Related research (i.e., non-abuse specific or trauma specific) also evidences a relation between anxiety and depression and poor physical health (e.g., Jenkins, 1985; Jorgensen, Frankowski, & Carey, 1999). In research with U.S. samples, it is

estimated that individuals reporting high levels of anxiety and depression in conjunction with physical health ailments may incur healthcare costs up to nine times those of other non-psychologically distressed individuals (e.g., Smith, Monsoon, & Ray, 1986; see also, Jorgensen & Richards, 1989; Neitzert, Davis, & Kennedy, 1997; Terre & Ghiselli, 1995). Other researchers note the co-occurrence of psychological distress (e.g., elevated negative affect) and physical ailments following stressful negative life events (e.g., Derogatis & Coons, 1993). Indeed, physical ailments have been suggested as markers of psychological distress more generally (Jorgensen et al., 1999).

Litz et al. (1992) also investigated the links between post-traumatic stress and increased physical symptoms, focusing on the cardiac symptoms exhibited by trauma survivors. Litz et al. (1992) proposed that the link between trauma and cardiac symptoms is carried by chronic arousal. Given that anxious arousal is a defining feature of post-traumatic stress (Kimerling et al., 2000), in conjunction with hostility (Butterfield, Forneris, Feldman, & Beckham, 2000), it is feasible that these forms of psychological distress may mediate the abuse-health relation, particularly in regard to cardiac symptoms. Other authors have not found the same link between hyperarousal and physical symptoms more generally (e.g., Zoellner et al., 2000), indicating that it may be only cardiac-related symptoms and/or other specifically defined symptom clusters that associate with chronic arousal or that hostility rather than non-hostile arousal may be of particular importance.

Research on the cardiac-related sequelae of the hostility components of Type A behaviour support Litz et al.'s (1992) suggestions. Such research evidences links

between personality and health outcomes, such as the Type A behaviour pattern and its associated risk for cardiovascular disease. Hostility and anger appear to be the components of Type A behaviours that impact on physical health (Wright, 1988). Although Type A behaviours have been discussed as part of a multicausal pathway in regard to health-related outcomes, the anger associated with Type A behaviours appears to work in conjunction with family history and lifestyle risks in its impact on long-term health (e.g., Poole, Matheson, & Cox, 2001). Whether Type A behaviours such as interactional hostility and anger are related to innate developmental styles or to post-abuse reactions, it is feasible that hostility and its related physiological changes may mediate the abuse-health relation, particularly in regard to cardiac symptomatology.

Whereas Cohen and Williamson (1991) suggested that both depression and anxiety may underlie the abuse-health relation, and Litz et al. (1992) suggested that chronic anxious arousal may also contribute, Friedman and Schnurr (1995) suggested that the hostility and anger (e.g., beyond anxious arousal), in conjunction with the depression associated with post-traumatic stress, may also contribute to the abuse-health link, particularly as it pertains to cardiovascular symptoms. Related research suggested that the physical health outcomes previously associated with depression (e.g., see Katon, 1984; Schulberg, McClelland, & Burns, 1987) might also underlie the trauma-health link.

Wolfe, Schnurr, Brown, and Furey (1994) also noted that trauma and psychological symptoms independently predicted physical health symptoms. Further, when controlling for PTSD symptoms, these authors reported that the link

between past trauma and current physical health was significantly reduced. Thus, Wolfe et al.'s (1994) findings suggest that the trauma-health relation is partly mediated by the psychological distress associated with PTSD. Subsequently, Resnick, Acierno, and Kilpatrick (1997) also suggested that psychological distress might act as a key underlying factor in the trauma-health relation.

In sum, although few studies directly assess relations between trauma, psychological distress and physical health, both traumatic life experiences (e.g., childhood abuse) and psychological distress have been shown to have independent negative effects on physical wellbeing (e.g., Cohen & Williamson, 1991; Litz et al., 1992; Wolfe et al., 1994; Friedman & Schnurr, 1995). Whereas past research (e.g., Coffey et al., 1996) tested psychological distress as an outcome of trauma such as child abuse, the present study hypothesized distress as a mediator between abuse and adult physical health status. Given the established relation between past abuse and decrements in psychological wellbeing (e.g., Briere et al., 1997), it was anticipated that psychological distress such as hostility (i.e., anger and irritability), anxious arousal and depression might underlie the relation between women's experiences of child abuse and their adult physical health.

Cognitive mediators. Research also suggests that survivors' cognitive processing of abuse and other assault experiences may mediate negative long-term effects on health (e.g., Draucker, 1989; Kimerling et al., 2000; Koss, 1990). For example, Finkelhor and Browne's (1985) Traumagenic Dynamics Model of child sexual abuse theorizes that the traumagenic dynamics of child abuse (i.e., sense of stigmatization, betrayal, powerlessness, and traumatic sexualization) impact on the

ways survivors interact with the world to the extent that such dynamics may account for long-term psychological and interpersonal difficulties. Coffey et al. (1996) tested a mediational model of traumagenic dynamics by discussing the ways in which internalized thoughts/feelings about past abuse may influence survivors' psychological adjustment into adulthood. The authors examined the relation between adult psychological adjustment and perceptions of stigma, betrayal, powerlessness and self-blame in regard to child sexual abuse, and found that the relation between abuse and adult psychological health was mediated by cognitive variables such as survivors' sense of stigma and self-blame. However, less is known about the possible mediating influences of molar cognitive variables on long-term physical health (e.g., Kimerling et al., 2000).

Therefore, the current study investigated the possible mediating influence of abuse survivors' cognitive assumptive beliefs. Defined as a "conceptual system, developed over time, that provides us with expectations about the world and ourselves" (Janoff-Bulman, 1992, p. 5), assumptive beliefs constitute an organized set of fundamental assumptions about ourselves, the world and other persons. Rooted in (generally) benevolent early-life experience with (generally) trustworthy caregivers (e.g., see Bowlby, 1969; Erikson, 1968), Janoff-Bulman's research (1982, 1985a, 1985b, 1989a, 1989b, 1992) evidences three such core beliefs: Beliefs about the benevolence of the world and others in it; beliefs about the meaningfulness of the world; and, beliefs about the worthiness of the self. These beliefs have been found to support a positively biased 'illusory glow' regarding the security of one's external environment and one's abilities to control events within it

(e.g., Janoff-Bulman, 1989a; see also, Fiske & Taylor, 1984; Freedman, 1978; Goldenberg, 1999; Taylor, 1989; Taylor & Brown, 1988). Related research evidences links between beliefs in the benevolence and security of one's world and improved psychological health and physical well-being (e.g., Isen & Daubman, 1984; McCann & Pearlman, 1990; Taylor, 1989).

In regard to benevolence of the world, 'world' refers to events and persons. An assumption of benevolence in events involves a belief that positive outcomes (i.e., good fortune) generally outweigh negative outcomes (i.e., misfortune). An assumption of benevolence in people involves a belief that other persons are essentially good, caring and/or helpful. Janoff-Bulman's (1989a, 1989b, 1992) research indicates that assumptive beliefs in benevolence reflect an "implicit base-rate notion about goodness and badness in the world" with research participants generally reporting a belief in "a benevolent, safe world rather than a malevolent, hostile one" (Janoff-Bulman, 1992, p. 7). When comparing psychological research findings with Western samples to sociological and anthropological findings in other cultural contexts, this belief is often maintained in regard to an individual's own personal world, even when it cannot be objectively generalized to the larger geographic, political and/or economic surrounds (e.g., Janoff-Bulman, 1992; see also, Fiske & Taylor, 1984; Matlin & Stang, 1978; Taylor, 1989; Watts & Free, 1978). Although the assumptive beliefs of survivors of later-life trauma have been examined in depth (e.g., Janoff-Bulman, 1992), the assumptive beliefs of survivors of child abuse have not been researched in detail. If benevolence of the world characterizes a 'typical' assumptive belief, one that is impacted by later-life trauma, it is feasible

that an assumptive belief in malevolence may be more likely for child abuse survivors who did not experience 'typical' levels of early-life benevolence.

In regard to meaningfulness of the world, this assumptive belief refers to ascribing reasons to events and, in particular, assumptions about why events happen to particular people. Individuals tend to "impose seemingly natural contingencies between people and their outcomes" (Janoff-Bulman, 1992, p. 8). Therefore, a meaningful world is one where there is an assumed relation between a person and the events that s/he experiences. An independent causal chain of events may be ascribed meaning by implicitly assuming that the distribution of positive and negative outcomes reflects the qualities and/or behaviours of the persons involved (Janoff-Bulman, 1979, 1982). Explanations regarding justice, control, or 'deservingness' allow individuals to "believe that misfortune is not haphazard and arbitrary, that instead there is a person-outcome contingency" (Janoff-Bulman, 1992, p. 9). A meaningful world may be perceived as a just world, where 'good persons' deserve positive outcomes (e.g., rewards) and 'bad persons' deserve misfortune (e.g., punishment) (Janoff-Bulman, 1992; Lerner, 1970, 1980).

A second component of the assumptive belief in meaningfulness involves a belief in personal control over negative events through careful behaviour (e.g., avoidance of illness through self-care and healthful behaviours) (Janoff-Bulman, 1992). A long-standing body of research evidences the adaptive importance of belief in personal control over events and the difficulties arising from a sense of no control (e.g., Langer, 1975; Seligman, 1975). A belief in a contingency between self-protective action and positive outcomes maintains an assumptive framework where

the world is viewed as meaningful. In Western cultures, where personal control and effort are emphasized (e.g., Janoff-Bulman, 1992), there may be a perceived contingency between personal behaviours and events that occur, “even in situations when this is clearly inappropriate” (Janoff-Bulman, 1992, p. 10), such as in the case of objectively random outcomes. Therefore, this second component of the assumptive belief in meaningfulness involves a discounting of chance events and an ongoing belief in personal control. Overall, the assumptive belief in the meaningfulness of the world depends upon a sense of justice and personal deservingness of, as well as a sense of control over, outcomes. As with the assumptive belief in benevolence, and the feasibility of abuse survivors developing an alternate belief in malevolence, it is feasible that survivors may develop assumptive beliefs in injustice and lack of control over outcomes, rather than an assumptive belief in meaningfulness.

The assumptive belief in self-worthiness involves a “global evaluation of the self” where “we perceive ourselves as good, capable, and moral individuals” (Janoff-Bulman, 1992, p. 11). These self-perceptions involve evaluations of personal willingness to engage in appropriate behaviours (i.e., behaviours likely to maximize successful outcomes). Research indicates that individuals tend to evaluate themselves positively (e.g., Janoff-Bulman, 1992), a general finding replicated in studies of individuals’ self-other comparisons (i.e., where individuals typically evaluate their own qualities more favourably than they do others) and in studies of self-esteem (i.e., where individuals’ responses are positively skewed) (e.g., Brown, 1986; Campbell, 1986; Greenwald, 1980; Taylor, 1989; Taylor & Brown, 1988).

Given their abuse experiences (e.g., emotional abuse where they are explicitly belittled, or physical and/or sexual abuse where they are explicitly injured and their selves narcissistically denied), it is feasible that abuse survivors' assumptive beliefs regarding their self-worth are negatively impacted by the very nature of their abuse experiences. Research on survivors' sense of self-blame not only documents the efforts survivors will make to regain a sense of personal control, it also supports the hypothesis that child abuse adversely affects assumptive beliefs in self-worth (e.g., Coffey et al., 1996; Finkelhor & Browne, 1985).

Overall then, core assumptive beliefs constitute beliefs that "we are good people who live in a benevolent, meaningful world" (Janoff-Bulman, 1992, p. 12). These assumptions are not narrow expectations, but rather, broad concepts based in generally benevolent early life experience and resistant to change later in life (e.g., Janoff-Bulman, 1992). As such, these basic assumptions provide an over-optimistic illusion of personal invulnerability evidenced in a diversity of studies (Janoff-Bulman, 1992; see also, Antonovsky, 1979; Janoff-Bulman, Madden, & Timko, 1983; Janoff-Bulman & Frieze, 1983; Perloff, 1983; Taylor, 1983). Irrespective of age, gender, occupation or education, individuals report viewing themselves as less likely than others to experience negative events (e.g., Perloff & Fetzer, 1986; Weinstein, 1980, 1982, 1989; Weinstein & Lachendro, 1982). Because these positively biased over-generalizations have been found to be adaptive in terms of both psychological and physical well-being (e.g., Taylor, 1989; Taylor & Brown, 1988), it is conceivable that they play a mediating role in the child abuse-adult health relation.

First, Janoff-Bulman's (1985a, 1985b, 1989a, 1989b, 1992; Janoff-Bulman & Frieze, 1983, 1987) research explores the role of assumptive beliefs in the aftermath of traumatic events. While otherwise resistant to change (e.g., Anderson, Lepper, & Ross, 1980; Fiske & Taylor, 1991; Snyder & Swann, 1978), these unchallenged assumptions about oneself and the world appear to be questioned following trauma. Traumatic events are "out of the ordinary and are directly experienced as threats to survival and self-preservation" (Janoff-Bulman, 1992, p. 53; see also, Gleser, Green, & Winget, 1981; Green, Grace, & Gleser, 1985). Their perceived atypicality means that they are not represented in an individual's assumptive world; accordingly, the individual may be psychologically unprepared for them. An individual experiencing chronic victimization such as child abuse or adult partner abuse may have a "general expectation of future [traumatic] occurrences" but is nevertheless "rarely certain of precisely when they will reoccur" (Janoff-Bulman, 1992, p. 54). Therefore, even if less unexpected than single-incident trauma, ongoing trauma is likely to continue to be experienced as a threat to survival.

In conjunction with this immediate threat to self-preservation, traumatic experiences impact assumptive beliefs (Janoff-Bulman, 1989a, 1989b, 1992). In contrast to positive over-generalizations about the benevolence and meaningfulness of the world, and the self-worth of the individual within it, trauma may reconfigure the developing assumptive beliefs of children, as well as the more solidified beliefs of adults, such that the world is viewed as characterized by malevolence, meaninglessness and self-abasement and/or blame (Janoff-Bulman, 1992). Therefore, in addition to coping with the immediate threat associated with trauma,

survivors must cope with the disillusionment that accompanies the loss of positive assumptive beliefs (Janoff-Bulman, 1989a, 1989b). For a young trauma survivor whose assumptive beliefs are less developed, their loss and/or failure to fully develop in the first place may be particularly shattering (e.g., Janoff-Bulman, 1992).

Although Janoff-Bulman (1992) notes the possible impact of trauma on the assumptive beliefs of young survivors, there is little research directly investigating the impact of trauma on children's developing assumptive beliefs. However, in her research with 338 undergraduate students who did or did not experience earlier trauma, Janoff-Bulman's (1989a) findings indicated that cognitive coping following trauma included self-blame and denial, in contrast to the aforementioned 'unrealistic optimism' or 'illusion of invulnerability.' Further, these young adults' beliefs in benevolence, meaningfulness and self-worth were seriously impacted, an effect that remained evident years after the traumatic event. It appears that trauma negatively impacts positive assumptive beliefs and, in the process, elicits negative coping strategies reflective of this impact (e.g., cognitive self-blame rather than sustained beliefs in self-worth).

Research continues to evidence the impact of trauma and the differences between the assumptive beliefs of survivors in contrast to non-traumatized samples. Janoff-Bulman's (e.g., 1989b, 1992) research indicates that, overall, persons who survive traumatic events view the world and themselves more negatively than do non-traumatized individuals. Related research also notes the impact of specific types of trauma. Survivors of human-induced trauma (e.g., child abuse, assault, rape) tend to report more negative assumptions about themselves (e.g., less self-

worth) and the benevolence of the world. For survivors of trauma that did not involve intentional harm-doers (e.g., natural disasters, diseases or accidents), the greatest difference between the assumptive beliefs of survivors and those of non-traumatized persons involve beliefs regarding the meaningfulness of the world. That is, traumatic events that can be described as 'acts of God' impact upon survivors' sense of meaning, whereas traumatic events perpetrated by other persons impact most seriously on survivors' sense of self-worth and their faith in a benevolent world (e.g., see, Collins, Taylor, & Skokan, 1990; Frederick, 1980; Janoff-Bulman, 1989a, 1989b, 1992).

Several studies investigating the severity of post-traumatic stress following child sexual abuse and related adult cognitive distortions have extended Janoff-Bulman's (1989a, 1989b, 1992) findings. For example, Owens and Chard (2001) report relations between post-traumatic stress severity and assumptive beliefs in self-worth. Basing their findings on a sample of 79 female survivors of child sexual abuse, Owens and Chard (2001) concluded that survivors tend to make frequent self-blaming attributions rather than distributing attributions for negative events between the world and the self. In sum, the available research documents a link between childhood trauma, including child sexual abuse, and adult assumptive beliefs.

Less is known about the possible links between the negative impact of trauma on assumptive beliefs and individuals' physical health. Although there is research on health locus of control expectancies (e.g., Lau, 1982; Lau & Ware, 1981; Wallston, Wallston, Kaplan, & Maides, 1976) and health beliefs more generally (e.g.,

Furnham, 1994; Furnham & Bhagrath, 1993; Furnham & Forey, 1994; Furnham & Smith, 1988), there is little research examining post-traumatic physical health outcomes as they relate to core assumptive beliefs. Although Furnham and Beard (1995) assessed just-world beliefs (i.e., akin to Janoff-Bulman's proposed assumptive belief in the meaningfulness of the world) in comparisons of complementary and orthodox medicine users, the authors found no differences. Further, Furnham and Beard (1995) did not directly assess relations between these beliefs and health outcomes.

However, in terms of research supporting the possible links between assumptive beliefs and physical health, there is ample evidence that various beliefs do affect health outcomes (e.g., see Bishop, 1994). Research on placebo effects, which indicates that beliefs in the efficacy of an inert treatment substance can influence health outcomes (e.g., Evans, 1985; Plotkin, 1985; Shapiro & Morris, 1978; White, Tursky, & Schwartz, 1985), gives rise to questions about the effects of other beliefs on health. For example, Antonovsky's (1979, 1987, 1993) research on a sense of coherence (i.e., a belief that one has the resources to meet challenges and that, despite stressors, there is a coherent structure to events) indicates that individuals with a strong sense of coherence resist the health-impact of stressors. Jorgensen, Frankowski, and Carey (1999) also report the stress-buffering effect of a sense of coherence on undergraduates' physical health and psychological wellbeing. Jorgensen et al. (1999) found that negative life events were associated with physical ailments only among those students with an *a priori* low sense of coherence, a finding that remained after taking the relation between psychological and physical

symptoms into account.

Similarly, Kobasa's (1979, 1982) research on hardiness (i.e., a strong sense of commitment to, control within, and meaningfulness of pursuits, and a belief in one's ability to meet challenges) indicates that hardy individuals show fewer negative health effects when under stress than do less hardy individuals. Further, Taylor's (1983) research indicated that a belief in the meaningfulness of meeting health crises, in conjunction with a sense of control, allowed breast cancer patients to maintain a positive outlook and a 'positive illusion' about the outcome of their disease. Seligman's (1975) classic research on helplessness also indicated that, without a belief in the possibility of hopeful outcomes, a sense of despair could have detrimental effects on physical health.

Each of these research streams (e.g., placebo effects; coherence; hardiness; helplessness/hopefulness) has shown that various beliefs provide health-protective buffers against the effects of stressors and suggests that decrements in such beliefs may have a negative impact on health outcomes. Further, the specific beliefs investigated in each of these research streams bear some resemblance to the component parts of the overarching assumptive beliefs suggested by Janoff-Bulman's (1989a, 1989b, 1992) research. Antonovsky's (1979) sense of coherence has conceptual overlap with components of the more molar assumptive beliefs in benevolence and meaningfulness of the world. The sense of meaningfulness in the experiences of Taylor's (1983) research participants has conceptual overlap with the control component of the assumptive belief in meaningfulness of the world, as does the sense of control and commitment of Kobasa's (1979, 1982) hardy individuals. In

contrast, Seligman's (1975) research on hopelessness has conceptual overlap with Janoff-Bulman's research on the shattering effect of trauma on core assumptive beliefs.

Given a) the centrality of assumptive beliefs in individuals' conceptual frameworks about the world, b) the established links between impacted assumptive beliefs, other life trauma and decrements in psychological wellbeing, c) the research on the influence of related beliefs on physical health (e.g., sense of coherence, control), the current study proposed that core cognitive beliefs would be negatively impacted by childhood abuse and might in turn mediate the child abuse-adult health relation. That is, survivors' negatively impacted assumptions of benevolence, meaning and self-worth were expected to underlie links between childhood abuse and adult physical health.

Cognitive-behavioural mediators. Coping has been broadly defined as an individual's cognitive-behavioural efforts to meet challenges/stressors (e.g., Folkman et al., 1986). Generally accepted as processes that can vary across situations (e.g., Gomez, Holmberg, Bounds, Fullarton, & Gomez, 1999), there is also evidence for consistency in coping styles over time (e.g., Amirkhan, Risinger, & Swickert, 1995; David & Suls, 1999; O'Brien & DeLongis, 1996; Scheier & Carver, 1985; Suls & David, 1996; Suls, David, & Harvey, 1996). Indeed, coping has been defined as "consistently applied types of conscious adaptive response to stressful events" (Kohn, Hay, & Legere, 1994, p. 170). Although coping has been conceptualized in several ways, coping strategies generally serve two functions: The regulation of emotions (emotion-focused coping); and, "altering the troubled person-environment

relation causing the distress (problem-focused coping)” (Folkman et al., 1986, p. 993). Specific coping strategies have been discussed in terms of coping styles, with active, problem-focused coping strategies constituting one end of the coping spectrum, and passive, emotion-focused coping strategies constituting the other end of the spectrum (e.g., Berzonsky, 1992).

Active problem-focused coping refers to strategies such as taking action to diminish or resolve stressors. These strategies include attempts to master events, find meaning in events and seek social support. More passive emotion-focused coping refers to strategies such as venting emotions or otherwise relieving emotional responses to a situation. Researchers have also discussed avoidance-focused coping as a third general coping style (e.g., Blalock & Joiner, 2000; Catanzaro, Horaney, & Creasey, 1995; Herman-Stahl, Stemmler, & Petersen, 1995), one that involves attempts to remove oneself cognitively or physically from stressful situations (e.g., Kohn et al., 1994) and encompasses strategies such as denial or avoidance of stressors (e.g., Carver & Scheier, 1994; Long & Sangster, 1993).

Of the above coping strategies, problem-focused coping has been shown to predict positive adaptation to stressful situations and positive wellbeing (e.g., Cornelius & Caspi, 1987; Endler & Parker, 1990a, 1990b; Kohn et al., 1994) and has therefore been referred to as ‘positive’ coping. In contrast, both emotion-focused and avoidance-focused coping strategies are conceptualized as potentially (although not always) detrimental, ‘negative’ attempts to cope. For example, denying or avoiding a stressor might be deemed a ‘negative’ attempt to cope in situations where it would be functionally beneficial to address the stressor (Carver, Scheier, &

Weintraub, 1989). Indeed, emotion-focused coping has been associated with poor adaptation to stress and negative impact on well-being (e.g., Endler & Parker, 1990a, 1990b; Kohn et al., 1994; Lobel, Gilat, & Endler, 1993) and has therefore been referred to as 'negative' coping. Finally, avoidance-focused coping has been linked to both negative adaptation to stress (Beiler & Terrell, 1990; Endler & Parker, 1990a; Felton & Revenson, 1984; Herman-Stahl et al., 1995), as well as potentially positive adaptive consequences (Miller, 1990; Miller, Brody, & Summerton, 1988).

In regard to research evidencing relations between coping and health, coping strategies have been shown to play a role in both "psychological and somatic health outcomes" (Folkman et al., 1986). It has been shown that both behavioural and psychological coping strategies employed by individuals as they meet daily challenges and extreme life events can impact on psychological and physical health (Carver et al., 1993; Cohen & Syme, 1985; Draucker, 1989; Folkman et al., 1986; Leitenberg, Greenwald, & Cado, 1992; Long & Sangster, 1993; Runtz & Schallow, 1997; Taylor, 1983). Whereas positive (i.e., primarily problem-focused) coping has been linked to health-protective psychological processes such as optimism and hope (Fontaine, Manstead, & Wagner, 1993; Scheier & Carver, 1985, 1987, 1992), negative (i.e., primarily emotion- and/or avoidance-focused) coping has been linked to decrements in psychological and physical health (Catanzaro et al., 1995; Endler & Parker, 1990a, 1990b; Felton & Revenson, 1984; Hall, 1997; Higgins & Endler, 1995; Kessler et al., 1985; Leitschuh, 1999; Lobel et al., 1993; Turner-Cobb & Steptoe, 1996; Zautra, Hamilton, & Burke, 1999).

In regard to research on coping with traumatic stress, Friedman and Schnurr's

(1995) research suggested that survivors of childhood abuse may employ negative (e.g., avoidant) coping strategies, and that these coping strategies might underlie the abuse-health relation. Research on traumatic stress also indicates that coping may be a factor in the relation between stressful life events and well-being, both psychological and physical (Billings & Moos, 1981; Felton, Revenson, & Hinrichsen, 1984; Folkman et al., 1986). In contrast to the detrimental health effects of negative coping strategies, related research indicates that positive coping may moderate the relation between traumatic stress and health-related outcomes (e.g., Schwartz, Neale, Marco, Shiffman, & Stone, 1999). Positive coping strategies such as seeking (and receiving) social support following disclosure of abuse have been shown to moderate the long-term effects of abuse on physical health (e.g., Bagley & Ramsey, 1986; Testa, Miller, Downs, & Panek, 1992), as have survivors' other positive coping strategies such as attempting to master and find meaning in events (Johnson & Kenkel, 1991; Leitenberg et al., 1992).

These findings are not without exceptions. For example, Kohn, Hay, and Legere (1994) investigated the hypothesized moderating effects of coping styles on the psychological and physical effects of stressors. The findings of this study did not support the hypothesis that active, problem-focused coping would diminish the adverse effects of stressors on well-being. However, it was found that passive, emotion-focused coping exacerbated the adverse impact of stressors on psychological, but not physical, well-being (Kohn et al., 1994). It appears that whereas 'positive' coping strategies (e.g., problem-focused) might not moderate the adverse effects of stress on psychological or physical well-being, 'negative' coping

strategies (e.g., emotion- or avoidance-focused) might contribute to the relation between extreme stressors (e.g., childhood abuse) and health (e.g., Auerbach, 1989).

Indeed, research carried out specifically with survivors of childhood abuse establishes that passive, avoidance-focused coping is associated with poor physical health. As noted above, Friedman and Schurr's (1995) research suggested that survivors' negative (e.g., avoidant) coping strategies may underlie an abuse-physical health link. Related research has investigated links between child abuse, poor coping and psychological health. For example, Leitenberg, Greenwald, and Cado (1992) investigated the coping strategies of a sample of 54 adult survivors of child abuse, as these related to participants' experiences of psychological well-being. Women in Leitenberg et al.'s (1992) study used both denial and emotional suppression to cope with their earlier adverse life experiences. In turn, emotional suppression and avoidance were associated with poorer psychological adjustment. Such findings suggest that coping strategies employed by survivors of child abuse may be detrimental to both psychological well-being and physical health.

Given the established relations between individuals' characteristic ways of coping with traumatic stress and related health outcomes (e.g., Higgins & Endler, 1995; Kessler et al., 1985), it is feasible that cognitive-behavioural coping strategies may mediate links between child abuse and adult physical health. Therefore, in addition to affective variables such as survivors' psychological distress and cognitive variables such as core assumptive beliefs, the current study hypothesized that cognitive-behavioural coping strategies would mediate the abuse-health relation.

In sum, the first goal of the current study was to assess the relation between women's childhood abuse experiences and adult physical health, investigating the possible mediating influences of survivors' psychological distress (anger/irritability, anxious arousal, depression), cognitive processes (assumptive beliefs) and cognitive-behavioural coping strategies on adult health-related outcomes. This mediational model of psychological distress, assumptive beliefs and coping strategies in the abuse-health relation is represented in Figure 1. Further, it was expected that the mediating influence of psychological distress, assumptive beliefs and coping strategies would remain even when taking into account the possible effects of survivors' experiences of later-life retraumatization.

The Child Abuse-Treatment Seeking Relation

Given the multiple psychological, psychosocial and physical health consequences of childhood maltreatment, it is not surprising that survivors' abuse experiences also influence patterns of treatment seeking in adulthood. An emerging literature notes the long-term physical effects of abuse (e.g., Golding, Cooper, & George, 1997; Koss et al., 1991; Salmon & Calderbank, 1996; Sansone et al., 1996; Sansone, Sansone, et al., 1997) and related increases in overall healthcare use by survivors. For example, research evidences relations between women's childhood victimization, adult retraumatization and frequent use of general healthcare services (Felitti, 1991; Koss et al., 1991; Leserman & Drossman, 1995; Rimsza et al., 1988; Salmon & Calderbank, 1996; Sansone et al., 1996; Sansone, Sansone, et al., 1997). Related research indicates that adult survivors subsequently experience more hospitalizations than nonabused individuals (Golding et al., 1988; Kimerling &

Figure 1

Overall Mediational Model of Psychological Distress, Assumptive Beliefs and Coping Strategies in Abuse-health and Abuse-treatment Seeking Relations

Calhoun, 1994; Koss et al., 1991; Moeller et al., 1993). Other literature discusses the related increases in healthcare costs (e.g., Day, 1995; Hulme, 2000; Walker et al., 1999).

In addition to the literature documenting survivors' increased general healthcare use, there is emergent research specific to treatment seeking for women's health concerns. As noted in the literature reviewed above, female survivors of childhood physical and sexual abuse experience high rates of adult gynaecologic disorders, including chronic pelvic pain (Berkowitz, 1998; Leserman & Drossman, 1995; Scarinci et al., 1994; Talley et al., 1994). Despite compromised gynaecologic health, survivors may initially avoid treatment for gynaecologic symptoms (Chapman, 1989; Draijer, 1989; Robohm & Bittenheim, 1996). However, concurrent research notes that, over time, chronic pelvic pain complaints relate to increases in invasive diagnostic laparoscopic procedures (Levitan et al., 1985; Reiter et al., 1991) and subsequent major surgeries such as hysterectomy (Berkowitz, 1998; Harrop Griffiths et al., 1988; Reiter et al., 1991). Therefore, it appears that childhood abuse relates not only to gynaecologic disturbances in adulthood, but also to patterns of treatment seeking: Survivors appear to experience more avoidance of gynaecologic care than nonabused women despite increases in gynaecologic symptoms; however, survivors' increased gynaecologic symptoms relate, over time, to increases in gynaecologic diagnoses and operative procedures.

Given these relations between childhood abuse and patterns of treatment seeking by adult survivors, various researchers discuss the benefits of healthcare providers inquiring about abuse in order to address related physical health concerns

(Campbell et al., 1994; Eby et al., 1995; McCauley et al., 1998) and to refer survivors for psychological counselling (Briere et al., 1997; Drossman et al., 1995). However, women's healthcare rarely involves discussion of past abuse and related health concerns (Felitti, 1991; Lechner et al., 1993; Leserman & Drossman, 1995; Moeller et al., 1993; Springs & Friedrich, 1992). Therefore, ongoing research calls for improved screening of abuse within healthcare settings (Briere & Zaidi, 1989; Drossman et al., 1995; Frenken & Van Stolk, 1990).

However, despite ample research on treatment seeking in general (Alonzo, 1984; Cameron, Leventhal, & Leventhal, 1995; Leventhal & Diefenbach, 1991; Leventhal, Nerenz, & Steele, 1984; Skelton & Croyle, 1991; see also, Wickramasekera, Davies, & Davies, 1996) and treatment delay in specific samples (e.g., Davies et al., 2000; Dracup et al., 1995), there is relatively little research assessing treatment seeking, delay and/or avoidance by abuse survivors (e.g., Salmon & Calderbank, 1996; Smith & Smith, 1999). There is also little research directed toward the diagnostic and treatment processes survivors are exposed to once they enter caregiving environments (e.g., Kitzinger, 1990a, 1990b). The psychological literature presents only a general perspective as to what healthcare providers can do when caring for abuse survivors (e.g., inquire about abuse in primary care settings, then refer elsewhere; Drossman et al., 1995; see also, Fromuth & Burkhart, 1992; Jennings, 1994; Miltenburg & Singer, 1997). Others note stereotyped attitudes that women in general, and abuse survivors in particular, may encounter from healthcare professionals (e.g., Bolaria & Bolaria, 1994; Campbell et al., 1994; Foster, 1995; Gallop et al., 1995; McCauley et al., 1998; Oakley, 1993;

Sherwin, 1998; Stein, 1997; Taylor & Dower, 1997; Webb, 1986). Some authors note that women may also encounter abuse within healthcare settings, including inappropriate sexual contact by healthcare providers (Archer, 1994). However, there is little extended discussion as to what healthcare settings are like for women in general, and even less information regarding survivors' treatment seeking (Hulme, 2000; Leserman & Drossman, 1995; Smith et al., 1986).

In sum, there is currently little research on the treatment seeking experiences of adult abuse survivors; however, research on the long-term physical health sequelae of abuse evidences some general relations between abuse in childhood and treatment seeking later in life. Given these relations between women's experiences of childhood abuse and adult patterns of treatment seeking, the second goal of the current study was to assess potential mediators of this abuse-treatment seeking relation.

Potential Mediators of the Child Abuse-Treatment Seeking Relation

Research on the long-term psychological and psychosocial sequelae of abuse suggests that psychological processes underlie relations between childhood abuse and adult physical health concerns, including patterns of treatment seeking. As reviewed earlier, the long-term psychological sequelae of abuse include depression (Arnstein, 1995; Drossman, 1992; Felitti, 1991), anxiety disorders (Arnstein, 1995; Bachman et al., 1988; Sedney & Brooks, 1984), post-traumatic stress disorder (PTSD) (Ackerman et al., 1998; Bremner & Narayan, 1998; Drossman, 1992; Rodriguez et al., 1996; Schaaf & McCanne, 1998), somatization (Briere & Runtz, 1988; Escobar et al., 1992), and dissociative identity disorder

(Lazar, 1997; Oxman et al., 1985). Further, there are relations between these long-term psychological sequelae and survivors' adult physical health concerns (Berkowitz, 1998). For example, somatization (Berkowitz, 1998; Briere & Runtz, 1988a, 1988b) and adult PTSD (McFarlane et al., 1994; Shalev et al., 1990) frequently co-occur with physical health outcomes such as chronic pelvic pain. There also appear to be relations between psychological sequelae of abuse and survivors' treatment seeking in adulthood. Psychological distress such as the anxious arousal and depression associated with PTSD appears to be most consistently related to treatment seeking. For example, there is an association between the extreme psychological distress frequently reported by abuse survivors (e.g., high levels of anxiety and depression), frequent treatment seeking (Blanchard, Keefer, Galovski, Taylor, & Turner, 2001; Colegrave, Holcombe, & Salmon, 2001) and significantly increased healthcare costs (Smith et al., 1986; Neitzert et al., 1997; Terre & Ghiselli, 1995). Indeed, relations between treatment seeking and debilitating psychological distress have also been reported in samples of nonabused individuals (e.g., Chambers & Keller, 1993; Craske, Brown, Meadows, & Barlow, 1995; Freeman, Rickels, Schweizer, & Ting, 1995; Hunter, Swann, & Ussher, 1995; Keefe, Lumley, Anderson, Lynch, & Carson, 2001; Keefe, Lumley, Anderson, Lynch, Studts, et al., 2001; Kendler, Gardner, & Prescott, 2001; Kimerling & Calhoun, 1994; Marcus, 2001; Simonds & Elliot, 2001; Montoya et al., 1995; Soares & Grossi, 1999; Sullivan, Reesor, Mikail, & Fisher, 1992; von Korff, Wagner, Dworkin, & Saunders, 1992).

Further, despite the association of somatization with PTSD, somatization itself

appears to be unrelated to survivors' healthcare use. Salmon and Calderbank (1996) studied 275 British undergraduates and found that abuse survivors reported more adult hospital admissions and surgical procedures relative to nonabused undergraduates. Although survivors reported more somatization and hypochondriasis, neither somatization nor hypochondriasis alone accounted for this increased use of healthcare services (Salmon & Calderbank, 1996). Rather, it appears that it is psychological distress (e.g., anxiety and depression as seen in PTSD) that is associated with treatment seeking (e.g., Blanchard et al., 2001; Colegrave et al., 2001). Therefore, given the relations between a) abuse and treatment seeking, b) abuse and deleterious psychological sequelae, c) psychological sequelae and survivors' treatment seeking, it is feasible that psychological mediators may underlie abuse-treatment seeking relations. The psychological mediators assessed in the current study included affective mediators (i.e., anxiety, depression), cognitive mediators (i.e., assumptive beliefs) and cognitive-behavioural mediators (i.e., coping strategies) (see Figure 1; p. 47a).

Affective mediators. Little research directly assesses relations between survivors' psychological distress (e.g., anxiety, depression) and treatment seeking. Existent research on the potentially distressing emotional impact of medical examination is largely limited to child rather than adult survivors (Finkel, 1998; Heger, 1996; Kempe, 1978) and is in turn limited to research on child survivors of sexual abuse only (Britton, 1998). However, there are parallels between this work with child survivors and the current *status quo* regarding the treatment seeking of adult survivors. For example, a lack of physician knowledge regarding the sexual

abuse of children, and the physical and psychological implications of such abuse, presented an early barrier to recognition and clinical involvement (Finkel, 1998). Similar barriers may exist regarding adult survivors' responses to, or needs before, during and after medical examinations (e.g., Kitzinger, 1990a, 1990b; Robohm & Buttenheim, 1996; Smith & Smith, 1999).

Research conducted during the 1980s and 1990s led to the growth of clinics for the purpose of providing forensic medical examinations for abused children (Chadwick, 1998). Although children may sustain physical injury during sexual abuse, genital injuries are generally reported as minor and, even when more extensive, tend to heal quickly and well (Chadwick, 1998). Therefore, the examination is primarily designed to reassure children that their bodies are healing (Britton, 1998; Chadwick, 1998) and to provide technically advanced documentation of the abuse. Given the numbers of adults with health concerns related to their earlier abuse, attention to medical examination may be as helpful in later life as it is during childhood. For adult survivors who experience long-term health effects of abuse, medical examinations may provide the opportunity not only for emotional reassurance regarding the body's capacity to heal, but also functional advice related to symptoms experienced.

Unfortunately, medical researchers have noted that medical examination can be psychologically retraumatizing rather than reassuring for child survivors, particularly when the examination includes colposcopic photography (Finkel, 1998; Levitt, 1998). The colposcope – a magnifying instrument with a built-in light source (Finkel, 1998; Roberts & Moran, 1995) – is a tool initially developed to facilitate

visualization of microscopic changes in the cervical epithelium of women.

Researchers have raised the concern that medical examination involving photographic documentation may suggest pornographic photography for some child survivors of sexual abuse. The same could be postulated for adult survivors. Other research notes that even without colposcopic photography, medical examinations may be problematic in terms of eliciting recall of previous abuse (Berson, Herman-Giddens, & Frothingham, 1993). Although there has been little attention to the psychological discomfiture of women undergoing pelvic examination, this literature dealing with child survivors notes the importance of observing a child's emotional reaction to the exam, responding to changes in a child's demeanour, and helping a child to achieve some sense of control during the examination (Finkel, 1998). The same could be said for adult survivors in the context of adult medical examinations (Kitzinger, 1990a, 1990b; Robohm & Buttenheim, 1996; Smith & Smith, 1999).

That treatment seeking may be psychologically retraumatizing for adult survivors is evidenced by one of the few studies inquiring about adult survivors' examination experiences. Kitzinger (1990b) interviewed 39 female survivors of child sexual abuse, ranging in age from 16 to 59 years and concluded, "it is clear that medical procedures can often bring back overwhelming memories of sexual abuse" (p. 38). Kitzinger's (1990b) participants reported a "fear of, and resistance to, internal examinations" and were "reluctant to surrender to intimate manipulations of their bodies while in the powerless position of a patient" (p. 38). Fear led to avoidance of internal examinations, cervical screening and antenatal care for many of Kitzinger's (1990b) interviewees. The author concluded that medical

examinations, which include nakedness, touch, intrusion, pain/discomfort and powerlessness, could reproduce the dynamics of sexual abuse (Kitzinger, 1990b). Indeed, the survivors interviewed by Kitzinger (1990b) described feelings of objectification, exposure, degradation and violation, and often used the language of rape to describe their examination experiences. For some women, experiences where they are “denied choice and control over what is done to their bodies remind them of childhood sexual assault” (Kitzinger, 1990b, p. 39). Two subsequent studies replicated Kitzinger’s (1990b) findings, with adult sexual abuse survivors reporting retraumatizing experiences during gynaecological examinations and subsequent avoidance of such examinations (Smith & Smith, 1999; Robohm & Bittenheim, 1996).

For Kitzinger’s (1990b) interviewees, the diagnosis of gynaecological problems was particularly disturbing. The finding of abnormal cervical cells following internal pelvic examination led to some interviewees reporting feelings of “pollution and punishment” (p. 40) and feeling as if they were, once again, “paying the price for the abuse” (p. 40). Kitzinger (1990b) notes the potential for caregivers to challenge the stigma and blame experienced by abuse survivors by encouraging women to develop a “more positive sense of [their] own competence” (p. 40) in terms of healthcare behaviours, and a sense of “[their] rights over [their] own bodies” (p. 40). Kitzinger (1990b) asserts that a “matter of fact and respectful approach” (p. 40) taken by healthcare staff can help survivors negotiate medical examinations with less psychological distress: “While health care can be degrading and humiliating it also provides the opportunity for a woman to learn about her body, and if treated

with dignity and respect, to make choices about, and take more control over her physical well-being” (Kitzinger, 1990b, p. 40).

Therefore, just as child survivors benefit from examination protocols that take into account the need for responsiveness on the part of medical caregivers (Finkel, 1998; Levitt, 1998), adult survivors may benefit from increased caregiver awareness regarding the health outcomes of abuse, the addition of an abuse history-taking, more sensitive protocols and more responsive feedback during medical examinations (e.g., Kitzinger, 199b; Smith & Smith, 1999; Robohm & Bittenheim, 1996). Indeed, a related research stream operates on the assumption that healthcare should focus not only on treatment, but also on the emotional trauma associated with abuse and the “initiation of social healing” (Britton, 1998, p. 573). Britton (1998) notes that the healthcare system has “been influenced by suggestions that medical intervention may be emotionally traumatizing” (Britton, 1998, p. 573), and that ways of reducing the psychological distress associated with medical examination include simple steps such as providing a friendly setting, working to establish rapport and, when possible, taking extra time to prepare and debrief survivors (Britton, 1998; Drossman et al., 1995; Dubowitz, 1998). Further, studies documenting the emotional impact of medical examinations on children suggest that fear of examination may relate to past negative medical experiences rather than abuse history *per se* (Labeznik et al., 1994; Steward, Schmitz, Steward, Joye, & Reinhart, 1995). Given that negative medical experiences (e.g., encountering rushed, unfriendly environments) are related to children’s negative reactions to medical examination, it is feasible that similar variables affect adult survivors’

reactions (Shalev, Schreiber, & Galai, 1993). If so, discussion about such variables may be a useful adjunct to current medical history-taking procedures with adults.

Despite the emergent nature of the psychological research regarding the emotional distress associated with treatment seeking (e.g., deChesnay, 1989; Kitzinger, 1990a, 1990b; Robohm & Bутtenheim, 1996; Smith & Smith, 1999) and potential strategies for reducing that impact (Britton, 1998; Dubowitz, 1998; Shalev et al., 1993), related commentary on the importance of careful examination in conjunction with abuse screening is now found in the published discourse of medical discussion groups. Medical researchers involved in primary care and abuse-related research voice awareness of the psychological distress related to medical examination. A member of a research discussion session (Medical Consequences, 1998) suggested that unnecessary operative procedures on adult abuse survivors should be stringently avoided in view of the psychological factors that may play a role in various gynaecological concerns. This researcher reports the frequency with which hysterectomies are performed and notes that, despite their low mortality rates, they constitute major operative procedures that may be performed too frequently.

Other medically-oriented researchers also acknowledge the relation between psychological distress and treatment seeking and suggest that healthcare professionals discuss abuse histories prior to medical examination. For example, Drossman et al. (1995) suggest that physicians inquire about abuse when patients wish to discuss psychological or interpersonal difficulties (e.g., difficulties in establishing trust; feelings of shame and guilt), specific medical disorders (e.g., chronic pain or gastrointestinal difficulties), psychiatric disorders (e.g., PTSD),

various illness-related behaviours (e.g., disability disproportionate to the clinical data, avoidance of health-promoting behaviours, difficulty with procedures such as rectal or vaginal examinations), and multiple unwanted medical outcomes (e.g., multiple diagnostic procedures, substance abuse, excessive use of health care services).

In sum, the current psychological and medical research literatures evidence a relation between survivors' psychological distress and treatment seeking. The psychological literature suggests that it might be the distress associated with abuse that leads to increases in general treatment seeking, whereas the medical literature suggests that treatment seeking itself may then elicit further distress. In addition, related literature suggests that survivors' psychological distress may also be associated with avoidance of particular healthcare such as gynaecologic examination. Taken together, the research suggests relations between adult survivors' experiences of psychological distress and treatment seeking; therefore, the current study assessed psychological distress as a possible mediator of abuse-treatment seeking relations.

Cognitive mediators. In addition to affective mediators, the current study proposed that cognitive mediators such as core assumptive beliefs might underlie the relations between women's childhood abuse and treatment seeking in adulthood. The research reviewed above evidences a relation between abuse and treatment seeking (e.g., Felitti, 1991; Golding et al., 1988; Kimerling & Calhoun, 1994; Koss et al., 1991; Leserman & Drossman, 1995; Moeller et al., 1993; Reiter et al., 1991; Rimsza et al., 1988; Robohm & Bittenheim, 1996; Salmon & Calderbank, 1996; Sansone et al., 1996, 1997) and between traumatic life events and

assumptive beliefs (e.g., Collins et al., 1990; Gleser et al., 1981; Green et al., 1985; Janoff-Bulman, 1985a, 1985b, 1989a, 1989b, 1992; Owens & Chard, 2001).

Certainly traumatic life events appear to violate assumptions about the benevolence, justice and meaningfulness of the world (e.g., Bower & Sivers, 1998; Janoff-Bulman, 1989a, 1989b) and one's own self-worth (e.g., Owens & Chard, 2001; Terr, 1984).

Although there is little research directly assessing relations between assumptive beliefs and physical health, research regarding the health impact of expectancies and/or beliefs in general (e.g., Antonovsky, 1993; Evans, 1985; Jorgensen et al., 1999; Plotkin, 1985; White et al., 1985) suggests that core assumptive beliefs may also play a role in treatment seeking.

Research on individuals' beliefs regarding illness and symptom severity indicates the impact such beliefs have on treatment seeking. For example, research examining individuals' beliefs about disorders and/or disease processes, including arthritis (e.g., Gray, 1985), cancer (e.g., Rimer et al., 1983), chronic headaches (e.g., Rokiki & Holroyd, 1994), psychological disorders (e.g., Fosu, 1995) and gynaecologic concerns (e.g., Hunter et al., 1995; Paskett, Carter, Chu, & White, 1990), documents the impact of patients' beliefs on treatment seeking, from the initial decision to seek treatment, to compliance with treatment protocols, to increasing knowledge regarding disease throughout the course of treatment (e.g., Hornung et al., 1995). Individuals' illness-related beliefs are, in turn, impacted by sociocultural beliefs regarding specific diseases (e.g., Baxter, Hinson, Wall, & McKee, 1998; Evans & Lambert, 1997; Matthews, Sellergren, Manfredi, & Williams, 2002; Straussner, 2001) and beliefs regarding treatment efficacy (e.g., Sklar, Annis,

& Turner, 1997; Toneatto, 1999).

Further, research regarding patient satisfaction indicates the impact of individuals' expectations on treatment seeking. In three studies assessing the impact of individuals' generalized "beliefs and assumptions" (Ditto, Moore, Hilton, & Kalish, 1995, pp. 24) on healthcare use and satisfaction, Ditto et al. (1995) found that individuals' beliefs about, and expectations of, physicians can impact treatment seeking such that patients express more treatment satisfaction when healthcare providers meet patients' role expectations. For example, individuals with authoritarian expectations of physicians report satisfaction with authoritarian care and more healthcare utilization overall; in contrast, individuals with egalitarian expectations of physicians express subsequent dissatisfaction with authoritarian care and little intention to follow treatment prescriptions (Ditto et al., 1995). Related research supports the view that individuals' beliefs and expectations can predict healthcare use and satisfaction (e.g., Avis, Bond, & Arthur, 1997; Hsieh & Doner Kagle, 1991; Jackson, Chamberlin, & Kroenke, 2001; Sitzia & Wood, 1997; Williams, Coyle, & Healy, 1998). Taken together, the research on illness beliefs and treatment expectations suggests a possible link between individuals' assumptive beliefs and treatment seeking.

Specifically regarding the assumptive belief in a benevolent world, studies (e.g., Christensen, 2000; Walt & Gillis, 1979; Watson, Daly & Zimmerman, 1980) report that caregiver benevolence is associated with treatment effectiveness (e.g., patient improvement). It may be the case that individuals endorsing a strong assumptive belief in the benevolence of the world may be more likely to perceive

benevolence in the treatment attempts of healthcare staff. In contrast, individuals with negatively impacted assumptive beliefs in benevolence may be less likely to expect and/or perceive benevolence in healthcare providers, a situation that may in turn affect treatment seeking.

Similarly, related research notes that facilitating a sense of meaning for cancer patients constitutes an important treatment phase (e.g., Schou & Hewison, 1998; Sherman & Simonton, 2001). It is feasible that a core assumptive belief in meaning may have a positive influence on treatment seeking; in contrast, a negatively impacted assumptive belief in meaning may have deleterious effects on treatment seeking.

In regard to research related to assumptive beliefs in self-worth, recent studies evidence the impact of childhood cancer patients' global self-worth (e.g., Hockenberry-Eaton, Kemp, & Dilorio, 1994) and breast cancer patients' perceived self-worth (e.g., in regard to sexual desirability) (e.g., Carver et al., 1998; Thorne & Murray, 2000) on treatment response. Global positive self-worth appears to have a positive influence on treatment seeking; therefore, it is feasible that core assumptive beliefs in self-worth may similarly influence treatment seeking. In contrast, it may be that negatively impacted beliefs in self-worth have deleterious effects on individuals' treatment seeking. For example, a trauma survivor experiencing the denial and self-blame evidenced in Janoff-Bulman's (1989a) research and the related research by Owens and Chard (2001), might be less likely to acknowledge further evidence of personal vulnerability (e.g., physical symptoms of illness) due to denial and/or be less likely to seek treatment due to self-blame. In sum, despite the absence of

research directly assessing the links between core assumptive beliefs and treatment seeking, the available related research is suggestive of such links and supports the feasibility of assumptive beliefs as mediators of an abuse-treatment seeking relation.

Cognitive-behavioural mediators. Finally, in addition to the proposed affective and cognitive mediators of the abuse-treatment seeking relation, the current study also proposed that cognitive-behavioural coping strategies might underlie the abuse-treatment seeking relation. Previously reviewed research indicates relations between abuse and treatment seeking (e.g., Felitti, 1991; Golding et al., 1988; Kimerling & Calhoun, 1994) and between abuse and coping (e.g., Friedman & Schnurr, 1995; Leitenberg et al., 1992; see also, Felton et al., 1984; Folkman et al., 1986). For example, it appears that survivors of childhood abuse may make frequent use of 'negative' coping strategies such as avoidance (Friedman & Schnurr, 1995), emotional suppression and denial (Leitenberg et al., 1992), which may in turn influence patterns of treatment seeking.

Indeed, related research indicates that avoidant treatment fearfulness is associated with under-use of health resources (Kushner & Sher, 1989). Further, reduced emotional response to physical symptoms is associated with delayed treatment seeking (Prohaska, Keller, Leventhal, & Leventhal, 1987), whereas greater use of emotion-focused coping following trauma is associated with increases in treatment seeking (Blake, Cook, & Keane, 1992). In contrast, 'positive' coping strategies such as problem-focused coping have been associated with preventive self-care (e.g., Ingledew, Hardy, Cooper, & Jemal, 1996). Finally, other research notes similar patterns of relations between stressors, coping strategies and symptom

reporting more generally (Miller, Leinbach, & Brody, 1989).

Finally, Golding's (1994) findings regarding the health-protective effects of coping strategies such as social support seeking (see also Burke Drauker, 1997a, 1997b; Perrott et al., 1998; Springs & Friedrich, 1992) are of interest. Although abuse survivors use healthcare services more often than the general population, it is feasible that there are also survivors who are nonusers, perhaps because of the health-protective social support they receive outside the healthcare system. It is not known whether non-use of the healthcare system stems from overall wellness (i.e., good health and subsequent non-need of medical attention; Berkowitz, 1998) or avoidant coping (i.e., unwillingness to access healthcare), perhaps because healthcare visits are reminiscent of past abuse (deChesnay, 1989; Kitzinger, 1990b). Overall, given the findings of the available literature regarding general patterns of relations between abuse, coping and treatment seeking, the current study assessed both 'positive' and 'negative' coping strategies as possible mediators of the abuse-treatment seeking relation.

Themes in Women's Treatment Seeking: Discomfort and Avoidance

Research regarding the possible retraumatizing effects of healthcare (e.g., Kitzinger, 1990a, 1990b; Robohm & Bittenheim, 1996; Smith & Smith, 1999) suggests that discomfort during treatment may be common for adult abuse survivors. However, improvement in survivors' treatment seeking experiences, whether in terms of the technical conduct of medical examinations or increased sensitivity to their emotional impact, may depend on an *a priori* disclosure of an abuse history. Unfortunately, the high rates of reporting abuse in prevalence studies

do not translate into similar disclosure rates in healthcare settings (Finkel, 1989, 1998; Goodman, Koss, & Felipe Russo, 1993; Leserman & Drossman, 1995; Pearse, 1994; Smith & Smith, 1999), despite research documenting the health-protective benefits of disclosure generally (Parker, 1995; Pennebaker, 1985, 1993) and disclosure of abuse in particular (e.g., Larson & Chastain, 1990; Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Everill & Waller, 1995). Rather, unsolicited disclosure of abuse to healthcare providers remains rare (Campbell et al., 1994; Goodman et al., 1993; Leserman & Drossman, 1995; McCauley et al., 1998; Thompson et al., 1998, 2000) despite the fact that abuse survivors are frequent users of healthcare resources and often deem their abuse as a factor in their current health concerns (deChesnay, 1989; Eby et al., 1995).

For example, recent studies reveal that close to 60% of survivors report never discussing their abuse with anyone other than family members and only 17% report discussing their abuse with their physicians (Drossman et al., 1990; Pearse, 1994). A related study reported that, although 25% of female patients in a medical family practice were assaulted by a partner in the previous year, only 2% had been asked about assault by their physicians during extended office visits (Hamberger, Saunders, & Hovey, 1992). In their study of the health risk behaviours of a sample of 511 female family practice attendees, Springs and Friedrich (1992) also found that fewer than 2% of the sexually abused women had discussed their abuse with a physician (Springs & Friedrich, 1992). Similarly, a high proportion of psychiatric patients avoid disclosing their abuse to their physicians and counsellors (Briere et al., 1997; Briere & Zaidi, 1989; Wurr & Partridge, 1996). When actually screened for

abuse in general medical family practices, however, 17% to 40% of female patients report childhood sexual abuse and up to 48% report some form of assault across the lifespan (Friedman, Samet, Roberts, Hudlin, & Hans, 1992; Greenwood, Tangelos, & Maruta, 1990; Lechner et al., 1993; Leserman & Drossman, 1995; Springs & Friedrich, 1992; Walch & Broadhead, 1992). That said, even though 20% to 75% of women visiting medical clinics have been sexually/physically traumatized at some point (Drossman et al., 1990; Eby et al., 1995; Gallop et al., 1995; Springs & Friedrich, 1992; Taylor & Dower, 1997; Toomey, Hernandez, Gittelman, & Hulka, 1993), abuse is rarely discussed and rarely researched in a healthcare context (Burge, 1989; Campbell, Pliska, Taylor, & Sheridan, 1994; McCauley, Yurk, Jenckes, & Ford, 1998; Sassetti, 1993).

Unless healthcare providers have adequate knowledge of an individual's historical or ongoing abuse, and knowledge of the possible health sequelae of that abuse, they run the risk of misdiagnosing symptoms and subjecting women to invasive (and possibly unnecessary) diagnostic practices with inadequate emotional preparation (Berkowitz, 1998; Felitti, 1991). Consequently, researchers such as Leserman et al. (1996, 1997) and Drossman et al. (1995) suggest that healthcare staff screen for abuse by employing simple questions (e.g., "[I]t's not uncommon these days for persons to have been emotionally, physically, or sexually victimized at some time in their life and this can affect how people manage with their medical condition. Has this ever happened to you?," Drossman et al., 1995, p. 789). Women's risk for experiencing distress following such questions is reported as low; indeed, "the ability to discuss the abuse history was considered beneficial or at least

not harmful to the patient in almost all cases” (Drossman et al., 1995; p. 789; see also, Campbell et al., 1994; Kitzinger, 1990b; McCauley et al., 1998; Taylor & Bower, 1997). Lechner et al. (1993) also suggest that routinely obtaining a thorough sexual history, which would include information regarding past sexual abuse, may help physicians “avoid misdiagnosis and misuse of medical services” (p. 633). Further, open discussions about abuse can aid physicians’ suggestions regarding referrals to mental health professionals (Drossman et al., 1995).

Such suggestions for improving survivors’ healthcare experiences overall, and reducing the emotional impact of medical examinations in particular, depend on healthcare professionals having not only an awareness of the issues surrounding abuse but training in how to elicit abuse histories, skills that healthcare professionals may lack (e.g., Archer, 1994; Burge, 1989; David, 1993; Herbert, 1991; Sassetti, 1993; Smith & Smith, 1999). In a survey by Blakeley and Ribeiro (1997), Canadian paediatric and community health nurses reported needing to improve their knowledge and skills regarding the identification, treatment and referral of survivors. Although these nurses “conveyed a high degree of empathy and caring that could prove useful in the development of therapeutic relationships” (Blakeley & Ribeiro, 1997, p. 343), they had a “less than adequate knowledge of child sexual abuse” (Blakeley & Ribeiro, 1997, p. 343). Similarly, Saunders and Kindy (1993) found that, while female physicians detected abuse earlier and took abuse histories more thoroughly than male physicians, both female and male doctors required more thorough training in interacting with adult survivors. Given healthcare providers’ reported lack of awareness regarding abuse-health relations, it remains unlikely that

they will inquire about abuse; therefore, the onus is on survivors to disclose abuse so that its potential role in the aetiology of current health concerns can be addressed.

Regarding more proactive attempts to inquire about abuse and thereby address related discomfort with treatment seeking (Medical Consequences, 1998), a medical researcher described the disclosure-enhancing aspects of computer-assisted interviews; however, it is not clear that such methods would integrate into busy healthcare settings. Studies suggest that lengthy interviewing techniques and ethnic matching of interviewer and interviewee may also facilitate disclosure (Berkowitz, 1998; Rimsza et al., 1988; Wyatt, 1985). Once again, it is not clear that such techniques would be feasible within applied healthcare settings. Other authors encourage healthcare providers to take steps to address the silence and/or stereotypes regarding battering and abuse (e.g., American Medical Association, 1992; American Medical Association Council on Ethical and Judicial Affairs, 1993; Sassetti, 1993) and the attitudes that may “perpetuate the problem and preclude appropriate care” (Sassetti, 1993, p. 292). For example, these authors support the routine screening for abuse, and encourage the implementation of simple measures (e.g., hanging anti-abuse posters in healthcare settings) that create “an environment that supports and validates a woman even before she enters the examining room” (Sassetti, 1993, p. 303).

In one of the few studies to ask directly for women’s opinions, McCauley et al. (1998) used focus groups to elicit women’s views on what helps or hinders abuse disclosure in healthcare settings in order to ease the discomfort associated with

treatment seeking. Contrary to suggestions that particular interview techniques (e.g., computer-facilitated or ethnically-matched) might facilitate disclosure, these women suggested achievable interactional variables. Survivors were likely to discuss their abuse experiences if they perceived that the clinician was caring, easy to talk to, showed a concerned, protective and non-judgmental manner, or offered a follow-up visit for further discussion. Women said that the main barrier to disclosure was the fear that healthcare staff would “look down on them” (McCauley et al., 1998, p. 553). This fear was compounded when clinicians were perceived as uncaring, appeared uncomfortable with any discussion of abuse, or appeared to be too rushed to listen.

A related study invited 250 female participants to take part in one of 19 focus groups discussing an ‘ideal’ women’s healthcare model (Taylor & Dower, 1997). Women reported being dissatisfied with what they perceived as healthcare workers’ insensitivity, discrimination, lack of manners, respect and caring, and “an attitude of superiority that keeps women uninformed and uneducated about their bodies and their health issues” (Taylor & Dower, 1997, p. 411). These women also described the healthcare system as silent and/or unresponsive to issues regarding incest, rape and domestic violence (Taylor & Dower, 1997). Such research indicates that, although healthcare professionals, researchers and healthcare consumers may report similar views regarding ‘women-centred’ and ‘survivor-friendly’ healthcare (e.g., American Medical Association, 1992; Schaps, Linn, Wilbanks, & Wilbanks, 1993), the gap between institutional intent and survivors’ actual healthcare experiences remains.

In sum, childhood abuse is rarely, but arguably should be, one of the factors assessed in 'survivor-friendly' healthcare settings, given the potentially retraumatizing effects of medical examinations and the potentially beneficial aspects of disclosure. Further, the role of healthcare staff in inquiring about abuse may be particularly important because women who have experienced physical and sexual abuse tend to be even more isolated than those who experienced emotional abuse alone. In one study, 62% of a group of emotionally abused women sought counselling in contrast to only 13% of the women who had also experienced sexual or physical abuse (Moeller et al., 1993). In turn, women who had not had psychotherapy were less likely to initiate disclosure of their abuse to their physicians, and yet these women were more likely to have histories of sexual and physical abuse (rather than emotional abuse alone), to have medical problems related to their abuse, to seek medical care, and to benefit from discussions of health-related implications of their abuse. Moeller, Bachman and Moeller (1993) claim that their results "indicate the need for a careful history of past abuse and for integration of these findings into a women's current medical care" (p. 638).

Overall then, research evidences numerous psychological, psychosocial and physical health sequelae of child abuse, each of which can bring female survivors into frequent contact with healthcare professionals. In short, the literature evidences a link between past abuse and treatment seeking in adulthood. Unfortunately, as noted in the literature reviewed above, there has been little research to assess the emotional impact of healthcare examinations on survivors, nor ways in which to reduce that impact. Indeed, it may be the case that reducing survivors' discomfort

during treatment may depend upon disclosure of abuse, something that is rare in healthcare settings.

Further, related research indicates that although survivors have more frequent contact with healthcare professionals in general, they are less likely to seek out healthcare related to specific women's health issues (Kitzinger, 1990b; Robohm & Buttenheim, 1996; Smith & Smith, 1999). The few studies that investigate these links report that sexual abuse survivors may avoid gynaecological treatment, including preventive screening for sexually transmitted diseases, pelvic inflammatory disease and gynaecologic cancers (e.g., pap smears for uterine and cervical cancers; pelvic exams for ovarian cancer) (Courtois, 1988; Holz, 1994; Kitzinger, 1990a, 1990b; Robohm & Buttenheim, 1996; Smith & Smith, 1999). It appears that survivors may also avoid prenatal healthcare and antenatal follow-up exams (Kitzinger, 1990b).

Indeed, medical and nursing research across the 1970s, 1980s and 1990s indicated that gynaecological healthcare is problematic for women in general (Debrovner & Shubin-Stein, 1975; Domar, 1985-1986; Haar, Kalitsky, & Stricker, 1977; Lichtman & Papera, 1990; Williams, Park, & Kline, 1992). However, the gynaecologic care experiences of survivors, and how these experiences compare to those of nonabused women, has not been examined in depth. The available research indicates that both survivors and nonabused women rate anxiety as the most problematic aspect of gynaecologic health exams, with nonabused women reporting related physical discomfort as their next greatest concern (Robohm & Buttenheim, 1996). In contrast, survivors report that experiences of vulnerability and

shame constitute their next greatest concerns (Robohm & Bутtenheim, 1996).

While little research investigates survivors' reasons for experiencing vulnerability and shame, Kitzinger (1990b) notes that gynaecologic examination shares interactional similarities with abusive situations, including power differences (e.g., in this case, between healthcare providers and patients), nudity and powerlessness. Further, there may be physical aspects of gynaecologic examination that resemble aspects of earlier abuse. For example, gynaecologic examination includes speculum insertion and breast examination, both of which may cause physical pain and elicit feelings of discomfort, shame and possible sexualization (e.g., Finkelhor & Browne, 1985; Robohm & Bутtenheim, 1996). Indeed, some authors suggest that the discomfort with pelvic exams reported by women in general might "evoke further anxiety responses or even flashbacks in some survivors" (Robohm & Bутtenheim, 1996; see also, Kitzinger, 1990a, 1990b).

These similarities with abuse experiences may contribute to the psychological distress reported by survivors in regard to gynaecological healthcare. In turn, the increased distress associated with gynaecological treatment may lead to avoidance for abuse survivors (Robohm & Bутtenheim, 1996). Finally, in addition to these findings regarding gynaecologic treatment avoidance, there is some indication that survivors may also avoid dental treatment (Hays & Stanley, 1993), perhaps because standard dental examination may be reminiscent of aspects of child abuse. For example, this may be the case for women who experienced oral rapes as children (e.g., Hays & Stanley, 1993).

Therefore, although the literature evidences an increase in adult survivors'

treatment seeking, preventive healthcare such as gynaecologic exams appear to be sought less frequently, likely due to the non-discussion of abuse-related concerns, and the subsequent retraumatizing aspects of such exams (Kitzinger, 1990a, 1990b; Robohm & Buttenheim, 1996; Smith & Smith, 1999). Unfortunately, these exams may be of particular importance for survivors' health, given survivors' increased risk for long-term gynaecologic concerns such as chronic pelvic pain, premenstrual distress and pelvic inflammatory disease (Chapman, 1989; Draijer, 1989; Gross et al., 1980; Koss et al., 1991; Moeller et al., 1993; Ribberink, Slurink, Everaerd, & Hanewald, 1989; Walker et al., 1988) and eventual increases, over time, of gynaecologic diagnostic and operative procedures (e.g., Berkowitz, 1998; Levitan et al., 1985; Reiter et al., 1991). In sum, the existent research indicates that, despite survivors' increased general healthcare use and compromised gynaecologic health (Robohm & Buttenheim, 1999), survivors report both increased anxiety toward and more avoidance of gynaecologic healthcare (Courtois, 1988; Holz, 1994; Kitzinger, 1990b), as might be expected in the previously noted context of non-disclosure and non-discussion about abuse-related discomfort.

It is not surprising that comparatively little is known about survivors' underlying reasons for treatment seeking or, for related discomfort and/or avoidance. The few inquiries into survivors' healthcare experiences have been conducted primarily with British samples (e.g., Kitzinger, 1990a, 1990b), and/or have looked solely at medical healthcare settings (e.g., Robohm & Buttenheim, 1996; Smith & Smith, 1999). Research investigating survivors' experiences within other healthcare settings such as dental clinics, is rare (e.g., Hays & Stanley, 1993). Given the

abuse-treatment seeking relation, it is important to investigate survivors' reasons for treatment seeking, and reasons for possible discomfort during treatment. Further, it is important to investigate avoidance of particular forms of healthcare despite survivors' reported increases in treatment seeking overall. Accordingly, the present study undertook a thematic analysis of women's stated reasons for discomfort and/or avoidance of healthcare. Given the possibly invasive nature of medical (e.g., Kitzinger, 1990a, 1990b; Robohm & Buttenheim, 1996; Smith & Smith, 1999) and dental examinations (e.g., Hays & Stanley, 1993) for women in general, and survivors of childhood abuse in particular, the current study focused on these two healthcare settings.

Because the research literature already reliably reports that women are not generally screened for abuse, and do not generally disclose, the current study did not focus on disclosure and/or screening in healthcare settings. Instead, the current study invited discussion from women with and without abuse histories, asking women to discuss the extent to which they avoid healthcare visits (i.e., medical examinations, dental check-ups). It was assumed that women could report many necessary healthcare visits, yet still report avoidance when possible. The current study also invited women to explain in their own words their reasons for avoiding treatment. In this way, the current study explored women's treatment seeking quantitatively in the mediational model of abuse-treatment seeking relations and thematically in the follow-up open-ended questions regarding reasons for healthcare avoidance.

Method

Participants

Of the total sample, 75 women (49.1%) were recruited from the Ottawa community. Of these, 41 women (54.7% of the community sample) learned about the study from posters placed in the community, 28 women (37.3%) learned about the study from other participants, and six women (1%) learned about the study from the main researcher or from friends who had seen the recruitment posters. Another 78 women (51% of the total sample) were recruited from the Carleton University community. Of these, 58 women (74.4% of the university sample) responded to posters placed in buildings across the university campus and 20 women (25.6%) signed up on a bulletin board advertising participation in the study for course credit in an Introductory Psychology course. In sum, 153 women participated in the current study, half of whom were from the local community and half of whom were from the Carleton University community.

On average, these participants were 30 years old (M age = 30.4, SD = 11.0, range = 18 to 63 years). The majority of these participants described themselves as Canadian (54.9%) or European (17.0%), while others described their background as Asian (7.2%), Middle Eastern (4.6%), African (2.6%), East Indian (1.3%), or Jewish (1.3%). Only one (0.7%) Aboriginal woman participated.

In regard to employment, income and/or student status, 43 women (28.1%) were employed full-time, 52 women (34%) were employed part-time, 36 women (23%) were on disability, social assistance or unemployed, and six women (3.9%) identified themselves as full-time homemakers. Regarding income, 47 women (30.7%) reported family earnings under \$15,000 per annum, 23 women (15%)

reported earnings between \$15,000 and \$24,999, and 36 women (23.5%) reported familial annual earnings between \$25,000 and \$54,999. Forty-one women (26.8%) reported an annual family income of \$55,000 or more. In sum, approximately half of the sample ($n = 70$) reported annual incomes below \$25,000, and half ($n = 77$) reported annual incomes above \$25,000. On average, these women reported 16 years of formal education ($M = 16.5$, $SD = 2.4$, range = 10 to 25 years), and over half were currently attending university (39% were full-time students and 19.6% were part-time students). On average, then, the majority of participants in this study were employed individuals (59.5%) also seeking further education.

Regarding relational status and number of children, 86 women (56.2%) were either single or dating. Another 51 women (33.3%) were either married or living with their partners. Sixteen women (10.5%) were either divorced or widowed, or reported other relational and/or living arrangements. Participants reported between zero and five children, with the average number of children being less than one ($M = 0.63$, $SD = 1.13$ children). Of the total sample, 107 women (69.9%) had no children, 34 women (22.2%) had one to two children, and another 10 women (6.5%) had three to four children. Finally, two participants (1.3%) had five children each. In sum, approximately one third of the women in the study had children.

Overall, then, the 'average' participant in the current study was a 30 year old employed Anglo- or Franco-Canadian woman, seeking further education. On average, approximately half of these participants were single women, without children.

Procedure

Recruitment posters were placed in the local community and on the Carleton University campus. These posters read: "Abuse survivors' study. Looking for female survivors of physical and sexual abuse for a two-hour questionnaire study of your perceptions of yourself, other people and the world, and your psychological and physical health. Confidentiality ensured and \$10.00 for your participation." Posters recruiting nonabused women were similar except that they invited women to participate in a "women's health study" rather than an "abuse survivors' study," as follows: "Women's health study. Inviting all women to participate in a two-hour questionnaire study of your perceptions of yourself, other people and the world, and your psychological and physical health. Confidentiality ensured. \$10.00 for your participation." Participants who signed up on the Psychology Department bulletin board were also given the choice of participating for \$10.00, two course credits, or a combination of one course credit and \$5.00.

Concurrent with the process of placing posters around the city and the campus community, the main researcher and two Honours-level co-researchers received training from a clinical psychologist regarding issues pertinent to survivors of childhood abuse, and ways of grounding³ any participants who became distressed during their participation in the study.

Prospective participants who phoned in response to the survivors' study posters were provided with the following information: "In this study, you will be

³ 'Grounding' involves basic strategies to ensure that participants are not distraught, such as engaging in concrete, relaxing 'small-talk.' Just as formal relaxation and calming techniques aim to reduce anxiety and improve mood, informal grounding strategies can re-orient participants to day-to-day topics and away from potentially distressing issues (e.g., Luquet, 2000a, 2000b; Mordock, 1999; Reichert, 1994).

asked to complete questionnaires about things such as your abuse, its impact, how you coped and are recovering. Other questionnaires will ask you to describe various aspects of yourself. Finally, other questionnaires will ask you about your health behaviours and your physical health.” Women who called in response to the health study posters were told that the study included questions about childhood abuse experiences that may or may not apply to the participant and that, due to the sensitive nature of these questions, each prospective participant would be screened similarly. Women who agreed to participate after learning more about the nature of the study were screened for possible suicidal or self-harming behaviours with the following questions, “Have you had any suicidal thoughts lately?” and “Have you been engaging in any self-harming behaviour such as cutting or burning?”

The protocol included plans to ask women who indicated that they were either suicidal or self-harming if they had informed anyone other than the researcher, whether they had someone there with them or available to them, and to provide crisis line contact numbers. The protocol also included plans to ask women experiencing either suicidal thoughts or self-harm to not participate at that time, given that the content of some of the questionnaires might be upsetting.⁴ Finally, all women currently in therapy were asked to consult with their therapists regarding their participation.

Callers were told that a preliminary, one-hour questionnaire package would be mailed to them for them to complete at their own convenience. It was also

⁴ No callers indicated current suicidal intention or self-harm. However, two women indicated that, although they were not currently self-harming, they did think about doing so. Both indicated that they were under the care of counselors, and did not require contact phone numbers for crisis lines. Both agreed not to participate, given their current self-harm-related thoughts and the possibly upsetting nature of some of the questionnaires.

explained that the researcher would later meet with participants at a mutually convenient location to fill out a second one-hour questionnaire package. It was explained that the researcher would remain with the participant during completion of this second set of questionnaires in order to explain any scales that might be difficult to understand and to answer any questions the participants might have regarding the first set of questionnaires. Callers were then reminded that total time for participation would be approximately two hours, involving a preliminary mail-out package and a subsequent meeting with the researcher. Women were also reminded of their remuneration options.

After completing the two sets of questionnaires, participants were provided with a debriefing information sheet and invited to contact the researchers if they had any additional questions or were in any way distressed by their participation. The written debriefing included contact numbers to social service agencies in the event that any participant should require support services. Further, participants were informed that if they were distressed by their participation in the study, a one-hour session with a registered clinical psychologist would be made available to them at no expense.⁵

Measures

The questionnaire package included measures of participants' health histories, experiences of child abuse and other trauma, various health-related outcomes (e.g., symptoms, effects of symptoms) and measures of variables

⁵ The vast majority of participants indicated that just the opposite was true. For these women, the experience of participating had been generally positive and the opportunity to contribute to the research process was viewed as a step toward taking negative experiences (e.g., abuse, other trauma, or negative health experiences) and 'making something good of them.' That is, women

hypothesized to mediate the abuse-health and abuse-treatment seeking relations (i.e., assumptive beliefs, psychological distress, and coping strategies). Participants also completed measures of treatment seeking, their experiences of physical and psychological discomfort during treatment, and treatment avoidance. Within each questionnaire package, the measures were randomly ordered to avoid possible order effects. The exceptions were that the "Background Information" questionnaire was always presented first and an invitation to participate in future related research was always presented last. (Appendix A contains a copy of the complete questionnaire package, including cover letters to participants, informed consent forms, questionnaires and debriefing forms.)

Measures of the predictor variables. The measures of emotional, physical and sexual abuse were incorporated into the "Childhood Experiences Survey." These items were derived from the 110-item Childhood Maltreatment Questionnaire (CMQ) (Demaré, 1992, 1994; Demaré & Briere, 1996), a retrospective self-report measure of psychological, physical and sexual abuse in childhood. Previous research with both university and community samples indicates that the CMQ is internally consistent (Demaré, 1994; Demaré & Briere, 1996; Kristiansen et al., 1998), with alpha reliability coefficients ranging from .67 to .96 for the psychological maltreatment subscales, from .82 to .96 for the sexual abuse subscales, and .90 for the physical abuse subscale. In addition, both Demaré (1994) and Demaré and Briere (1996) indicate that the CMQ has predictive validity based upon its positive correlations with other forms of severe distress experienced early in life. Therefore,

frequently noted that they hoped their discussions of their experiences, as found in the questionnaires, would ultimately be of help to other women.

the items derived from the CMQ for inclusion in the current study originate in internally consistent scales, as follows.

Participants were asked about experiences of familial childhood emotional abuse in 14 items on the “Childhood Experiences Survey.” Participants were asked to indicate how often their parents, stepparents, foster parents, or other adult(s) in charge of them as children under the age of 16 engaged in a series of emotionally abusive behaviours (e.g., “Yell at you,” “Insult you,” “Criticize you,” “Ridicule you,” “Embarrass you in front of others”). Other emotionally abusive behaviours included making participants feel guilty or feel as though they were “bad [people].” Finally, participants were also asked how often adults in charge of them had threatened them (e.g., “Threaten to hurt or kill you,” “Threaten to hurt or kill someone you cared about”) or restrained them (e.g., “Lock you in a room, closet, or other small space”). Each emotional abuse item asked participants to estimate the frequency of their experiences of emotional abuse using a six-point scale ranging from ‘never’ (0) to ‘30+ times’ (6).

Participants were asked about their experiences of physical abuse in 18 items on the “Childhood Experiences Survey.” As per the emotional abuse items, the first eight of these physical abuse items were derived from the CMQ (Demaré, 1994; Demaré & Briere, 1996). These items asked participants how often a parent, stepparent, foster parent or other adult(s) in charge of them before the age of 16 engaged in a variety of physically abusive behaviours (e.g., “Spank you,” “Hit or slap you other than spanking,” “Hit you with objects,” “Punch you,” “Beat you severely,” “Kick you”). Two items asked participants to indicate how often they had been injured in any way, and how often they had been injured to the extent of requiring

medical services. Each of these physical abuse items asked participants to estimate the frequency of their experiences of physical abuse using a six-point scale ranging from 'never' (0) to '30+ times' (6). A final item assessed the frequency of spanking in the worst year participants could remember from "Never" to "301+ times."

Participants were then asked to estimate the number of times they had been hit, punched or pushed such that they had received bruises, been scratched or bloodied, or received broken bones/teeth. They were also asked to indicate the number of times they had been hurt so badly that they had been taken to see a physician. For each of these questions, participants were asked to indicate their relationship to the perpetrator of the abuse, their age at the onset and offset of the abuse, and whether or not authorities such as police or child welfare services had ever been notified.

Eighteen non-scaled items on the "Childhood Experiences Survey" (derived from Briere, 1997) asked participants about their experiences of three types of familial child sexual abuse, namely sexual kissing, touching, and intercourse. For each type, participants were asked to indicate the frequency of their experiences, how often physical force was used (i.e., from never to always), how many family members perpetrated the sexual abuse, their relationship to the sexual abuse perpetrators(s), and their age at the onset and offset of the sexual abuse type.

Participants' experiences of trauma other than child abuse were assessed via the 20-item Stressful Life Experiences Screening-Short Form (SLES) (Stamm, 1996). The SLES was specifically developed to assess traumatic life experiences across the life span. In the SLES, participants are asked to rate a series of stressful life experiences using a 10-point scale ranging from 'I did not experience' (0) to

'Exactly like my experiences' (10). The stressful experiences include items pertaining to natural disasters (e.g., "I have witnessed or experienced a natural disaster, like a hurricane or earthquake"), and human-made disasters (e.g., "I have witnessed or experienced a human made disaster like a plane crash or industrial disaster"). Other items ask about experiences with illness and death (either serious illnesses experienced by participants themselves, or illness or death of family members or close friends) (e.g., "I have witnessed or experienced a life threatening illness happening to me, a close friend or a family member"). A fourth set of items asks about experiences with war, terrorism or hostage-taking (e.g., "I have been involved in combat or a war or lived in a war affected area"), while a fifth set of items asks about experiences of body assault, either witnessed or personally experienced (e.g., "As an adult or child, I have witnessed someone else being choked, hit, spanked, or pushed hard enough to cause injury"). The final item on the SLES reads, "I have witnessed an extremely stressful event not already mentioned" and, for the purposes of the current study, the following phrase was added to this item: "Please explain on the back of this page." A brief example was provided, and participants were then given the opportunity to provide an open-ended text-based explanation of their response to the final SLES item. Based upon the post-traumatic stress literature and trauma literature more generally, the SLES has been reported to have an acceptable alpha reliability coefficient of .70 (Stamm, 1996). Therefore, it was selected for use in the current study as a reliable measure of traumatic life experiences beyond those assessed by the "Childhood Experiences Survey."

Measures of the hypothesized mediating variables. The hypothesized mediating variables considered in the current study were psychological distress, core

assumptive beliefs and coping strategies. Each potential mediator was measured via the following self-report questionnaires.

The overall psychological impact of traumatic experiences was measured via Briere's (1995) 100-item Trauma Symptom Inventory (TSI), referred to in the current study as the "Adult Experiences Inventory." The TSI measures post-traumatic stress symptoms and related intra- and interpersonal difficulties and produces scores on ten clinical subscales, three of which were considered in the present study. These three scales provided measures of Anxious Arousal (AA), which involves anxiety, jumpiness and tension associated with post-traumatic hyperarousal (e.g., "Periods of shaking or trembling"), Depression (D), which involves the mood states (e.g., "Sadness") and cognitive distortions (e.g., "Feeling worthless") associated with depressive symptomatology, and Anger/Irritability (AI), which refers to hostile affect (e.g., "Becoming angry for little or no reason") and related angry behaviour and cognitions (e.g., "Being easily annoyed by other people"). On each TSI scale, participants rate their post-traumatic symptoms and their interpersonal and intrapersonal difficulties over the past six months using four-point scales ranging from 'never' (0) to 'often' (3). In addition to its excellent construct validity (Briere, Elliott, Harris, & Cotman, 1995), previous research evidences the reliability of the TSI, reporting average alpha coefficients for the ten TSI scales as .84 or above (Briere, 1995; Briere, Elliott, Harris, & Cotman, 1995; Runtz & Roche, 1999).

Finally, in addition to its clinical scales, the TSI also includes three validity scales. The Response Level (RL) scale consists of the number of zeros endorsed on items least likely to receive zero in the standardization samples, and measures a tendency towards defensiveness, a wish to appear symptom-free, or an

underendorsement response set. The Atypical Response (ATR) scale consists of the least commonly endorsed and most unusual items on the TSI, and measures extreme distress, an attempt to appear especially dysfunctional, or an overendorsement response set. Finally, the Inconsistent Response (INC) scale consists of the absolute differences of the 10 TSI items most likely to be answered in a similar manner, and measures concentration problems or random item endorsement. Participants' responses to the three validity scales were used in the current study to screen participants whose responses may reflect underendorsement, overendorsement or random item endorsement.

Participants' assumptive beliefs were measured with the 32-item World Assumptions Scale (WAS) (Janoff-Bulman, 1989a), referred to in the questionnaire package as the "World Views Scale." The WAS was designed to assess people's unquestioned assumptions about themselves and the world, and the specific role of these assumptions in the aftermath of traumatic events. The WAS has three primary subscales, namely benevolence, meaning and self-worth.

The benevolence subscale measures participants' beliefs in the benevolence of the world (e.g., "There is more good than evil in the world") and others (e.g., "Human nature is basically good"). The meaningfulness of the world subscale measures participants' beliefs in a just versus random world, assessing beliefs in people's deservingness of fortune or misfortune, based upon whether they themselves are 'good' or 'bad' (e.g., "By and large, good people get what they deserve in this world") and beliefs in the role of randomness or chance in life (e.g., "In general, life is mostly a gamble"). Finally, the perceived self-worth subscale measures participants' assumptions regarding their own self-worth (e.g., "I am very

satisfied with the kind of person I am”). Each item is rated on a six-point scale ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (6).

Originally developed by Janoff-Bulman (1989a) in research with undergraduate samples, research with the WAS indicates that assumptive beliefs are influenced by traumatic events and that this impact can be seen years after the trauma. Numerous research studies with the WAS have indicated that alpha reliability coefficients for each of the three subscales range from .81 to .87 (e.g., Janoff-Bulman, 1989a, 1989b, 1992; Owens & Chard, 2001). Therefore, the World Assumptions Scale was selected for inclusion in the current study as a reliable measure of participants’ core assumptive beliefs about themselves, the world and other people.

Coping strategies were assessed via the Brief COPE Scale (Carver, 1997). This 28-item measure asks participants to rate the extent to which they generally use particular coping strategies in response to stressful situations or events, and to do so using four-point scales ranging from ‘I don’t do this at all’ (1) to ‘I do this a lot’ (4). The full COPE has been used previously in health-related research with both community and student samples (Carver, 1997). Similarly, the Brief COPE Scale has been used in health-related research (e.g., with breast cancer patients), with a community sample recovering from Hurricane Andrew, and other samples (Carver, 1997). The Brief COPE Scale omits two subscales (growth and focus on emotions) from the original COPE, adds another subscale (self-blame), and reduces the other subscales to two items per subscale. The two items retained per subscale were selected on the basis of strong factor analytic loadings, item clarity and reported meaningfulness of the items to the respondents (Carver, 1997).

In short, the positive reinterpretation and growth scale were condensed to positive reframing (without growth-specific items); focus on and venting of emotions were reduced to venting; and, mental disengagement was refined to become self-distraction. The other coping strategies are organized into the following subscales: Active coping; planning; humour; use of instrumental social support; use of emotional social support; acceptance; religion; denial; substance use; and behavioural disengagement. Again, all subscale items were retained on the basis of strong factor analytic loadings. Finally, participants were asked whether they had a particular stressful event(s) or situation(s) in mind when answering the COPE items.

Measures of the criterion variables. The criterion variables in the current study were specific health symptoms (i.e., digestive, cardiovascular, genitourinary and menstrual cycle symptoms), functional effects of symptoms (e.g., number days absent from work/school due to symptoms), treatment seeking for symptoms (i.e., number of visits to health care professionals), psychological and physical discomfort during treatment, and treatment avoidance. Each criterion variable was measured via the following self-report questionnaires.

The digestive, cardiovascular and genitourinary symptom items in the “General Health Symptoms” inventory were derived from the Modified Revised Cornell Medical Index (CMI) (Brodman, Erdmann, & Wolff, 1956). Designed to reliably collect pertinent medical information, the CMI serves as a standardized medical history. Initially normed on multiple samples of healthy controls and patient populations (e.g., Brodman, Erdmann, Lorge, Deutschberger, & Wolff, 1954; Brodman, Erdmann, Lorge, Gershenson, & Wolff, 1952; Gordon, Emerson, &

Simpson, 1959), the CMI physical health items employed in the current study ask participants to rate the frequency with which they experience 78 symptoms.

Overall, the CMI subscales measure symptoms in eight major body systems: Visual and auditory systems (e.g., “Blurred vision,” “Severe ear infections”); sinus and respiratory systems (e.g., “Stuffy nose,” “allergies”); musculoskeletal system (e.g., “Painfully swollen joints”); epidermal system (e.g., “Sensitive or tender skin,” “Skin rashes”); central nervous system (e.g., “Migraines,” “Dizziness or faintness”); and the three body systems most pertinent to the current study, namely the cardiovascular system (e.g., “Heart palpitations,” “Your heart racing”), the digestive system (e.g., “Upset stomach or indigestion,” “Stomach cramps or pains”), and the genitourinary system (e.g., “Genital pain,” “Burning sensation in genitals or rectum”). Respondents are asked to rate their frequency of experiencing each symptom using six-point scales ranging from ‘never’ (0) to ‘daily’ (5).

Finally, the CMI physical health symptom items are followed by questions asking participants if their symptoms have been diagnosed as a specific medical condition(s), whether any prescription medication(s) have been prescribed for their symptoms, and whether they take any other medications. In sum, the CMI was selected as a reliable standardized measure of participants’ health symptoms, diagnoses and prescribed medications.

The “Menstrual Cycle Symptoms” inventory was derived from the Women’s Health Inventory (Runtz, 1997). Updating and expanding upon Moos’ (1968) Menstrual Distress Questionnaire, Runtz’s (1997) Women’s Health Inventory was developed in research with both nonabused and abused women. Using five-point scales ranging from ‘never’ (0) to ‘always’ (4), respondents rate the extent to which

each of 47 premenstrual symptoms has bothered them in the last six months. Respondents rate the list of symptoms for the week before menstruation. (Women who do not currently have a menstrual cycle are asked to leave the scale blank.) Items include physical symptoms (e.g., “weight gain,” “backache,” “fatigue”), cognitive changes (e.g., “forgetfulness,” “difficulty concentrating”), and affective changes (e.g., “anxiety,” “tension”).

The “Effects of Symptoms Scale” used in this study was also derived from Runtz’s (1997) Women’s Health Inventory. In this measure, participants are asked to answer a series of questions pertaining to the previously answered lists of health symptoms (i.e., digestive, cardiovascular, genitourinary and menstrual cycle symptoms). These questions ask about the extent to which participants’ symptoms (if any) have functionally affected their lives. First, women are asked to indicate how many days over the past six months they have been absent from work/school because of their symptoms. They are then asked to use five-point scales ranging from ‘not at all’ (0) to ‘a great deal’ (4) to rate the degree to which their symptoms have affected their professional/academic performance, interfered with obtaining a restful night’s sleep, interfered with social life, interfered with a participant’s enjoyment of her sex life, and have affected a participant’s life overall. In sum, this five-item scale provided a brief self-report measure of functional impairment associated with the experience of health symptoms.

Within the context of a “Health Behaviour Survey,” participants were asked about their routine preventive health checkups with healthcare professionals and healthcare visits for any reason. Women were asked to make several estimates of their healthcare use. To aid participants’ accuracy in recall of total numbers of

healthcare visits, estimates of healthcare use were broken down into several specific time frames and specific types of treatment seeking. For example, in regard to routine medical checkups such as regular annual exams, women were asked to estimate the number of such checkups in the last five years (i.e., “In the past five years, how many routine medical checkups have you had?”). Participants were then asked to estimate the number of trips made to a doctor’s office or healthcare clinic for any reason in the last year. They were subsequently asked to estimate the number of visits made to any healthcare professional for any reason over the past six months.

The indices of psychological and physical discomfort during treatment were specifically developed for the purposes of this study and incorporated into the “Health Behaviour Survey.” The index of discomfort with treatment seeking included the following questions: First, participants were asked to use five-point scales ranging from ‘none’ (0) to ‘a great deal’ (4) to indicate the extent to which they experience physical discomfort with routine medical checkups (i.e., “How much physical discomfort do you feel during routine medical checkups?”), and subsequently, the amount of psychological discomfort they experience with such checkups (i.e., “How much psychological discomfort do you feel during routine medical checkups?”). They were then asked about their psychological discomfort and physical discomfort during internal pelvic examinations, pap smears and routine dental checkups. Participants then used five-point scales ranging from ‘not at all’ (0) to ‘a great deal’ (4) to rate the extent to which they avoid healthcare visits (medical and dental) even when they know they need treatment.

Finally, as a measure of treatment avoidance participants were asked to write out, if applicable, their reasons for avoiding medical visits and, if applicable, their reasons for avoiding dental visits.

Results

Preliminary Analyses

The initial analyses included assessing the internal consistency of the various scales and examining the descriptive statistics and intercorrelations of the predictor, mediating and criterion variables.

Scale homogeneity. Item analyses and, for some scales, principal components and factor analyses, were conducted to develop internally consistent measures of the predictor, mediating and criterion variables. Table 1 presents the item analyses that were conducted to assess the internal consistency of the measures of women's experiences of familial emotional, physical and sexual abuse during childhood, and other traumatic experiences throughout their lives. As shown there, the 14 "Childhood Experiences Survey" (CES) items assessing experiences of familial emotional abuse were internally consistent. Therefore, participants' mean scores were calculated to form a measure of emotional abuse, with higher scores reflecting more severe experiences of childhood familial emotional abuse.

The eight CES items assessing the frequency of participants' experiences of childhood familial physical abuse were also internally consistent, as were the Z-scores of participants' responses to the non-scaled items assessing the frequency of spanking, the frequency and duration of being hit to the point of bruising, bleeding or having bones broken, and the frequency and duration of being hurt sufficiently to require medical attention. Because the mean of participants' Z-score responses to these non-scaled physical abuse items was strongly correlated with the mean of their responses to the eight scaled CES items, $r = .69$, $p < .001$, a single measure of childhood familial physical abuse was constructed by taking the mean of these two

Table 1

Results of Item Analyses

Measure	No. of items	<i>M</i> inter-item <i>r</i>	α
Predictor variables			
Familial emotional abuse	14	.47	.93
Familial physical abuse, scaled items	8	.57	.91
Familial physical abuse, non-scaled items	5	.42	.72
Familial sexual abuse, frequency and duration	6	.61	.82
Familial sexual abuse, force	3	.86	.95
Other trauma	16	.19	.80
Mediating variables			
Anger/irritability	8	.52	.91
Anxious arousal	8	.43	.86
Depression	8	.58	.89
Benevolence	8	.48	.88
Meaning	12	.32	.70
Self-worth	12	.35	.87
Negative coping	9	.37	.82
Positive coping	5	.38	.80
Social support coping	6	.46	.84

Table 1 (cont'd)

Results of Item Analyses

Measure	No. of items	<i>M</i> inter-item <i>r</i>	α
Criterion variables			
Digestive symptoms	5	.43	.79
Cardiovascular symptoms	5	.42	.78
Genitourinary symptoms	8	.37	.79
Premenstrual symptoms	12	.57	.94
Effects of symptoms	6	.46	.84
Treatment-seeking, preventive	4	.48	.74
Treatment-seeking, any reason	2	.53	.70
Psychological discomfort	4	.64	.81
Physical discomfort	4	.51	.88

scores. As a result, higher scores reflected more severe experiences of familial physical abuse. As expected, participants' physical abuse scores on this scale were positively correlated with their responses to the physical abuse item in the Stressful Life Experiences Screening-Short Form (SLES) (Stamm, 1996), "As a child/teen, I was hit, spanked, choked or pushed hard enough to cause injury," $r = .68, p < .001$.

An item analysis of the Z-scores of participants' responses to the childhood sexual abuse items, including a measure of duration that was calculated by taking the difference between the estimated ages of onset and offset for each type of abuse, indicated that these items were internally consistent. Similarly, the items assessing the extent to which physical force was used during sexual kissing, touching and intercourse, were reliably consistent. Therefore, the mean of participants' responses was taken to form two separate indices of the frequency of participants' familial sexual abuse experiences and the amount of physical force associated with these experiences. Higher scores reflected more frequent and forced experiences of childhood familial sexual abuse, respectively. As expected, the measure of force during familial sexual abuse was correlated with participants' responses to the SLES item that read, "As a child, I was forced to have unwanted sexual contact," $r = .48, p < .001$.

Finally, after removing four items that assessed aspects of childhood abuse, reliability analyses indicated that the remaining 16 SLES items were internally consistent. Therefore, total other trauma scores were formed by calculating the mean of participants' responses. As a result, higher scores indicated more frequent and more severe experiences of trauma other than childhood abuse.

Table 1 also presents the findings of the item analyses of measures of the mediating variables. As shown there, the items comprising the anger/irritability, anxious arousal and depression scales of the “Adult Experiences Inventory” (Trauma Symptom Inventory, TSI, Briere, 1995) were internally consistent. Also shown in Table 1 is that the items comprising the benevolence, meaningfulness and self-worth scales of the World Assumptions Scale (WAS, Janoff-Bulman, 1989a, 1989b, 1992) were internally consistent. Overall scale scores were therefore formed by calculating the mean, resulting in higher scores indicating stronger beliefs in benevolence, meaningfulness and self-worth.

A principal components analysis with varimax rotation was used to explore the factors underlying participants’ responses to the Brief COPE Scale (Carver, 1997).⁶ Based upon an examination of the principal components and associated scree plot, and an assessment of the magnitude, complexity and interpretability of each item’s factor loadings (Barret & Kline, 1981a, 1981b), a three-factor solution was selected. The first factor was comprised of a series of nine negative coping items, such as “I give up the attempt to cope,” “I refuse to believe that it has happened,” “I blame myself for things that have happened” and “I use alcohol/drugs to help me get through it.” The item, “I concentrate my efforts on doing something about the situation,” also loaded negatively on this factor. Together, these items explained 21.6% of the variance in the inter-item correlation matrix. As displayed in Table 1, subsequent item analysis indicated that these negative coping items were internally consistent.

⁶Measures were subjected to factor analysis if there was less information about their structure or if the measure was modified for use in the current study.

The second coping factor was comprised of six items related to social support seeking, such as “I get comfort and understanding from someone,” “I get help and advice from other people,” “I say things to let my unpleasant feelings escape” and “I make jokes about it.” Overall, these items explained 12.9% of the variance in the inter-item correlation matrix. A subsequent reliability analysis indicated that these social support items were internally consistent (see Table 1).

The third factor was comprised of seven positive coping items, such as “I look for something good in what is happening,” “I try to find comfort in my religion or spiritual beliefs” and “I learn to live with it.” Overall, these items explained 9.0% of the variance in the inter-item correlation matrix. No items had complex loadings, but two items loaded on this third factor less than .50. The remaining five items, however, loaded from between .50 to .80 on this third factor and a subsequent item analysis indicated that these positive coping items were internally consistent.

In sum, the COPE items were reduced to three theoretically sound and internally consistent measures, namely negative coping (i.e., avoidance, denial, and self-blame), social support coping (i.e., instrumental support, emotional support, and venting to others) and positive coping (i.e., reinterpretation and faith-based coping). Scale scores were, therefore, derived by calculating the mean, resulting in higher scores reflecting more frequent use of each strategy.

Analyses of the items comprising the measures of the criterion variables, namely digestive, cardiovascular, genitourinary and menstrual cycle symptoms, effects of symptoms, treatment seeking, and psychological and physical discomfort during treatment, indicated that these measures were internally consistent. As listed in Table 1, participants’ responses to the five digestive symptom items of the

“General Health Symptoms” (GHS) inventory, the eight genitourinary symptoms on the GHS, the Z-scores of the six items assessing the functional effects of symptoms, the four items on the “Health Behaviour Survey” (HBS) measuring preventive healthcare seeking, the two items on the HBS assessing treatment seeking for any reason, the four items assessing psychological discomfort and the four items assessing physical discomfort during treatment were all internally consistent. Scale scores were therefore formed by calculating the mean, resulting in higher scores reflecting more of the phenomenon in question.

Because participants’ responses to the measure of treatment seeking for prevention and treatment seeking for any reason were correlated, $r = .53$, $p < .001$, $N = 150$, the mean of participants’ responses to these measures was calculated as an overall index of treatment seeking. Further, because participants’ responses to the measures of psychological and physical discomfort during treatment were correlated, $r = .71$, $p < .001$, $N = 152$, the mean of participants’ responses to these measures was calculated as an overall index of discomfort during treatment.

An item analysis also revealed that three GHS items related to distal vascular ailments (i.e., “Swollen ankles,” “Cold hands/feet,” “Leg cramps”) did not reliably correlate with the five proximal cardiovascular symptoms. The remaining five cardiovascular items on the GHS (i.e., “Chest pain,” “Heart palpitations,” “Racing heart,” “Difficulty breathing,” “Getting out of breath”) were, however, internally consistent (see Table 1). Scale scores were therefore formed by calculating the mean, resulting in higher scores reflecting more cardiovascular symptoms.

Finally, the scree plot associated with a principal components analysis indicated one common factor underlying the “Menstrual Cycle Symptoms” scale.

The 14 items that loaded .50 to .82 on this common factor were related to cognitive performance (e.g., "Poor concentration," "Difficulty concentrating," "Distractibility," "Decreased efficiency"). These items explained 37% of the variance in the inter-item correlation matrix. After deleting two items with low item-total correlations, the remaining 12 items formed an internally consistent measure of premenstrual cognitive symptoms (see Table 1). Therefore, participants' menstrual cycle scores were formed by calculating their mean response to these 12 internally consistent items, with higher scores indicating more premenstrual symptoms.

Descriptive statistics and correlations among the predictor variables.

As shown in Table 2, on average, these participants reported just over two experiences of childhood emotional abuse. Sixty-five women (42.5%) reported from zero to five experiences of emotional abuse and 88 women (57.5%) reported from six to 30+ such experiences.

On average, participants also reported being spanked four times before the age of 16. Sixty-two women (41.2%) reported being spanked zero to ten times and 51 women (33.3%) reported being spanked 11 to 301+ times. Further, sixty-two women (40.5%) also indicated that they had been struck with sufficient force to cause bruising, bleeding and/or broken bones an average of 37 times. Participants were typically six years old when this form of physical abuse began and 14 years old when it stopped, indicating an average duration of almost eight years ($M = 7.96$, $SD = 5.67$ years). This form of physical abuse was most commonly perpetrated by multiple perpetrators ($n = 23$, 37.7% of those who experienced such abuse) or fathers and stepfathers ($n = 21$, 34.4%), followed by mothers or stepmothers ($n = 9$, 14.8%), brothers or other male relatives ($n = 6$, 9.8%) and sisters ($n = 1$, .02%). Of

Table 2

Descriptive Statistics for Abuse- and Trauma-Related Predictor Variables

Measure	Range	<i>M</i>	<i>SD</i>
Familial emotional abuse	0 – 6	2.26	1.48
Familial physical abuse			
Scaled items	0 – 6	1.43	1.58
Spanking	0 – 11	4.20	3.34
Bruising – frequency	0 – 1000	37.23	135.74
Bruising – age at onset	1 – 15	6.44	3.95
Bruising – age at offset	6 – 34	14.32	3.65
Medical attention - frequency	0 – 301	4.37	30.97
Medical attention - age at onset	1 – 17	7.50	3.99
Medical attention - age at offset	1 – 34	13.07	7.36
Familial sexual kissing			
Frequency	8 – 1000	78.04	146.28
Kissing with force	0 – 4	1.81	1.62
Age at onset	2 – 15	7.78	3.72
Age at offset	5 – 20	12.96	3.48
Number of perpetrators	0 – 10	1.58	1.52

Table 2 (cont'd)

Descriptive Statistics for Abuse- and Trauma-Related Predictor Variables

Measure	Range	<i>M</i>	<i>SD</i>
Familial sexual touching			
Frequency	1 – 3000	75.02	355.17
Touching with force	0 – 4	1.88	1.48
Age at onset	1 – 14	6.62	3.33
Age at offset	4 – 19	12.53	3.69
Number of perpetrators	1 – 10	1.78	1.50
Familial sexual intercourse			
Frequency	0 – 3000	53.34	325.05
Intercourse with force	0 – 4	2.26	1.64
Age at onset	3 – 16	7.53	4.00
Age at offset	6 – 27	12.58	4.11
Number of perpetrators	1 – 6	1.58	1.13
Other Life Trauma	0 – 10	3.20	2.36

these women experiencing severe physical abuse to the point of bruising, bleeding and/or broken bones, only 16 (25.8%) indicated that authorities and/or child support services had at some point been informed of the abuse.

Of the 62 women reporting severe physical abuse, 18 (29%) reported having been injured to the extent of requiring medical attention or hospitalization. On average, these women reported four such incidents between the ages of seven and 17 years. Therefore, these women endured extreme physical abuse for an average of six and a half years ($SD = 8.29$). This form of physical abuse was most commonly perpetrated by fathers or stepfathers ($n = 8$, 44.4% of those experiencing this form of physical abuse), mothers or stepmothers ($n = 4$, 22.2%), another male family member (i.e., brother, uncle or grandfather) ($n = 3$, 16.7%) or multiple perpetrators ($n = 3$, 16.7%).

In response to the questions regarding their experiences of familial childhood sexual abuse, 45 women (29.4% of the total sample) reported being kissed in a sexual manner by a family member(s). Among these women, this experience occurred an average 78 times, beginning at the age of eight and continuing to the age of 13, and was perpetrated by one to two family members. Typically this sexual kissing was perpetrated by a nonparental male relative ($n = 19$, 42.2%), followed by fathers or stepfathers ($n = 13$, 28.9%), multiple perpetrators ($n = 10$, 22.2%) or sisters ($n = 1$, .02%). Moreover, of the 45 women reporting experiences of familial sexual kissing, 34 women (75.6%) reported being kissed with physical force that, on average, occurred often.

A third of the sample ($n = 52$, 34.0%) reported being touched in a sexual manner by a family member. These women reported that such abuse occurred an

average of 75 times, from the ages of six to 12, and was perpetrated by one family member, typically fathers, stepfathers, other male relatives ($n = 34$, 65.4%) or multiple family members ($n = 17$, 32.7%). Forty-three of these women (87%) reported being touched with physical force that, on average, occurred often.

Thirty-nine women (25.5% of the total sample) reported experiences of familial sexual intercourse, perpetrated, on average, 53 times from age seven to age 12 by, on average, one perpetrator, typically an uncle, grandfather or brother ($n = 17$, 43.6% of those reporting familial sexual intercourse), a father or stepfather ($n = 11$, 28.2%) or multiple family members ($n = 7$, 17.9%). Penetrative sexual abuse was also perpetrated by a mother or sister ($n = 2$, 5.1%). Overall, 32 of these women (82.1%) reported that this form of abuse was typically perpetrated with force.

Finally, participants reported that the Stressful Life Experiences Screening-Short Form (SLES) items were, on average, 'A little like my experiences,' with 20% of the participants reporting no to little life trauma other than child abuse, whereas 60% experienced some life trauma other than child abuse, and approximately 20% experienced a great deal of life trauma other than child abuse (see Table 2).

As shown in Table 3, participants' experiences of childhood familial emotional, physical, and sexual abuse (both frequency and force) were moderately to highly intercorrelated. Further, experiences of all types of familial abuse were moderately to highly related to experiences of other life trauma. Consistent with previous research, women who experienced one type of child abuse were likely to have experienced other types of child abuse (Leserman & Drossman, 1995; Ney et al., 1994) and were vulnerable to retraumatization later in life (Benedict et al., 1999; Dansak, 1998).

Table 3

Intercorrelations Among Predictor Variables

	Physical abuse	Sexual abuse	Sexual abuse force	Other trauma
Emotional abuse	.73**	.29**	.47**	.61**
Physical abuse	—	.36**	.44**	.54**
Sexual abuse	—	—	.16*	.23**
Sexual abuse force	—	—	—	.53**

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Note: Ns range from 146 to 153.

Descriptive statistics and correlations among the mediating variables.

Table 4 presents the descriptive statistics for women's responses on the measures of psychological distress (i.e., anger/irritability, anxious arousal, depression), assumptive beliefs (i.e., benevolence, self-worth, meaningfulness), and coping strategies (i.e., negative coping, positive coping, social support coping).

In regard to women's average scores on the three measures of psychological distress, Table 4 shows that these women rarely experienced anger/irritability, anxious arousal and depression in the last six months.⁷ Comparing these scores with published standardized norms (Briere, 1995) reveals that, as shown in Table 5, these women's anger/irritability, anxious arousal and depression scores were slightly elevated but not in the clinical range.

In regard to assumptive beliefs, these participants, on average, slightly agreed that the world and people are benevolent and that they themselves are worthy, and they slightly disagreed that the world is meaningful. Overall then, relative to nontraumatized samples discussed elsewhere in the literature (e.g., Janoff-Bulman, 1989a, 1989b, 1992), the women in the current study viewed the world as less meaningful but perceived the world as more benevolent and themselves as more worthy individuals than do other traumatized samples (e.g., Janoff-Bulman, 1992).

Finally, the descriptive statistics for participants' responses to the coping measures (see Table 4) reveal that these women used negative coping strategies 'a little bit' and social support and positive coping strategies 'a medium amount.' In

⁷Three participants were not included in the analyses of the anger/irritability, anxious arousal and depression TSI subscale because their atypical response score, response level score, and/or inconsistent response raw score exceeded the published norms for these validity subscales.

Table 4

Descriptive Statistics for Hypothesized Mediating Variables

Mediating variable	Range	<i>M</i>	<i>SD</i>
TSI Anger/Irritability	0 – 27	12.96	7.09
TSI Anxious Arousal	0 – 24	11.65	5.85
TSI Depression	0 – 24	11.64	7.53
Assumptive Beliefs Scale			
Benevolence	1 – 6	4.19	0.99
Meaningfulness	1 – 6	3.36	0.80
Self-worth	1 – 6	4.12	0.96
Brief Cope Scale			
Negative coping	1 – 4	1.84	0.58
Positive coping	1 – 4	2.88	0.60
Social support coping	1 – 4	2.85	0.72

Note: *Ns* range from 150 to 153.

Table 5

*Participants' Anger/Irritability, Anxious Arousal and Depression Scores
Compared to Norms*

Subscale	Current study		Norm	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Anger/Irritability	12.96	7.09	8.31	6.24
Anxious arousal	11.65	5.85	7.68	5.22
Depression	11.64	7.59	7.10	6.13

Note: *N* = 149 participants aged 18 to 54 years. Norms are for participants of the same age. Only 4 participants in this sample were older than 54 years. The mean scores of these older participants were slightly, but not clinically, higher than the corresponding standardization sample means.

comparison to descriptive statistics reported with other university and community samples (e.g., Carver & Scheier, 1994; Carver et al., 1989; Gomez et al., 1999; O'Brien & DeLongis, 1996), the women in the current study reported less frequent use of negative coping strategies, but also less frequent use of social support and positive coping strategies.

As shown in Table 6, participants' responses to the measures of the hypothesized mediating variables were interrelated. Anger/irritability, anxious arousal and depression were not only highly positively intercorrelated, but were also moderately to highly negatively related to assumptive beliefs in benevolence and self-worth, but were only weakly or nonsignificantly related to beliefs in the meaningfulness of the world. Finally, anger/irritability, anxious arousal and depression were also moderately to strongly positively related to negative coping, but independent of social support and positive coping. Therefore, three of the hypothesized mediating variables did not have strong patterns of intercorrelations with the other mediators. Specifically, the assumptive belief in meaningfulness and two coping strategies (positive coping and social support coping) were not consistently interrelated with the other mediators. The remaining two assumptive beliefs, namely benevolence and self-worth, were moderately negatively correlated with women's use of negative coping strategies and moderately negatively correlated with women's psychological distress. Thus, women who believed more strongly in benevolence and self-worth were less likely to engage in negative coping strategies and less likely to experience anger/irritability, anxious arousal and depression.

Descriptive statistics and correlations among the criterion variables.

Table 6

Intercorrelations Among the Hypothesized Mediating Variables

	Anxious arousal	Assumptive beliefs				Coping strategies		
		Depression	Benevolence	Self- worth	Meaning	Negative	Positive	Social support
Anger/ irritability	.69***	.63***	-.35***	-.39***	-.09	.42***	-.16	.09
Anxious arousal	—	.74***	-.41***	-.50***	-.25**	-.22**	-.14	.03
Depression	—	—	-.49***	-.66***	-.24**	.51***	-.12	-.06
Assumptive beliefs								
Benevolence	—	—	—	.50***	.28***	-.22**	.35***	.24**
Self-worth	—	—	—	—	.24**	-.53***	.45***	.21**
Meaning	—	—	—	—	—	-.12	.07	.03
Coping								
Negative	—	—	—	—	—	—	-.30***	-.04
Positive	—	—	—	—	—	—	—	.33***

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Note: Ns range from 126 to 152.

The descriptive statistics for the criterion variables are presented in Table 7. In regard to symptoms, participants reported that in the last six months they experienced digestive symptoms between 'only occasionally' to 'about once a month,' cardiovascular symptoms between 'never' to 'occasionally,' genitourinary symptoms 'very rarely' and premenstrual cognitive symptoms 'rarely.'

Despite the infrequency of their symptoms, on average these women reported that their health symptoms were associated with 'some' functional impairment in work/school performance, sleep, social life, sex life, life overall and number of sick days in the last six months.

In view of the functional limitations imposed by their symptoms, it is not surprising that these respondents reported, on average, 12 visits to healthcare professionals for routine medical check-ups (i.e. dental check-ups, pelvic exams and pap smears) or for other reasons over the last year. They also estimated that they had attended, on average, four routine medical check-ups in the last five years, including an average of four dental check-ups, three pelvic exams and three pap smears. They also reported experiencing 'a little' to 'some' psychological and physical discomfort during treatment.

Overall, the women in the current study reported physical health symptoms that were less severe than those reported for clinical samples with diagnosed syndromes (e.g., Rosenthal, Wruble, Rosenthal, & Edwards, 1987) but comparable to that of other community-based samples (e.g., Heppner, Kampa, & Brunning, 1987; Lahey et al., 1984; Rosenthal et al., 1987).

As indicated in Table 8, participants' responses to the various criterion variables were related. Digestive, cardiovascular, genitourinary and premenstrual

Table 7

Descriptive Statistics for Criterion Variables

Criterion variable	Range	<i>M</i>	<i>SD</i>
Digestive symptoms	0 – 5	1.59	1.10
Cardiovascular symptoms	0 – 5	.91	.91
Genitourinary symptoms	0 – 5	.32	.53
Menstrual cycle symptoms	0 – 4	.96	.96
Effects of symptoms	0 – 4	1.66	1.25
Treatment seeking	.50 – 102	11.72	17.90
Discomfort during treatment	0 – 4	1.66	1.07

Note: *Ns* range from 128 to 152.

Table 8

Intercorrelations Among the Criterion Variables

	Digestive symptoms	Genitourinary symptoms	Menstrual cycle symptoms	Effects of symptoms	Discomfort during treatment	Treatment seeking
Cardiac symptoms	.51***	.47***	.39**	.55***	.36***	.35***
Digestive symptoms	—	.51***	.46***	.58***	.45***	.39***
Genitourinary symptoms	—	—	.27**	.47***	.29**	.26**
Menstrual cycle symptoms	—	—	—	.54***	.26**	.29***
Effects of symptoms	—	—	—	—	.48***	.37***
Discomfort during treatment	—	—	—	—	—	.28**

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Note: Ns range from 125 to 151.

symptoms were moderately to highly positively intercorrelated. Similarly, each physical symptom type was moderately to highly positively correlated with effects of symptoms, amount of treatment seeking and discomfort during treatment. Further, effects of symptoms scores were moderately positively correlated with amount of treatment seeking and discomfort during treatment. Discomfort during treatment was also moderately correlated with the actual amount of treatment seeking, and in a positive direction. That is, women who reported frequent healthcare visits also experienced psychological and physical discomfort during these visits.

In sum, participants' experiences of physical health symptoms were positively related to the functional effects of these symptoms in their daily lives, and to their treatment seeking for these symptoms. However, although experiencing symptoms was positively related to treatment seeking, it was also positively related to discomfort during treatment.

Main Analyses

The primary analyses examined the correlations between the predictor, mediating and criterion variables. Path analyses (Baron & Kenny, 1986; Judd & Kenny, 1981; Pedhazzer, 1997) were then conducted to assess the viability of the hypothesized mediational model of the relations between childhood abuse and adult wellbeing.

Relations between predictor and criterion variables. The correlations between the five predictor variables (i.e., childhood familial emotional, physical and sexual abuse frequency and force, and other life trauma) and the seven criterion variables (i.e., digestive, cardiovascular, genitourinary and menstrual cycle symptoms, effects of symptoms, treatment seeking, discomfort during treatment) are

presented in Table 9. As shown there, the frequency of women's experiences of childhood familial emotional and physical abuse, and other trauma were weakly to strongly positively correlated with each of the measures of symptom frequency, effects of symptoms, treatment seeking and discomfort during treatment. The one exception to this general pattern was forcible sexual abuse, which was independent of the frequency of premenstrual symptoms. The frequency of women's experiences of familial sexual abuse did not, however, have a consistent pattern of correlations with the various criterion variables. Its only significant correlations were weakly positive with genitourinary symptoms, treatment seeking and discomfort during treatment. Given these results, the measure of sexual abuse frequency was not considered in the subsequent analyses. Thus, four of the five predictor variables, namely familial childhood emotional, physical and forcible sexual abuse, and other trauma were significantly related to the criterion variables.

Relations of the hypothesized mediating variables with predictor and criterion variables. The correlations of the hypothesized mediating variables with the predictor and criterion variables were examined to identify those that might mediate the observed predictor-criterion relations. These correlations are presented in Table 10.

First, three of the hypothesized mediating variables (beliefs in meaningfulness, positive coping, social support coping) did not correlate significantly with the predictor variables. Of the remaining predictors and mediators, each predictor variable (familial emotional, physical, forcible sexual abuse, and other trauma) correlated significantly with each mediator variable (benevolence and self-worth beliefs, negative coping, anger/irritability, anxious arousal and depression).

Table 9

Correlations Between the Predictor and Criterion Variables

Predictor variable	Criterion variable						
	Cardiac symptoms	Digestive symptoms	Genitourinary symptoms	Menstrual cycle symptoms	Effects of symptoms	Discomfort during treatment	Treatment seeking
Emotional abuse	.43***	.43***	.30***	.47***	.37***	.51***	.28**
Physical abuse	.44***	.34***	.43***	.31***	.33***	.41***	.24**
Sexual abuse	.08	.15	.38***	.03	.04	.22**	.24**
Sexual abuse force	.33***	.36***	.30***	.15	.34***	.44***	.27***
Other trauma	.39***	.37***	.37***	.31***	.33***	.41***	.25**

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Note: Ns range from 127 to 152.

Table 10

Correlations Between Predictor, Criterion and Hypothesized Mediating Variables

	Potential mediator							
	Anger/ irritability	Anxious arousal	Depression	Benevolence	Self- worth	Meaning	Negative coping	Positive coping
Predictors								
Emotional abuse	.39***	.59***	.47***	-.24**	-.27***	-.18*	.22**	.04
Physical abuse	.25**	.44***	.36***	-.33***	-.28***	-.13	.19*	-.07
Sexual abuse force	.29***	.42***	.28***	-.19*	-.24**	-.11	.07	-.03
Other trauma	.21*	.41***	.26**	-.17*	-.23**	-.13	.26**	.07
Criteria								
Cardiac symptoms	.38***	.58***	.42***	-.32***	-.25**	-.24*	.26**	-.01
Digestive symptoms	.39***	.63***	.56***	-.38***	-.36***	-.25**	.33***	-.16*

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Note: Ns range from 126 to 152.

Table 10, Con't.

Correlations Between Predictor, Criterion and Hypothesized Mediating Variables

<u>Criteria</u>	<u>Potential mediator</u>							
	<u>Anger/irritability</u>	<u>Anxious arousal</u>	<u>Depression</u>	<u>Benevolence</u>	<u>Self-worth</u>	<u>Meaning</u>	<u>Negative coping</u>	<u>Positive coping</u>
Genitourinary symptoms	.15	.43***	.35***	-.27**	-.32***	-.21*	.27**	-.04
Menstrual symptoms	.38***	.54***	.50***	-.22*	-.21*	-.15	.38***	.02
Effects of symptoms	.45***	.62***	.63***	-.41***	-.42***	-.26**	.44**	-.03
Discomfort during treatment	.32***	.52***	.34***	-.25**	-.32**	-.16*	.25**	-.05
Treatment seeking	.16*	.42***	.35***	-.15	-.20*	-.14	.06	-.02

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Note: Ns range from 126 to 152.

The one exception to this general pattern was the nonsignificant correlation between forcible sexual abuse and negative coping.

The correlations between the hypothesized mediators and the criterion variables are also presented in Table 10. Three hypothesized mediating variables (beliefs in meaningfulness, positive coping, social support coping) had few or no significant correlations with the criterion variables, just as they had with the predictor variables. Of the remaining hypothesized mediating variables, benevolence, self-worth, negative coping, anger/irritability, anxious arousal and depression were most frequently and most strongly correlated with the criterion variables.

In view of these patterns of correlations, a number of variables were eliminated as potential mediators of the trauma-wellbeing relation. Specifically, because of their weak patterns of, or nonsignificant, correlations with both the predictor and criterion variables, meaningfulness beliefs, positive coping, and social support coping were eliminated as potential mediating variables. Thus, anger/irritability, anxious arousal, depression, benevolence, self-worth and negative coping, as well as subsequent traumatization, were maintained as potential mediators of the child abuse-adult wellbeing relation.

Path analyses. A series of path analyses, one for each criterion variable, was conducted to evaluate the viability of the hypothesized mediational model. Each of these path analyses involved a series of simultaneous regression analyses. First, the measure of subsequent trauma was regressed onto the measures of child abuse. In the second set of analyses, each potential mediating variable was regressed onto the measure of subsequent trauma and child abuse. Finally, each criterion variable was regressed simultaneously onto all the potential predictors,

including the potential mediating variables, subsequent trauma and the indices of child abuse.

When the measure of subsequent trauma was regressed simultaneously onto emotional, physical and forcible sexual abuse, the three predictors collectively explained 46.2% of the variance, $F(3, 149) = 41.75, p = .000$. Tests for the individual beta weights indicated that emotional abuse, $\beta = .37, t(149) = 4.12, p = .000$, and forcible sexual abuse, $\beta = .30, t(149) = 4.28, p = .000$, made significant independent contributions to the equation, whereas physical abuse did not, $\beta = .14, t(149) = 1.52, ns$ (see Figure 2). Consistent with the findings of previous research, then, women who more frequently experienced emotional or forced sexual abuse during childhood were more likely to be retraumatized later in life. Although the relation of childhood physical abuse to subsequent trauma was nonsignificant in this analysis, the correlations between childhood physical abuse and other childhood abuse suggests that this may have stemmed from multicollinearity in this simultaneous regression analysis.

In a second set of analyses, each potential mediating variable was regressed onto the measure of subsequent trauma and child abuse. The results of these analyses, which appear in Table 11, revealed that more frequent experiences of emotional or forcible sexual abuse were associated with more frequent experiences of anger or irritability and anxious arousal, more frequent experiences of childhood emotional abuse were associated with more frequent experiences of depression and less self-worth, more frequent experiences of childhood physical abuse were associated with less endorsement of the benevolence of the world, and more

Figure 2

Effects of Childhood Abuse on Later-Life Traumatization

*** $p = < .001$.

Table 11

*Results of Simultaneous Regression of Potential Mediating Variables
Onto Measures of Child Abuse and Other Trauma*

Mediating variable	Predictor	β	t
Anger/ irritability	Emotional abuse	0.43	3.62***
	Physical abuse	0.08	-.75
	Forced sexual abuse	0.19	2.11*
	Other trauma	0.11	-1.12
	Total $R^2 = .180, F(4,147) = 7.83^{***}$		
Anxious arousal	Emotional abuse	0.49	4.70**
	Physical abuse	-.00	-.08
	Forced sexual abuse	0.19	2.29*
	Other trauma	0.01	0.12
	Total $R^2 = .371, F(4,146) = 20.90^{***}$		
Depression	Emotional abuse	0.43	3.74***
	Physical abuse	0.04	0.39
	Forced sexual abuse	0.11	1.26
	Other trauma	0.09	-.94
	Total $R^2 = .223, F(4,147) = 10.27^{***}$		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 11, Con't.

*Results of Simultaneous Regression of Potential Mediating Variables
Onto Measures of Child Abuse and Other Trauma*

Mediating variable	Predictor	β	t
Benevolence	Emotional abuse	-.02	-0.18
	Physical abuse	-.32	-2.73***
	Forced sexual abuse	-.06	0.67
	Other trauma	0.05	0.47
	Total $R^2 = .116, F(4,148) = 4.75^{***}$		
Self-worth	Emotional abuse	-.07	-0.53***
	Physical abuse	-.17	-1.42
	Forced sexual abuse	-.12	-1.26
	Other trauma	-.03	-0.27
	Total $R^2 = .100, F(4,148) = 4.06^{**}$		
Negative coping	Emotional abuse	0.09	0.70
	Physical abuse	0.04	0.35
	Forced sexual abuse	-.11	-1.17
	Other trauma	0.22	1.99*
	Total $R^2 = .068, F(4,149) = 2.65^*$		

$p < .05$ ** $p < .01$ *** $p < .001$.

frequent experiences of trauma later in life were associated with more frequent use of negative coping strategies.

As shown in Table 10, the simple correlations between each mediating variable, each child abuse type and other trauma were significant. However, as shown in Table 11, not all abuse types and other trauma significantly predicted the hypothesized mediating variables. This result might be explained by multicollinearity among the predictor variables ($r_s = .29$ to $.73$, $p_s = .01$ to $.000$; see Table 3). Simultaneous regression analysis on intercorrelated variables considers only independent or unique effects of predictors rather than their shared variance; therefore, the initial intercorrelations among the predictors may explain why not all measures of abuse and other trauma were significant in these analyses. Nevertheless, the variance collectively explained in each mediator was significant and, in the case of anxious arousal and depression, considerable (37.1% and 22.3%).

In sum, with the exception of its relation to negative coping, subsequent trauma did not mediate the relations between childhood abuse and the hypothesized mediating variables. Rather, childhood abuse had direct effects on adult anger-irritability, anxious arousal, depression and beliefs in benevolence (in a negative direction) (see Figure 3).

The last set of regression analyses examined the extent to which the predictor and hypothesized mediating variables accounted for women's criterion variable scores. The standardized regression coefficients for each significant path in the hypothesized model predicting digestive symptoms are presented in Figure 4. When participants' digestive symptom scores were regressed simultaneously onto

Figure 3

Effects of Predictor Variables on Hypothesized Mediating Variables

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Figure 4

Path Analyses of the Predictors of Digestive Symptoms

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

their scores on the potential mediating variables, subsequent trauma and the indices of child abuse, these variables collectively explained 42.0% of the variance, $F(10, 144) = 11.41, p = .000$. Examining the tests for the individual standardized beta weights revealed that anxious arousal, $\beta = .44, t(144) = 3.80, p = .000$, and depression, $\beta = .24, t(144) = 1.92, p = .05$, predicted digestive symptoms, whereas anger/irritability, $\beta = -.15, t(144) = -1.65, ns$, benevolence, $\beta = -.15, t(144) = -1.89, ns$, self-worth, $\beta = .09, t(144) = .88, ns$, negative coping, $\beta = .06, t(144) = .69, ns$, emotional abuse, $\beta = .09, t(144) = .79, ns$, forcible sexual abuse, $\beta = .08, t(144) = .99, ns$, physical abuse, $\beta = -.10, t(144) = -1.03, ns$, and other trauma, $\beta = .08, t(144) = .88, ns$, did not. That is, participants with more anxious arousal and depression were more likely to have digestive symptoms. Previously significant relations between childhood abuse and digestive symptoms were no longer significant with the effects of anxious arousal and depression controlled. Therefore, the effects of childhood abuse on adult digestive symptoms were entirely mediated by two hypothesized mediating variables, namely anxious arousal and depression.

The standardized regression coefficients for each significant path in the hypothesized model predicting cardiovascular symptoms are presented in Figure 5. When participants' cardiovascular symptom scores were regressed simultaneously onto their scores on the potential mediating variables, subsequent trauma and the indices of child abuse, these variables collectively explained 34.1% of the variance, $F(10, 144) = 8.46, p = .000$. In this case, anxious arousal, $\beta = .46, t(144) = 3.78, p = .000$, predicted cardiovascular symptoms, whereas depression, $\beta = .06, t(144) = .49, ns$, anger/irritability, $\beta = .01, t(144) = .14, ns$, benevolence, $\beta = -.08, t(144) = -.99, ns$,

Figure 5

Path Analysis of the Predictors of Cardiovascular Symptoms

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

self-worth, $\beta = .09$, $t(144) = .95$, *ns*, negative coping, $\beta = -.04$, $t(144) = -.39$, *ns*, emotional abuse, $\beta = -.11$, $t(144) = -.86$, *ns*, forcible sexual abuse, $\beta = .01$, $t(144) = .04$, *ns*, physical abuse, $\beta = .19$, $t(144) = 1.77$, *ns*, and other trauma, $\beta = .15$, $t(144) = 1.51$, *ns*, did not. That is, participants with more anxious arousal were more likely to have cardiovascular symptoms. Because the previously significant relations between childhood abuse and cardiovascular symptoms were no longer significant with the effects of anxious arousal controlled, the effects of childhood abuse on adult cardiovascular symptoms were entirely mediated by anxious arousal.

The standardized regression coefficients for each significant path in the hypothesized model predicting genitourinary symptoms are presented in Figure 6. When participants' genitourinary symptom scores were regressed simultaneously onto their scores on the potential mediating variables, subsequent trauma and the indices of child abuse, these variables collectively explained 28.3% of the variance, $F(10, 145) = 6.71$, $p = .000$. Examining the tests for the individual standardized beta weights revealed that anxious arousal, $\beta = .41$, $t(145) = 3.15$, $p = .002$, anger/irritability, $\beta = .28$, $t(145) = 2.58$, $p = .01$, and physical abuse, $\beta = .32$, $t(145) = 2.89$, $p = .005$, predicted genitourinary symptoms, whereas depression, $\beta = .10$, $t(145) = .74$, *ns*, benevolence, $\beta = -.02$, $t(145) = -.21$, *ns*, self-worth, $\beta = -.05$, $t(145) = -.51$, *ns*, negative coping, $\beta = .06$, $t(145) = .64$, *ns*, emotional abuse, $\beta = .20$, $t(145) = 2.00$, *ns*, forcible sexual abuse, $\beta = .08$, $t(145) = .62$, *ns*, and other trauma, $\beta = .17$, $t(145) = 1.70$, *ns*, did not. Thus, participants with more anxious arousal and anger/irritability were more likely to have genitourinary symptoms. Because the previously significant relations between childhood emotional and forcible sexual

Figure 6

Path Analysis of the Predictors of Genitourinary Symptoms

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed).

abuse and genitourinary symptoms were no longer significant with the effects of anger/irritability and anxious arousal controlled, the effects of childhood emotional and forcible sexual abuse on genitourinary symptoms were entirely mediated by anger/irritability and anxious arousal. However, the direct effects of physical abuse on genitourinary symptoms remained significant with the effects of the hypothesized mediating variables and subsequent trauma controlled.

The standardized regression coefficients for each significant path in the hypothesized model predicting premenstrual symptoms are presented in Figure 7. When participants' premenstrual symptom scores were regressed simultaneously onto their scores on the potential mediating variables, subsequent trauma and the indices of child abuse, these variables collectively explained 33.8% of the variance, $F(10, 122) = 7.22, p = .000$. Examining the tests for the individual standardized beta weights revealed that anxious arousal, $\beta = .29, t(122) = 2.17, p = .03$, predicted premenstrual symptoms, whereas anger/irritability, $\beta = -.06, t(122) = -.59, ns$, depression, $\beta = .25, t(122) = 1.82, ns$, benevolence, $\beta = -.01, t(122) = -.11, ns$, self-worth, $\beta = .21, t(122) = 1.95, ns$, negative coping, $\beta = .19, t(122) = 1.94, ns$, emotional abuse, $\beta = .21, t(122) = 1.62, ns$, forcible sexual abuse, $\beta = -.09, t(122) = -1.01, ns$, physical abuse, $\beta = -.03, t(122) = -.27, ns$, and other trauma, $\beta = .04, t(122) = .36, ns$, did not. Thus, participants with more anxious arousal were more likely to have premenstrual symptoms. Because the previously significant relations between childhood abuse and premenstrual symptoms were no longer significant with the effects of anxious arousal controlled, the effects of childhood abuse on premenstrual symptoms were entirely mediated by anxious arousal.

Figure 7

Path Analysis of the Predictors of Premenstrual Symptoms

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

The standardized regression coefficients for each significant path in the hypothesized model predicting effects of symptoms are presented in Figure 8. When participants' effects of symptoms scores were regressed simultaneously onto their scores on the potential mediating variables, subsequent trauma and the indices of child abuse, these variables collectively explained 46.0% of the variance, $F(10, 133) = 12.29, p = .000$. Examining the tests for the individual standardized beta weights revealed that anxious arousal, $\beta = .28, t(133) = 2.43, p = .01$, and depression, $\beta = .36, t(133) = 2.82, p = .006$, predicted effects of symptoms, whereas anger/irritability, $\beta = -.10, t(133) = -1.05, ns$, benevolence, $\beta = -.15, t(133) = -1.85, ns$, self-worth, $\beta = .15, t(133) = 1.51, ns$, negative coping, $\beta = .21, t(133) = 2.40, ns$, emotional abuse, $\beta = -.07, t(133) = -.67, ns$, forcible sexual abuse, $\beta = .13, t(133) = 1.56, ns$, physical abuse, $\beta = -.02, t(133) = -.22, ns$, and other trauma, $\beta = .06, t(133) = .68, ns$, did not. Thus, participants with more anxious arousal and depression were more likely to experience functional effects of their symptoms. Because the previously significant relations between childhood abuse and effects of symptoms were no longer significant with the effects of anxious arousal and depression controlled, the effects of childhood abuse on effects of symptoms were entirely mediated by anxious arousal and depression.

The standardized regression coefficients for each significant path in the hypothesized model predicting treatment seeking are presented in Figure 9. When participants' treatment seeking scores were regressed simultaneously onto their scores on the potential mediating variables, subsequent trauma and the indices of child abuse, these variables collectively explained 12.5% of the variance, $F(10, 143) = 3.04, p = .002$. Examining the tests for the individual standardized beta weights

Figure 8

Path Analysis of the Predictors of Effects of Symptoms

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Figure 9

Path Analysis of the Predictors of Treatment Seeking

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

revealed that anxious arousal, $\beta = .39$, $t(143) = 2.73$, $p = .007$, predicted treatment seeking, whereas anger/irritability, $\beta = -.16$, $t(143) = -1.43$, *ns*, depression, $\beta = .17$, $t(143) = 1.16$, *ns*, benevolence, $\beta = .07$, $t(143) = .67$, *ns*, self-worth, $\beta = -.09$, $t(143) = -.73$, *ns*, negative coping, $\beta = -.16$, $t(143) = -1.38$, *ns*, emotional abuse, $\beta = .00$, $t(143) = .00$, *ns*, forcible sexual abuse, $\beta = .10$, $t(143) = 1.03$, *ns*, physical abuse, $\beta = -.06$, $t(143) = -.45$, *ns*, and other trauma, $\beta = .01$, $t(143) = .09$, *ns*, did not. Thus, participants with more anxious arousal sought more treatment. Because the previously significant relations between childhood abuse and treatment seeking were no longer significant with the effects of anxious arousal controlled, the effects of childhood abuse on adult treatment seeking were entirely mediated by anxious arousal.

The standardized regression coefficients for each significant path in the hypothesized model predicting discomfort during treatment are presented in Figure 10. When participants' discomfort scores were regressed simultaneously onto their scores on the potential mediating variables, subsequent trauma and the indices of child abuse, these variables collectively explained 34.10% of the variance, $F(10, 145) = 8.50$, $p = .000$. Examining the tests for the individual standardized beta weights revealed that anxious arousal, $\beta = .31$, $t(145) = 2.50$, $p = .01$, emotional abuse, $\beta = .26$, $t(145) = 2.14$, $p = .03$, and forcible sexual abuse, $\beta = .20$, $t(145) = 2.34$, $p = .02$, predicted psychological discomfort during treatment, whereas anger/irritability, $\beta = -.07$, $t(145) = -.66$, *ns*, depression, $\beta = -.19$, $t(145) = -1.80$, *ns*, benevolence, $\beta = -.04$, $t(145) = -.48$, *ns*, self-worth, $\beta = -.10$, $t(145) = -.95$, *ns*, negative coping, $\beta = .06$, $t(145) = .66$, *ns*, physical abuse, $\beta = -.02$, $t(145) = -.20$, *ns*,

Figure 10

Path Analysis of the Predictors of Discomfort During Treatment

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

and other trauma, $\beta = .03$, $t(145) = .34$, *ns*, did not. Thus, participants with more anxious arousal were more likely to experience discomfort during treatment. In this case, however, the previously significant relations between childhood emotional and forcible sexual abuse and discomfort remained significant with the effects of the hypothesized mediating variables and subsequent trauma controlled. Therefore, childhood emotional and forcible sexual abuse had direct, unmediated effects on adult discomfort during treatment.

In sum, the relations between childhood abuse and adult physical health status were not mediated by benevolence, self-worth or negative coping. Rather, the relations between childhood abuse and various physical health symptoms and effects of symptoms were entirely mediated by anxious arousal and/or anger/irritability and/or depression. Further, childhood emotional and forcible sexual abuse had direct, nonmediated effects on discomfort during treatment.

Alternative explanations of path analyses. The correlations between women's demographic characteristics and their scores on the predictor, mediating and criterion variables were examined to identify any confounds that might provide alternative explanations for the results of the path analyses. Possible relations were assessed between abuse, age (i.e., a demographic variable expected to positively correlate with health concerns), and employment-, student- and relational-status.

First, age was moderately positively correlated with emotional abuse history, physical abuse history, and with overall experience of other trauma ($r_s = .28$ to $.33$, $p_s = .000$), but not with forcible sexual abuse ($r = .14$, *ns*). That is, the older women in the sample reported more frequent experiences of childhood emotional and

physical abuse and, as would be expected, more stressful life experiences overall.

However, the older women did not report more experiences of forcible sexual abuse.

Further, there were no significant relations between women's abuse histories, experiences of other trauma, reporting full-time or part-time employment status, being on social assistance or unemployed, or being a full-time homemaker ($r_s = .01$ to $.14$, ns). However, women with more severe abuse histories and/or experiences of other trauma reported more disability ($r_s = .21$ to $.31$, $p_s = .01$ to $.000$). However, this relationship may stem from the increased age of the women reporting abuse and other trauma histories, as age and disability were similarly correlated ($r = .20$, $p = .01$).

Overall, there was no relationship between student status and abuse histories ($r_s = -.04$ to $.14$, ns) but there was a weak negative relationship between student status and total other life trauma ($r = -.23$, $p = .005$). This finding is reflective of the fact that women reporting full-time student status were younger than the other women in the study (i.e., age was strongly negatively correlated with full-time student status, $r = -.52$, $p = .000$) and therefore less likely to have experienced as many incidents of total other life trauma.

Relational status was also slightly positively related to abuse histories and/or experiences of other lifetime trauma ($r_s = .20$ to $.23$, $p_s = .01$ to $.005$), with the abused women reporting more marriage, divorce, or living with a partner status, rather than single or dating status. This finding is likely reflective of the more mature age-range of the average woman reporting a history of abuse or other trauma (i.e., age correlated moderately positively with marriage, divorce or living with a partner status, $r = .35$, $p = .000$).

In sum, although there were some anticipated associations between demographic variables such as age, disability and the key predictor variables in the current study (abuse and other trauma histories), on average, the demographic variables were only weakly related to abuse and other trauma. Finally, the demographic variables were not related to either the mediating variables ($r_s = .05$ to $.13$, $p_s = ns$) or the criterion variables ($r_s = -.00$ to $.15$, $p_s = ns$). Therefore, the path analytic findings regarding relations between abuse/other trauma and health outcomes were not confounded by demographic variables.

Analyses of Treatment Avoidance

On average, women reported that they avoided healthcare visits 'a little bit' to 'somewhat' ($M = 1.23$, $SD = 1.26$). However, 30 women (20.1%) reported that they avoid healthcare visits 'quite a bit' to 'a great deal.' Therefore, some healthcare avoidance was not uncommon. Moreover, healthcare avoidance was positively, albeit weakly, correlated with experiences of childhood forcible sexual abuse ($r = .22$, $p < .01$), and experiences of other trauma ($r = .22$, $p < .01$). As noted earlier (see Table 8), women's treatment seeking was positively associated with the frequency of their symptoms and the functional impairment stemming from the symptoms. In addition, however, women's treatment avoidance was also associated with the frequency of their genitourinary ($r = .27$, $p < .001$) and digestive symptoms ($r = .29$, $p < .001$), although not with the functional impairment stemming from these symptoms ($r = .10$, ns). These paradoxical findings (i.e., relations between genitourinary and digestive symptoms and treatment avoidance) are no doubt due to the fact that, as noted earlier, more frequent experiences of child abuse were also associated with more discomfort during treatment and treatment seeking ($r_s = .24$ to

.49, $ps = .01$ to $.000$). (Correlations between women's avoidance of treatment and childhood abuse, other trauma, symptoms, effects of symptoms, treatment seeking and discomfort during treatment are presented in Tables 12 and 13.)

To further explore the reasons for women's treatment avoidance, a thematic analysis (Luborsky, 1994) was conducted on the responses of the 89 women (58.2%) who answered the two open-ended questions asking, "If applicable, please explain why you avoid doctor visits," and, "If applicable, please explain why you avoid dental visits." Of these, 67 women (75.3%) were survivors of some form of trauma. Three coders independently analyzed the content of these women's responses for emergent themes and one *a priori* theme, namely the extent to which women's avoidance was associated with experiences of retraumatization during treatment (e.g., Finkelhor & Browne, 1985). Following a multi-stage process of analyzing women's reasons for treatment avoidance, the three coders achieved an average inter-rater reliability (i.e., the two other coders with each other, and each of the second coders with the primary researcher) of 89% for instances of the *a priori* retraumagenics code, and 88% for instances of the emergent codes. Strings of data that evidenced several reasons, or unique combinations of reasons, accounted for some of the inter-rater variability in coding.

In addition to the *a priori* theme of retraumatization during treatment (the most frequent reason for treatment avoidance), the following themes were apparent in the women's responses (listed from most to least frequent): Pain/fear; self-healing or self-neglect; dislike and/or mistrust of one's healthcare provider; financial concerns; extreme discomfort; inconvenience of health care visits (i.e., time required; distant location of healthcare provider's office); avoiding bad news; and extreme

Table 12

Correlations Between Treatment Avoidance and Predictor Variables

	Predictor variable			
	Emotional abuse	Physical abuse	Forced sexual abuse	Other trauma
Treatment avoidance	.15	.14	.22**	.22**

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed)

Note: Ns range from 127 to 152.

Correlations Between Treatment Avoidance and Criterion Variables

Note: Ns range from 127 to 152.

discouragement. Overall, these emergent themes were found in both the responses of survivors and nonabused women; however, extreme discomfort and/or extreme discouragement during treatment were specific to survivors' responses (see Table 14).

First, because of the potentially invasive nature of standard gynaecologic examinations (e.g., internal pelvic exams, pap smears) and standard dental examinations, it was anticipated that women might report healthcare avoidance due to the potentially retraumagenic dynamics of the visits themselves. There were 28 instances of this *a priori* theme in the responses of 28 women (32% of those avoiding treatment), each of whom were survivors of childhood abuse.

One 38 year old Anglo-Canadian survivor of child emotional, physical and sexual abuse said simply, "I avoid any appointments requiring gynaecology, e.g., pelvic exams, pap smears." A 47 year old survivor of child emotional, physical and sexual abuse said, "I hate doctors, do not like to be touched or examined" and in regard to dental visits, "I gag during routine check ups." Similarly, a 20 year old Vietnamese-Canadian survivor of child emotional and sexual abuse indicated that, "I don't like to be touched or examined by strangers." Another 35 year old survivor of child emotional, physical and sexual abuse discussed in greater depth the ways in which medical visits make her feel as she did following her abuse. She explained by saying medical visits make her feel a sense of, "Nervousness, feeling vulnerable, post-trauma-like." Another 31 year old Anglo-Canadian survivor of child physical and sexual abuse discussed pelvic exams as reminiscent of past abuse, and concluded that, overall, "pelvic exams are so unpleasant that I did cancel an

Table 14

*Treatment Avoidance Themes and Percentage of Abused
and Nonabused Participants*

Theme	Percentage abused	Percentage nonabused
Retraumagenic dynamics	100%	0%
Fear of pain during treatment	65%	35%
Self-healing or self-neglect	70%	30%
Dislike or mistrust of healthcare providers	85%	15%
Financial concerns	75%	25%
Extreme discomfort	100%	0%
Inconvenience	66%	33%
Avoiding bad news	20%	80%
Extreme discouragment	100%	0%

appointment; but, then went later on. If I can put these exams off, without too much being 'lost,' then I will sometimes."

Other survivors also reported the experience of retraumagenic dynamics in the context of healthcare. Usually this was expressed as a function of the mechanics of various physical exams, such as breast exams or internal pelvic exams. A 30 year old Anglo-Canadian survivor of child emotional, physical and sexual abuse summed up by saying that, "I don't like pelvic exams (e.g., find them invasive and I don't like all the sex-related questions even though my M.D. is great – an empathic, efficient woman)."⁸ Another 23 year old survivor of child emotional and sexual abuse indicated that "pelvic exams and paps are hard for me because I feel really vulnerable to someone who has that power over me." However, one woman also reported an experience of actual abuse during a routine medical appointment. She noted that her avoidance of medical treatment was a direct result of this assault: "I was sexually assaulted by a medical technician and am afraid of male medical staff. I can't seemingly put the effort forth to find a responsible female doctor."

A 40 year old Anglo-Canadian survivor of child emotional, physical and sexual abuse said of her experiences with dental visits, "I have an aversion to things in my mouth... I feel anxious and uncomfortable. My current dentist prescribes medication (Diazepam) prior to my visit. I now go more often." Another 19 year old abuse survivor also discussed feelings of discomfort and disconnection in the context of having dental procedures: "I hate knowing that they can see everything in your

⁸ This comment constituted one of only two positive notes made in the entire data set regarding positive, 'good' physicians. While the prevalence of negative commentary would be expected given that the questionnaire asked about reasons for healthcare avoidance, the almost complete dearth of commentary regarding some positive aspects of interaction with healthcare professionals was beyond what was anticipated.

mouth whenever you aren't physically able to see what's going on. It makes me uncomfortable and also wishing I didn't have to be there."

Other women expressed more than feeling uncomfortable; instead, they discussed retraumatizing levels of discomfort ranging from feeling highly anxious, to trapped, to dissociated. A 53 year old survivor of child emotional, physical and sexual abuse stated that her avoidance of dental exams had to do with the following abuse-reminiscent experiences: "I feel trapped, unable to express myself – no control." Similarly, a 25 year old survivor of child emotional, physical and sexual abuse noted, "I loathe having objects in my mouth and I panic and feel trapped." A 30 year old Anglo-Canadian survivor of child emotional, physical, and sexual abuse said explicitly of her abuse-related reasons for dental care avoidance, "I don't like being pinned on my back by a man wielding sharp objects." Similarly, a 31 year old Anglo-Canadian survivor of child physical and sexual abuse said, "I hate having needles stuck in my mouth. I hate having a man (usually) tell me I need to floss more."

Some women explicitly discussed their abuse-related difficulties controlling a strong gag reflex. In this regard, a 36 year old Anglo- and Franco-Canadian survivor of child sexual abuse wrote, "I now have a very strong gag reflex – unpleasant," and a 22 year old survivor of child emotional and sexual abuse asserted, "I hate to have work done in my mouth. I gag very easily and am very uncomfortable." A brief paragraph written by a 36 year old Anglo-Canadian survivor of child emotional, physical and sexual abuse succinctly described the retraumagenic dynamics inherent in dental check-ups: "I hate having my neck and throat touched. I had a lot of oral rapes as a child and hate anything near or in my mouth that isn't in *my* hand.

For most of the abuse, I was lying down...No matter how relaxed or grounded [during dental visits], or who I bring with me (friend), I get dizzy, nauseous, my head hurts. I come out disoriented, and if I'm alone it can take me a long time to get home because I keep dissociating."

Beyond the most frequent reason for avoidance (retraumagenic dynamics during treatment), participants indicated that a primary reason for avoiding healthcare visits involved their previous experiences of physical pain during such visits and their fear of experiencing more pain in future visits. This reason was cited by 25 participants (28.1% of those avoiding treatment). These instances were summed up by the brief statements of a 30 year old Anglo-Canadian survivor of child emotional, physical and sexual abuse regarding her avoidance of dental visits: "They hurt!" Another 47 year old survivor of child emotional, physical and sexual abuse also stated succinctly that she avoids dental visits because they are "too painful."

Other participants elaborated the link between treatment avoidance and fear of pain. For example, a 23 year old survivor of child emotional, physical and sexual abuse explained that she avoids dental visits because, "I feel a great deal of physical pain and fear when I am in a dental office and therefore fear going to them." One 21 year old nonabused Chinese-Canadian student noted, "I am afraid of pain," whereas another 25 year old nonabused woman stated, "I do not like pain in my mouth and I'm a bit scared." A 24 year old Anglo-Canadian nonabused women indicated that, "I find dental appointments very uncomfortable; usually my teeth really hurt, and my gums bleed during and afterwards."

Other survivors, however, discussed the pain associated with dental visits in equally succinct, but more emotionally charged terms. For example, after discussing her experiences with medical doctors whom she believed had little experience in dealing with abuse-related health concerns, a 39 year old survivor of emotional, physical and sexual abuse summed up her reasons for also avoiding dental procedures: "I simply have no more reserves for pain." Other participants qualified the level of pain experienced, as it depends upon particular dental procedures. For example, one 22 year survivor of child emotional and sexual abuse said: "When extensive work needs to be done (i.e., fillings), I feel excruciating pain," whereas another 39 year old survivor of child physical and sexual abuse indicated that she had "had two root canals and now really 'balk' but will go because I know I have to."

In contrast, other participants discussed pain-related avoidance of medical or dental procedures from a different perspective. That is, they indicated that they avoid healthcare visits not because they fear the associated pain but because they have developed a tolerance for pain associated with physical health problems. For example, one 29 year old Anglo-Canadian survivor of child emotional, physical and sexual abuse indicated, "Sometimes I just learn to live with pain; I have a high tolerance level and can ignore my body easily." In other words, an ability to withstand and/or ignore bodily pain associated with physical health concerns, rather than a fear of experiencing pain, accounted for treatment avoidance.

Next, 23 women (26% of those avoiding treatment) indicated that they avoid treatment because of a belief in self-healing or conversely, out of self-neglect. It was necessary to ascertain whether a participant was avoiding treatment because of a belief in self-healing (i.e., out of a philosophy based in respect for the body's

inherent healing capacities) or because of self-neglect (i.e., ignoring bodily distress in the hope that problems would go away untreated). It was found that this reason was expressed in both a positively and negatively valenced manner. Therefore, this theme was retained as one general theme with two valences.

First, some participants indicated that they frequently prefer to carefully self-medicate and/or attempt to let their bodies 'heal themselves' even when they know they need treatment. As a 23 year old survivor of child emotional abuse explained, "I usually know what's wrong with me and how to fix it. Otherwise I visit." Similarly, a 19 year old survivor of child emotional and physical abuse wrote that, "I usually do not think seeing a doctor is necessary," and a 31 year old Franco-Canadian survivor of child emotional, physical and sexual abuse said, "I don't avoid [visits], but I do prefer trying to heal myself without being 'pumped' full of pills. But I certainly go when logic prevails that I must." Another 47 year old survivor of child emotional, physical and sexual abuse indicated that, "I'm pretty in tune with my body, when it feels weird I try to figure out and fix things, then turn to my doctors."

A 21 year old nonabused Indian-Canadian woman extended this notion of self-care before seeking treatment by noting, "Usually, I believe the illness, such as the common cold, will go away if I take care of myself by eating healthy, resting well, and taking proper [over-the-counter] medications." Others extended the theme of responsibly self-medicating. A 25 year old nonabused Asian-Canadian woman noted that she avoids healthcare visits because, "[f]irstly, I have some medicines brought from my home country and I know their usage. Secondly, I want to see if my body can resist the virus by itself." Finally, one 28 year old Egyptian-Canadian

woman indicated that her preference to self-heal is informed by her own training as a physician: "I am a physician, so I use medications by myself."

Other women indicated not only a preference for self-healing, but a preference for non-mainstream treatment, with medical professionals being a last choice. For example, a 42 year old Franco-Canadian survivor of child emotional, physical and sexual abuse stated, "I try to use herbal/Eastern medicines before using a regular doctor." Others indicated that their avoidance of healthcare visits originated not only in a desire to treat themselves, but in a lack of faith in the healthcare system. For example, a 37 year old Anglo-Canadian survivor of emotional and sexual abuse said, "I generally feel that I can treat myself. I have little faith in the medical establishment. Doctors usually tell me there is nothing wrong or nothing they can do."

Others extended this reason by discussing an explicit, well-defined philosophy of wellbeing based on a critique of medical intervention. Frequently, the participants discussing this reason for avoiding treatment were those women who had experienced health concerns, and developed a dislike for medical healthcare professionals and medical approaches to health management. For example, a 60 year old European-Canadian survivor of child emotional, physical and sexual abuse said, "I feel the healthcare system is over-used; I rarely have serious health problems; I believe in health – doctors believe in illness. I have several times been diagnosed with illnesses I do not have." She also indicated, "I think society is over-dependent on healthcare professionals." Similarly, a 53 year old survivor of emotional abuse said, "I do not believe that the drug/surgery oriented patriarchal white Western medical model provides a viable option for healthcare."

Other participants indicated that their avoidance of healthcare visits stemmed from a desire to be increasingly self-sufficient regarding their wellbeing rather than dependent upon outside care. For example, a 21 year old African-Anglo-Canadian student stated, "When I was younger I used to go to the doctor all the time. I don't want to be like that anymore." Another 19 year old survivor of child sexual abuse said she avoids healthcare visits, "Because I hate going to the doctor for every little thing. Sometimes I figure that I'll just get better on my own."

In contrast, there were participants who avoided healthcare visits not because of a concerted effort to allow their bodies to 'self-heal' (e.g., without medical intervention) or to responsibly self-medicate but because of a hope that untreated problems would 'go away' by themselves. For example, a 24 year old survivor of child emotional abuse indicated, "I want to wait to see if the problem heals itself – runs its course." Others were concerned about seeking treatment, being told that nothing is physically 'wrong' with them, and having to manage the resultant embarrassment. A 21 year old survivor of child sexual abuse said, "Sometimes I don't want to admit that something is wrong. Other times I am sure the problem will go away before I get to the doctor's and then I will look foolish." Similarly, a 23 year old European-Canadian survivor of child emotional and sexual abuse said that she avoids healthcare visits because, "I don't want to seem like I'm paranoid or a hypochondriac."

Others reiterated a theme of hoping health concerns would 'run their course,' by 'waiting things out.' For example, this reason for healthcare avoidance was combined with a discussion of dissatisfaction with healthcare professionals in the responses of a 19 year old nonabused European-Canadian student who indicated, "I

wait it out. I haven't been able to find a new doctor that seems to care about me as a person, and not just money."

Next, the fourth theme in women's reasons for healthcare avoidance involved women's dislike and/or mistrust of their healthcare providers. Dislike of healthcare providers was occasionally voiced, above, in women's discussions of their wishes to self-heal rather than to seek treatment from a healthcare professional. However, dislike of doctors and dental staff was also voiced strongly and in much more explicit detail. In short, women reported that they frequently avoided treatment primarily because of interpersonal dislike or lack of rapport with healthcare professionals. Twenty women (22.5%) explicitly cited this reason. For example, a 36 year old survivor of child emotional, physical and sexual abuse said, "I don't like my doctor. He doesn't seem to pay attention." Another 41 year old Anglo-Canadian survivor of child emotional and physical abuse echoed this view by noting, "I don't like my doctor's manner, and being examined by him is unpleasant."

A 22 year old Indian-Canadian student extended this theme of inattention and/or unpleasantness by describing a situation where she felt rushed through her healthcare provider's office, based upon a mistaken assumption that as a student she must simply 'want a doctor's note.' The incident troubled her sufficiently that she indicated, "I now avoid doctor visits because when I'm really sick and I go to the doctor I receive no medication. Instead, they just ask if I need a [medical doctor's] official note [for school absence]. Again, I was at a point where I couldn't even get out of the bed due to the flu, and then I felt like crying when they asked that like that." Another 27 year old Anglo- and Franco-Canadian survivor of child emotional, physical and sexual abuse summed up her reasons for avoiding healthcare visits by

saying that in her experience, “most doctors seem insensitive to patients except as subjects/cases,” and another 30 year old Anglo-Canadian survivor of child emotional, physical and sexual abuse noted, “I don’t believe they’ll be helpful; they’ll be dismissive; I feel uncomfortable with them – there is no rapport.” Another 39 year old Scottish-Canadian survivor of emotional, physical and sexual abuse noted also, “Doctors...don’t understand the physical effects of abuse other than very short term...It’s hard to find a good doctor.”

This lack of rapport was discussed not only in the context of interpersonal dislike of healthcare providers, but also in the context of actual mistrust. A 19 year old European-Canadian survivor of child emotional, physical and sexual abuse said, “I don’t often trust their opinion as I have been misdiagnosed a lot, so I wait until I know a good doctor will be there.” A 25 year old survivor of child emotional, physical and sexual abuse echoed this sense of mistrust and related search for a ‘good’ physician: “Since moving to Ottawa, I have not found a doctor I trust or that seems to understand the [abuse-related] issues I am dealing with. I find many [doctors] intrusive, disrespectful, and domineering, and the procedures invasive.”

Similarly, a 39 year old Aboriginal-Canadian survivor of child emotional, physical and sexual abuse said, “I hate the needles, and I do not trust the doctors.” A 37 year old survivor of child emotional and sexual abuse said, “I have little faith in the medical establishment. Doctors usually tell me there is nothing wrong or nothing they can do.” After discussing a traumatic experience in the context of healthcare seeking (e.g., flashbacks to earlier abuse while being examined), a 34 year old Franco-Canadian survivor of child emotional, physical and sexual abuse succinctly summed up her reasons for treatment avoidance by attributing her avoidance to her

dislike of medical staff, and that this dislike can in turn be attributed to, “[t]rust issues.”

Unfortunately, this discussion of interpersonal dislike, lack of rapport, and/or mistrust was occasionally voiced even more strongly in women’s reasons for avoiding dental visits. A 37 year old survivor of child emotional and sexual abuse noted, “I don’t trust dentists and fear that they will cause more damage.” Other participants traced their dislike of their dentists to incidents where they had endured invasive procedures without fully understanding what was happening, or that they had not given consent for. (Given the similarities to childhood abuse experiences – that is, invasive experiences, endured without consent nor understanding – these reports could have been coded as examples of retraumagenic dynamics during treatment seeking. However, unless survivors explicitly noted the reminiscence of abuse in the treatment seeking situation, these experiences were not categorized as such.) As an example of interpersonal dislike as a reason for avoiding dental visits, a 27 year old Polish-Canadian nonabused woman said, “I don’t like the dentist. Bad experience a year ago. He pulled out an impacted wisdom tooth without getting my consent. Then the freezing wore off. I had an out of town trip the next day – I was driving and so could not take the pain killers.” A 26 year old survivor of child emotional and sexual abuse summed up her avoidance of dental visits by saying, “The hygienist is mean,” and a 19 year old Anglo-Canadian survivor of child sexual abuse said bluntly, “I hate my dentist. But usually I just go to him to get it over with.”

Financial reasons were the next most frequently listed reason for participants’ avoidance of healthcare visits, particularly dental visits. Overall, this reason was evident in the written responses of 19 participants (21.4% of those avoiding

treatment). Women made explicit comments about being covered by insurance for both dental and medical visits. For example, a 21 year old African- and Anglo-Canadian survivor of child emotional and sexual abuse indicated that she avoids dental visits because, "I am no longer covered under any dental plan." A 58 year old French-Canadian survivor of child emotional, physical and sexual abuse by multiple family members explained that she avoids dental visits because she, "worr[ies] they will insist on expensive treatment not covered by insurance." Similarly, a 44 year old survivor of child emotional, physical and sexual abuse noted, "I don't usually [avoid health care visits] but I did live in Japan and Italy and I didn't bother going to the doctor in Italy because I didn't have medical insurance."

Nonabused women's responses regarding dental insurance echoed those of the survivors, even when employed full-time. For example, a 25 year old nonabused Anglo-Canadian part-time student noted that she avoids dental visits because, "I don't have insurance; can't afford the cost," whereas a 30 year old English- and Irish-Canadian nonabused woman indicated, "I only visit the dentist when my dental plan is in effect," and that for any necessary care outside of this time-frame, she will not seek treatment.

Other women did not comment on lack of insurance coverage, but made explicit comments about the cost of dental treatment and having limited access to finances to cover it. For example, a 31 year old Anglo-Canadian survivor of child emotional and physical abuse reported that she avoids dental visits because of, "[t]he price of dental work to be done," whereas another 34 year old Franco-Canadian survivor of child emotional, physical and sexual abuse noted, "Avoid for the reason of money! Living on extremely limited means." Other women made

similar statements, succinctly represented by the response of a 38 year old Anglo-Canadian survivor of emotional, physical and sexual abuse: “I can’t afford treatment.”

In regard to financial concerns discussed in reference to medical treatment seeking (i.e., as opposed to dental visits), one particular perspective emerged solely in the responses of women with childhood abuse histories. This perspective involved avoiding healthcare visits because of beliefs that such visits would waste healthcare funding (e.g., provincial healthcare funding). Whereas nonabused women discussed treatment avoidance due to financial constraints in proportionate numbers to survivors, only survivors commented on not wanting to utilize provincial healthcare funding. Some women indicated that they did not feel they should use such funding on their own behalf. For example, a 23 year old European-Canadian survivor of child emotional and sexual abuse indicated that she avoids medical visits because, “I don’t want to waste healthcare money on myself.” In contrast, a 20 year old Anglo-Canadian survivor of child sexual abuse indicated that she avoids medical visits due a belief that people in general over-use tax-funded services. She noted that healthcare visits “[w]aste taxpayers’ money. Too many people run to the doctor for things that can be treated at home or with over-the-counter drugs.”

In the next most frequently discussed reason for treatment avoidance, women frequently reported extreme discomfort with treatment seeking to the extent that it was analyzed as a separate reason rather than a component of interpersonal dislike (above). That said, the two reasons were closely interconnected, with women’s extreme discomfort occasionally occurring as a result of incidents where interpersonal dislike was cultivated. Discomfort was also reported as related to the

gender of the healthcare provider (i.e., extreme discomfort with male physicians), rather than related to interpersonal dislike for the particular healthcare provider. Overall, there were instances of extreme discomfort during treatment evidenced in the responses of 14 women (16% of those avoiding treatment).

At the more benign end of the spectrum, such discomfort was reported in terms of embarrassment. For example, a 42 year old Anglo-Canadian survivor of child emotional and sexual abuse discussed her discomfort and embarrassment in dealing with healthcare professionals, particularly male physicians. She summed up by indicating that, even if she did not avoid treatment, “I might avoid discussing some problems with a male doctor.” Another 31 year old Anglo-Canadian survivor of child emotional abuse said, “I have a male doctor and I consider myself overweight and embarrassed to take my clothes off for examinations.”

Another 19 year old European-Canadian survivor of child emotional and physical abuse reported feeling ‘very uncomfortable’ during treatment seeking. She explained, “My doctor is female, however, she is rarely available. When she isn’t available, I usually have male doctors which is very uncomfortable for me.” A 53 year old Franco-Canadian survivor of child emotional, physical and sexual abuse echoed this theme of extreme discomfort, and indicated that treatment seeking is particularly difficult when the health problem “is sensitive and/or personal. Then I must really push myself to go.” Similarly, a 23 year-old Anglo-Canadian survivor of child emotional abuse and suspected sexual abuse noted, “It’s rare that the doctors I go to are queer-positive and it makes me really uncomfortable.”

In the next most frequent reason for treatment avoidance, the inconvenience of attending healthcare visits, was evident in the responses of 14 participants (15.7%

of those avoiding treatment), and indicated that both survivors and nonabused women avoided seeking treatment because of the inconvenience of allotting time for healthcare visits, the inconvenient locations of their healthcare providers' offices, and/or having to allot time for waiting-room delays. Another time-related reason was the concept of treatment seeking as a general 'waste of time' (i.e., time-consuming and not necessarily helpful).

For example, a 30 year old Anglophone-Canadian survivor of child emotional, physical and sexual abuse wrote, "Mostly, however, it's not something I avoid although I do have a hard time finding time to go (my M.D. is far away, and there's always a major wait, so it takes a half-business day to go and return!)" Similarly, another 31 year old survivor of child emotional and physical abuse noted, "I don't really avoid for any reason other than lack of time."

Other survivors noted that concurrently pressing concerns take priority when time is an issue. In this regard, a 30 year old Irish-French-Canadian survivor of child emotional, physical and sexual abuse explained, "If there are many activities happening (deadlines, [academic] exams, etc.) simultaneously, I simply 'put it off' until there is a clearing in my schedule." Similarly, another 36 year old Anglo- and Francophone survivor of child sexual abuse indicated that with her busy schedule, "Sometimes I feel pressed to find the time for [visits]." In regard to why she avoids doctor's visits, a 21 year old nonabused Dutch-Canadian university student also indicated, "Always put them off. Too busy to take time out of my daily routine."

Finally, a 19 year old Anglo-Canadian survivor of child sexual abuse summed an aspect of time-related inconvenience related to waiting- and examination-room delays when she said she avoids medical treatment because, "It's just a pain to

make the appointment and wait in a room to be poked and prodded.” While none of the nonabused women discussed disliking having to wait in anticipation of a negative exam experience (e.g., being “poked and prodded”), they did report similar dislike with waiting-room delays. For example, a 25 year old nonabused Anglo-Canadian participant indicated that she avoids healthcare visits because, “I do not like wasting my time (the wait it takes before you see the doctor).” A 21 year old nonabused Chinese-Canadian university student simply indicated, “Waste of time” as the primary reason that she avoids health care visits.

The next most frequent reason for treatment avoidance was based not in fear of the physical pain associated with healthcare visits (above), but rather, fear of receiving negative health news. Whereas fear of physical pain was largely found in discussions of dental healthcare seeking, fear of bad news was largely found in women’s discussions of medical treatment seeking. There were instances of this reason in the responses of 10 women (11.2% of those avoiding treatment).

For example, a 24 year old German-Canadian nonabused woman stated that she avoids treatment “to avoid bad news,” and another 24 year old Anglo-Canadian nonabused woman elaborated, “I am generally fearful of seeing doctors because I’m afraid they’re going to find something’s wrong with me. I find this is lessening however.” Similarly, an 18 year old American-Canadian nonabused student said, “I tend to make myself worry and in turn believe that I have an illness and dread going in to find out results,” and a 19 year old Chinese-Canadian nonabused student said simply, “I’m scared to know if I’m ill.”

When this reason was expressed in the responses of survivors, however, it was expressed along with the belief that knowing health test results would not be of

use to them. In other words, there was a degree of hopelessness expressed in their responses. For example, one 29 year old Anglo-Canadian survivor of child emotional, physical and sexual abuse indicated, “Sometimes I just don’t know if I want to find out any bad news” and that she would rather endure physical pain than know about its possible causes. Another 23 year old survivor of child sexual abuse indicated, “I tend to be scared of being told I am either sick or have something terminal, so I figure if I have something ‘long term,’ me knowing about it isn’t going to change it.”

A final reason for healthcare avoidance was expressed by some women as extreme discouragement during treatment. There were explicit instances of this reason in the responses of six women (7% of those avoiding treatment). This reason captured the experiences of this small sample of women, each of whom suffered chronic health concerns and who had, out of necessity, a great deal of contact with medical staff. These women’s avoidance of further healthcare visits was based largely on a sense of discouragement or disillusionment regarding such visits. While their responses could also be deconstructed and coded into several other themes (e.g., extreme discomfort with treatment seeking), these responses were preserved intact as evidence of extreme discouragement during treatment.

For example, a 27 year old survivor of child emotional and sexual abuse summed up her reasons for healthcare avoidance as follows: “I go to the doctors so much, it can get very depressing at times and I need a break.” Similarly, a 23 year-old Korean-Canadian survivor of child emotional and physical abuse said, “I don’t mostly, but when I do, it’s because I know what they’re going to say – I’ve been going to doctors (so many) all my life that I’m tired of it (for specifically my heart

condition).” A 38 year old Anglo-Canadian survivor of child emotional, physical and sexual abuse wrote, “I find that they [her healthcare visits] are pointless and the result is only a ‘Band-aid’ solution instead of treating the symptoms or problem.”

Overall, the experience of healthcare avoidance arising out of extreme discouragement can be summed up in the response of a 41 year old German-Canadian survivor of childhood emotional, physical and sexual abuse: “I’d almost rather die than go to a doctor! There are many reasons: I don’t feel they understand how hard it is for me to go, or why. The things they say make it even harder to go back. I don’t think they have any concept of the physical suffering I go through every day. They don’t explain my problems so that I can understand what is happening. They don’t look for causes or solutions. I feel abandoned by the healthcare system. When I do go to a doctor, I feel as though he/she is an alien being, so different is the way we think about things. It is invariably a depressing experience and leaves me feeling even more hopeless and alone than before.”

In sum, this thematic analysis sheds light on the apparent paradox that women both seek and avoid treatment. Earlier analyses indicated that women seek treatment when experiencing more physical health symptoms and more functional impairment as a result of those symptoms. However, when experiencing genitourinary and digestive symptoms in particular, women reported that they are also likely to avoid treatment, although not if their symptoms lead to functional impairment. Therefore, it appears that women may avoid treatment when possible, but seek treatment when physical health concerns have a functional impact on their lives.

Further, the women who were most likely to report both treatment avoidance, and physical and psychological discomfort when seeking treatment, were those who had survived forcible childhood sexual abuse and retraumatization later in life. Therefore, it appears that adult abuse survivors experience a 'Catch-22' in regard to their long-term physical health and treatment seeking: That is, survivors experience more physical health concerns over time and therefore more related treatment seeking; however, this treatment seeking may be sufficiently unpleasant and/or retraumatizing that survivors also avoid treatment when they can, particularly in the context of gynaecologic and/or dental healthcare visits.

Indeed, the results of the thematic analysis of women's reasons for treatment avoidance indicated that extreme psychological distress elicited during treatment was a frequent deterrent to treatment seeking, even when treatment appears to be necessary. For survivors in the current study, distress to the point of explicit retraumatization during healthcare visits was the most frequently cited reason for subsequent treatment avoidance. Compounded by the frequent pain and fear experienced during healthcare visits, and the explicit dislike and/or mistrust of healthcare providers, survivors' psychological distress and possible retraumatization may explain their treatment avoidance in the context of overall increases in treatment seeking relative to nonabused individuals.

Discussion and Conclusions

Of the 153 participants in this study, 102 women (66.7%) reported childhood familial emotional, physical and/or sexual abuse and all but eight women (5.2%) reported at least some experience of trauma other than childhood familial abuse. Therefore, the prevalence of abuse in the current sample was approximately twice that of population prevalence estimates of childhood abuse (e.g., Bagley, 1996; Finkelhor et al., 1990; Leserman & Drossman, 1995). This finding is reflective of the explicit recruitment of abuse survivors for the current study and is comparable to research with similar samples (e.g., Berger, Knutson, Mehm, & Perkins, 1988; Bernstein, Ahluvalia, Pogge, & Handelsman, 1997).

As reported elsewhere in the literature (e.g., Beitchman et al., 1992), the concurrent high rate of reporting other trauma may reflect the link between abuse and later-life retraumatization. That the majority of these participants (94.8%) reported some experience of other trauma is also in line with studies reporting high rates of trauma in the general population (e.g., Davidson, 2000; Hidalgo & Davidson, 2000; Solomon & Davidson, 1997) and in smaller community samples (e.g., Giaconia, Reinherz, Silverman, & Pakiz, 1995). However, of the 150 women who responded to the other trauma items, most indicated that the traumatic experiences items were, on average, only 'a little' to 'somewhat' like their experiences. In sum, then, two thirds of the women in the study reported experiences of both childhood abuse and other trauma, although their experiences of other trauma were described as minor.

The findings of the current study pertain to the relations between familial childhood abuse, later-life trauma and health-related outcomes, the processes

mediating the abuse-health relation, and participants' experiences of treatment seeking and/or avoidance, as follows.

The Child Abuse-Adult Health Relation

Drawing on the responses of community- and university-based participants, the current study found support for the relation between childhood abuse and adult physical health (e.g., Bendixen, Muus, & Schei, 1994; Felitti et al., 1998; Golding, 1994; Koss et al., 1990, 1991; Sansone et al., 1996; Rimsza et al., 1988). Concurrent with prior research, participants were likely to have experienced more than one type of childhood abuse (Leserman & Drossman, 1995; Ney et al., 1994) and were vulnerable to later-life retraumatization (Beitchman et al., 1992; Benedict et al., 1999; Dansak, 1998; Schaaf & McCanne, 1998). The simple correlations revealed weak to strong relations between women's experiences of childhood emotional, physical and sexual abuse (both in terms of frequency and force), and other trauma. In turn, the simple correlations revealed moderately sized relations between women's childhood abuse experiences and their adult experiences of digestive symptoms (Felitti, 1991; Leserman & Drossman, 1995; Springs & Friedrich, 1992; Talley et al., 1994; Walker et al., 1993), cardiovascular symptoms (Felitti et al., 1998; Leserman et al., 1998), and genitourinary and menstrual cycle symptoms (Friedman et al., 1982; Miccio-Fonseca, Jones, & Futterman, 1990; Paddison et al., 1990; Runtz, 2002), as well as their functional disability due to these symptoms. These relations held for all of the types of child abuse that were examined (i.e., emotional, physical and forced sexual abuse) with the exception of the frequency of women's experiences of sexual abuse. Thus, while the degree of forced sexual abuse predicted women's physical wellbeing, the frequency of sexual abuse did not.

These findings may reflect the relative impact of different abuse characteristics on women's adult wellbeing and are in line with recent research noting the particular impact of force experienced during child sexual abuse (e.g., Mennen & Meadow, 1995; Tyler, 2002). For example, Banyard and Williams (1996) reported that women's experiences of physical force during childhood sexual abuse, in addition to a close survivor-perpetrator relationship, was most strongly associated with survivors' adult experiences of psychological symptoms. Johnson, Pike, and Chard (2001) also reported that forcible sexual abuse, including penile penetration and physical injury, best predicted the severity of survivors' adult psychological distress (see also Tyler, 2002). In regard to adult survivors' physical health symptoms, Sickel, Noll, Moore, Putnam, and Trickett (2002) found that in addition to longer abuse duration and experiencing multiple perpetrators, violence experienced during childhood sexual abuse predicted women's increased gynaecologic and gastrointestinal concerns. Similarly, Runtz (2002) reported that although, overall, women's experiences of childhood sexual abuse were not related to adult physical health symptoms, the severity of women's childhood sexual abuse experiences was predictive of adult gynaecologic concerns. Therefore, although findings regarding abuse characteristics vary across studies (Tyler, 2002), the present findings support the research suggesting that there may be characteristics of abuse types (i.e., forced sexual abuse) that are particularly detrimental to survivors' adult wellbeing (Banyard & Williams, 1996; Johnson et al., 2001; Mennen & Meadow, 1995; Runtz, 2002; Sickel et al., 2002).

However, given that participants' experiences of childhood familial emotional, physical, and sexual abuse (as measured by both abuse frequency and force) were

interrelated, it would be difficult to claim that any one child abuse type has more severe long-term effects on survivors' adult health. That is, while there is some evidence that aspects of sexual abuse (e.g., forced sexual abuse) may have a particular impact on survivors' wellbeing, it is difficult to claim that any one abuse type (i.e., emotional, physical, sexual) has more severe long-term health consequences given that the experience of each abuse type is entangled with the experience of others. Further, while it may be theoretically feasible to disentangle the experience of each abuse type, it is unlikely to be practically feasible. For example, it would be difficult to disentangle the experience of aspects of emotional abuse, such as being verbally denigrated, yelled at, or threatened, from the frequent co-occurrence of physical abuse, such as being slapped or struck. Similarly, it would be difficult to disentangle the experience of the physically punishing aspects of sexual abuse from those of physical abuse. Although each individual abuse type may have a particular impact on health-related outcomes, the current study is in line with prior research (e.g., Leserman & Drossman, 1995; Ney et al., 1994) in suggesting the complex, interrelated nature of different types of childhood abuse and their interrelated effects on adult health.

The link between childhood abuse and later-life physical health concerns has both theoretical and applied implications. Theoretically, the association between child abuse and adult health is congruent with the theoretical model of the relation between stress and health, where life stressors have been found to impact negatively on health status (e.g., Cohen, 1996; Folkman et al., 1986; Friedman & Schnurr, 1995; Kennedy et al., 1988; Koss et al., 1991; Leserman & Drossman, 1995; Salmon & Calderbank, 1996; Sansone et al., 1996). In regard to applied

implications, these findings suggest that in-depth psychological assessment of survivors' experiences should go beyond the standard focus on psychological and psychosocial wellbeing to include a holistic focus incorporating discussions of physical wellbeing. As suggested elsewhere in the literature (Berkowitz, 1998; Leserman & Drossman, 1995; Mayer & Gebhart, 1994; Wolf, 1997), this may be particularly important given the interconnected mind-body nexus and the feedback loops between psychological and physical health. The current findings also support screening for abuse within the context of primary healthcare settings (Berkowitz, 1998; Felitti, 1991; Lechner et al., 1993). For example, increasing healthcare providers' knowledge of the relations between women's abuse experiences and current physical health may aid in the diagnosis of symptoms (Berkowitz, 1998; Felitti, 1991) and related referrals (Briere et al., 1997; Campbell et al., 1994; Drossman et al., 1995; Eby et al., 1995; McCauley et al., 1998).

Mediators of the child abuse-adult health relation. In addition to assessing relations between women's experiences of childhood abuse and their adult health concerns, the current study examined the extent to which these relations were mediated by women's experiences of affective psychological distress, cognitive assumptive beliefs, cognitive-behavioural coping strategies and other life trauma.

Consistent with previous research findings (e.g., Briere, 1995), the simple correlations evidenced moderate relations between the extent of women's exposure to both child abuse and other trauma and their current experiences of anger/irritability (Butterfield et al., 2000; Friedman & Schnurr, 1995; Kimerling et al., 2000; Litz et al., 1992), anxious arousal (Ackerman et al., 1996; Bachman et al.,

1988; Kendall-Tackett et al., 1993) and depression (Ackerman et al., 1998; Bagley, 1996; Benedict et al., 1999; Briere & Runtz, 1988b; Briere & Zaidi, 1989; Bryer et al., 1987; Courtois, 1979; Sedney & Brooks, 1984). Moreover, the simultaneous regression analyses indicated that the experience of trauma accounted for a sizable 18 to 37% of the variance in women's psychological distress scores.

Women's experiences of psychological distress were also, and substantially, correlated with their experiences of physical health symptoms and functional disability. These findings therefore replicate those of other studies observing relations between physical health and anger/irritability (e.g., Butterfield et al., 2000; Litz et al., 1992; Wright, 1988), anxious arousal (Briere & Runtz, 1988b; Burgess & Holmstrom, 1974; Cohen et al., 1986; Cohen & Williamson, 1991; Jorgensen et al., 1999; Zoellner et al., 2000) and depression (Cohen & Williamson, 1991; Katon, 1984; Schulberg et al., 1987).

Beyond the relations between trauma and elevated psychological distress, and the relations between psychological distress and health outcomes, the results of the path analyses indicated that psychological distress mediated the relations between child abuse and the various health outcomes assessed in this study. For example, the effects of childhood abuse on adult cardiovascular and premenstrual symptoms were entirely mediated by anxious arousal. Similarly, although childhood physical abuse retained its direct effects on adult genitourinary symptoms, the effects of childhood emotional and forcible sexual abuse on genitourinary symptoms were entirely mediated by anxious arousal and anger/irritability. Further, the effects of childhood abuse on adult digestive symptoms were entirely mediated by anxious arousal and depression, as was the impact of childhood abuse on the functional

effects of symptoms in adulthood. Overall, the findings of the current study clearly evidence a mediating influence of psychological distress, particularly anxious arousal, on the abuse-health relation. These findings therefore lend support to the suggestion that the anxiety following trauma leads to chronic autonomic arousal that in turn relates to somatic symptomatology (e.g., Briere & Runtz, 1988b; Burgess & Holmstrom, 1974).

The findings of this study also provide support for the hypothesized detrimental impact of trauma on molar-level cognitive assumptive beliefs. Supportive of Janoff-Bulman's (1992) findings with survivors of a variety of traumatic events, and Owens and Chard's (2001) findings with survivors of child sexual abuse, the simple correlations indicated that women's experiences of childhood abuse and other trauma were related to moderately weaker endorsement of beliefs in the benevolence of people and the world, meaningfulness and self-worth. Moreover, the simultaneous regression analyses revealed that women's experiences of childhood abuse and other life trauma accounted for a modest 12% and 10% of the variance in their beliefs in benevolence and self-worth respectively.

Other correlational analyses revealed that decreased assumptive beliefs in benevolence, meaningfulness and self-worth were related to moderately poorer physical health outcomes and more disability, findings that support related research on the health-protective aspects of positive assumptions and generally optimistic expectations (e.g., Janoff-Bulman, 1992; Taylor, 1989; Taylor & Brown, 1988). Despite the observed simple relations between trauma and cognitive assumptive beliefs, and the relations between assumptive beliefs and health, the path analyses indicated that these molar-level cognitive beliefs did not mediate the abuse-health

relations. Nevertheless, the negative relations between assumptive beliefs and physical health may be important in treatment seeking contexts to the extent that abuse survivors' decreased beliefs in benevolent others detract from their willingness to seek treatment from healthcare providers, or to interact trustfully with them.

Consistent with other research documenting relations between trauma and adult coping strategies, the women in this study who experienced more emotional and physical abuse during childhood (Leitenberg et al., 1992) and more other life trauma (Catanzaro et al., 1995; Folkman et al., 1986; Janoff-Bulman, 1989a; Kohn et al., 1994; Turner-Cobb & Steptoe, 1996) reported somewhat more frequent use of negative coping strategies such as avoidance, denial and self-blame (e.g., Friedman & Schnurr, 1995). However, unlike other research findings (Runtz & Schallow, 1997; Tremblay, Hebert, & Piche, 1999), they did not report significantly less use of either positive coping strategies (i.e., reinterpretation of stressful events and faith-based coping) or social support (i.e., instrumental support, emotional support and venting to others). In addition, women's experiences of forced sexual abuse were independent of their use of any type of coping strategy. These findings run counter to research that reports relations between childhood sexual abuse and increases in survivors' adult use of negative coping strategies (Merrill, Thomsen, Sinclair, Gold, & Milner, 2001; Sigmon, Greene, Rohan, & Nichols, 1996) and may reflect characteristics of the sexual abuse survivors in this sample (e.g., high levels of post-secondary education, reported elsewhere as relating to less frequent use of negative coping strategies; see Drossman et al., 2000), or, their particular sexual abuse experiences (e.g., relative degree of force experienced in comparison to other

samples). While the observed moderate correlations between the use of negative coping strategies, physical wellbeing and functional disability are also in line with previous research (Leitenberg et al., 1992), the nonsignificant relations between positive coping strategies and social support are not. That is, women in the present study did not appear to experience the expected health-protective benefits of positive coping and social support, findings that are difficult to explain given the relations previously documented with other samples (e.g., Runtz & Schallow, 1997).

That the use of negative coping strategies would mediate the relation between later-life trauma and physical health outcomes was anticipated from related research (e.g., Auerbach, 1989; Kohn et al., 1994; Leitenberg et al., 1992). However, and as noted above, the cognitive behavioural coping strategies of women in the current study did not mediate the relations between their experiences of early-life abuse and adult health. Therefore, as was the case with the molar-level assumptive beliefs, cognitive-behavioural coping strategies did not underlie the abuse-health relation.

Finally, as later-life trauma follows chronologically from early-life abuse, and women who have, relative to those who have not, experienced child abuse are more likely to be retraumatized (Beitchman et al., 1992; Schaaf & McCanne, 1998), it was feasible that other trauma might underlie the child abuse-adult health relation. Consistent with this, the women who experienced more child abuse, of any type, were moderately more likely to experience subsequent retraumatization. Moreover, and in line with the observed relations between life stress and health (e.g., Friedman & Schnurr, 1995; Leserman & Drossman, 1995), women who experienced more extreme traumatization later in life also reported moderately more physical health

symptoms and functional disability due to those symptoms. Nevertheless, when women's experiences of other trauma were statistically controlled in the path analyses, the relations between women's experiences of child abuse and their adult wellbeing were maintained and other trauma did not mediate these relations. These findings therefore add support to the literature regarding the relations between women's childhood abuse experiences and their adult health concerns (e.g., Felitti et al., 1998; Koss et al., 1991; Salmon & Calderbank, 1996; Sansone et al., 1996) and illustrate the profound effects of child abuse on health.

Further, the current study also assessed whether other trauma mediated the relations between childhood abuse and adult psychological distress, assumptive beliefs and coping strategies. The findings indicate that the relations between childhood abuse and affective psychological distress and cognitive assumptive beliefs are maintained when controlling for other trauma. That is, other trauma did not mediate these relations. Instead, experiences of childhood abuse continued to predict survivors' psychological distress and assumptive beliefs in adulthood. These findings are congruent with related research documenting relations between child abuse and psychological distress (e.g., Ackerman et al., 1998; Beitchman et al., 1992; Benedict et al., 1999; Briere & Runtz, 1988; Calam et al., 1998) and research indicating relations between child abuse and assumptive beliefs (e.g., Janoff-Bulman, 1992).

It appears that previously reported associations between childhood abuse and later-life physical health hold (e.g., Felitti et al., 1998; Koss et al., 1991; Salmon & Calderbank, 1996; Sansone et al., 1996), as do other findings regarding the increased likelihood of survivors to experience later-life retraumatization (e.g.,

Beitchman et al., 1992; Schaaf & McCanne, 1998). Given the relations between abuse and health, other trauma and health, and abuse and other trauma, it was reasonable to predict that later-life retraumatization might mediate the relation between childhood abuse and adult health. However, the current findings indicate that this is not the case. The implication is that the previously reported associations between childhood abuse and health outcomes may be particularly robust, with childhood abuse retaining its long-term effects on adult health even when adjusting for later-life trauma.

Therefore, although traumatic stress in many forms has been shown to have an impact on physical health (e.g., Cohen, 1996; Folkman et al., 1986; Friedman & Schnurr, 1995; Janoff-Bulman, 1989a, 1992; Kiecolt-Glaser & Glaser, 1992; Leserman & Drossman, 1995), it appears that traumatic stress in the form of childhood abuse has a particularly long-lasting influence on survivors' adult wellbeing. Further, given the apparent strength and replicability of the childhood abuse-adult health relation, and the non-mediation of this relation by other trauma, it was feasible to focus further attention on affective psychological distress as a mediator of the abuse-health relation.

In sum, the path analyses indicated that anxious arousal entirely mediated the effects of childhood abuse on adult cardiovascular and premenstrual symptoms, accounting for a considerable 46 and 29% of the variance in these symptoms respectively. Although physical abuse retained its direct effects on adult genitourinary symptoms, the effects of childhood emotional and forcible sexual abuse on adult genitourinary symptoms were entirely mediated by anxious arousal and anger/irritability, respectively accounting for 41 and 28% of the variance in

genitourinary symptoms. The effects of childhood abuse on adult digestive symptoms were entirely mediated by anxious arousal and depression, accounting for 44 and 24% of the variance in these symptoms respectively. Finally, the impact of childhood abuse on the functional effects of symptoms in adulthood was also entirely mediated by anxious arousal and depression, accounting for 28 and 36% of the variance respectively. Taken together, these findings clearly evidence a mediating influence of affective psychological distress on child abuse-adult health relations.

The Child Abuse-Adult Treatment Seeking Relation

The current study found moderately sized relations between women's experiences of cardiovascular, digestive, genitourinary and menstrual cycle symptoms and increases in treatment seeking; however, women's physical health symptoms were also moderately positively related to their experiences of discomfort during treatment. That is, for women experiencing physical health symptoms, treatment seeking was a frequent but unpleasant experience. Further, previous research has documented a relation between childhood abuse and increased use of general healthcare services (e.g., Felitti, 1991; Koss et al., 1991; Leserman & Drossman, 1995; Salmon & Calderbank, 1996; Smith & Smith, 1996), more hospitalizations (e.g., Golding et al., 1988; Kimerling & Calhoun, 1994) and greater discomfort during treatment, particularly gynaecologic care (Chapman, 1989; Kitzinger, 1990a, 1990b; Smith & Smith, 1996; Robohm & Bittenheim, 1996). In line with these findings, the simple correlations revealed that the women who experienced more severe emotional, physical, and forced sexual abuse during

childhood reported moderately more treatment seeking and moderately more discomfort during treatment.

The links between childhood abuse and adult treatment seeking and discomfort have clear applied implications. For example, these findings provide further evidence of the need for child abuse screening in healthcare settings (e.g., Briere & Zaidi, 1989; Drossman et al., 1995; Frenken & Van Stolk, 1990) and increased awareness of child abuse-health relations on the part of healthcare providers (e.g., Drossman et al., 1995; Sassetti, 1993). Indeed, in view of the psychological and physical health benefits of trauma-disclosure (e.g., Everill & Waller, 1995; Larson & Chastain, 1990; Pennebaker et al., 1988), the current findings suggest that healthcare settings may be an especially pertinent arena for such disclosure given the frequency of survivors' physical health concerns and treatment seeking.

Mediators of the child abuse-treatment seeking relation. In addition to assessing the relation between women's experiences of childhood abuse and their adult treatment seeking, the current study assessed the extent to which these relations were mediated by women's experiences of affective psychological distress, cognitive assumptive beliefs, cognitive-behavioural coping strategies and other traumatization.

Consistent with prior research (e.g., Blanchard et al., 2001; Colegrave et al., 2001; Kitzinger, 1990a, 1990b), increased psychological distress in the form of anger/irritability, anxious arousal and depression was associated with moderate increases in treatment seeking frequency, and women's experiences of psychological and physical discomfort during treatment. Moreover, the path

analyses revealed that anxious arousal mediated the relations of childhood emotional and forced sexual abuse, but not physical abuse, with adult treatment seeking. In addition, the findings that both childhood emotional and forced sexual abuse also had direct effects on discomfort during treatment suggest that variables other than those examined in the current study mediate these relations. Identifying these mediators, then, might be a task for future research.

Relative to the role of women's affective distress, women's cognitive assumptive beliefs played a much smaller part in the relations between their experiences of childhood abuse and their adult treatment seeking behaviour and experiences. The extent to which women endorsed benevolence and meaningfulness, for example, were independent of their treatment seeking behaviour. The extent to which women endorsed beliefs in their own self-worth was only weakly negatively related to treatment seeking. However, congruent with prior research examining the influence of beliefs and expectancies on treatment seeking (e.g., Ditto et al., 1995; Evans, 1985; Jorgensen et al., 1999; Plotkin, 1985), decreased assumptive beliefs in benevolence, meaningfulness and self-worth were slightly to moderately related to greater discomfort during treatment. Certainly these relations are likely to have implications in healthcare settings where survivors' decreased beliefs in the benevolence of others and the worthiness of the self may impact on trustful interactions with healthcare staff. However, apart from these observations, assumptive beliefs did not mediate the abuse-treatment seeking relations.

Women's cognitive-behavioural coping strategies also had little impact on the child abuse-treatment seeking relations observed in this study. Both the extent to

which women engaged in positive coping and social support coping were independent of their treatment seeking behaviour and discomfort during treatment. Similarly, the extent to which women engaged in negative coping strategies was independent of the frequency of their treatment seeking. However, and in line with earlier research findings (e.g., Friedman & Schurr, 1995; Leitenberg et al., 1992), women who more frequently engaged in negative coping strategies reported slightly more discomfort during treatment. Finally, like cognitive assumptive beliefs, cognitive-behavioural coping strategies did not mediate the observed relations between childhood abuse and the frequency of adult treatment seeking and discomfort during treatment.

Given the increased vulnerability of abuse survivors to later-life retraumatization, as noted in both previous research (e.g., Beitchman et al., 1992) and in the current study, it was feasible that later-life retraumatization might actually mediate the abuse-treatment seeking relation. In line with prior research (e.g., Schaaf & McCanne, 1998), the simple correlations indicated that women who had experienced any type of childhood abuse were moderately more likely to experience retraumatization. Further, the women who experienced retraumatization were moderately more likely to seek treatment and to also experience discomfort during treatment, findings in line with the known relations between stress and health (Friedman & Schnurr, 1995; Leserman & Drossman, 1995). Nevertheless, the results of the path analyses indicate that with other trauma statistically controlled, women's experiences of retraumatization did not mediate relations between childhood abuse experiences and adult treatment seeking. The implication is that, although many forms of traumatic stress may impact adult treatment seeking,

previously reported relations between childhood abuse and adult treatment seeking may be particularly robust. Therefore, these findings support the related research regarding the long-term influence of abuse in childhood, rather than later-life retraumatization, on adult patterns of treatment seeking such as increases in overall amount of treatment seeking relative to nonabused individuals (Felitti, 1991; Koss et al., 1991; Leserman & Drossman, 1995; Salmon & Calderbank, 1996) and increases in discomfort during treatment (Kitzinger, 1990a, 1990b). Therefore, given the apparent strength of the childhood abuse-adult treatment seeking relation it was feasible to re-focus attention on affective psychological distress as a mediator of the abuse-treatment seeking relation.

In sum, the current findings evidence a clear mediating influence of psychological distress, rather than cognitive assumptive beliefs or cognitive-behaviour coping strategies, on childhood abuse-adult treatment seeking relations. The path analyses indicated that anxious arousal mediated the relations of childhood emotional and forced sexual abuse, but not physical abuse, with adult treatment seeking, accounting for 28% of the variance in treatment seeking frequency. In addition, although emotional and forced sexual abuse retained their direct effects on adult discomfort during treatment (explaining 26 and 20% of the variance respectively), suggesting that variables other than those examined in the current study mediated these relations, anxious arousal also accounted for 34% of the variance in discomfort. Overall, these findings evidence a mediating influence of affective psychological distress, particularly anxious arousal, on child abuse-adult treatment seeking relations.

Implications of Non-Mediation of the Child Abuse-Adult Health and Treatment Seeking Relations by Assumptive Beliefs and Coping, and Mediation by Psychological Distress

Taken together, the findings of the path analyses suggest that trauma-adult health relations are primarily mediated by proximal psychological distress (e.g., elevated anxious arousal) rather than molar-level cognitive assumptive beliefs or by cognitive coping strategies. In regard to theoretical implications, the findings in the current study can be viewed within the context of Metcalfe and Mischel's (1999) and Metcalfe and Jacobs' (2000) recent model of self-regulatory processing and traumatic memory, particularly regarding the primacy and importance of 'hot' emotions over 'cool' cognitions. Metcalfe and Mischel (1999) propose a model of self-regulatory processing that involves two distinct systems: The first is a 'cool' cognitive system specialized for episodic representation and thought, and the second is a 'hot' emotional system specialized for quick emotional processing and responding (see also, Metcalfe & Jacobs, 1996, 1998, 2000; Mischel & Shoda, 1995).

Highlighting the functional differences between cognitive and emotional processes, Metcalfe and Mischel (1999) note that the cool cognitive system is hippocampally centred, although it also involves other frontal and cortical areas implicated in comprehension, working memory and metacognition (Metcalfe & Jacobs, 1996, 1998). The cool system "is narrative, weaving knowledge about sensations and emotions, thoughts, actions, and context" into a "narrative that is coherent, goal sensitive, and strategic" (Metcalfe & Mischel, 1999, p. 6). This

system is related to “verbal or nonverbal descriptions, statements, assertions, and commentaries – reflections rather than reflexes” (Metcalf & Mischel, 1999, p. 6).

In contrast, the hot emotional system is amygdala-based and attuned to attractive as well as threatening and fear-provoking triggers (Metcalf & Jacobs, 1996, 1998). The hot system is “characterized by rapid automatic triggering, conditioned responding, inflexibility, stereotyping, and affective primacy” (Metcalf & Mischel, 1999, p. 6). Responses related to the hot emotional system are “immediate or direct approach-avoidance patterns” (Metcalf & Mischel, 1999, p. 6), without the “extensive interconnectedness ..., the relational properties, the complexity of thought of the cool cognitive system” (Metcalf & Mischel, 1999, p. 6). Therefore, whereas the cool cognitive system is characterized by complexity, reflection and later development, the hot emotional system is simple, reflexive, and develops early in life (Metcalf & Mischel, 1999). Further, whereas the cognitive system is attenuated by stress, the emotional system is *accentuated* by stress (Metcalf & Mischel, 1999).

Metcalf and Mischel (1999) discuss the conditions under which ‘cool control’ of ‘hot impulses’ are likely to be impaired, as well as the conditions determining the dominance of the hot over the cool system. First, acute stress impacts the two systems differentially such that with increased stress the cool cognitive system becomes dysfunctional, and the hot emotional system dominates processing. Second, chronic activation of the hot system by conditions of severe stress affects the dominance of the hot versus cool systems. Experience with chronic traumatic stress is likely to “result in a systematic shift in the preponderance of hot-system as opposed to cool-system activation,” a shift that may be “relatively stable in people who have experienced severe and chronic stress” (Metcalf & Mischel, 1999, p. 8).

Indeed, when the hot system is dominant, salient stressful stimuli (i.e., anxiety-inducing) tend to elicit a strong 'hot' system response, with a concurrent attenuation of 'cool' system strategies. Further, as stress increases, the hot emotional system is increasingly potentiated and the cool cognitive system increasingly inhibited. Metcalfe and Mischel (1999) state, for example, "[W]e expect that children who live under conditions of chronic stress should be less likely to delay gratification" (p. 15) because a childhood of chronic stress is likely to lead to the dominance of the hot emotional system over the cool cognitive system. This prediction is supported not only by the available psychological literature (e.g., Rodriguez, Mischel, & Shoda, 1989; Rutter, 1987), but by neuroanatomical studies. For example, there is evidence that individuals who have experienced chronic stress, be it child abuse or combat, have reduced hippocampal volume (for a review see Bremner, 2002) which, in turn, impedes the ability of the cool system to function (e.g., see Metcalfe & Mischel, 1999; Jacobson & Sapolsky, 1991; Sapolsky, 1996).

The current study's findings regarding the mediation of trauma-adult health relations by proximal affective variables but not molar cognitive variables makes theoretical sense within the context of this two-system, 'hot/cool' framework. Specifically, both assumptive beliefs and coping strategies can be nested within the 'cool' cognitive system of Metcalfe and Mischel's (1999) self-regulatory processing model. Assumptive beliefs form a complex conceptual system, one developed over time and one that constitutes an organized set of fundamental assumptions about ourselves, the world and other persons (e.g., see, Janoff-Bulman, 1992). As such, they fall within the 'cool' cognitive system's "narrative," "weaving knowledge about sensations and emotions, thoughts, actions, and context" (Metcalfe & Mischel, 1999,

p. 6). Similarly, coping strategies involve individuals' cognitive and behavioural efforts to meet challenges and stressors (e.g., Folkman et al., 1986). Again, these fall within the 'cool' cognitive system's weaving of knowledge about emotions (e.g., emotion-focused coping), actions and context (e.g., active problem-focused coping), such that the individual narrative remains "coherent, goal sensitive, and strategic" (Metcalf & Mischel, 1999, p. 6). Indeed, the definitions of assumptive beliefs are akin to the molar-overarching 'narratives' processed within the 'cool' cognitive system, and the definitions of coping strategies are akin to the 'strategies' employed within this system.

Given that the 'cool' cognitive system is attenuated by both acute and chronic stress (Bremner, 2002; Metcalf & Jacobs, 2000; Metcalf & Mischel, 1999), and may even become dysfunctional, it is perhaps not surprising that assumptive beliefs and coping strategies did not mediate the trauma-adult health relations assessed in this study. Moreover, because individuals who have endured the extreme stressor of childhood abuse, and who are also experiencing the stressors posed by adult physical health concerns, may experience predominant activation of the 'hot' emotional system over the 'cool' cognitive system, it is also not surprising that women's affective psychological distress did mediate the relations between their experiences of trauma and physical wellbeing.

In addition, existent research on survivors' treatment seeking indicates that healthcare visits can constitute stressors for survivors, stressors that may be reminiscent of past abuse (e.g., Kitzinger, 1990a, 1990b). As such, it is feasible that treatment seeking may also constitute a stressor that elicits primacy of the 'hot' emotional system and inhibition of the 'cool' cognitive system, thereby explaining the

mediation of abuse and treatment seeking frequency by affective distress (anxious arousal) but not cognitive assumptive beliefs nor cognitive-behavioural coping strategies.

In the case of discomfort during treatment, affective distress significantly predicted discomfort, while childhood experiences of emotional and forced sexual abuse remained as independent predictors of such discomfort. It may be the case that variables other than anxious arousal mediate the abuse-discomfort relation, such as more immediate interactional variables that capture the quality of relationship between survivors and healthcare providers. This possibility was explored in the thematic analyses of women's avoidance of treatment, to be discussed below.

Finally, in regard to applied implications of the current findings, anxious arousal is an experience that may be addressed in the context of treatment seeking itself. For example, if the abuse-treatment seeking relation had been mediated by non-malleable assumptive beliefs (e.g., lack of belief in benevolent others – possibly including healthcare providers – and lack of belief in the worthiness of the self – that is, a self worthy of beneficial treatment experiences), such a relation would be difficult to address in a healthcare setting. Indeed, such a relation may be difficult to address even within the context of a clinical counseling setting (e.g., Janoff-Bulman, 1989a, 1989b, 1992), given that core assumptive beliefs are known to be highly resistant to change (Janoff-Bulman, 1989a, 1989b, 1992). Instead, the abuse-treatment seeking relation was mediated by anxious arousal, an experience that may lend itself to attention directly within the healthcare setting itself. For example, this anxiety may be effectively addressed during healthcare encounters.

Research indicates the beneficial impact of anxiety-reducing modifications to typical healthcare encounters including the addition of a brief abuse-screening, providing a friendly setting, non-judgmental discussion of health concerns, non-rushed examinations, and taking extra time to both prepare and debrief survivors regarding healthcare examinations (e.g., see Briere et al., 1997; Britton, 1998; Candib, 1995; DeChesnay, 1989; Kitzinger, 1990b; Robohm & Buttenheim, 1996; Smith & Smith, 1999). However, it remains to be seen whether addressing anxiety in healthcare settings, and in discussions with healthcare providers regarding health concerns (e.g., thereby possibly decreasing anxious arousal regarding bodily symptoms), might address the anxious arousal that mediated the abuse-treatment seeking link.

In sum, the non-mediation of the abuse-health relation and the abuse-treatment seeking relation by both cognitive assumptive beliefs and cognitive-behavioural coping strategies can be viewed in the context of the significant relations and mediation of the abuse-health relation by affective psychological distress, findings that support Wagner et al.'s (2000) suggestion that it may be important to assess stressor response (e.g., psychological distress following trauma) in addition to stressor exposure (e.g., abuse and/or other trauma history), when evaluating physical health outcomes.

Factors Influencing Healthcare Avoidance

Given the long-term psychological, psychosocial and physical health outcomes of childhood abuse, it is not surprising that abuse affects adult treatment seeking, such as increased use of healthcare services (e.g., Koss et al., 1991; Leserman & Drossman, 1995). However, as with the minimal existent research (e.g., Kitzinger, 1990a, 1990b; Robohm & Buttenheim, 1996; Smith & Smith), the

current study also found evidence of survivors' increased psychological and physical discomfort during treatment, as well as healthcare avoidance. Women's experiences of healthcare avoidance were weakly positively related to their experiences of forced sexual abuse and later-life retraumatization. Women's experiences of healthcare avoidance were also moderately related to their experiences of digestive and genitourinary symptoms. In addition to the quantitative findings regarding relations between experiences of abuse, health, discomfort during treatment and treatment avoidance, the current study invited women to discuss factors influencing their healthcare avoidance. That is, the current study extended the quantitative findings regarding survivors' treatment seeking experiences (amount of treatment seeking; discomfort during treatment; extent to which treatment is avoided) with a thematic analysis of women's reasons for treatment avoidance.

First, because survivor-status in the current study correlated with increased discomfort during treatment, it was perhaps not surprising that survivors also reported being avoidant of treatment despite increases in treatment seeking overall. An apparent paradox between increased treatment seeking concurrent with increased avoidance can perhaps be understood as follows. Medical need in survivors (e.g., the increased physical health symptoms, effects of symptoms reported by survivors in the current study) might indeed necessitate a proportional increase in overall amount of treatment seeking relative to nonabused women. However, given the simultaneous increase in discomfort during treatment, it is also feasible that survivors still avoid treatment when possible. Increased treatment seeking overall, increased discomfort during treatment, and treatment avoidance

when possible, are not mutually exclusive experiences, nor is their co-occurrence necessarily paradoxical.

Second, given the treatment settings for which women were asked to discuss avoidance, it is not surprising that participants in the current study reported experiences of avoidance, even concurrent with physical need. Women were asked to discuss their possible avoidance in the context of dental treatment, a setting reported elsewhere as being associated with both treatment delay and avoidance (e.g., Gross, 1992) in a variety of populations, including survivors (e.g., Hays & Stanley, 1993). Further, participants were also asked to discuss treatment avoidance in the context of medical treatment, which for women includes gynaecologic examination, again known to be associated with distress for women in general and avoidance for survivors in particular (e.g., Courtois, 1988; Holz, 1994; Kitzinger, 1990a, 1990b; Smith & Smith, 1999; Robohm & Bittenheim, 1999).

When women were then asked to actively think about and explain their reasons for treatment avoidance, their reasons ranged from logistical influences (i.e., financial concerns; inconvenience of healthcare visits), through to affective influences (i.e., fear of bad medical news; fear of pain during treatment; extreme discomfort during treatment; extreme discouragement with treatment; explicit experiences of retraumatization during treatment), through to cognitive-interactional influences such as dislike and/or mistrust of healthcare providers in conjunction with explicit preferences to self-heal rather than seek treatment. The results of the thematic analysis of women's reasons for treatment avoidance indicate that experiences of avoidance are more frequently rooted in negative healthcare experiences (e.g., related to affective and interactional reasons for treatment

avoidance) than non-need of healthcare services. For example, abuse survivors in the sample reported more medical need in terms of increased symptoms and effects of symptoms; however, despite medical need, negative (and frequently retraumatizing) medical experiences were discussed as reasons for treatment avoidance. That is, medical and dental attention were frequently required, and frequently sought; however, when avoidance did occur, women reported that negative healthcare experiences (rather than non-need of healthcare) accounted for this avoidance.

For women in the current study, treatment avoidance due to logistical constraints such as lack of time and finances, and avoidance due to expectancies of pain, fear and bad health-related news, were common reasons for avoiding healthcare visits. Although time and financial constraints, and to some extent, bad medical news or physical pain experienced during healthcare visits, may remain as realities for many individuals, many of women's other reasons for healthcare avoidance may be open to change. For example, both survivors and nonabused women also discussed many interactional reasons for treatment avoidance such as dislike or mistrust of healthcare providers. Further, women with experiences of childhood abuse also discussed avoidance due to extreme psychological discomfort and discouragement during treatment, and intrusive and/or retraumatizing healthcare experiences. Therefore, the findings from the thematic analysis suggest that, for survivors of childhood abuse in particular, treatment discomfort and avoidance primarily originate in negative interactional experiences with healthcare staff. When taken into consideration with these findings from the thematic analysis, the current findings regarding survivors' increased treatment discomfort and

avoidance also lend support to recommendations for improving both healthcare providers' awareness of abuse (e.g., Sassetti, 1993) and their awareness of the impact that negative healthcare experiences can have on the quality of survivors' treatment seeking overall (e.g., Archer, 1994; Blakeley & Ribeiro, 1997; Burge, 1989; David, 1993).

Of interest is that the majority of the above reasons for avoiding healthcare may be addressed by the implementation of feasible changes within treatment settings, such as increasing healthcare provider knowledge regarding abuse-health links (e.g., knowledge that healthcare providers themselves have reported wanting; Blakely & Ribeiro, 1997). Subsequent changes may also include the addition of a brief abuse history screening, additional time taken to prepare and debrief women following healthcare examinations, a non-judgmental setting free from interruption, and examination protocols that take women's anxieties regarding treatment seeking into account (e.g., Britton, 1998; Kitzinger, 1990b; Robohm & Bittenheim, 1996; Smith & Smith, 1999). Such changes seem feasible, even in the context of busy healthcare practices, and may address, at least in part, some of the reasons the women in the current study avoid treatment.

Strengths and Limitations of the Current Study and Implications for Future Research

The existent literature frequently uses clinic-based samples in discussions of childhood abuse-adult health relations. Although there may be survivors who are primarily nonusers of the healthcare system, the use of clinic-based populations in research has created a bias by selecting samples that are actively seeking medical care (Berkowitz, 1998). In order to attract more nonusers of the healthcare system

(i.e., either due to healthcare avoidance or overall wellness and non-need of healthcare), the current study recruited abuse survivors in one poster campaign, and other participants interested in women's health in a second poster campaign, and did so in both community and university settings rather than exclusively clinic-based settings. Therefore, despite the possible limitations of a modest total sample size, the current study worked with a community- and university-based sample that may be representative of survivors more generally (i.e., rather than clinic-based samples that are *a priori* experiencing health concerns), and found that even within a non-clinic sample, women's childhood abuse experiences were related to a variety of physical health symptoms (i.e., digestive, cardiovascular, genitourinary and premenstrual symptoms). In contrast, however, the university-based component of the current sample may present a limitation insofar as participants were, on average, highly educated. Therefore, although women sampled from the community may be more representative of the general population, the university-based sample may have somewhat limited the current study's generalizability.

In regard to assessing women's childhood abuse experiences, the current study is perhaps limited in ways that previous research has been (e.g., see Briere, 1992) in that it required participants to report on historic abusive events, and, did so using a compilation of abuse measures. Retrospective reporting on historic events has been questioned in regard to its accuracy (Briere, 1992) and the compilation of abuse measures may make it difficult to compare the current findings with those reported elsewhere. That said, the current study offered an improvement over previous research in that, although recent literature notes the value of separating by type rather than aggregating women's reported experiences of child abuse and other

trauma (e.g., Schaaf & McCanne, 1998), much of the previous research regarding abuse and adult health-related concerns focuses on child sexual abuse. In addition to women's experiences of childhood sexual and physical abuse, the current study assessed the possible impact of childhood emotional abuse on survivors' physical health symptoms and treatment seeking. The results indicate that relations between child abuse, adult physical health and treatment seeking hold even for non-contact abuse such as emotional abuse. Further, the current findings suggest that the characteristics of different abuse types (i.e., sexual abuse force) may relate have particularly detrimental effects on adult physical health, suggesting that future research further explore the particular effects of different child abuse types and characteristics of those types.

Another strength of the current study was its assessment of the impact of other life trauma on women's physical health symptoms and treatment seeking. The assessment of other life trauma was important in a comprehensive assessment of trauma given the known relations between traumatic life experiences and subsequent physical health and wellbeing (e.g., Benedict et al., 1999; Dansak, 1998; McFarlane et al., 1994; Shalev et al., 1990), and between past abuse and later retraumatization (e.g., Benedict et al., 1999; Dansak, 1998). The non-mediation of the child abuse-adult health and the child abuse-adult treatment seeking relation by other trauma provided further evidence of the lasting impact of childhood abuse on adult health concerns.

The present study also assessed women's experiences of childhood abuse and other trauma in conjunction with experiences of different physical symptoms, expanding the symptom clusters more typically examined in the research literature to

include theoretically important cardiovascular concerns. For example, the current study drew on research evidencing the frequency of gastrointestinal disorders (e.g., Leserman & Drossman, 1995; Scarinci et al., 1994; Talley et al., 1994; Walker et al., 1995) and gynaecological concerns (Berkowitz, 1998; Leserman & Drossman, 1995; Friedman et al., 1982; Walker et al., 1988) reported by abuse survivors, and assessed participants' digestive and genitourinary symptoms accordingly. Further, given the available research evidencing links between menstrual cycle symptoms and abuse (Friedman et al., 1982; Miccio-Fonseca et al., 1990; Paddison et al., 1990; Walker et al., 1988), the current study also assessed premenstrual symptoms. Finally, given the general relation between elevated stress and cardiovascular symptoms (Barlow, 1988; Lahad, Heckbert, Koepsell, Psaty, & Patrick, 1997; Shapiro, Jamner, & Goldstein, 1997; Whitman, Fowkes, Deary, & Lee, 1997), the current study also assessed such theoretically important symptoms, hypothesizing that the traumatic stress of childhood abuse may associate with cardiovascular health concerns. Therefore, rather than assessing a general health profile, the current study targeted four abuse-specific health symptom clusters. Further, the related findings indicate that abuse-specific physical health outcomes merit further study.

Given the research evidencing links between generalized negative affect and increased symptom reporting (e.g., Watson & Pennebaker, 1989), it was important to assess functional health status beyond symptom reporting. Therefore, the current study assessed the functional impact of symptoms on participants' daily lives, assessing number of days absent from work or school, and impact of symptoms on school/academic performance, sleep patterns, social life, sex life and life in general.

That women's functional health outcomes (i.e., effects of symptoms) were also assessed via self-report may pose a limitation; nevertheless, these reports provided an estimate of participants' functional health status in addition to their subjective reporting of specific symptoms.

In addition to assessing physical health symptoms and functional health status as outcome variables in the proposed mediational model, the current study assessed treatment-seeking behaviours such as number of visits to healthcare providers. Although the outcome variables related to health status (i.e., health symptoms, effects of symptoms, treatment seeking) were assessed via self-report, they nevertheless provided a more comprehensive picture of health status than subjective symptom reporting alone. That is, health symptom self-reports can be effectively supplemented through the inclusion of other types of health-status indicators such as health-related behaviours (e.g., number of days absent from work/school due to symptoms; number of physician visits) (Watson & Pennebaker, 1989). That said, as with all self-report data, the possibility remains that women's responses may have been affected by a response bias (e.g., attempts to either inflate or under-rate experiences), despite randomized orders of the questionnaires and separation of the total package into two components completed one week apart. However, it seems unlikely that women's responses were unduly influenced by a response bias given that some of the anticipated relations (e.g., relations between childhood abuse and coping) in the current study were weak or non-significant.

In addition to assessing the adult physical health and treatment seeking effects of childhood abuse, the current study also assessed the processes underlying the abuse-health relations. Specifically, the current study explored

possible psychological mediators of these relations such as affective mediators (anger/irritability, anxious arousal, depression), cognitive mediators (assumptive beliefs) and cognitive-behavioural mediators (coping strategies). That is, this study examined both psychological and physical factors related to abuse, and in contrast to research assessing psychological variables as abuse-related outcomes, hypothesized that psychological variables would mediate abuse-health relations. Therefore, the current study builds upon and extends previous research findings by reporting the importance of proximal psychological distress (rather than cognitive assumptive beliefs or cognitive-behavioural coping strategies) underlying the relations between childhood abuse, adult physical health and treatment seeking. Further, the current study locates the mediational influence of affective distress within a recent theoretical model of trauma and self-regulatory processing, exploring the primacy of 'hot' emotions' over 'cool' cognitions under stressful conditions (Metcalfe & Mischel, 1999), an area of research that merits further study, particularly in the context of women's treatment seeking.

Although the mediational influence of affective psychological distress seems particularly clear when contrasted with the non-mediation of the child abuse-adult health relation and the child abuse-adult treatment seeking relation by cognitive assumptive beliefs, the potential role of survivors' coping strategies merits further study given the unexpected weak or non-significant relations between women's childhood abuse experiences and adult coping strategies. Indeed, the current study may be limited by the factor structure of the Brief COPE questionnaire. Although women's responses on the questionnaire appeared to be internally consistent, with three meaningful factors, the possibility remains that the solution was not stable.

Nevertheless, this possible limitation regarding cognitive-behavioural coping strategies does not detract from the overall findings regarding the mediational primacy of women's affective distress over cognitive assumptive beliefs.

Finally, in addition to assessing hypothesized psychological processes underlying childhood abuse-adult health and childhood abuse-adult treatment seeking relations, the current study also explored the extent to which survivors avoided treatment and followed up with a thematic analysis of women's specific reasons for treatment avoidance. That is, while facets of treatment seeking (amount of treatment seeking, discomfort during treatment) were included as outcome variables in the mediational model of the child abuse-adult treatment seeking relation, its further examination constituted the second goal of the current study. Just as the literature has only recently documented the physical health outcomes of abuse, and the possible mediators of child abuse-adult health relations, the literature is lacking in a related discussion of survivors' treatment seeking experiences (e.g., see, Bell & Mosher, 1998). Given an abuse-treatment seeking relation, it was important to investigate the quality of women's healthcare experiences, such as treatment seeking discomfort and related avoidance. In a final strength of the current study, treatment seeking was then further explored via a thematic analysis of women's healthcare experiences in regard to reasons for treatment avoidance. Given the findings of the thematic analysis, women's healthcare experiences, ways in which to improve these experiences, and concurrent exploration of healthcare providers' experiences in working with abuse survivors, all merit further study.

Conclusions

The existent literature documents long-term psychological and psychosocial sequelae of childhood maltreatment (e.g., Ackerman et al., 1998; Bagley, 1996; Beitchman et al., 1992; Calum et al., 1998; Chandy et al., 1996). Long-term physical health sequelae have also been documented (e.g., Koss et al., 1991; Salmon & Calderbank, 1996; Sansone et al., 1996), although less frequently. Less is known about the psychological processes that may underlie the long-term effects of childhood abuse on adult health. Therefore, the current study investigated the child abuse-adult health link by assessing women's experiences of childhood abuse (familial emotional, physical and forcible sexual abuse) and other trauma, in conjunction with women's health symptoms, functional effects of symptoms and treatment seeking (i.e., amount of treatment seeking; discomfort during treatment).

Overall, the current findings support and extend previous research documenting the child abuse-adult health relation. For example, the findings suggest that familial childhood emotional, physical and forcible sexual abuse relate to physical health outcomes (i.e., symptoms, effects of symptoms, treatment seeking frequency, discomfort during treatment). The current study also assessed possible mediators of child abuse-adult health relations, including affective psychological distress, molar cognitive assumptive beliefs and cognitive-behavioural coping strategies. The findings indicate that neither women's overarching assumptive beliefs nor coping strategies mediated child abuse-adult health relations. In contrast, women's proximal experiences of affective psychological distress (e.g., anxious arousal) mediated abuse-health links, findings that lend support to the suggestion that the anxiety following trauma leads to chronic autonomic arousal that in turn relates to physical symptomatology (Briere & Runtz, 1988b).

Finally, the current study also examined child abuse-adult treatment seeking relations and found that women's psychological distress (i.e., anxious arousal) mediated the abuse-treatment seeking relation. These findings were then extended to include women's open-ended discussions of their reasons for treatment discomfort and avoidance. The findings indicated that women's treatment avoidance frequently stemmed from negative healthcare experiences. Of interest, however, is that these negative experiences may be modified with increased healthcare provider awareness, and achievable changes within healthcare settings.

In sum, the proximal psychological distress that most reliably mediated child abuse-adult health relations may be addressed in the context of treatment seeking itself. Considering the treatment-seeking anxiety reported by women, it seems germane to address this distress within primary healthcare settings. For women in the current study, distress mediated the connection between child abuse and adult health concerns. Further, distress was also a clear factor in women's discussions of their treatment seeking, discomfort and avoidance. While distress may lead to abuse survivors seeking treatment for health concerns, it also accompanies the very process of treatment seeking itself. It remains an interesting question – both theoretical as well as applied – whether addressing the distress that accompanies treatment seeking may help, in turn, to 'unpack' the distress that underlies the link between abuse and physical health concerns.

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Appendix A: Questionnaire Package

Cover Letter

Informed Consent

Questionnaires

Debriefing Form

Childhood Experiences, World Views and Well-Being Study
Department of Psychology, Carleton University
1125 Colonel By Drive, Ottawa, ON
K1B 5B6

Dear Participant,

Thank you for agreeing to participate in the 'Childhood Experiences, World Views and Well-Being Study.' As briefly described in our phone conversation, this study looks at childhood experiences, and adult world views and well-being, including physical health.

First, before you read the enclosed package of questionnaires, please read and sign the Informed Consent form. We have signed this form in advance, and we ask you to also sign and date the form in the space provided. Note that because the consent form will identify you because it contains your signature, it will be removed from the questionnaire package as soon as we receive it, and stored separately from your questionnaires. In this way, we can ensure your confidentiality, and ensure that your responses remain anonymous. Please do not put your name anywhere on the questionnaires, also to ensure your anonymity.

Second, as explained in our phone conversation, this package contains about half of the questionnaires we would like you to complete, and takes about one hour to fill out. Each questionnaire has its own set of instructions to guide you. We have put the questionnaires in different orders for different participants so as to avoid a research problem known as "order" or "carry-over" effects. We would therefore be grateful if you would complete the questionnaires in the order they are provided, without looking ahead or back. Also, please note any places where you have questions or where you need clarification. We will be happy to answer any questions you may have when we meet with you so that you can fill out the second set of questionnaires, as explained in our phone conversation.

We will contact you in about 10 days to arrange a time for you to meet with us to fill out the second set of questionnaires. The next set of questionnaires takes a little less than one hour to fill out. However, we want to meet with you in person so we can answer any questions you may have. When we contact you, we will set up a time and place that is most convenient for you to meet with us. As discussed on the phone, this location can be in our lab here at Carleton University or at a place of your choosing. When we meet, we will answer any of your questions, ask you fill out the final questionnaires, and then we will explain the goals of the study in more detail.

As a gesture of our appreciation for your help we will also provide you with \$10.00 for your time and effort. Alternatively, If you are student registered in 49.101 or 49.102, you may choose between \$10.00, or two experimental course credits, or a combination of 1 experimental course credit and \$5.00.

Again, thank you for your participation. Your time and efforts are greatly appreciated.

Sincerely,

Amanda Bouchard
B.A. Thesis student

Connie Kristiansen, Ph.D.
Contact number: 520-2600, Ext. 2674

Holly Hinton
B.A. Thesis student

Michelle Melia-Gordon, M.A.
Contact number: 520-2600, Ext. 2679

CHILDHOOD EXPERIENCES, WORLD VIEWS AND WELL-BEING: INFORMED CONSENT FORM

Before you consider participating, we would like to make sure that you understand the purpose of the study and the nature of your involvement. The information provided in this informed consent is intended to provide you with sufficient information so that you can make an informed decision about whether you wish to participate in the study. If you have any questions, please feel welcome to contact us at this point to ask us. (Contact numbers listed below.)

This study is being conducted by Amanda Bouchard, BA student, Holly Hinton, BA student, Michelle Melia-Gordon, Ph.D. candidate, and Connie M. Kristiansen, Ph.D., Associate Professor, from the Psychology Department of Carleton University.

This study involves filling out questionnaires. There are no interviews involved. You will be given questionnaires that ask about your childhood experiences, whether or not these experiences included any child abuse, its impact upon you, how you coped, and your recovery process. Other questions will ask you about your self-perceptions and your world views. Finally, you will also be asked about your health and wellness.

There are a total of two questionnaire session, for a total time commitment of about 2 hours. This first set of questionnaires takes about one hour to fill out and can be filled out on your own at home or at any other quiet location of your choice. There is a second set of questionnaires, and we will arrange to meet with participants in person so that we can fully explain the questionnaire one-on-one. This second set of questionnaires takes less than one hour to complete. In order for you to fill it out, we can meet with you at our research lab on Carleton Campus or at a location of your choice. We will collect the first set of questionnaires at that time also. We will also give you \$10.00 as a gesture of our appreciation for your participation. (For participants who are Carleton students registered in 49.101 or 49.102, you may choose to receive \$10.00 or two experimental course credits, or a combination of \$5.00 and one experimental course credit.)

Some questions in the study ask about sensitive issues such as your physical health and wellbeing, and whether or not you experienced abuse. Being asked questions about sensitive issues can be potentially distressing (e.g., emotionally upsetting). Therefore, it is important that you understand your participation in this study is completely voluntary, that you are free to refuse to answer any questions, and that you may stop participating in the study at any time, for any reason. If you stop participating, we ask that you read the final information form entitled, "Childhood experiences, world views and wellbeing study" because it includes contact numbers if you feel you need support or counseling.

Because this form will contain your signature and will therefore identify you by name, it will be removed immediately from this set of questionnaires as soon as we receive them in our meeting. To ensure confidentiality, the Informed Consent will then be stored separately from your questionnaires. In this way, we can ensure your confidentiality, and ensure that your answers remain anonymous. For this reason also, please do not write your name anywhere on your questionnaires.

Should you wish to discuss this study, you are welcome to contact Michelle Melia-Gordon or Dr. Connie Kristiansen at 520-2600, ext. 2679. If you have any complaints or comments about the way this study was conducted, or how you were treated, please contact Dr. Monique Senechal, Chair of the Psychology Ethics Committee at 520-2600, ext. 1155. If you have any other concerns, please contact Dr. Kim Matheson, Chair of the Department of Psychology, at 520-2644.

We thank you in advance for your participation.

Amanda Bouchard
B.A. Thesis student

Connie Kristiansen, Ph.D.

Holly Hinton
B.A. Thesis student

Michelle Melia-Gordon, M.A.

I acknowledge that I have read the above information and willingly consent to participate in this study while recognizing that I can stop at any time, for any reason.

Participant Signature:

Date:

Background Information

1. Your Age: _____
2. Relational Status (check those that apply):
 - _____ Single
 - _____ Dating
 - _____ Married
 - _____ Divorced
 - _____ Living with a partner
 - _____ Other
3. Number of Children: _____
4. Ethnic Background: _____
5. Highest Year of Education Completed: _____
6. Employment/Student Status (please check all that apply):
 - _____ Employed full-time (35+ hours/week)
 - _____ Employed part-time
 - _____ Unemployed
 - _____ On disability
 - _____ On social assistance
 - _____ Homemaker
 - _____ Student full-time
 - _____ Student part-time
7. Total Gross Family Income Per Year (please check one):
 - _____ Under \$15,000
 - _____ \$15,000-\$24,999
 - _____ \$25,000-\$34,99
 - _____ \$35,000-\$44,999
 - _____ \$45,000-\$54,999
 - _____ \$55,000-\$64,999
 - _____ \$65,000-\$74,999
 - _____ \$75,000 or more
8. Where did you hear about this study? _____

Health History

Below is a list of health conditions. Please indicate if any of the following experiences apply to you by circling your answer:

1. Has your doctor ever said that you have high blood pressure? Yes / No
2. Has your doctor ever said you have heart trouble? Yes / No
3. Has your doctor ever said you have stomach ulcers? Yes / No
4. Has your doctor ever said you have jaundice? Yes / No
5. Has your doctor ever said you have liver or gall bladder trouble? Yes / No
6. Has your doctor ever said you have a hernia (rupture)? Yes / No
7. Has your doctor ever said you have a kidney or bladder disease? Yes / No
8. Has your doctor ever said you have spastic colitis? Yes / No
9. Has your doctor ever said you have irritable bowel? Yes / No
10. Do you have any other important medical condition or history that has not been covered in this questionnaire? Yes / No
11. Have you had or do you have any other important medical condition or history that has not been covered in this questionnaire? Yes / No

If yes, please describe briefly: _____

Childhood Experiences Survey

When you were a child (under the age of 16), how often did your parents, stepparents, foster parents, or other adult(s) in charge of you do the following? To answer, pick a number between 0 and 6 from the scale below and write it in the space beside each item.

0	1	2	3	4	5	6
Never	1 or 2 times	3 to 5 times	6 to 9 times	10 to 19 times	20 to 30 times	30+ times

<u>Answer</u>	<u>Item</u>
_____	1. Yell at you
_____	2. Insult you
_____	3. Criticize you
_____	4. Try to make you feel guilty
_____	5. Ridicule or humiliate you
_____	6. Embarrass you in front of others
_____	7. Make you feel like you were a bad person
_____	8. Lock you in a room, closet, or other small space
_____	9. Tie you up or chain you to something
_____	10. Threaten to hurt or kill you
_____	11. Threaten to hurt or kill someone you cared about
_____	12. Threaten to hurt or kill your pet
_____	13. Threaten to leave you somewhere that frightened you or where you wouldn't be able to get back home
_____	14. Threaten to leave and never come back
_____	15. Spank you
_____	16. Hit or slap you (other than spanking)
_____	17. Hit you with objects
_____	18. Punch you
_____	19. Beat you severely
_____	20. Kick you
_____	21. Injure you so that you required medical services
_____	22. Injure you in any way

1. Before age 16, how often *in the worst year that you can remember* were you hit or spanked by your parents or other adults? (Please check one.)

☐ Never	☐ 11 to 15 times	☐ 51 to 100 times
☐ 1 or 2 times	☐ 16 to 20 times	☐ 101 to 200 times
☐ 3 to 5 times	☐ 21 to 30 times	☐ 201 to 300 times
☐ 6 to 10 times	☐ 31 to 50 times	☐ 301+ times

Before age 16, how often did a parent, step-parent, foster parent, or other adult in charge of you:

(1) Do something on purpose to you (e.g., hit or punch or cut you, or push you down) that gave you bruises or scratches, broke bones or teeth, or made you bleed?

_____ times

What was their relationship to you? _____

How old were you the first time? _____ years old

How old were you the last time (before age 16)? _____ years old

Were the authorities ever notified (e.g., the police, child welfare)? Yes / No

(2) Hurt you so badly that you had to see a doctor or go to the hospital?

_____ times

What was their relationship to you? _____

How old were you the first time? _____ years old

How old were you the last time (before age 16)? _____ years old

2. a) Before you were 16, how often did a family member try to kiss you in a sexual way? _____ times

How often was physical force used on these occasions? (Please circle one)

Never Occasionally Often Almost Always Always

How many family members did this happen with? _____

What was their relationship to you? _____

How old were you when it first happened? _____ years old

How old were you when it last happened? _____ years old

3. a) Before you were 16, how often did a family member touch your body in a sexual way, or make you touch their sexual parts? _____ times

How often was physical force used on these occasions? (Please circle one)

Never Occasionally Often Almost Always Always

How many family members did this happen with? _____

What was their relationship to you? _____

How old were you when it first happened? _____ years old

How old were you when it last happened? _____ years old

4. a) Before you were 16, how often did a family member have oral, anal, or vaginal intercourse with you, or place their fingers or objects in your anus or vagina?
_____ times

How often was physical force used on these occasions? (Please circle one)

Never Occasionally Often Almost Always Always

How many family members did this happen with? _____

What was their relationship to you? _____

How old were you when it first happened? _____ years old

How old were you when it last happened? _____ years old

Stressful Life Experiences (Stamm)

Instructions: We are interested in learning about your life experiences. Below is a list of experiences that some people have found stressful. Please fill in the number that best represents how much each of the following statements describes your experiences. If you are not sure of your answer, just give us your best guess. Please write "0" in the "Describes Experience" column if you didn't experience any of these.

Example: There was an accidental explosion (industrial disaster) in the factory in my home town. I didn't see the accident happen, but I saw the remains of the factory afterwards and I know many of the people who worked there, so I heard all about it. For item #2: "I have witnessed or experienced a human made disaster like a plane crash or industrial disaster" I would probably choose "2" or "3," because I sort of experienced it.

	0	1	2	3	4	5	6	7	8	9	10
	I did not experience this at all	A little like my experience				Somewhat like my experience					Exactly like my experience
Describes Experience	Life Experiences										
	1. I have witnessed or experienced a natural disaster like a hurricane or earthquake.										
	2. I have witnessed or experienced a human made disaster like a plane crash or industrial disaster.										
	3. I have witnessed or experienced a serious accident or injury.										
	4. I have witnessed or experienced chemical or radiation exposure happening to me, a close friend or a family member.										
	5. I have witnessed or experienced a life threatening illness happening to me, a close friend or a family member.										
	6. I have witnessed or experienced the death of my spouse or child.										
	7. I have witnessed or experienced the death of a close friend or family member (other than my spouse or child).										
	8. I or a close friend or family member has been kidnapped or taken hostage.										

	<p>19. I have witnessed or experienced an extremely stressful event not already mentioned. Please explain in the space below. Use the back of this page if you need more room.</p>
--	--

Adult Experiences Inventory

This questionnaire contains 100 items describing experiences that may or may not have happened to you. Please indicate how often each of the following experiences has happened to you in the last 6 months. From the scale below, select the number that best reflects your response and write it in the space beside each item.

0	1	2	3
Never	Has	Has	Often
	happened, but	happened, but	
	only rarely	not often	

In the last 6 months, how often have you experienced:

<u>Answer</u>	<u>Item</u>
_____	1. Nightmares or bad dreams
_____	2. Trying to forget about a bad time in your life
_____	3. Irritability
_____	4. Stopping yourself from thinking about the past
_____	5. Getting angry about something that wasn't very important
_____	6. Feeling empty inside
_____	7. Sadness
_____	8. Flashbacks (sudden memories or images of upsetting things)
_____	9. Not being satisfied with your sex life
_____	10. Feeling like you were outside of your body
_____	11. Lower back pain
_____	12. Sudden disturbing memories when you were not expecting them
_____	13. Wanting to cry
_____	14. Not feeling happy
_____	15. Becoming angry for little or no reason
_____	16. Feeling like you don't know who you really are
_____	17. Feeling depressed
_____	18. Having sex with someone you hardly know

0	1	2	3
Never	Has	Has	Often
	happened, but	happened, but	
	only rarely	not often	

In the last 6 months, how often have you experienced:

<u>Answer</u>	<u>Item</u>
_____	19. Thoughts or fantasies about hurting someone
_____	20. Your mind going blank
_____	21. Fainting
_____	22. Periods of trembling or shaking
_____	23. Pushing painful memories out of your mind
_____	24. Not understanding why you did something
_____	25. Threatening or attempting suicide
_____	26. Feeling like you were watching yourself from far away
_____	27. Feeling tense or "on edge"
_____	28. Getting into trouble because of sex
_____	29. Not feeling like your real self
_____	30. Wishing you were dead
_____	31. Worrying about things
_____	32. Not being sure of what you want in life
_____	33. Bad thoughts or feelings during sex
_____	34. Being easily annoyed by other people
_____	35. Starting arguments or picking fights to get your anger out
_____	36. Having sex or being sexual to keep from feeling lonely or sad
_____	37. Getting angry when you didn't want to
_____	38. Not being able to feel your emotions
_____	39. Confusion about your sexual feelings
_____	40. Using drugs other than marijuana
_____	41. Feeling jumpy
_____	42. Absent-mindedness

0	1	2	3
Never	Has	Has	Often
	happened, but	happened, but	
	only rarely	not often	

In the last 6 months, how often have you experienced:

<u>Answer</u>	<u>Item</u>
_____	43. Feeling paralysed for minutes at a time
_____	44. Needing other people to tell you what to do
_____	45. Yelling or telling people off when you felt you shouldn't have
_____	46. Flirting or "coming on" to someone to get attention
_____	47. Sexual thoughts or feelings when you thought you shouldn't have them
_____	48. Intentionally hurting yourself (e.g., by scratching, cutting or burning) even though you weren't trying to commit suicide
_____	49. Aches and pains
_____	50. Sexual fantasies about being dominated or overpowered
_____	51. High anxiety
_____	52. Problems in your sexual relations with another person
_____	53. Wishing you had more money
_____	54. Nervousness
_____	55. Getting confused about what you thought you believed
_____	56. Feeling tired
_____	57. Feeling mad or angry inside
_____	58. Getting into trouble because of your drinking
_____	59. Staying away from certain people or places because they remind you of something
_____	60. One side of your body going numb
_____	61. Wishing you could stop thinking about sex
_____	62. Suddenly remembering something upsetting from your past
_____	63. Wanting to hit someone or something
_____	64. Feeling hopeless

0	1	2	3
Never	Has	Has	Often
	happened, but	happened, but	
	only rarely	not often	

In the last 6 months, how often have you experienced:

<u>Answer</u>	<u>Item</u>
_____	65. Hearing someone talk to you who wasn't really there
_____	66. Suddenly being reminded of something bad
_____	67. Trying to block out certain memories
_____	68. Sexual problems
_____	69. Using sex to feel powerful or important
_____	70. Violent dreams
_____	71. Acting "sexy" even though you didn't really want sex
_____	72. Just for a moment, seeing or hearing something upsetting that happened earlier in your life
_____	73. Using sex to get love or attention
_____	74. Frightening or upsetting thoughts popping into your mind
_____	75. Getting your own feelings mixed up with someone else's
_____	76. Wanting to have sex with someone who you knew was bad for you
_____	77. Feeling ashamed about your sexual feelings or behaviour
_____	78. Trying to keep from being alone
_____	79. Losing your sense of taste
_____	80. Your feelings or thoughts changing when you were with other people
_____	81. Having sex that had to kept a secret from other people
_____	82. Worrying that someone is trying to steal your ideas
_____	83. Not letting yourself feel bad about the past
_____	84. Feeling like things weren't real
_____	85. Feeling like you were in a dream
_____	86. Not eating or sleeping for 2 or more days
_____	87. Trying not to have any feelings about something that hurt you

0	1	2	3
Never	Has	Has	Often
	happened, but	happened, but	
	only rarely	not often	

In the last 6 months, how often have you experienced:

<u>Answer</u>	<u>Item</u>
_____	88. Daydreaming
_____	89. Trying not to think or talk about things in your life that were painful
_____	90. Feeling like life wasn't worth living
_____	91. Being startled or frightened by sudden noises
_____	92. Seeing people from the spirit world
_____	93. Trouble controlling your temper
_____	94. Being easily influenced by others.
_____	95. Wishing you didn't have any sexual feelings
_____	96. Wanting to set fire to a public building
_____	97. Feeling afraid you might die or be injured
_____	98. Feeling so depressed that you avoided people
_____	99. Thinking that someone was reading your mind
_____	100. Feeling worthless

World Views Scale

This questionnaire asks about your world views. For each of the following statements, please rate how much you agree or disagree by picking a number from the scale and writing it in the space beside each statement.

1	2	3	4	5	6
Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree

Answer

Item

_____	1. Misfortune is least likely to strike worthy, decent people.
_____	2. People are naturally unfriendly and unkind.
_____	3. Bad events are distributed to people at random.
_____	4. Human nature is basically good.
_____	5. The good things that happen in this world far outnumber the bad.
_____	6. The course of our lives is largely determined by chance.
_____	7. Generally, people deserve what they get in this world.
_____	8. I often think I am no good at all.
_____	9. There is more good than evil in the world.
_____	10. I am basically a lucky person.
_____	11. People's misfortunes result from mistakes they have made.
_____	12. People don't really care what happens to the next person.
_____	13. I behave in ways that are likely to maximize good results for me.
_____	14. People will experience good fortune if they themselves are good.
_____	15. Life is too full of uncertainties that are determined by chance.
_____	16. When I think about it, I consider myself very lucky.
_____	17. I almost always make an effort to prevent bad things from happening
to me.
_____	18. I have a low opinion of myself.
	19. By and large, good people get what they deserve in this world.

1	2	3	4	5	6
Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree

Answer**Item**

-
- _____ 20. Through our actions we can prevent bad things from happening to us.
- _____ 21. Looking at my life, I realize that chance events have worked out well for me.
- _____ 22. If people took preventive actions, most misfortune could be avoided.
- _____ 23. I take the actions necessary to protect myself against misfortune.
- _____ 24. In general, life is mostly a gamble.
- _____ 25. The world is a good place.
- _____ 26. People are basically kind and helpful.
- _____ 27. I usually behave so as to bring about the greatest good for me.
- _____ 28. I am very satisfied with the kind of person I am.
- _____ 29. When bad things happen, it is typically because people have not taken the necessary actions to protect themselves.
- _____ 30. If you look closely enough, you will see the world is full of goodness.
- _____ 31. I have reason to be ashamed of my personal character.
- _____ 32. I am luckier than most people.

Brief COPE Scale

We are interested in how people respond to the difficult or stressful events they encounter in their lives. For each of the following items, please rate how much you USUALLY do each in response to a stressful situation or event, using this scale:

	1	2	3	4
I usually:	<u>Don't</u>	Do this	Do this a	Do this
	do this at all	<u>a little bit</u>	<u>medium amount</u>	<u>a lot</u>

<u>Answer</u>	<u>Item</u>
_____	1. I turn to work or other activities to take my mind off things.
_____	2. I concentrate my efforts on doing something about the situation.
_____	3. I say to myself, 'This isn't real.'
_____	4. I use drugs or alcohol to make myself feel better.
_____	5. I get emotional support from others.
_____	6. I give up trying to deal with it.
_____	7. I take action to try to make the situation better.
_____	8. I refuse to believe that it has happened.
_____	9. I say things to let my unpleasant feelings escape.
_____	10. I get help and advice from other people.
_____	11. I use alcohol and drugs to help me get through it.
_____	12. I try to see it in a different light, to make it seem more positive.
_____	13. I criticize myself.
_____	14. I try to come up with a strategy about what to do.
_____	15. I get comfort and understanding from someone.
_____	16. I give up the attempt to cope.
_____	17. I look for something good in what is happening.
_____	18. I make jokes about it.

	1	2	3	4
I usually:	<u>Don't</u>	Do this	Do this a	Do this
	do this at all	<u>a little bit</u>	<u>medium amount</u>	<u>a lot</u>

<u>Answer</u>	<u>Item</u>
_____	19. I do something to think about it less (e.g., go to the movies, watch t.v., read, daydream, sleep, or shop.)
_____	20. I accept the reality of the fact that it has happened.
_____	21. I express my negative feelings.
_____	22. try to find comfort in my religion or spiritual beliefs.
_____	23. I try to get advice or help from other people about what to do.
_____	24. I learn to live with it.
_____	25. I think hard about what steps to take
_____	26. I blame myself for things that happened.
_____	27. I pray or meditate.
_____	28. I make fun of the situation.

If you had a particular stressful event(s) or situation(s) in mind, what was it?

General Health Symptoms

The following is a list of physical complaints that people sometimes have. Please indicate how often you have experienced each of them ***in the last 6 months***, by choosing in the number from the scale below and entering it into the space provided:

0	1	2	3	4	5
Never	Occasionally	About once a month	About once a week	Several times a week	Daily

In the past 6 months, how often have you experienced the following:

A.

- _____ 1. Blurred vision
- _____ 2. Tunnel vision
- _____ 3. Double vision
- _____ 4. Your eyesight blacking out completely (e.g., temporary blindness)
- _____ 5. Your eyes continually blinking or watering
- _____ 6. Pain in your eyes (e.g., when reading)
- _____ 7. Red or inflamed eyes
- _____ 8. A bad running ear (e.g., severe ear infection)
- _____ 9. Constant noises in your ears

B.

- _____ 10. Having to clear your throat frequently
- _____ 11. A choking lump in your throat
- _____ 12. Sore throat
- _____ 13. Difficulty swallowing
- _____ 14. Loss of voice
- _____ 15. Sneezing spells
- _____ 16. Stuffy nose
- _____ 17. Running nose
- _____ 18. Nose bleeds
- _____ 19. Colds
- _____ 20. Allergies

0	1	2	3	4	5
Never	Occasionally	About once a month	About once a week	Several times a week	Daily

In the past 6 months, how often have you experienced the following:

- _____ 21. Asthma
- _____ 22. Constant coughing
- _____ 23. Coughing up blood
- _____ 24. Soaking sweats at night
- _____ 25. A chronic chest condition

C.

- _____ 26. Heart or chest pains
- _____ 27. A loud thumping heart (e.g., heart palpitations)?
- _____ 28. Your heart racing
- _____ 29. Difficulty breathing
- _____ 30. Getting out of breath
- _____ 31. Swollen ankles
- _____ 32. Cold hands or feet even in hot weather
- _____ 33. Leg cramps

D.

- _____ 34. Bleeding gums
- _____ 35. Toothaches
- _____ 36. Your tongue being badly coated
- _____ 37. Poor appetite
- _____ 38. Upset stomach or indigestion
- _____ 39. Nausea
- _____ 40. Stomach cramps or pains
- _____ 41. Stomach trouble bloating
- _____ 42. Loose bowel movements or diarrhea
- _____ 43. Constipation
- _____ 44. Rectal hemorrhoids

0	1	2	3	4	5
Never	Occasionally	About once a month	About once a week	Several times a week	Daily

In the past 6 months, how often have you experienced the following:

E.

- _____ 45. Painfully swollen joints
- _____ 46. Stiff muscles and joints
- _____ 47. Pains in your arms, legs, or hip joints
- _____ 48. Rheumatism or arthritis
- _____ 49. Back aches
- _____ 50. Muscle weakness

F.

- _____ 51. Sensitive or tender skin
- _____ 52. Cuts in your skin that don't heal quickly
- _____ 53. Your face getting badly flushed
- _____ 54. Sweating a great deal even in cold weather
- _____ 55. Severe itching
- _____ 56. Skin rashes
- _____ 57. Eczema

G.

- _____ 58. Headaches
- _____ 59. Pressure or pain in your head that makes life miserable
- _____ 60. Migraines
- _____ 61. Dizziness or faintness
- _____ 62. Hot or cold spells
- _____ 63. Numbness or tingling in any part of your body
- _____ 64. Have you at times had a twitching of the face, head, or shoulders?
- _____ 65. Fits or convulsions

H.

- _____ 66. Problems with your genitals
- _____ 67. Genitals or vaginal pain

0	1	2	3	4	5
Never	Occasionally	About once a month	About once a week	Several times a week	Daily

In the past 6 months, how often have you experienced the following:

- _____ 68. Vaginal discharge
- _____ 69. Vaginal dryness
- _____ 70. Bleeding between menstrual periods
- _____ 71. Pelvic pain
- _____ 72. Passing blood while urinating
- _____ 73. Trouble starting when trying to urinate
- _____ 74. Getting up in the night to urinate
- _____ 75. Urinating frequently during the day
- _____ 76. A burning pain when you urinate
- _____ 77. Losing control of your bladder
- _____ 78. Burning sensation in genitals or rectum

79. Have any of your symptom(s) been diagnosed as a specific medical condition?

Yes / No

If yes, what was the diagnosis?

80. Are you taking any prescription medication(s) for your symptom(s)?

Yes / No

If yes, please describe them:

81. Are you taking any other prescription medications (e.g., birth control pills)?

Yes / No

If yes, please describe them:

Menstrual Cycle Symptoms

Below is a list of complaints that some women have prior to, and during, their menstrual cycle. Please rate the extent to which these symptoms/complaints have bothered you ***in the past six months***, using the following scale. If you do not presently have a menstrual cycle please leave this questionnaire blank.

0 = never 1 = rarely 2 = sometimes 3 = often 4 = always

WEEK BEFORE MENSTRUATION

_____	1. Weight gain
_____	2. Insomnia
_____	3. Crying
_____	4. Lowered work/school performance
_____	5. Muscle stiffness
_____	6. Forgetfulness
_____	7. Confusion
_____	8. Take naps/stay in bed
_____	9. Headaches
_____	10. Skin disorders
_____	11. Loneliness
_____	12. Feelings of suffocation
_____	13. Feeling affectionate
_____	14. Cramps
_____	15. Dizziness, faintness
_____	16. Excitement
_____	17. Chest pains
_____	18. Anxiety
_____	19. Backache
_____	20. Cold sweats
_____	21. Lowered judgment
_____	22. Fatigue
_____	23. Nausea, vomiting
_____	24. Restlessness

0 = never 1 = rarely 2 = sometimes 3 = often 4 = always

**WEEK BEFORE
MENSTRUATION**

_____	25. Hot flashes
_____	26. Difficulty concentrating
_____	27. Painful breasts
_____	28. Feelings of well-being
_____	29. Ringing in the ears
_____	30. Distractability
_____	31. Swelling
_____	32. Accidents
_____	33. Irritability
_____	34. General aches/pains
_____	35. Mood swings
_____	36. Heart pounding
_____	37. Depression
_____	38. Decreased efficiency
_____	39. Lowered motor coordination
_____	40. Numbness, tingling
_____	41. Tension
_____	42. Blind spots, fuzzy vision
_____	43. Bursts of energy, activity
_____	44. Feeling 'dazed'
_____	45. Poor concentration
_____	46. Feeling like other people are
talking about you
_____	47. Everything looking "foggy" to you

Effects of Symptoms

Below is a list of questions regarding the physical symptoms listed in the previous questionnaires. Please indicate how the symptoms you have identified have affected your life, by circling the most appropriate answer on the scales below. If you have not experienced any of the symptoms listed in the previous questionnaires, please skip this page.

1. On average, how much have your symptoms affected your work/school performance?

0	1	2	3	4
Not at all				A great deal

2. About how many days in the past 6 months have you missed work/school because of your symptoms?

_____ days

3. On average, how much do your symptoms prevent you from getting a good night's sleep?

0	1	2	3	4
Not at all				A great deal

4. How much do your symptoms interfere with your social life?

0	1	2	3	4
Not at all				A great deal

5. How much do your symptoms interfere with your sex life?

0	1	2	3	4
Not at all				A great deal

6. Overall, how much do your symptoms affect your life?

0	1	2	3	4
Not at all				A great deal

Health Behaviour Survey

Part 1: We would like to know how often you engage in the following behaviours. Your answers can range from "1" if you did the behaviour less than once a week to "5" if you did the behaviour every day. To answer, write in the number that best reflects how often you do the behaviours in the space beside each item using the following scale:

1	2	3	4	5
Less than once a week	One day a week	2-3 days a week	4-5 days a week	6-7 days a week

<u>Answer</u>	<u>Item</u>
_____	1. Eat breakfast
_____	2. Get a good, uninterrupted, restful sleep of about 8 hours
_____	3. Drink 5 or more caffeinated beverages, such as coffee/tea, cola
_____	4. Exercise for 20 minutes or more, to the point of perspiration
_____	5. Eat at least 3 meals a day
_____	6. Take time to relax
_____	7. Eat fresh fruits and/or vegetables
_____	8. Walk as much as possible, for example, take the stairs not the elevator
_____	9. Take vitamins and/or minerals
_____	10. Eat junk foods (e.g., chips, candy, French fries, etc.)
_____	11. Eat healthy, well-balanced meals
_____	12. Take natural supplements (e.g., garlic pills, echinacea, herbals)
_____	13. Brush your teeth twice a day
_____	14. Floss your teeth
_____	15. Watch television in the dark or read in dim light

Part 2: Please circle the word that best indicates your answer.

1. How often do you wear your seatbelt when in a car?

Never Rarely Sometimes Usually Always

2. How often do you wash your hands with soap before eating or preparing food?

Never Rarely Sometimes Usually Always

3. How often do you try to limit the amount of cholesterol in your food?

Never Rarely Sometimes Usually Always

4. How often do you take along warm protective clothing (e.g., hat, sweater) when there is a chance of cold weather, rain, or snow?

Never Rarely Sometimes Usually Always

5. How often do you wear bright, reflective clothing at night when riding a bicycle or motorcycle? (If you do not ride, how often do you think you would do so?)

Never Rarely Sometimes Usually Always

6. How often have you driven a motor vehicle or bicycle when you were really too tired to do so?

Never Once A couple of times A few times Many times

7. Have you ever mixed prescription medication and alcohol at the same time?

Never Once A couple of times A few times Many times

8. During the past year, about how often did you drink one or more alcoholic beverages within an hour before driving a motor vehicle or bicycle somewhere?

Never Once A couple of times A few times Many times

9. How many cigarettes do you smoke a day? _____

10. On average, how many alcoholic drinks do you drink a week?

<u>Type of drink</u>	<u>Number/week</u>
Glasses of wine	_____
Bottles of beer	_____
Shots of hard liquor	_____
Coolers	_____

11. In the past 6 months, how often have you used the following non-prescription drugs?

<u>Number of times</u>	<u>Drug</u>
_____	Cocaine/crack
_____	Marijuana
_____	Inhalants
_____	Amphetamines
_____	Heroin/opiates
_____	Ecstasy
_____	Tranquilizers or sedatives

12. In the last 6 months, how often have you used a needle to inject any of the above drugs? _____ times

13. If you injected drugs in the past 6 months, how often did you shoot up with needles that someone else had already used?

0	1	2	3	4	5
Not applicable	Never	Sometimes	Half the time	Usually	Always

14. If you injected drugs in the past 6 months and you shared the needle with someone else, how often did you clean the needle first with bleach or alcohol?

0	1	2	3	4	5
Not applicable	Never	Sometimes	Half the time	Usually	Always

15. In the past 6 months, how many different people did you have sex with (i.e., physical contact that went beyond hugging and kissing, but not necessarily intercourse)?

_____ people

16. In the past 6 months, how often did you use a condom or barrier (e.g., dental dam) when having oral sex?

0	1	2	3	4	5
Not applicable	Never	Sometimes	Half the time	Usually	Always

17. In the past 6 months, how often did you use a condom or barrier (e.g., dental dam) when having vaginal intercourse?

0	1	2	3	4	5
Not applicable	Never	Sometimes	Half the time	Usually	Always

18. In the past 6 months, how often did you use a condom or barrier (e.g., dental dam) when having anal intercourse?

0	1	2	3	4	5
Not applicable	Never	Sometimes	Half the time	Usually	Always

19. Some people talk to their sexual partners about ways of preventing HIV infection, and other people do not have such discussions. Which of the following best describes what you do? (If you are not currently sexually active, answer for what you think you would typically do.) (Circle the best answer.)

- a. I do not talk about ways of preventing HIV with my partner(s).
- b. I discuss it, but only when my partner initiates the discussion.
- c. I initiate the discussion if I think my partner(s) may be infected or at risk.
- d. I always initiate the discussion with my partner(s).

20. In the past 12 months, how many times did you perform breast self-examination?

_____ times

21. If you are a woman at mid-life, how long ago was your last mammogram?
(If you are not a woman at mid-life, please leave blank.)

_____ months

22. a) In the past five years, how many routine medical check-ups have you had?

_____ check-ups

b) Please estimate the number of trips you made into a doctor's office or healthcare clinic for any reason in the last year

_____ times

c) Please indicate briefly what these visits were for:

d) How much *physical* discomfort do you feel during routine medical check-ups?

0	1	2	3	4
None				A great deal

e) How much *psychological* discomfort do you feel during routine medical check-ups?

0	1	2	3	4
None				A great deal

23. a) In the past five years, how many routine dental check-ups have you had?
 _____ check-ups

b) How much *physical* discomfort do you feel during dental check-ups?

0	1	2	3	4
None				A great deal

c) How much *psychological* discomfort do you feel during dental check-ups?

0	1	2	3	4
None				A great deal

24. a) In the past five years, how many pelvic examinations have you had?
 _____ examinations

b) How much *physical* discomfort do you feel during pelvic examinations?

0	1	2	3	4
None				A great deal

c) How much *psychological* discomfort do you feel during pelvic examinations?

0	1	2	3	4
None				A great deal

25. a) In the past five years, how many pap smears have you had?
 _____ pap smears

b) How much *physical* discomfort do you feel during pap smears?

0	1	2	3	4
None				A great deal

c) How much *psychological* discomfort do you feel during pap smears?

0	1	2	3	4
None				A great deal

26. a) To what extent do you avoid health care visits or dental visits, even when you know you need treatment?

0	1	2	3	4
Not at all				A great deal

b) If applicable, please explain why you avoid doctor visits

c) If applicable, please explain why you avoid dental visits

27. In the past 6 months, how many visits have you made to health care professionals? These can include medical doctors, dentists, and alternative medicine practitioners such as chiropractors, homeopaths, acupuncturists, etc.

Number of visits:

28. Were any of these to alternative medicine practitioners (including massage therapists, Reiki practitioners, etc., as well as the alternative practitioners listed above)?

Yes / No

29. Please list the type(s) of alternative practitioner(s) you visited:

Childhood Experiences, World Views and Well-Being Study: Debriefing

This study was designed to examine several issues. First, this study was designed to compare the way people who were and were not abused as children view their worlds and other people.

As a primary aim, this study was designed to compare the way women who were and were not abused view themselves and the world. Because child abuse shatters the fundamental assumptions and beliefs that people have, it is expected that survivors of child abuse will see things less optimistically than women who were not abused. Adult survivors' views of themselves and the outside world may be stripped of positive illusions and may be generally less optimistic than the views of women who were not abused.

As another aim, this study was also designed to investigate the factors responsible for the effects of childhood abuse and physical health. These factors might include assumptive beliefs, psychological distress, and coping styles. For example, do adult survivors of child abuse have poorer physical health because they use less adaptive coping styles? Or is it because they feel hopeless and don't think they can control anything, including their health, and therefore don't bother engaging in good preventive health behaviour? By clarifying which factors are responsible for survivors' tendency to illness, we hope to inform and improve preventive health strategies for adult survivors of past abuse.

Overall, it is hoped that this study will help us and others to better understand the long-term effects of childhood abuse, and that it will contribute to the development of interventions designed to help survivors re-shape their world views, achieve and maintain physical health and wellness, and thereby experience more enjoyment of what life has to offer them.

Sometimes, recalling unpleasant events in life can leave us feeling the need for support. If you are feeling the need for support or counseling, please contact any of the following services. For immediate crisis intervention, you can contact the following 24-hour hot-lines: Rape Crisis Centre: 729-8889; Sexual Assault Support Centre; 234-2266; or the Distress Line; 238-3311. If you continue to feel the need for counseling and you do not already have a therapist, contact Michelle Melia-Gordon or Connie Kristiansen, Ph.D., at 520-2600, ext. 2679, and arrangements will be made for you to meet with a clinical psychologist who is experienced in child abuse issues. She can also refer you to other resources, if needed.

Should you wish to discuss this study, you are welcome to contact Michelle Melia-Gordon or Connie Kristiansen at 520-2600, ext. 2679. If you have any complaints or comments about the way this study was conducted, or how you were treated, please contact Dr. Monique Senechal, Chair of the Psychology Ethics Committee at 520-2600, ext. 1155. If you have any other concerns, contact Dr. Kim Matheson, Chair of the Department of Psychology at 520-2644.

Again, thank you for your participation. Your time and effort are greatly appreciated.

Best regards,

Amanda Bouchard
B.A. thesis student

Connie Kristiansen, Ph.D.

Holly Hinton
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