INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

**ProQuest Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600**

UMI[®]

**Dating Relationships Violence:
the Beginning of a Vicious Cycle?**

by
Alla L. Skomorovsky

**A thesis submitted to the Faculty of Graduate Studies
and Research in partial fulfillment of the requirements
for the degree of Masters of Arts**

Department of Psychology

**Carleton University
Ottawa, Ontario**

September, 2001

**© Copyright
2001, Alla Skomorovsky**

**National Library
of Canada**

**Acquisitions and
Bibliographic Services**

**395 Wellington Street
Ottawa ON K1A 0N4
Canada**

**Bibliothèque nationale
du Canada**

**Acquisitions et
services bibliographiques**

**395, rue Wellington
Ottawa ON K1A 0N4
Canada**

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-66856-8

Canada

The undersigned recommend to the
Faculty of Graduate Studies and Research
Acceptance of the thesis:

"Dating relationships violence: The Beginning of a Vicious Cycle"

submitted by

Alla Skomorovsky

in Partial fulfillment of the requirements for
the degree of Master of Arts

Chair

Thesis Supervisor

Carleton University
September, 2001

Abstract

Violence in intimate relationships has been found to be one of the major causes of psychological distress among women. Despite the evidence on high rates of abuse in dating relationships, this area is relatively unexplored compared to violence in marital relationships. Thus, the present thesis focused on dating relationships, examining the negative impact of physical and psychological abuse on the development of symptoms of depression, ASD, PTSD, and low self-esteem among women. Consistent with the literature, it was hypothesized that perceived social support, coping strategies and defense mechanisms would moderate the impact of abuse on psychological health. The impact of abuse on basal salivary cortisol level, moderated by ASD and PTSD was also examined. 114 female students in dating relationships who agreed to participate in the study were followed-up during the academic year. Hierarchical regression analyses indicated that physical, and especially psychological abuse were associated with the self-report indicators of psychological distress. As well, emotional containment and immature defenses were significantly associated with higher psychological distress, whereas perceived social support was associated with lower psychological distress. Contrary to the predictions, coping strategies and resources did not moderate the effects of abuse on well-being. In terms of physiological stress (basal cortisol levels), the use of emotional expression coping strategy moderated the effect of abuse, in that, as psychological abuse increased in severity, greater use of emotional expression was associated with higher levels of basal cortisol. The explanations for the findings, the implications for the future research are discussed.

Acknowledgments

I would like to thank several people who helped me with this project.

I am very grateful to Dr. Kim Matheson who agreed to become my advisor after I had already begun the MA program and who has taught me so much. Great thanks for her time and fine suggestions, without which this project would not have been possible.

Many thanks also to Dr. Hymie Anisman for his interest in the project and for his valuable advise.

I would also like to thank my parents, Polina and Lev Skomorovsky, and my husband, Vadim Zalmanov, for their strong support and gentle love. I do not know where I would be without them and I do not want to know.

Table of Contents

	Page
Introduction	1
The Correlates of Courtship Aggression	2
Women's Responses to Battering	4
Characteristics of the Event	6
Psychological Abuse Versus Physical Abuse	6
Different Kinds of Psychological Abuse	8
Health Outcomes	11
Partner Abuse and Psychological Outcomes	11
Partner Abuse and Cortisol Outcomes	16
Individual Characteristics Affecting Response to a Stressor	19
Coping Strategies and Social Support	19
Defensive Mechanisms	22
Summary	25
Method	27
Participants	27
Procedure	27
Measures	29
Results	34
Descriptive statistics	39
Main Analyses	40
Depressive Symptoms, Abuse and Moderating Factors	41
ASD, Abuse and Moderating Factors	45
PTSD, Abuse and Moderating Factors	48
Self-esteem, Psychological Abuse and Moderating Factors	51
Cortisol Levels	55
Discussion	62
The Role of Physical and Psychological Abuse	62
The Role of Individual Differences	64

Table of Contents (Continued)

Cortisol	69
Conclusion	71
References	74
Appendix A. Pre-Selection Questions	97
Appendix B. Telephone Contact	98
Appendix C. Consent Form	99
Appendix D. Questionnaires	100
Appendix E. Debriefing	122

Tables

	Page
1. Summary of Scale Item Analyses	39
2. Results of Regressing Social Support onto Depression Scores	43
3. Results of Regressing Coping Strategies onto BDI Scores	44
4. Results of Regressing Defense Mechanisms onto BDI Scores	45
5. Results of Regressing Social Support onto ASD Scores	47
6. Results of Regressing Coping Strategies onto ASD scores	48
7. Results of Regressing Defense Mechanisms onto ASD scores	49
8. Results of Regressing Social Support onto PTSD Scores	50
9. Results of Regressing Coping Strategies onto PTSD Scores	51
10. Results of Regressing Defense Mechanisms onto PTSD Scores	52
11. Results of Regressing Social Support onto Self-Esteem Scores	54
12. Results of Regressing Coping Strategies onto Self-Esteem Scores	55
13. Results of Regressing Defense Mechanisms onto Self-Esteem Scores	56
14. Results of Regressing Social Support onto Awakening Scores	58
15. Results of Regressing Coping Strategies onto Awakening Scores	59
16. Results of Regressing Defense Mechanisms onto Awakening Scores	60
17. Results of Regressing ASD onto Awakening Scores	62
18. Results of Regressing PTSD onto Awakening Scores	62

Woman battering is not only a major source of fear, but also one of the largest causes of injury, mental disorders and death among women (Goodman, 1993). The recent national Commonwealth Fund survey in USA demonstrated that more than 4 million women are abused by their male partners every year, with half of them suffering from serious injury and 2,000-4,000 suffering death (Plichta, 1996). It has been known for over 20 years that abuse affects the lives of a significant number of women, nearly one in four (Straus, Gelles & Steinmetz, 1979). Men's abuse of women can be physical, psychological or sexual. These dimensions of violence may have significant but different impacts on victims. This thesis concentrated on the impact of physical and psychological clusters of abuse on the well-being and mental health of young women.

Historically, society's concept of violence against women has focused on assault occurring between acquaintances and strangers. However, women's greatest risk of abuse is from their intimates. Women victims of abuse by male partners are more likely to be repeatedly attacked, raped, or injured than are women assaulted by other types of assailants (Browne, 1993; Browne & Williams, 1993). Many studies show that wife battering is so broad and serious a problem in Canada and U.S., that a large percentage of couples view violence as a normal element of married life (DeKeseredy, 1988; Yllo & Straus, 1981). The approximate rate of domestic abuse is unexpectedly high, occurring among close to 50 - 60 % of all couples (DeKeseredy, 1988). Studies investigating the nature of women battering sensitizes researchers to the fact that woman battering is not restricted to the conjugal home, but it also exists in dating relationships, (DeKeseredy, 1988; Lane & Gwartney-Gibbs, 1985; Laner & Thomson, 1982). Makepeace (1981) showed that one fifth (21.2%) of female university students experienced at least one

violent incident with a dating partner, over the course of their university studies. Yllo and Straus (1981) found that unmarried women experienced five times more severe violence and three times more abuse of any kind from their intimate partners than did married women. Despite such evidence on high rates of abuse in dating relationships, this area is relatively unexplored (DeKeseredy, 1988). This thesis focused on dating relationships, although knowledge of the effects of battering within long-term or marital relationships partly formed the basis of the theoretical expectations.

The Correlates of Courtship Aggression

The correlates of courtship violence have been classified in the literature into three categories: personality/ individual, relational, and social/situational. These dimensions have been assessed both in relation to the male abuser, as well as the female victim. In terms of personality, the male abuser is likely to have low self-esteem, hold traditional attitudes toward male-female roles, be experiencing an increased level of stressful life events, have witnessed or experienced abuse in his family of origin, and hold more accepting attitudes toward the use of violence (Follingstad et al., 1988; Makepeace, 1987; O'Keefe, 1997, 1998). Male's alcohol use is reported as a factor in 50% to 75 % of the incidents of aggression (Lloyd & Emery, 2000). However, research attempting to document many of these characteristics of the aggressive male have been inconsistent in their findings (Sugarman & Hotaling, 1989). Different studies show that female victims of abuse during courtship do not display a consistent personality profile either (Lloyd, 1991). "Most of the differences seen between women who have experienced aggression and those who have not experienced aggression are the effects of the aggression itself (rather than risk factors)" (Lloyd & Emery, 2000, p. 6).

Relational factors were found to be more consistent predictors of men's aggression against women. The likelihood of male aggression increases with the length and commitment of the relationship (Arias et al., 1987). Aggression is often triggered by jealousy, relational insecurity, anger, perceived rejection, power struggles, and sexual denial (Laner, 1990; Lloyd & Emery, 1994). In a recent study, it was suggested that feelings that they have lost control and need to regain it is a key dynamic in men's violence against their intimate partners (Lloyd & Emery, 2000). In a conflict situation, as a result of ineffective patterns of communication, male aggressors feel that "a conflict ... escalated out of control" and believe "that the partner can be changed, and that violence will result in winning the argument" (Lloyd & Emery, 2000, p. 6, p. 134).

In terms of social factors, the social network plays a key role in sustaining and building norms for aggression (Lloyd & Emery, 2000). Among male aggressors, their social network may reinforce aggression against women (DeKeseredy, 1990; Schwartz & DeKeseredy, 1997). For women, a social context that creates isolation has been viewed as particularly relevant to her staying in the relationship. "As a component of abuse itself, the male aggressor may systematically cut his partner off from contact with family and friends, to prevent both discovery and help-seeking" (Lloyd & Emery, 2000, p. 7). And finally, such situational characteristics as "male initiation of the date, payment of the expenses, and the woman going to the male's apartment" (Lloyd & Emery, 2000, p. 8) may affect aggression, and particularly sexual aggression, in that men view this as women's compliance to have sex.

Studies of courtship and the first year of marriage indicate that for those couples who marry despite the presence of physical aggression, the chances of continued physical

aggression are quite high (Bradbury & Lawrence, 1999). A longitudinal study reveals that even among the men who decrease their use of physical abuse over the years of marriage, levels of emotional abuse remain high, and within two years a significant proportion of wives (38%) leave their marriages as a result of such abuse (Jacobson et al., 1996). This finding suggests that about two thirds of battered women do not leave their partners despite the constant and escalating violence.

Women's responses to battering. There are three frequent strategic responses women adopt to deal with violence: help-seeking, asking for a protection order, and leaving the abusive relationship. An interesting finding regarding the help-seeking strategic response was that the severity of violence per se (physical abuse, verbal abuse, and injury), was not significantly associated with help-seeking; however, the batterers' antisocial or negative behaviour toward the victim following the abuse was found to be significantly associated with help-seeking strategic response (Gondolf & Fisher, 1988). It was found that the severity and duration of abuse as well as the perception that the abuse was escalating predicted women's return to the court for civil protection. The third strategic response of leaving the abusive relationship has been investigated the most (Lloyd & Emery, 2000). However, the results across studies are inconsistent regarding in terms of the relation between the nature and extent of abuse and women's decision to leave. In one set of studies it was found that injury and physical abuse, but not psychological abuse, predicted leaving the abusive partner (Dutton, Goodman, Bennett, 1999; Marshall, 1996). Another set of studies showed that a partner's emotional state and psychological abuse were stronger predictors of relationship dissolution than physical violence (Gortner et al., 1997). The rates of retaining the abusive relationships are quite

high even in the cases of severe abuse: about a third women return to the abusive partners from shelters (Gondolf, 1988). There are different reasons provided for why women decide to stay in abusive relationships, including learned helplessness (Walker, 1977), economic dependence and psychological commitment (Strube & Barbour, 1983), lack of social support (Barnett, Martinez & Keyson, 1996; Mitchell & Hodson, 1983), and self-blame (Barnett et al., 1996; Trimpey, 1989).

Among women who remain in the relationship, the fear and the actual act of violence, psychological or physical, have been related to mental health problems (Browne, 1993; Weaver & Clum, 1995). Research studying the effects of battering on women's mental health has reported a high incidence of depression, anxiety disorders, cognitive dissociations, feelings of helplessness, fatigue, listlessness, self-imposed isolation, alcohol and drug abuse, disruption of interpersonal relationships, somatic complaints and suicide attempts (Astin & Foy, 1995; Astin & Lawrence, 1993). Similarly, it has been found that abuse in dating relationships is associated with high level of stress among students (DeKeseredy, 1988; Levine & Perkins, 1980; Makepeace, 1983). Therefore, abuse can be considered a traumatic stressful event, which may lead to numerous acute and chronic physical and mental health problems.

Green, Wilson & Lindy (1985) proposed three categories of risk factors contributing to the negative impact of a stressful traumatic event on mental health: characteristics of the event itself, individual characteristics, and characteristics associated with the recovery environment. The present study concentrated on the first two dimensions of risk factors, as the focus was on the initial relationship as opposed to recovery from a history of abuse. For battered women, characteristics of the event include the type of abuse and its

severity. Individual characteristics that may affect the impact of a traumatic stressor such as abuse include personality predispositions and coping mechanisms.

Characteristics of the Event

Psychological abuse versus physical abuse. Even though the issue of partner violence came to public attention in the 1970s, it has only been during the last decade that attention has been given to understanding the consequences of both psychological and physical abuse. While physical abuse has been the primary focus of attention, most recently researchers have suggested that physical abuse is only a part of the entire configuration of coercive control tactics. These tactics are in fact mechanisms for achieving control over women, and are frequently accomplished through psychological abuse (Stark & Flitcraft, 1995). Therefore, it may be most appropriate to examine abuse in terms of reflecting control tactics men may use against women, and the impacts on women's mental state.

Physical abuse is defined as physical violence that ranges from being pushed to attempted murder. Aggressive acts against women range from being slapped, punched, kicked, thrown, scalded, cut, choked, smothered, or bitten (Browne, 1993). In one study it was found that 21% of women using emergency surgical services were the victims of partner violence (Randall & Dusek, 1990). "Women assaulted by male partners were 13 times more likely to sustain injury to the breasts, chest, or abdomen than were accident victims and were more likely to sustain multiple injuries" (Browne, 1993, p. 1079). Chronic pain was found to be the most frequent reason for visiting the emergency room among battered women (Goldberg & Tomlanovich, 1984; McCauley et.al., 1995). Battered women report such chronic pains as headaches, hearing, vision, and

concentration problems (Eby, Campbell, Sullivan & Davidson, 1995; Gelles & Straus, 1990).

Among dating partners the rates of physical abuse range from 12% to 53.6% (Arias, 1987; DeKeseredy, 1988; Sigelman, 1984; White & Koss, 1991). These differences may be the result of using different abuse measures. Nonetheless, Sigelman (1984) argued that even though the rates are different, it is obvious there is a high rate of physical abuse occurring in a large number of university students' dating relationships. Female students were abused by their male dating partners at every North American campus, regardless of its size, religious and political affiliation, and location (DeKeseredy & Schwartz, 1998; Schwartz & DeKeseredy, 1997). Men and women reported similar incidence rates, in that 74.1% of the men admitted that they were psychologically abusive, and 79.1% of the women complained that they were psychologically abused (DeKeseredy & Schwartz, 1998).

Although psychological control is inherent to the theoretical framework delineated by the battered woman syndrome, psychological abuse per se has received substantially less research attention than physical abuse. There has been an implicit assumption that physical abuse creates greater physical and psychological damage to the woman and so is of greater importance. Yet more than two decades ago it was known that most of abused women described incidents involving psychological humiliation and verbal harassment as constituting their worst battering experiences, whether or not they were physically abused at the same time (Walker, 1979).

Psychological abuse is frequently defined as "verbal and nonverbal acts which symbolically hurt the other, or the use of threats to hurt the other..." (Straus, 1979, p.77).

In the framework of psychological violence women may experience intense criticism, ridicule, jealous control, or verbal harassment. Women experiencing psychological abuse report fear of the partner, shame, loss of self-esteem, depression, and anxiety (Arias & Pape, 1999). While some kinds of psychological abuse are not intended to hurt, they are still defined as abusive due to the psychological or emotional harm they may produce among victims. The major point in defining the act as psychological abuse is therefore not the intention to hurt but the outcome of it. Thus, psychological abuse is viewed as increasingly severe if it leads to more psychological harm, mental disorder, or damage to the well-being of a woman.

Different kinds of psychological abuse. Along with the increasing interest in psychological abuse and its influence on mental health among battered women has been an interest in the forms such abuse can take. For example, Tolman (1989) found two major dimensions: dominance-isolation and emotional-verbal. Aguilar and Nightingale (1994) further divided the emotional dimensions into controlling/emotional and sexual/emotional. Follingstad (1990) mentioned five important types, including threats of abuse and ridicule, jealousy, threats to change marriage, restriction, and damage to property. Sackett and Saunders (1999) found four major forms of abuse: criticizing behaviour, ignoring, ridiculing traits, and jealous/ control. While some of these typologies have some common dimensions, they also show some variability. Much of the variability in these classifications stems from an empirical approach that develops the dimensions of abuse on the basis of statistical patterns of co-occurrence and uniqueness (i.e., factor analyses).

In contrast, Marshall (1999) took a theoretical approach to developing an understanding of the dimensions of psychological abuse. Her approach can best be described as a social influence perspective (Marshall, 1994). This perspective suggests that psychological abuse occurs in normal interpersonal processes in everyday interactions. Abuse is a negative effect of these interpersonal processes. This perspective makes a man's intention to hurt or a woman's recognition of the act irrelevant for an act to cause serious psychological damage. Thus, while psychological abuse can vary in terms of the intent and its recognizability, Marshall argues that mental damage can ensue and may even be more insidious when the abuse is less identifiable. In this respect, Marshall suggested three major dimensions of psychological abuse: obvious, overt, and subtle. Verbal aggression and controlling or dominating acts or statements are examples of obvious acts. Such acts are easily recognizable and interpreted as harmful. For example, if the partner yells that 'you are fat' during a conflict, it would be obvious abuse. An act of psychological abuse would be considered overt when an observer would be able to note the potential for harm and would be able to describe the act or impact relatively easily. For example, if the partner tells you at the party to 'stop eating the cake' with the implication that you are too fat and others can hear it, it would be an overt abuse. Dominating (making you feel you are nothing), monitoring (checking up on you), discrediting (telling others things that make you look bad), being indifferent (ignoring you) are examples of overt acts of abuse. Finally, an act may be considered subtle psychological abuse when it would be more difficult for an observer to see the potential for harm, and even the woman has difficulty describing the act as abusive or the feelings it evokes. The act can often be done in loving and caring ways. For example, if the

partner says in a caring way that 'you should lose some weight so that others could see how beautiful you are', it could be a subtle abuse. Undermining (making you worry about your capabilities), discounting (acting like there is something wrong with you), isolation (keeping you from having time for yourself or others) are examples of subtle acts of abuse.

Marshall (1999) hypothesized and found that obvious and overt acts result in anger and feelings of being overwhelmed, and harmed a woman's general well-being in a transient way, whereas the subtle acts of psychological abuse were more likely to specifically harm a woman's sense of self and, as a result, mental health in a more constant way. Marshall explains that subtle psychological abuse may have more severe effects on battered women's mental health than overt abuse, because it is more difficult to attribute such an act to a partner's anger or his wish to dominate and so she is more likely to think there is something wrong with her and she should "fix" it.

The majority of researchers find that almost all women who are physically abused also report verbal harassment or other kinds of psychological abuse (Hyden, 1995; Stets, 1990; Steinmetz & Straus, 1974, Walker, 1979). Notably, these researchers argue that psychological abuse early in the relationship is a frequent precursor of later physical aggression. There have been several studies examining the correlation between measures of psychological and physical abuse. However, the results are not consistent. In some studies the correlation was found to be low (Dutton, Goodman & Bennet, 1999; Marshall, 1999). However, others find significant and sizable correlations between psychological and physical kinds of aggression (Hyden, 1995) and that psychological abuse almost always precedes the physical (O'Leary, 1999). The inconsistency may be explained by

taking into consideration Marshall's typology of psychological abuse. Examining past research more carefully suggests that the correlation between psychological and physical abuse primarily defines psychological abuse as "verbal aggression" (Hyden, 1995) or "psychological aggression" (O'Leary, 1999). According to Marshall's theory, such aggression reflects only obvious abuse, (e.g., yelling and aggressive voice), which was correlated with physical violence (Marshall, 1999).

Studies that do not find a correlation between psychological and physical abuse, define psychological abuse in terms of overt and subtle abuse (Dutton, Goodman & Bennet, 1999). These forms of psychological abuse may cause psychological damage in their own right, independent of further physical abuse. Psychological abuse that cannot be easily attributed to the male (in particular, subtle abuse) may lead to such self-doubt that a battered woman may try to change herself, attributing the abuse to her own weaknesses (Sackett & Saunders, 1999). This means that, at least temporarily, she does not make a decision to leave the abusive relationship. As a result, this abuse may be more likely to lead to more severe acute, as well as chronic, mental and physiological damage than physical abuse.

Health Outcomes

Partner abuse and psychological outcomes. One way of systematizing the majority of the psychological symptoms reported by battered women is using the perspective of "battered woman syndrome" (BWS). BWS is defined as a woman's state after having suffered repeated exposure to severe psychological and physical abuse at the hands of an intimate partner (Walker, 1979). The syndrome refers to a series of symptoms reported by battered women, which are assumed to be a result of the abusive relationship. The

syndrome includes such symptoms as the learned helplessness, re-experiencing the trauma, intrusive recollections, generalized anxiety, low self-esteem, and social withdrawal (Walker, 1979).

Walker (1979) proposed two components that characterize the BWS: *circle of violence* and *learned helplessness*. Regarding the circle of violence it was proposed that abuse takes place in a cyclic manner and consists of three stages: a tension building phase, an acute battering incident, and a loving contrition stage. The first stage is characterized by verbal abuse or other kinds of psychological aggression, and an overall sense of tension between the partners. Gradually this tension moves up into a next stage where an acute battering incident of uncontrollable physical abuse takes place. A woman may be damaged seriously during this stage. After the storm of abuse, a stage of loving contrition comes, when the batterer apologizes and promises that it will not happen again. However, over time the abuse becomes both more frequent and more severe (Walker, 1979).

The cycle of violence results in psychological symptoms that are associated with learned helplessness, the second component of BWS proposed by Walker (1979). The abused woman learns she can do nothing to prevent or control the battering, especially in the situation of an abuser's threats of even more severe abuse if she tries to escape. As a result an abused woman lapses into the state of learned helplessness and depression: whatever she does she has no way to escape (Walker, 1979).

BWS is a reliable reflection of a battered woman's life, however it is not a clinical diagnosis. The syndrome is actually a traumatic experience subcategory of the general diagnosis of Posttraumatic Stress Disorder (PTSD; Diagnostic and Statistic Manual

Fourth Edition (DSM-IV), 1994). The American Psychiatric Association has suggested using the diagnostic construct of PTSD to define and characterize the psychological symptoms reported by battered women. PTSD, as defined in DSM-IV (1994), is a disorder that follows experiencing, witnessing, or being confronted with events involving actual or threatens death, physical injury, or other threats to the physical integrity of the self or others; the person's response has to involve intense fear, helplessness, or horror. Beginning with Walker (1984), many researchers have noted that the symptoms abused women experience constitute a subcategory of PTSD. An experience of "extreme stress is a hallmark of PTSD" (Golding, 1999, p.100). Numerous studies have confirmed this conclusion, documenting such PTSD-specific symptoms as nightmares, flashbacks, re-experiencing of the traumatic event when exposed to associated stimuli, memory loss and affective numbing avoidance symptoms as well as sleep and appetite disturbances, difficulty concentrating, hypervigilance, and heightened startle response autonomic hyperarousal symptoms among battered women (Astin & Foy, 1995; Housekamp & Foy, 1991; Jaffe, Wolfe & Zak, 1986; Kemp, Green, Hovanitz & Rawlings, 1995; Mitchell & Hodson, 1983).

While the majority of studies find high rates of incidence for PTSD among abused women, these rates vary from as high as 84.4% (Kemp, Rawlings & Green, 1991) to as low as 33% (Astin, Lawrence & Foy, 1993). However, this variation may be a function of the samples used. For example, Saunders (1994) compared women who had obtained help at domestic violence programs with those who had obtained help at other types of programs. It was found that roughly 60% of women in the two groups met criteria for PTSD but their symptom profiles significantly differed. The difference in symptom

profiles was explained by the nature of violence in each group, in that women seeking support at domestic abuse centers were more frequently and severely injured and abused than comparison groups. Further, several studies of domestic violence have found that greater severity of partner violence reported by battered women has been associated with more serious PTSD (Housekamp & Foy, 1991; Kemp, Green, Horowitz, Rowlin, 1995). Thus, incidence rates may in part depend on the sample and severity of abuse. However, they will also vary depending on the operational definition that is used to assess PTSD and the extent to which it reflects the different symptom profiles.

Despite the range in estimates of PTSD prevalence, these studies show a significant association between battering and PTSD. The major limitation of these studies is the lack of a non-battered comparison group. However, this has been addressed by comparing to incidence rates in the general population. In 11 studies conducted among battered women it was found that 31% to 84.4% of the women met clinical criteria for PTSD compared to 1.3% to 12.3% in general population (Golding, 1999). Others have used quasi-experimental control groups, including maritally distressed women (Astin, Ogland-Hand & Foy, 1995). These researchers also found that battered women exhibited higher rates of PTSD than maritally distressed women (58% vs. 18%, respectively).

Taken together, Walker's theory of partner abuse with its emphasis on the cycle of violence and learned helplessness, and research on PTSD as it relates to battering are critical for understanding and characterizing the essence of battered woman's life, her symptoms and experiences. While the circle of violence and learned helplessness help us to understand the reasons why women stay in the abusive relationships, the PTSD criteria

help us to characterize the symptoms experienced and to identify the women in need for support and psychological treatment.

While PTSD may be a long-term consequence of abuse, exposure to a single traumatic event, or acute stressor, may lead to Acute Stress Disorder (ASD), which consists of three dissociative symptoms: re-experiencing symptom, marked avoidance, and marked anxiety or increased arousal. ASD is similar to PTSD in the source and symptoms, but while PTSD reflects disturbance that has lasted for more than 1 month, ASD should last from 2 days to 1 month after the stressor. Although ASD is an acute dissociation, it can predict the further development of chronic PTSD (Harvey & Bryant, 1999; Koopman, Classen & Spiegel, 1994). A study conducted by Harvey (1999) investigated the role of acute arousal in the development of PTSD. Hospitalized motor-vehicle-accident survivors were assessed for ASD within 1 month of the trauma and were reassessed for PTSD 6 months posttrauma. A diagnosis of ASD combined with a resting heart rate of greater than 90 beats per minute accounted for 36% of the variance of the number of PTSD symptoms. Thus, ASD may be a strong predictor of the further development of PTSD among women who continue in an abusive relationship.

There have several studies conducted to compare the differential effects of physical and psychological abuse on the development of other mental disorders among battered women. Research results have not been consistent. Past research has documented a significant correlation between physical abuse and mental distress, such as depression and PTSD (Cascardi & O'Leary, 1992; Housekamp & Foy, 1991; Kemp, Green, Horowitz & Rowlin, 1995). However, in studies in which both physical and psychological abuse were taken into account, the results regarding the unique role of

physical abuse were inconsistent. Some research has found that both physical and psychological abuse contribute significantly and independently to depression and low self-esteem (Sackett & Saunders, 1999). Other studies found that physical abuse was significantly correlated, even though it was weaker than the correlations found with psychological abuse, in relation to lowered self-esteem (Aguilar & Nightingale, 1994) and mental distress, such as depression and PTSD (Cascardi & O'Leary, 1992; Dutton, Goodman & Bennet, 1999; Follingstad, 1990). However, others have also found no correlation between physical abuse and mental distress (Arias, 1999). Arias suggested that this surprising result might be due to the measure of physical abuse, which was derived by summing the product of frequency and severity of physical aggression during the last year. He argues that it may be that only recent violent events may impact on women's mental health.

This thesis examined psychological distress in relation to psychological and physical abuse. It was hypothesized that the more severe abuse would be associated with ASD, low self-esteem, depression, and PTSD. Moreover, it was expected that psychological abuse would be a stronger predictor than physical abuse.

Partner abuse and cortisol outcomes. It is generally accepted that alterations of neuroendocrine functioning occur in response to stressors, particularly with respect to hormones of the hypothalamic-pituitary-adrenal (HPA) axis, and these alterations may be of adaptive significance. Among other things, these changes may reflect a preparatory physiological reaction to help the individual deal with impending or ongoing stressors, or may prevent excessive stimulation of biological systems (Sapolsky, Romero & Munck, 2000). However, if sustained, these neuroendocrine alterations may have adverse

consequences, including effects on cognitive functioning, cardiovascular processes and immune functioning (Brown, Tomarken, Orth, Loosen, Kalin & Davidson, 1996; House, Landis, Umberson, 1988; McEwen, 1998; Sapolsky, Romero & Munck, 2000). Moreover, high levels of cortisol have been implicated in depression and other mental disorders (Murphy, 1991).

Given the relationship between stressful events and HPA functioning, it should not be surprising to find that PTSD and ASD would be associated with alterations of pituitary ACTH and consequently adrenal glucocorticoid release (Sapolsky, Romero, & Munck, 1999). However, in contrast to the effects of most acute stressors, it has been reported that cortisol levels in plasma, urine or saliva (all of which reflect adrenal release) are diminished in individuals with PTSD symptoms (Boscarino, 1996; Goenjian, et.al., 1996; Kellner, Baker & Yehuda, 1997; Yehuda, Giller & Mason, 1993; Yehuda, Resnick, Schmeidler, Yang & Pitman, 1998). It is of particular interest that the cortisol response to trauma was influenced by the individual's previous traumatic stressor experiences, being reduced among women with a history of trauma (Yehuda et al., 1998).

The altered neuroendocrine functioning was not limited to the adrenal gland, but was also evident with respect to other aspects of HPA functioning, including hypothalamic and pituitary factors. In this respect, PTSD was associated with enhanced dexamethasone suppression of plasma cortisol (Goenjian, et. al., 1996; Stein, Yehuda, Koverola, 1997; Yehuda, Boisoneau, Lowy, Giller, 1995). Interestingly, elevated corticotropin releasing hormone (CRH) levels in CSF were apparent in PTSD patients (Baker, et. al., 1999; Bremner, et. al., 1997). Yet, CRH challenge led to a blunted ACTH response in PTSD patients (Smith, et. al., 1989), and metyrapone administration

increased ACTH levels to a greater extent in PTSD than control subjects. Thus, it appears that although stressful events typically give rise to adrenal glucocorticoid activation, with a sufficiently intense or protracted trauma, at least one sufficiently potent to provoke PTSD symptoms, HPA feedback processes may not function adequately, culminating in elevated hypothalamic activity, which then promotes a down regulation of pituitary or adrenal functioning (McEwen, 1998; Yehuda, Levengood, Schmeidler, Wilson, Guo & Gerber, 1996). It is unclear whether this stems from chronic activation of this axis, hence promoting the pituitary and/or adrenal dysfunction. Likewise, it is not known whether these HPA changes develop with the passage of time following the trauma. It is clear, however, that appreciable inter-individual differences exist with respect to corticoid levels among PTSD patients (Kellner, Baker & Yehuda, 1997), but the psychosocial and personality factors predicting diminished cortisol remain to be elucidated.

As in the case of other stressors, it has been demonstrated that marital distress effectively promotes the release of pituitary and adrenal hormones, and it is believed that these may impact on immune functioning (Kiecolt-Glaser, Newton, Cacioppo, MacCallum, Glaser & Malarkey, 1996; Oleshansky & Meyerhoff, 1992). As indicated earlier, research examining the relationship between PTSD symptoms and the level of cortisol found that individuals with the most severe PTSD symptoms displayed reduced cortisol levels (Anisman, Griffiths, Matheson, Ravindran & Merali, in press; Gurvits, Gilbertson, Lasko, Tarhan, Simeon, Macklin, Orr & Pitman, 2000). In studies on marital conflict, however, it does not appear that the population examined included women who had been battered, and thus elevated cortisol levels were unexpected. As battering is among the most significant domestic conflicts, and may be associated with PTSD among

the victims of abuse, it was of particular interest to determine the cortisol levels of this subset of women. Thus, the present thesis investigated possible links between ASD and PTSD among victims of partner battering and alterations of basal cortisol level.

Individual Characteristics Affecting Response to a Stressor

Much research has been done in the field of stress and its influence on mental health, and the moderating effects of individuals' coping styles and defense mechanisms. Coping processes are conscious and intentionally used mechanisms, which are situationally determined to reduce stress and are typically associated with adaptational success. While individuals may use such conscious strategies, they might also adopt unconscious defense mechanisms. Defense mechanisms are the ways and means by which the individual wards off displeasure and anxiety, and exercises control over impulse behaviour, affects and instinctive urges (Freud, 1966). Defense mechanisms are predispositional, and function in unconscious and nonintentional ways and are associated with less successful efforts to deal with stress (Cramer, 2000). There is evidence confirming that both the coping strategies and defense mechanisms are related to the mental health and neurotic symptoms among people experiencing adverse life events (Andrews et.al, 1978; Brewin, Andrews & Valentine, 2000; Bryant, Marosszeky, Crooks, Baguley & Gurka, 2000; Duncan-Jones, 1982; Griffiths, Ravindran, Merali & Anisman, 2000; Monroe & Depue, 1991; Solomon & Smith, 1994). Battering is a very stressful adverse life event, thus coping and defense mechanisms are likely to play an important role in moderating the effects on battered women's mental health.

Coping strategies and social support. "People are rarely passive in the face of what happens to them; they seek to change the things they can, and when they cannot they use

cognitive modes of coping by which they may change the meaning of the situation” (Lazarus & DeLongis, 1983, p. 248). The term ‘coping’ refers to the constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person (Lazarus, 1984). When we talk about coping we are referring to strategies for dealing with threat. The way a person copes is determined in part by his or her resources, which include health and energy, positive beliefs, problem-solving skills, social skills, social support, and material resources (Lazarus, 1984). Researchers have examined the individual variability in responses to stress, and adjustment to the negative emotional consequences of the stressful event (Folkman & Lazarus, 1980; Lazarus, 1981).

Many theories suggest that a failure to cope with stressful or traumatic situations leads to psychological problems, including depression, ASD and subsequent PTSD (Beckham & Adams, 1984; Brewin, Andrews & Valentine, 2000; Bryant, Marosszeky, Crooks, Baguley & Gurka, 2000; Cohen & Syme, 1985; Cohen & Wills, 1985; Griffiths, Ravindran, Merali & Anisman, 2000; Monroe & Depue, 1991; Solomon & Smith, 1994). According to Lazarus (1984), coping effectiveness is based on two functions: the regulation of distress (emotion-focused coping) and the management of the problem that is causing the distress (problem-focused coping). A person who manages a problem effectively but at great emotional cost cannot be viewed to be coping effectively. For example, a battered woman who decides to leave the abusive husband is coping effectively with the problem itself, yet she can be left with feelings of loss, guilt and depression. Effective coping means this woman also manages the negative feelings about

her decision. Thus, effective coping includes both problem solving and the management of related emotions.

While some argue that coping strategies are not inherently good or bad, and the effectiveness of a strategy depends on the extent to which it is appropriate to the internal and/ or external demands of the situation (Lazarus, 1984), others argue some strategies are more effective than others (Billings & Moos, 1981; Doerfler & Richards, 1981). However, among those who argue that there are more effective strategies to cope with stressful events, there is no consensus as to which coping techniques should be viewed as most adaptive leading to a healthy mental state. Coyne, Aldwin and Lazarus (1981) found the effective coping efforts of depressed persons to be characterized by seeking emotional and informational support and by wishful thinking. Billings and Moos (1981) found that depressive mood is positively correlated with avoidance mode of coping whereas active cognitive coping is correlated with less depressive mood. Research done in the field of battered women finds that abused women generated such coping strategies as avoidance and dependence, withdrawal, hiding an accident from others, and not seeking outside help, rather than using problem-solving coping strategies (Claerhout, Elder & Janes, 1982; Walker, 1979). It was found that women who used more active problem-solving coping strategies or sought more social support and used fewer avoidant responses reported less mental distress (Mitchell & Hodson, 1983). The majority of the researchers find active coping, and specifically problem-solving, to be associated with lower mental distress and passive coping, such as withdrawal and avoidance, to be associated with higher mental distress. Further, an intention to develop new interpersonal relationships was correlated with an improvement in mental distress, namely reduced depression

(Doerfler & Richards, 1981). This thesis examined the links between coping strategies and mental distress. It was hypothesized that among abused women, active coping strategies, such as seeking social support, cognitive restructuring and problem-solving, would be associated with high lower levels of mental distress, whereas passive coping strategies, such as emotional containment, blame, and passivity would be associated with higher levels of mental distress.

Among the coping strategies, social support seeking is believed to be the most adaptive coping strategy against mental distress, particularly among battered women (Claerhout, Elder & Janes, 1982; Funabiki, Bologna, Pepping & Fitzgerald, 1980; Mitchell & Hodson, 1983; Walker, 1979). A linkage between social support and positive health outcomes was proposed more than twenty years ago (Cohen & Syme, 1985; Cohen & Wills, 1985; Sarason & Sarason, 1985). It was found that individuals who had high levels of social support had suffered less from traumatic life events (Cassel, 1976; Cobb, 1976), experienced lower levels of depression and anxiety (Hays et al., 1992) than individuals with low levels of social support. Therefore, a buffering role of social support was proposed.

Defensive mechanisms. It is often not just traumatic events, but also a personal idiosyncratic response to this event that may lead to psychopathology. There is evidence that personal defense mechanisms are able to buffer or increase the negative effects of stress (Katz et.al., 1970; Vaillant, 1994). An individual may deal with emotional conflict, internal or external stressors using one or more defense mechanisms. According to Vaillant's hierarchy of defenses (1971) based on psychodynamic theory, there are four types of defenses: mature, neurotic, immature and psychotic.

Mature defenses are unconscious mechanisms that integrate reality, interpersonal relationships, and individual feelings for the user. The mature defenses are sublimation (channelling unacceptable feelings into socially desirable behaviour), humor, suppression (avoiding thinking about the negative experience or feeling), anticipation (planning for future), and altruism. Mature defenses are associated with high adaptiveness and mental health. Under severe stress mature defenses may change to less mature mechanisms.

Neurotic defenses are common as part of neurotic disorders, and in mastering acute adult stress. They appear as individual quirks or neurotic hang-ups and for the user that alter the feelings of instinctual expression. The neurotic defenses are intellectualization (excessive use of abstract thinking to avoid unpleasant feelings), repression (being unable to remember or be cognitively aware of negative experience or events), displacement (redirecting a feeling onto less threatening objects), and reaction formation (substituting a feeling with one that is diametrically opposite to an unacceptable one). Neurotic defenses are less adaptive than mature ones

Immature defenses are common in adults with personality disorders, or in psychotherapy. They appear socially undesirable, and for the user alter the distress engendered by the threat of interpersonal intimacy or the threat of experiencing its loss. The immature defenses are projection (falsely attributing unacceptable feelings to others), passive aggression (indirectly expressing aggression against others), hypochondriasis (overoccupation with the health issues), dissociation (temporary alteration in the integrative functions of identity), schizoid fantasy (using fantasy to resolve conflicts), and acting out (acting without reflection for negative consequences). Immature defenses are

non-adaptive compared to mature and neurotic defenses and are associated with damage to the perception of reality, social and personal dysregulation.

Finally, *psychotic defenses* are mechanisms that alter reality. An example of psychotic defenses is delusional projection, which is the alteration of external reality: “the devil is devouring my heart”.

Links between defense mechanisms and distress as a result of stress have been found (Katz et. al., 1970; Vaillant, 1971; Weinberger, 1998; Weinberger, Schwartz & Davidson, 1979). However, neither a specific defense mechanism, nor pattern of mechanisms in relation to an event has been identified as particularly relevant.

Research has also looked at defense mechanisms in response to various types of abuse. Of particular interest, given the relation to PTSD symptoms, is evidence showing that as a result of severe physical or psychological abuse, immature major image-distorting defenses such as dissociation and splitting of self and others’ images and projective identification are mobilized (Chu & Dill, 1990; Freud, 1920). These defense mechanisms lead to shifts in and out of bad, weak, or victimized self-images and to further reliance on these defenses. These defense mechanisms reinforce a sense that there is no trust in the world, in the partner, and in oneself. It results in serious psychological distress.

One important aspect of the dissociative response to trauma concerns immediate dissociation “at the time the traumatic event is unfolding” (Marmar, Weiss & Metzler, 1995, p. 414). The dissociative response includes alterations in the experience of reality (time, place, and person). The dissociation may create the feeling of unreality that this is happening, the feeling that this is happening to somebody else, the feeling that the body

belongs to somebody else or other feelings of confusion and disorientation, and is likely to be incurred in response to an abusive episode (Holen, 1993; Koopman, Classen & Spiegel, 1994; Noyes & Kletti, 1977). Apparently, the dissociative response may defend a person against serious abuse, harassment, or terror by helping to escape overwhelming experiences. Multiple studies showing the association between abuse and dissociative symptoms have also noted a significant correlation between the dissociative symptoms at the time of trauma and subsequent development of PTSD. While there have been studies pointing out that the dissociative defense mechanism is a strong predictor for the development of PTSD, there have not been studies showing the subsequent correlation between PTSD and dissociative symptoms. Therefore, research among victims of a traumatic event is necessary to investigate the association between the dissociative symptoms after the traumatic event and the existence of PTSD. Much research has been done in the context of childhood domestic abuse as opposed to adult domestic abuse against women. The present study hypothesized that defense mechanisms would increase or buffer the negative effect of abuse on women's mental health, and in particular, that mature defense mechanisms (e.g., sublimation) would be associated with lower mental health, and immature (e.g., dissociation) with higher psychological distress.

Summary

Research on the impact of stressful events suggests two risk/buffer factors that may influence the impact of abuse on woman's state: characteristics of the stressful event itself and individual characteristics. Depending on these factors, abused women may or may not experience serious psychological distress, including depression, reduced self-

esteem, ASD and a subsequent PTSD. In addition, the trauma of partner abuse can lead to alterations in endocrine system functioning (i.e., heightened cortisol levels).

The present study was designed to examine different aspects of partner abuse in dating relationships, its consequences and the role of moderating factors. Recognizing the significant role of abuse on mental health among women, this study assessed the factors that may be the strongest predictors of mental distress. It was contended that abuse within dating relationships may have a severe impact on mental health and result in negative endocrine alterations, but the individual's use of effective coping strategies, mature defense mechanisms, and perceiving social support would buffer the negative effects of battering. More specifically, the following hypotheses were examined:

1. Consistent with past research, it was expected that more severe psychological and physical abuse would be related to greater psychological distress among women in terms of reduced self-esteem, and symptoms of depression, ASD, and PTSD. Psychological abuse was expected to be a more important predictor of psychological distress than was physical abuse.
2. The relationships between abuse and mental distress outcomes were expected to be moderated by women's coping strategies. In particular, women seeking and establishing social support or using cognitive problem-solving strategies and women who adopt mature defensive mechanisms to cope with the abuse were expected to experience lower levels of mental distress as a function of experiencing abuse compared to women using emotional containment coping strategies or immature defense mechanisms.

3. Women who experienced abuse, and exhibit symptoms of ASD/ PTSD were expected to exhibit lower basal of salivary cortisol than women who were not abused or those who were abused but do not suffer ASD/PTSD symptoms.

Method

Participants

Women were preselected from a mass-testing of students in the first year seminars at Carleton University, who were in the heterosexual dating relationships. Women were contacted by telephone and invited to participate in a study on intimate relationships (see Appendix B), that involved 3 measurement times; only the first two contained measures of relevance to the present thesis. 114 women agreed to participate. Due to attrition, there were only 83 women in the second phase of the study ($N=83$).

Procedure

Women responded to questionnaires included in the in-class testing of students in all cooperating first year seminars. Included in this package were measures assessing demographic information, the Coping Strategies Scale (Beckham & Adams, 1984), and the Depression Inventory (Beck, 1972). Consent to use this information for the purposes of related research was provided in the in-class session.

Women who reported that they were currently in an intimate relationship were contacted by phone, and invited to participate. They were asked to take part in 3 sessions over the course of the academic year (only two of which are relevant to the present study, in mid October and early January). Women were run in small groups in morning sessions (from 9 am to 11 am). In the fall session, they completed an informed consent to

participate in all further sessions (see Appendix C), and a questionnaire (see Appendix D) that included measures assessing the current status of their relationship, the Conflict Tactics Scale (Straus, Hamby, McCoy & Sugarman, 1996), the Psychological Abuse Scale (Marshall, 1999), the Social Provisions Scale for specific relationships (Cutrona & Russell, 1987), self-esteem (Heatherton & Polivy, 1991), symptoms of PTSD (Impact of Events – Revised; Weiss & Marmar, 1995), and ASD (Bryant, Moulds & Guthrie, 2000). In the 2nd session, they completed the measures concerning the current status of their relationship, defense strategies (Andrews, Pollock & Stewart, 1989), ASD, Impact of Events, and the Beck Depression Inventory.

In these latter two sessions, participants provided a salivary sample for the determination of circulating hormones affected by stressful experiences. This comprised the student placing a piece of dental cotton in her cheek for a 2-min period. Once the cotton was thoroughly wet, it was placed in a test tube for subsequent analysis. The cotton was then placed in a tube (salivette), which was subsequently kept on ice, centrifuged to extract the saliva, and frozen at -70°C . Salivary cortisol levels were subsequently determined, in duplicate, by means of a solid phase radio-immuno assay using ^{125}I kits obtained from ICN Biomedicals Inc., CA. The intra- and extra-assay variability was less than 10%. This procedure was conducted at the beginning and at the end of the session, and again the next morning (within 30 minutes of awakening). The three measures were necessary owing to the pulsatile nature of cortisol release.

While contact numbers were provided at the end of each session, debriefing occurred at the end of the last session of the study (Appendix E). Responses were monitored in the event that a woman may have responded with 3 or 4 on item 7 of the

Beck Depression Inventory (suicidal ideation), as they would have been contacted immediately by a psychiatrist, and strongly encouraged to seek counseling. However, no such cases occurred.

Measures

Some outcome measures were administered more than once. For the purposes of analyses in the present thesis, scores on ASD, PTSD and self-esteem were derived from the October phase of the study, as these were closest in time to the indicator of abuse, and as well maximized sample size. However, the Beck Depression Inventory (BDI) was only obtained in the first and third phase, and therefore, analyses were based on responses in the last phase of the study, reflecting its status as an outcome (as opposed to predictor) variable. In any case, the correlations between measures at the 2 time points were high (BDI, $r = .67$, $p < .001$; ASD, $r = .347$, $p = .001$; PTSD, $r = .501$, $p < .001$; and self-esteem, $r = .823$, $p < .001$), and there were no significant differences in the extent of each disorder at each of the two time points (BDI, $t(83) = 1.36$, ns; ASD, $t(81) = 1.34$, ns; PTSD, $t(81) = 1.26$, ns; Self-esteem, $t(84) = -.74$, ns).

Abuse. A 79-item revised version of the Conflict Tactics Scale (CTS2, Straus, Hamby, McCoy & Sugarman, 1996) was used to assess different tactics intimate partners may use to resolve conflicts, and in particular the use of physical abuse and injury. There is a substantial empirical body demonstrating the construct validity and discriminant validity for the scale (Straus, McCoy & Sugarman, 1996). The revised version of the scale was used because it had a greater number of items to enhance validity and reliability over earlier versions. As well, it differentiated between minor and severe levels of aggression, along with cognitive and emotional aspects of conflict. Finally, it

included additional subscales assessing sexual coercion and physical outcomes (physical injury from assaults by a partner). The dimensions examined in the present study represented the dimensions of physical abuse, and included physical assault (“my partner twisted my arm or pulled my hair”), sexual coercion (“my partner used threats to make me have sex”), and injury scales (“I went to a doctor because of a fight with my partner”). Responses were on 6-point scale that ranged from 0 (Never) to 5 (Always). Responses were averaged to create each subscale, such that higher scores reflected more severe abuse.

Psychological abuse. A 39-item scale developed by Marshall (1999) was used to assess the typology of intimate partner psychological abuse. The scale was created specifically to identify the psychological abuse against women. The scale was used because it could differentiate between subtle and overt psychological abuse. The overt psychological abuse subscale included factors reflecting domination (“uses an offensive or hurtful tone”), indifference (“ignores you”), monitoring (“checks up on you”), and discrediting (“tells others things that make you look bad”). The subtle psychological abuse subscale included undermining (“makes you feel ashamed of yourself”), discounting (“discourages you from interests he is not part of”), and isolating (“tries to keep you from showing feelings”). Responses were on 5-point scale ranging from 1 (Never) to 5 (Always). Responses were averaged for each subscale to create two composite score indices of psychological abuse (Marshall (1996) did not include the obvious abuse dimension), such that higher scores reflect greater use of the particular type of abuse.

Coping strategies. A modified and reduced version (87 items) of Beckham and Adams (1984) measure of coping strategies was used. Responses were “yes” or “no” in terms of the self-applicability of each strategy in recent months. This scale was chosen because it represented a multidimensional assessment of coping strategies, such as blame (“thought a lot who is responsible for your problems, besides yourself”), emotional expression (“expressed anger that others were not making effort to help you”), emotional containment (“felt angry, but held it in”), social support seeking (“sought sympathy from others”), cognitive restructuring (“told yourself that some good can come out of your misfortune”), general activity (“gone shopping”), avoidance/denial (“avoided thinking about your problems”), problem-solving (“taken steps to improve your problems”), and passivity (“decided to wait and see how things turn out rather than making an effort”). Beckam and Adams further recommend the creation of three composite scales: blame, passivity, avoidance and emotional containment were combined into emotional containment coping strategy; emotional expression and social support seeking were combined into an emotional expression coping strategy; and general activity, problem-solving, and cognitive restructuring were combined into cognitive problem-solving coping strategy. Responses were averaged for every subtest to create the three composite indices of coping, such that higher scores reflect greater use of the particular strategy.

Social support. The 24-item social provisions scale of Cutrona and Russell (1987) assessed the perceived support obtained from social relationships with each of parents, friends, and intimate partners. Responses were on a 3-point scale, ranging from 1 (No), 2 (Not sure) or 3 (Yes), in terms of whether the item accurately described the individual’s relationships. This scale was used because it represented the broad dimensions of social

relationships, including guidance (“do you feel that you could turn to your friends for guidance in terms of stress”), reliable alliance (“are there friends you can depend on to help you, if you really need”), reassurance of worth (“do you feel that your friends do not respect your skills and abilities” (reverse scored)), opportunity for nurturance (“do you feel personally responsible for your friends”), attachment (“do you feel you lack emotional closeness with your friends” (reverse scored)), and social integration (“are there friends who enjoy the same activity that you do”). Cutrona and Russell (1987) provide evidence of construct validity and discriminant validity. Responses were averaged to provide three indices, such that higher scores reflected greater perceived social support from each of the three sources.

Defense strategies. A 36-item short form of Andrews, Pollock and Stewart (1989) scale, which was based on Bond’s (1986) original questionnaire, assessed the psychological defense strategies women used. The scale was chosen because it differentiated between mature (“I work out my anxiety through doing something constructive and creative like painting or wood”) and immature (“I am always treated unfairly”) defenses. Responses were on a 5-point scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Responses were averaged to provide two indices of defense mechanisms, such that higher scores reflected greater use.

Depressive symptoms. A 13-item Beck Depression Inventory (Beck, 1972) assessed depressive symptoms. Responses included item sets that gave respondents a choice between 4 different behaviours reflecting increasingly degrees of problem severity (e.g., from 0 (“I do not feel sad”) to 3 (“I am so sad or unhappy that I can’t stand it”)). Responses were summed to provide a single index of depressive symptomatology.

Symptoms of posttraumatic stress. A 22-item revised version of the impact of events scale of Weiss and Marmar (1995) assessed PTSD symptomatology. This revised version included hyperarousal symptoms (“I was jumpy and easily startled”), which target such domains as anger and irritability, jumpiness and exaggerated startle response, trouble concentrating, psychophysiological arousal upon exposure to reminders, and hypervigilance. The original avoidance (“I stayed away from reminders about it”) and intrusion (“any reminder brought me back feelings about it”) subscales were also included. Participants indicated how distressing each difficulty had been during the past seven days as a result of, or any time they thought of their *worst fight* with their intimate partner using a 5-point scale, ranging from 0 (Not at all) to 4 (Extremely). Responses were summed to provide a single score index of PTSD, as well as three indices of the component dimensions of PTSD.

Symptoms of acute stress. An 18-item scale from Bryant, Moulds and Guthrie (2000) assessed the symptoms of acute stress disorder. This scale represents a self-report multidimensional approach to assessing ASD symptoms and covers dissociative (“during or after the trauma, did things around you ever feel unreal or dreamlike”), reexperiencing (“have you felt as if the trauma was about to happen again”), avoidance (“have you tried not to talk about the trauma”), and arousal (“have you had trouble sleeping since trauma”) symptoms. Women rated their agreement with the occurrence of various reactions to their *last* conflict with their intimate partner on a 5-point scale ranging from 0 (Not at all) to 4 (Extremely). Responses were summed to provide a single score index of ASD as well as four indices reflecting the dimensions of ASD.

Self-esteem. A 20-item scale of Heatherton and Polivy (1991) assessed state self-esteem among women. This scale represents different dimensions of self-esteem including cognitive (“I feel that I have less scholastic ability than others”), appearance and body image (“I feel unattractive”), and social esteem (“I feel that others respect and admire me”). Responses were on 5-point scale ranging from 0 (“Not at all true of me”) to 4 (“Extremely true of me”). Responses were averaged (with relevant items reverse scored) to provide three indices of self-esteem.

Results

Initial analyses were conducted to document the descriptive characteristics of the conceptual variables of the study. The main analyses involved hierarchical regressions assessing the association between psychological and physical abuse and women’s mental health and neuroendocrine responses, and the moderating effects of women’s coping strategies, social support, and defense mechanisms.

Initial Analyses

Demographic characteristics. Participants ($N=114$) were women between the ages of 17 and 26 ($M= 19.4$, $SD= 1.47$). In the fall phase of the study, out of the 114 participants, 97 (83.6%) were in a dating relationship, 10 (8.6%) were living with a partner (co-habiting or married), and 7 (6.0%) were recently broken up. On average, participants reported having been in relationships for 19.0 months ($SD=12.9$). In the winter phase of the study, of the 84 participants 68 (90%) were in a dating relationship, 6 (7.1%) were living with a partner, and 9 (10.7%) were recently broken up. On average, at this time point, women reported having been in their relationships for 21.9 months

($SD=12.9$). While the length and commitment of women's relationships clearly varied, the sample sizes were not sufficient to make comparisons among them. Therefore, women's responses were collapsed across these relationship variables for the remaining analyses.

With respect to ethnic background, 111 (97.4%) participants were Canadian citizens, and 3 (2.6%) were landed immigrants from England, Guyana, and Russia, respectively. For 103 participants (90.4%) their first language was English, for 2 (1.8%) it was French, and for 9 participants (7.9%), other than English or French. Only one woman had a child. At the outset of the study, 50% of women worked part-time, 6% worked full time, and 44% percent did not work at all. Women who dropped out of the study ($N=31$) did not differ from those, who continued ($N=83$) on abuse scores, relationship status or outcome variables.

Of particular relevance to cortisol measurements, in the fall phase of the study of 114 participants 83 participants (72.8%) were on some form of medication; 72 of these participants (63.16%) took birth-control pills, 4 (3.5%) – anti-inflammatories, 4 (3.5%) – anti-depressives, 2 (1.75%) – anti-anxieties, and 16 (11.1) – some other form of medication (such as ventalin for asthma reduction or menocycline for acne reduction). At the onset of the study twenty-four participants (21.05%) reported they had undergone some kind of psychotherapy at some point of their lives, but no one was currently undergoing psychotherapy.

Interitem reliabilities of measures. Interitem reliability analyses were conducted to examine the internal consistency of the mental health, abuse, social support, coping, and defense mechanisms (see Table 1). The measures of mental health, including symptoms

of depression, ASD, PTSD, and self-esteem had high inter-item reliabilities. Because of the high intercorrelations in ASD, PTSD, and self-esteem subscales, the total scores were used. The thesis did not look at diagnoses of depression, ASD or PTSD, but rather assessed the presence of some of their symptoms.

In relation to the Conflict Tactics Scale, the psychological and physical abuse subscales showed high reliability, whereas the sexual abuse and injury subscales had moderate-low reliability. The probable reason was the low variance in these scales, in that very few experienced injury or sexual abuse. In order to examine the hypotheses of the study, the Physical Abuse subscale of the Conflict Tactics Scale was used. Because of the skewness in the distribution of physical abuse, reflecting a low number of participants reporting higher levels of abuse, the score of physical abuse was combined with the injury score and the score of sexual abuse, and then the categorical score, 0 or 1 was created. This score then reflected either the absence (0) or presence (1) of abuse in the relationship, as opposed to reflecting a continuum of abuse severity.

While the Conflict Tactics Scale reliably assessed Psychological Abuse, a second inventory of psychological abuse was included because it assessed the dimensions of theoretical interest. The correlation between the total score on this indicator of psychological abuse and the CTS subscale was high ($r=.74$, $p<.001$), and so only responses to this former scale were examined in subsequent regression analyses. The correlation between the subscales assessing overt and covert psychological abuse was very high ($r=.87$, $p<.01$). Therefore, to avoid problems of redundancy, or potential multicollinearity, a total score for psychological abuse was created. Because of the skewness in the distribution of psychological abuse, reflecting a low number of

participants reporting higher levels of abuse, the natural logarithm of psychological abuse was calculated and used as a reflection of the psychological abuse score. Physical and psychological abuse were moderately correlated with each other ($r=.45$, $p<.01$), suggesting that at least some of the women who were experiencing physical abuse were also experiencing psychological abuse.

The three sources of perceived social support, namely, friends, partner, and parents (see Table 1); had high inter-item reliabilities. The zero-order correlations were significant between perceived support from friends and partner ($r=.14$, $p<.01$), but not between friends and parents ($r=.001$, ns), or parents and partner ($r=.01$, ns).

The Coping Strategies Inventory consisted of three composite indices: social support seeking and emotional expression, emotional containment, and cognitive problem-solving. Emotional expression and cognitive restructuring were slightly positively correlated ($r = .035$, $p<.05$), as were emotional expression and emotional containment ($r= .049$, $p<.05$), but not emotional containment and cognitive restructuring ($r=.00$, ns).

Due to the low inter-item consistency of the Neurotic Defense Mechanisms subscale (Table 1 in the Defense Mechanisms Inventory this subscale was not used in further analyses. The inter-item consistency of the Immature Defense Mechanisms subscale was quite low as well; therefore, even though it was used in the study in order to investigate the hypothesis of interest, the results based on this measure should be treated with caution.

Table 1. Summary of Scale Item Analyses

Measure	Number of items	Alpha	Range	Score	SD
Depression	13	.82	0-3	5.17 ^a	4.66
Acute Stress Disorder	18	.90	0-4	13.20 ^a	12.06
Dissociation	5	.79	0-4	4.89 ^a	4.52
Avoidance	4	.80	0-4	4.16 ^a	3.90
Arousal	6	.85	0-4	2.42 ^a	3.99
Reexperiencing	3	.76	0-4	1.73 ^a	2.42
Posttraumatic Stress Disorder	22	.83	0-4	18.33 ^a	17.77
Hyperarousal	6	.86	0-4	6.73 ^a	7.29
Avoidance	8	.88	0-4	7.82 ^a	7.40
Intrusion	8	.92	0-4	3.71 ^a	4.72
Self-Esteem	20	.84	0-4	2.47 ^b	.66
Cognitive	7	.84	0-4	2.62 ^b	.72
Appearance	6	.83	0-4	2.29 ^b	.80
Social	7	.85	0-4	2.48 ^b	.81
Conflict Tactics Scale					
CTS-Psychological Abuse	8	.83	0-5	.35 ^b	.60
CTS-Physical Abuse	12	.85	0-5	.58 ^b	2.32
CTS-Injury	5	.35	0-5	.13 ^b	.54
CTS-Sexual Abuse	7	.37	0-5	.52 ^b	1.46
Psychological Abuse Scale					

Overt Abuse	20	.89	1-5	1.49 ^b	.50
Covert Abuse	19	.93	1-5	1.32 ^b	.48
Total score	39	.95	1-5	1.40 ^b	.47
Social Provisions					
Friends	12	.86	1-3	2.57 ^b	.33
Partner	12	.83	1-3	2.72 ^b	.34
Parents	12	.81	1-3	2.56 ^b	.39
Coping Strategies					
Emotional Containment	31	.84	0-1	.50 ^b	.19
Emotional Expression	15	.71	0-1	.53 ^b	.21
Cognitive Problem-Solving	38	.86	0-1	.55 ^b	.19
Defense Mechanisms					
Mature	22	.80	1-5	3.08 ^b	.51
Immature	9	.55	1-5	2.03 ^b	.47
Neurotic	5	.39	1-5	2.44 ^b	.57

^a - sum, ^b - mean

Descriptive statistics

As seen in Table 1, participants showed low levels of depressive symptoms, and symptoms of ASD and PTSD, suggesting that they were not suffering from serious mental health problems. However, there were significant percentages of the women who experienced some level of mental distress. Out of 83 women, 21 (17.4%) experienced some level of ASD and 20 (17%) experienced some level of PTSD; and five (4%) experienced depression, whereas the cutoff values were used from the original scales. In

addition, the mean on the self-esteem scale was at the mid-point of the scale, suggesting that on average, the participants did not suffer from low self-esteem.

Also seen in Table 1, physical abuse, sexual abuse and injury subscales had very low scores and variances. The distribution was similar for psychological abuse. Not surprisingly, these distributions were positively skewed. Therefore, the scores of physical and the psychological abuse were transformed (see above). If the operational definition of abuse was “anything at all”, in terms of experiencing at least one of the items on the respective measures, then 78.6% of the women could be considered having experienced some degree of psychological abuse. If a more strict criterion was used there were 11 women (9.6%) who had scores of between 2 and 5 on psychological abuse. In terms of physical abuse 33 women (28.0%) who experienced some form of physical abuse.

With respect to Social Support, participants perceived fairly high levels of support from all three sources. Participants’ mean scores were at the midpoints of every subscale of the Coping Strategies scale. It may be of note that the mean scores on Defense Mechanisms suggested that participants do not for the most part use immature defenses and mostly use mature defenses.

Main Analyses

To examine the possible risk and buffer factors affecting the impact of physical and psychological abuse on women’s psychological health, a series of hierarchical regressions was conducted. For each mental health variable, three regressions were conducted to assess the moderating effects of the sources of social support, the more general coping strategies, and then the defense mechanisms. To assess the moderating effects, scores on psychological abuse and physical abuse and each of the moderators

were standardized, and their cross products calculated as indicators of the interactive effect. For each regression, the mental health outcome variable (symptoms of depression, PTSD, ASD and self-esteem) was regressed first onto the psychological and physical abuse scores, followed by the main effects for the relevant set of moderating variables, with the interactions entered on the final step.

Depressive symptoms, abuse and moderating factors. In the first regression the moderating effect of *social support* was investigated (Table 2). The first step of entering abuse as a predictor variable was significant ($\underline{R}^2_{\text{change}} = .238$, $\underline{F}_{\text{change}} (2, 80) = 12.51$, $p < .001$). While both variables were correlated with BDI scores, such that higher abuse was associated with greater depressive symptomatology, only psychological abuse was found to be uniquely significant. The second step of entering the three dimension of social support was also significant ($\underline{R}^2_{\text{change}} = .113$, $\underline{F}_{\text{change}} (3, 77) = 4.47$, $p < .05$). While support from both friends and parents were negatively correlated with depression, only social support from parents was found to be uniquely associated with lower levels of depression. Neither the interactions between physical abuse and social support ($\underline{R}^2_{\text{change}} = .004$, $\underline{F} < 1$), nor the interactions between psychological abuse and social support were significant predictors of depressive symptoms ($\underline{R}^2_{\text{change}} = .040$, $\underline{F}_{\text{change}} (3, 71) = 1.556$, ns), suggesting that social support did not moderate the effects of abuse (see Table 2).

In the second regression the moderating effect of *coping strategies* was investigated (Table 3). Over and above abuse, coping strategies were significant predictors ($\underline{R}^2_{\text{change}} = .089$, $\underline{F}_{\text{change}} (3, 77) = 3.383$, $p < .05$). Examination of the correlations and regression coefficients indicated that only emotional containment was associated with higher levels of depression. As with social support, no interaction effects were

found, suggesting that coping strategies did not significantly moderate the effects of physical ($R^2_{\text{change}} = .006$, $F < 1$) or psychological abuse on depression ($R^2_{\text{change}} = .057$, $F_{\text{change}}(3, 71) = 2.212$, *ns*).

In the third regression the moderating effects of *defense mechanisms* were investigated (Table 4). Over and above abuse, defense mechanisms were found to be significant ($R^2_{\text{change}} = .130$, $F_{\text{change}}(2, 79) = 8.009$, $p < .001$). Examination of the correlation and regression coefficients indicated that only immature defenses were positively associated with the levels of depressive symptomatology. Once again, the interactions between physical abuse and defense mechanisms ($R^2_{\text{change}} = .011$, $F < 1$), and between psychological abuse and defense mechanisms were found to be not significant ($R^2_{\text{change}} = .010$, $F < 1$). No moderating effects were found, once again indicating that the effects of physical and psychological abuse were not moderated by these variables.

Table 2. Results of Regressing Social Support onto Depression Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.238**			
Physical Abuse		.366**	.159	.134
Psychological Abuse		.470**	.384**	.323**
Step 2				
Social Support	.113**			
Friends		-.247**	-.107	-.079
Partner		-.180	.054	.089
Parents		-.390**	-.295**	-.320**
Step 3				
Physical Abuse & Social				
Support Interaction	.004			
Abuse & Friends		-.043	.040	.036

Abuse & Partner	.016	-.002	-.001
Abuse & Parents	-.013	.046	.044
Step 4			
Psychological Abuse & Social Support	.040		
Abuse & Friends	-.159	.476	.191
Abuse & Partner	-.235*	-.445	-.166
Abuse & Parents	-.188*	.017	.010

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

Table 3. Results of Regressing Coping Strategies onto BDI Scores

Predictor	R ² _{ch}	r	B	Semi-partial
Step 1				
Abuse ¹	.235**			
Physical		.372**	.185	.159
Psychological		.458**	.362**	.310**
Step 2				
Coping Strategies	.089*			
Containment		.404**	.290**	.269**
Expression		-.095	-.074	-.071
Problem solving		-.222*	-.113	-.110
Step 3				
Physical Abuse & Coping Strategies	.006			

¹ The reason for different regression coefficients for abuse is the moderating variables have different participants with missing variables, and so there is a slight variation in the sample being used in each analysis

Abuse & Containment	.140*	.047	.042
Abuse & Expression	-.004	-.024	-.023
Abuse & Solving	.041	.072	.068
Step 4			
Psychological Abuse & Coping Strategies	.057		
Abuse & Containment	.203*	-.045	-.027
Abuse & Expression	.033*	.424*	.236*
Abuse & Solving	-.040	-.002	-.001

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

Table 4. Results of Regressing Defense Mechanisms onto BDI Scores

Predictor	R ² _{ch}	r	B	Semi-partial
Step 1				
Abuse	.229**			
Physical Abuse		.371**	.180	.153
Psychological Abuse		.454**	.358	.303
Step 2				
Defense Mechanisms	.130**			
Mature		.049	-.006	-.006
Immature		.564**	.432**	.359**
Step 3				
Physical Abuse & Defenses	.011			
Abuse & Mature		.060	-.016	-.016
Abuse & Immature		.243**	.112	.101
Step 4				
Psychological Abuse Defenses	.010			
Abuse & Mature		.092	.161	.099
Abuse & Immature		.273**	.131	.022

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

ASD, abuse and moderating factors. In the first regression the moderating effect of *social support* was investigated (Table 5). The first step of entering the dimensions of abuse was significant ($R^2_{\text{change}} = .380$, $F_{\text{change}}(2, 109) = 33.348$, $p < .001$). Correlation and regression coefficients indicated that while both physical and psychological abuse were associated with higher ASD symptoms, only the psychological abuse was uniquely correlated with ASD over and above the physical one. Social support had neither a significant direct relation with ASD ($R^2_{\text{change}} = .023$, $F_{\text{change}}(3, 100) = 1.338$, n.s.), nor did it significantly interact with physical ($R^2_{\text{change}} = .002$, $F < 1$) or psychological abuse ($R^2_{\text{change}} = .025$, $F_{\text{change}}(3, 100) = 1.447$, n.s.).

In the second regression the moderating effect of *coping strategies* was investigated (Table 6). Coping strategies were found to be significant, over and above abuse ($R^2_{\text{change}} = .080$, $F_{\text{change}}(3, 105) = 4.933$, $p < .01$). As with depression, the use of emotional containment was the only strategy that was associated with higher levels of ASD. Coping did not moderate the effects of physical ($R^2_{\text{change}} = .025$, $F_{\text{change}}(3, 102) = 1.588$, n.s.) or psychological abuse on ASD ($R^2_{\text{change}} = .024$, $F_{\text{change}}(3, 99) = 1.513$, $p < .05$).

In the third regression the moderating effects of *defense mechanisms* were investigated (Table 7). Neither the direct relation of defense mechanisms to ASD over and above abuse ($R^2_{\text{change}} = .020$, $F_{\text{change}}(2, 78) = 1.351$, ns), nor their moderating effects with physical ($R^2_{\text{change}} = .002$, $F < 1$) or psychological abuse ($R^2_{\text{change}} = .004$, $F < 1$) were found to be significant.

Table 5. Results of Regressing Social Support onto ASD Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.380**			
Physical Abuse		.218**	-.128	-.109
Psychological Abuse		.606**	.672**	.576**
Step 2				
Social Support	.023			
Friends		-.099	.164	.145
Partner		-.299	.001	.001
Parents		-.131	-.021	-.020
Step 3				
Abuse & Social				
Social Support	.002			
Abuse & Friends		-.017	.009	.007
Abuse & Partner		-.069	.028	.021
Abuse & Parents		-.125	-.047	-.045
Step 4				
Psychological Abuse &				
Social Support	.025			
Abuse & Friends		-.209*	-.092	-.041
Abuse & Partner		-.352**	.257	.105
Abuse & Parents		-.374**	-.227	-.147

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

Table 6. Results of Regressing Coping Strategies onto ASD scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				

Abuse	.351**			
Physical Abuse		.189*	-.130	-.113
Psychological Abuse		.581**	.646**	.561**
Step 2				
Coping Strategies	.080**			
Containment		.449**	.284**	.256**
Expression		.059	.042	.039
Solving		-.028	.025	.024
Step 3				
Physical Abuse & Coping Strategies	.025			
Abuse & Containment		.187*	.116	.106
Abuse & Expression		-.037	-.098	-.093
Abuse & Solving		.109	.121	.117
Step 4				
Psychological Abuse & Coping Strategies	.024			
Abuse & Containment		.342**	.174*	.114*
Abuse & Expression		-.195*	-.083	-.054
Abuse & Solving		-.181*	-.076	-.055

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

Table 7. Results of Regressing Defense Mechanisms onto ASD scores

Predictor	R ² _{ch}	r	B	Semi-partial
Step 1				
Abuse	.404**			
Physical Abuse		.242*	-.128	-.109
Psychological Abuse		.627**	.695**	.588**
Step 2				
Defense Mechanisms	.020			

Mature	.108	.143	.140
Immature	.288	.043	.035
Step 3			
Physical Abuse & Defenses	.002		
Abuse & Mature	.063	.027	.026
Abuse & Immature	.066	-.043	-.039
Step 4			
Psychological Abuse & Defenses	.004		
Abuse & Mature	-.031	-.047	-.029
Abuse & Immature	.417**	.056	.040

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

PTSD, abuse and moderating factors. In the first regression the moderating effect of *social support* was investigated (Table 8). The first step of entering the two dimensions of abuse was significant ($R^2_{\text{change}} = .383$, $F_{\text{change}}(2, 108) = 33.541$, $p < .001$). Once again, correlation and regression coefficients indicated that only psychological abuse was associated with higher PTSD symptoms. Social support had neither a significant direct relation with PTSD symptoms ($R^2_{\text{change}} = .001$, $F < 1$), nor did it significantly interact with physical ($R^2_{\text{change}} = .020$, $F_{\text{change}}(3, 102) = 1.165$, *n.s.*) or psychological abuse ($R^2_{\text{change}} = .003$, $F < 1$).

In the second regression the moderating effect of *coping strategies* was investigated (Table 9). Coping strategies had no significant direct relation with PTSD over and above abuse ($R^2_{\text{change}} = .040$, $F_{\text{change}}(3, 103) = 2.353$, *n.s.*). As with social support, no moderating effects were found to be significant, suggesting that coping

strategies did not moderate the effects of physical ($R^2_{\text{change}} = .028$, $F_{\text{change}}(3, 100) = 1.643$, *n.s.*) or psychological abuse ($R^2_{\text{change}} = .003$, $F < 1$) on PTSD symptoms.

In the third regression the moderating effects of *defense mechanisms* were investigated (Table 10). Neither the direct relation of defense mechanisms to PTSD symptoms over and above abuse ($R^2_{\text{change}} = .002$, $F < 1$), nor their moderating effects with physical ($R^2_{\text{change}} = .012$, $F < 1$) or psychological abuse ($R^2_{\text{change}} = .000$, $F < 1$) were found to be significant when predicting PTSD symptoms.

Table 8. Results of Regressing Social Support onto PTSD Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.383**			
Physical Abuse		.249**	-.093	-.080
Psychological Abuse		.614**	.662**	.567**
Step 2				
Social Support	.001			
Friends		-.220**	.176	.017
Partner		-.306**	.084	.025
Parents		-.094	-.033	.008
Step 3				
Physical Abuse & Social Support	.020			
Abuse & Friends		.022	.016	.120
Abuse & Partner		-.061	.049	.042
Abuse & Parents		-.095	-.035	-.033
Step 4				
Psychological Abuse & Social Support	.003			
Abuse & Friends		-.186*	-.084	-.037
Abuse & Partner		-.305**	.097	.039

Abuse & Parents	-.232**	.028	.018
-----------------	---------	------	------

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

Table 9. Results of Regressing Coping Strategies onto PTSD Scores

Predictor	R ² _{ch}	r	B	Semi-partial
Step 1				
Abuse	.372**			
Physical		.230**	.091	.086
Psychological		.604**	.436**	.414**
Step 2				
Coping Strategies	.040			
Containment		.373**	.245*	.225*
Expression		.060	.044	.041
Solving		-.085	-.039	-.038
Step 3				
Physical Abuse & Coping Strategies	.040			
Abuse & Containment		.161**	.016	.045
Abuse & Expression		.061	.046	.017
Abuse & Solving		.175*	.200	.166
Step 4				
Psychological Abuse & Coping Strategies	.028			
Abuse & Containment		.269**	.028	.018
Abuse & Expression		-.087	-.106	-.004
Abuse & Solving		-.088	-.066	-.047

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

Table 10. Results of Regressing Defense Mechanisms onto PTSD Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.395**			
Physical Abuse		.308**	-.045	-.038
Psychological Abuse		.627**	.652**	.548**
Step 2				
Defense Mechanisms	.002			
Mature		.030	.049	.048
Immature		.319**	-.014	-.011
Step 3				
Physical Abuse & Defenses	.012			
Abuse & Mature		.104	.056	.055
Abuse & Immature		.044	-.106	-.096
Step 4				
Psychological Abuse & Defenses	.000			
Abuse & Mature		-.010	-.002	-.001
Abuse & Immature		.364**	-.006	-.004

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

Self-esteem, psychological abuse and moderating factors. In the first regression the moderating effect of *social support* was investigated (Table 11). The first step of entering abuse as a predictor variable was significant ($R^2_{change} = .276$, $F_{change}(2, 111) = 21.169$, $p < .001$). The main effect of abuse was found to be significant in that higher abuse was associated with lower self-esteem; however, only psychological abuse was found to be

uniquely associated with self-esteem. Social support was also found to be significant, over and above abuse ($R^2_{\text{change}} = .064$, $F_{\text{change}}(3, 108) = 3.494$, $p < .05$). However, only social support from friends was significantly positively associated with self-esteem. No moderating effects were found to be significant, suggesting that social support did not moderate the effects of physical ($R^2_{\text{change}} = .014$, $F < 1$) or psychological abuse ($R^2_{\text{change}} = .016$, $F < 1$) on self-esteem.

In the second regression the moderating effect of *coping strategies* was investigated (Table 12). Coping Strategies had a significant direct relation with self-esteem over and above abuse ($R^2_{\text{change}} = .228$, $F_{\text{change}}(3, 107) = 16.161$, $p < .001$). Two dimensions of coping were found to be uniquely associated with self-esteem, in that both lower emotional containment scores and higher cognitive problem-solving were associated with greater self-esteem. As with social support, no moderating effects were found to be significant, suggesting that coping strategies did not moderate the effects of physical ($R^2_{\text{change}} = .005$, $F < 1$) or psychological abuse ($R^2_{\text{change}} = .010$, $F < 1$) on self-esteem.

In the third regression the moderating effects of *defense mechanisms* were investigated (Table 13). Defense mechanisms had a significant direct relation with self-esteem over and above abuse ($R^2_{\text{change}} = .100$, $F_{\text{change}}(2, 79) = 6.380$, $p < .05$). Only immature defense mechanisms were found to be significantly negatively associated with self-esteem. No moderating effects were found between defense mechanisms and physical ($R^2_{\text{change}} = .001$, $F < 1$) and psychological abuse ($R^2_{\text{change}} = .000$, $F < 1$), once again indicating that the effects of abuse were not moderated by these variables.

Table 11. Results of Regressing Social Support onto Self-Esteem Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.300**			
Physical Abuse		-.313**	-.042	-.036
Psychological Abuse		-.547**	-.525**	-.449**
Step 2				
Social Support	.057*			
Friends		.423**	.250**	.208**
Partner		.358**	.046	.031
Parents		.186**	.098	.102
Step 3				
Physical Abuse & Social Support	.011			
Abuse & Friends		.194*	.003	.002
Abuse & Partner		.140	-.073	-.054
Abuse & Parents		.121	.099	.096
Step 4				
Psychological Abuse & Social Support	.007			
Abuse & Friends		.271**	-.027	-.012
Abuse & Partner		.268**	-.151	-.062
Abuse & Parents		.208*	.072	.047

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

Table 12. Results of Regressing Coping Strategies onto Self-Esteem Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.268**			
Physical Abuse		-.303**	-.063	-.055
Psychological Abuse		-.515**	-.484	-.420
Step 2				
Coping Strategies	.228**			
Containment		-.560**	-.409**	-.368**
Expression		-.133	-.122	-.115
Solving		.281**	.252**	.244**
Step 3				
Physical Abuse & Coping Strategies	.005			
Abuse & Containment		-.044	.063	.057
Abuse & Expression		.007	-.001	-.001
Abuse & Solving		.050	.046	.045
Step 4				
Psychological Abuse & Coping Strategies	.010			
Abuse & Containment		-.159*	.002	.002
Abuse & Expression		.048	-.117	-.077
Abuse & Solving		.156*	.091	.066

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

Table 13. Results of Regressing Defense Mechanisms onto Self-Esteem Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.282**			
Physical Abuse		-.322**	-.057	-.048

Psychological Abuse		-.529**	-.498**	-.422**
Step 2				
Defense Mechanisms	.100**			
Mature		-.042	-.012	-.012
Immature		-.545**	-.377**	-.313**
Step 3				
Physical Abuse & Defenses	.001			
Abuse & Mature		-.051	-.013	-.013
Abuse & Immature		-.110	.026	.024
Step 4				
Psychological Abuse & Defenses	.000			
Abuse & Mature		-.013	-.008	-.005
Abuse & Immature		-.294**	.025	.018

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

Cortisol levels. In order to examine the possible risk and buffer factors affecting the level of cortisol as a stress indicator among women, a series of hierarchical regressions were conducted. It was decided that the cortisol at awakening would represent the basal cortisol level and would be the most valid indicator of stress levels, for the purposes of the present analyses. Three regressions were conducted to assess the moderating effects of the sources of social support, coping strategies, and the defense mechanisms on the relation between abuse and cortisol levels. For each regression, awakening cortisol level was regressed first onto the psychological and physical abuse scores, followed by the main effects for the relevant set of moderating variables, with the interactions entered on the final step. In the first regression the moderating effect of *social support* was investigated (Table 14). While the first step of entering abuse as a

predictor variable was not significant ($R^2_{\text{change}} = .055$, $F_{\text{change}} (2, 83) = 2.423$, *ns*), social support was found to be significant, over and above abuse ($R^2_{\text{change}} = .094$, $F_{\text{change}} (3, 80) = 2.960$, $p < .05$). However, only social support from partner was significantly positively associated with awakening cortisol level. No moderating effects were found to be significant, suggesting that social support did not moderate the effects of physical ($R^2_{\text{change}} = .032$, $F_{\text{change}} (3, 77) = 1.005$, *ns*) or psychological abuse ($R^2_{\text{change}} = .025$, $F_{\text{change}} < 1$) on cortisol.

In the second regression the moderating effect of *coping strategies* was investigated (Table 15). Coping Strategies did not have a significant correlation with cortisol over and above abuse ($R^2_{\text{change}} = .025$, $F_{\text{change}} < 1$). Coping strategies did not moderate the effects of physical abuse ($R^2_{\text{change}} = .011$, $F_{\text{change}} < 1$). However, the step of entering the interaction between psychological abuse and coping strategies was significant when predicting the level of cortisol ($R^2_{\text{change}} = .115$, $F_{\text{change}} (3, 74) = 3.547$, $p < .05$), in a way that the interaction between psychological abuse and emotional expression was significantly associated with the level of cortisol. Follow-up analyses were conducted by assessing the simple slopes for the effects of emotional expression at one standard deviation below and above the mean of psychological abuse (Aiken & West, 1991). When predicting the level of cortisol at one standard deviation below the mean of psychological abuse, emotional expression was not significant ($\beta = -.00$), whereas at one standard deviation above the mean of psychological abuse, emotional expression was significant ($\beta = .30$), in that the greater use of emotional expression was significantly associated with higher level of basal cortisol.

In the third regression the moderating effects of *defense mechanisms* were investigated (Table 16). Defense mechanisms did not have a significant direct relation with cortisol over and above abuse ($R^2_{\text{change}} = .001$, $F < 1$). No moderating effects were found between defense mechanisms and physical ($R^2_{\text{change}} = .002$, $F < 1$) and psychological abuse ($R^2_{\text{change}} = .030$, $F < 1$), indicating that the effects of abuse were not moderated by these variables.

Table 14. Results of Regressing Social Support onto Awakening Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.055			
Physical Abuse		-.155*	-.243	-.217
Psychological Abuse		.089	.198	.177
Step 2				
Social Support	.094*			
Friends		-.028	-.115	-.101
Partner		.120*	.302*	.235*
Parents		.181	.188	.184
Step 3				
Physical Abuse & Social Support	.032			
Abuse & Friends		-.040	-.096	-.072
Abuse & Partner		.028	-.062	-.046
Abuse & Parents		-.116	-.138	-.132
Step 4				
Psychological Abuse & Social Support	.025			
Abuse & Friends		.021	-.022	-.009

Abuse & Partner	.090	.081	.034
Abuse & Parents	.148	.072	.094

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

Table 15. Results of Regressing Coping Strategies onto Awakening Scores

Predictor	R ² _{ch}	r	B	Semi-partial
Step 1				
Abuse	.052			
Physical Abuse		-.153	-.232*	-.210*
Psychological Abuse		.088	.186	.169
Step 2				
Coping Strategies	.025			
Containment		-.028	-.005	-.005
Expression		.134	.160	.154
Solving		.036	.009	.008
Step 3				
Physical Abuse & Coping Strategies	.011			
Abuse & Containment		-.035	-.061	-.055
Abuse & Expression		-.036	-.013	-.013
Abuse & Solving		-.038	-.105	-.095
Psychological Abuse & Coping Strategies	.115*			
Abuse & Containment		-.109	-.207	-.149
Abuse & Expression		.100	.319*	.224*
Abuse & Solving		.106	.141	.112

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

Table 16. Results of Regressing Defense Mechanisms onto Awakening Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.050			
Physical Abuse		-.141	-.234	-.206
Psychological Abuse		.087	.197	.174
Step 2				
Defense Mechanisms	.001			
Mature		.000	.032	.032
Immature		.026	.019	.016
Step 3				
Physical Abuse & Defenses	.002			
Abuse & Mature		-.052	-.043	-.043
Abuse & Immature		-.091	-.009	-.008
Step 4				
Psychological Abuse & Defenses	.030			
Abuse & Mature		-.013	.062	.036
Abuse & Immature		-.062	-.185	-.140

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

In order to examine the hypothesis that women who experienced abuse and exhibit symptoms of ASD/ PTSD exhibited lower level of cortisol than women who were not abused or those who were abused but do not suffer ASD/PTSD symptoms a second set of hierarchical regressions was conducted². For each regression, the level of cortisol at awakening was regressed first onto the psychological and physical abuse scores, followed by the main effects for either ASD or PTSD, respectively, with the interactions entered on the on the final step. In the first regression the moderating effect of *ASD* was investigated (Table 17). ASD did not have a significant correlation with cortisol over and above abuse ($R^2_{\text{change}} = .037$, $F_{\text{change}} (1, 81) = 3.348$, *ns*). ASD did not moderate the effects of physical abuse ($R^2_{\text{change}} = .001$, $F < 1$), and psychological abuse ($R^2_{\text{change}} = .030$, $F_{\text{change}} (1, 79) = 2.724$, *ns*) on cortisol. In the second regression the moderating effect of *PTSD* was investigated (Table 18). Similarly to the ASD analysis, PTSD did not have a significant correlation with cortisol over and above abuse ($R^2_{\text{change}} = .007$, $F < 1$). PTSD did not moderate the effects of physical abuse ($R^2_{\text{change}} = .000$, $F < 1$), and psychological abuse ($R^2_{\text{change}} = .039$, $F_{\text{change}} (1, 77) = 3.305$, *ns*) on cortisol either.

² The assumption of linearity was confirmed by entering the ASD and PTSD squared scores and their interactions with abuse at the step following their linear effects. No quadratic correlations or interactions were found to be significant.

Table 17. Results of Regressing ASD onto Awakening Scores

Predictor	R^2_{ch}	r	B	Semi-partial
Step 1				
Abuse	.056			
Physical Abuse		-.162*	-.246	-.221
Psychological Abuse		.086	.193	.174
Step 2				
ASD	.037	-.085	-.239	-.194
Step 3				
Physical Abuse & ASD	.001	.016	.031	.030
Step 4				
Psychological Abuse & ASD	.030	-.111	-.233	-.174

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

Table 18. Results of Regressing PTSD onto Awakening Scores

Predictor	R^2_{CH}	r	B	Semi-partial
Step 1				
Abuse	.054			
Physical Abuse		-.152	-.239	-.214
Psychological Abuse		.091	.197	.176
Step 2				
PTSD	.007	.003	-.108	-.081
Step 3				
Physical Abuse & PTSD	.000	-.028	.008	.008
Step 4				
Psychological Abuse & PTSD	.039	-.072	-.251	-.197

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

Discussion

The present study investigated the impact of abuse in a dating relationship on women's mental health. Research on the impact of stressful events suggested that two risk/buffer factors might influence the impact of abuse on women's well-being: characteristics of the stressful event itself and individual characteristics. Depending on these factors, abused women may or may not experience serious psychological distress, including symptoms of depression, reduced self-esteem, ASD and a subsequent PTSD symptomatology. In addition, it was proposed that the trauma of partner abuse could lead to alterations in neuroendocrine system functioning, as evidenced by heightened cortisol activity.

The Role of Physical and Psychological Abuse

A substantial proportion of women in the present study experienced at least some degree of either physical or psychological abuse. If the operational definition of abuse was "anything at all", in terms of experiencing at least one of the items on the respective measures, then almost 80% of the women could be considered having experienced some degree of psychological and physical abuse. These high rates would be consistent with the rates found in a study conducted by DeKeseredy and Schwartz (1998), where 79.1% of the women complained that they were psychologically abused. Other recent studies show a range in the rates of physical abuse from 12% to 53.6% among dating relationships partners (Arias, 1987; DeKeseredy, 1988; Sigelman, 1984; White & Koss, 1991). Nonetheless, the skewed distributions suggest that the severity of abuse experienced by the majority of women in the present study was not, on the whole, extreme. If more stringent criteria for what constitutes abuse were applied, then lower

rates would be evident. Clearly there are definitional ambiguities in the literature that make comparisons across studies difficult, and the generalizability of conclusions uncertain. A limited degree of abuse was expected among women who were still in their 'formative' years with respect to dating relationships, particularly given their age range, and that many were still living at home with their parents or in residence making them less vulnerable to abuse in their relationships. Thus, while this population was the focus of the present study, caution in statistical interpretations need to be conveyed, given that the low variance in the extent of abuse may have attenuated some of these relations.

Consistent with past literature (Aguilar & Nightingale, 1994; Arias, 1999; Cascardi & O'Leary, 1992; Dutton, Goodman & Bennet, 1999; Follingstad, 1990, 1999; Housekamp & Foy, 1991; Kemp, Green, Horowitz & Rowlin, 1995; Sackett & Saunders), it was found that both psychological and physical abuse were factors associated with mental distress among women. Depressive symptoms, symptoms of acute and posttraumatic stress disorders, and low self-esteem were all found to be higher among women who had experienced abuse in dating relationships. More specifically, consistent with hypotheses of the study, psychological abuse could be an even more detrimental experience for women's psychological well-being than physical abuse, in that it was a stronger predictor of psychological distress. While physical abuse was associated with poorer well-being, only psychological abuse was uniquely associated with all the variables of mental distress investigated in the study over and above physical abuse, suggesting that it may be the psychological abuse that co-occurs with physical abuse that is most predictive of mental distress. The zero-order correlations were significant or close to significant for physical abuse, which suggests that the physical abuse was related but

redundant with psychological abuse. This pattern is inconsistent with the results of some recent studies (Aguilar & Nightingale, 1994; Cascardi & O'Leary, 1992; Dutton, Goodman & Bennet, 1999; Follingstad, 1990; Sackett and Saunders, 1999), where physical abuse was found to be a unique and independent predictor of depression, PTSD, and low self-esteem. Thus, while it appears in the present study that psychological abuse was a more important predictor at this stage of women's relationships, it is also possible, given the low degree of physical abuse reported in the present sample attenuated the relationship with well-being. It is quite likely that as physical abuse becomes more evident or severe within a relationship, its effect on women's psychological well-being would be more profound.

It had also been hypothesized, consistent with Marshall's findings (1999), that there would be differences in the effects of psychological abuse as a function of whether it was overt or covert. However, in the present study, due to the high correlation between the subscales assessing overt and covert psychological abuse, in order to avoid the problem of redundancy, or potential multicollinearity, they could not be effectively examined separately. The high correlations between the subscales may again be a reflection of the skewness in the severity of abuse reported. It may be that in populations with higher rates of psychological abuse, the overt and subtle types of abuse would be less related and thus, a differentiating typology would be not only possible but important for predicting the psychological distress.

The Role of Individual Differences

Consistent with the predictions, individual differences among women did affect their well-being. Coping strategies were significantly associated with all of the variables

of mental distress except PTSD symptoms. In particular, the use of emotional containment strategies was associated with higher levels of depression and ASD symptoms, and lower levels of self-esteem, whereas cognitive problem-solving was associated with lower levels of depression and higher levels of self-esteem. These findings support the idea that the way a person copes with stress influences his/her psychological well-being (Beckham & Adams, 1984; Cohen & Syme, 1985; Cohen & Wills, 1985; Griffiths, Ravindran, Merali & Anisman, 2000; Monroe & Depue, 1991; Brewin, Andrews & Valentine, 2000; Solomon & Smith, 1994; Bryant, Marosszeky, Crooks, Baguley & Gurka, 2000). Moreover, the pattern is consistent with other studies showing that avoidance mode of coping is positively correlated with depression, whereas active cognitive coping, specifically problem-solving, is correlated with less depressive mood and positive psychological state (Billings & Moos, 1981; Mitchell & Hodson, 1983).

While coping styles affected women's psychological well-being in general, they were not found to moderate the impact of abuse among women experiencing abuse in their dating relationship. It is possible that, consistent with Jenkins (1997) who examined coping strategies among emergency medical personnel after a mass shooting incident, coping played a different role at different stages of recovery and some strategies that are effective immediately after the trauma were not be necessarily effective later. This evidence suggests the importance of further investigation of the coping strategies as related to the time passed since the traumatic the event. Indeed, the results of coping may be limited by general way in which coping styles were assessed. Perhaps if women had been asked about how they coped specifically with the abusive situation, not only would

the direct relations been stronger, but there might have been greater evidence of a moderating effect of the abuse itself.

Contrary to the hypothesis of the present study, and other studies' findings (e.g., Mitchell & Hodson, 1983), emotional expression coping, which included social support seeking, was not significant when predicting mental distress among these abused women. This contrasts with the significant relations between perceived social support and reduced depression and greater self-esteem. Social support seeking as a coping strategy and perceptions of the availability of social support represent different concepts that may be only moderately related: whereas, a social support seeking coping strategy is a desire for help and support activation behaviour (Yankeelov et al., 1995), perceived social support is a result of such a process, that is, an individual's subjective belief that support is available (Von Dras & Siegler, 1997). Support may be sought, but not obtained, and may be dependent on the strategies the individual uses to elicit support (Yankeelov et al., 1995). Thus, differentiating between social support seeking and perceived social support is important in that if an individual seeks support, but does not get it, such a strategy would have a negative effect on psychological health. Therefore, whereas perceived social support was a factor associated with better psychological well-being, which is consistent with past research (Cassel, 1976; Cobb, 1976; Cohen & Syme, 1985; Cohen & Wills, 1985; Hays, et al., 1993; Sarason & Sarason, 1985; Schmitz & Crystal, 2001; Spikes, 2000), social support seeking as a coping strategy was not. While the result is supported by some previous findings (Ravindran, Matheson, Griffiths, Merali & Anisman (in press)), nonetheless, there remains a contradiction with some other studies, which found a correlation between social support seeking and better psychological well-being

among depressive (Billings & Moos, 1981; Coyne, Aldwin & Lazarus, 1981) as well as among battered individuals (Claerhout, Elder & Janes, 1982; Mitchell & Hodson, 1983; Walker, 1979).

Past research on social support found it to be an important factor when predicting psychological health among individuals with different types and levels of stress, such as exposure to violence, college stressors and HIV/AIDS diseases (Castillo, 2000; Grassi, Rasconi, et. al., 2000; Ridley & Amy, 1999; Shmitz & Crystal, 2000; Spikes, 2000). However, the correlations between social support and mental distress in the present study were found to be significant for depression and self-esteem only. It is possible that the absence of the support from friends, partner or parents can be associated with depressive symptomatology and low self-esteem of the individual, but not with stress event specific disorders that result in the more general ASD and PTSD symptoms. Nonetheless, this explanation is inconsistent with the conclusions of the previous research that individuals who had high levels of social support had suffered less from traumatic life events (e.g., Cassel, 1976; Cobb, 1976).

Another possibility may be a function of the sample in the present study. Given the relative low levels of abuse severity, and hence low number of women experiencing high levels of ASD/ PTSD symptoms, relations among variables may have been attenuated. Therefore, it is premature to conclude that social support does not buffer women against symptoms of stress disorders as a function of abuse without further research using samples experiencing more severe traumatic events and symptomatology.

While the perceived availability of support from any of the three sources was associated with women's depressive symptoms and self-esteem, parental support

explained further unique variance in depression, whereas support from friends predicted additional variance in self-esteem. This may be due to the nature of the sample, in that they were students, young women with the average age of 19. It is possible that at this age parents may play more significant role in the one's life, and the individuals are more dependent upon parents for psychological well-being, especially if the individual is still living with the parents. Nonetheless, peer acceptance and support may be viewed as a better indicator of their self-worth than parental support.

Social support did not significantly buffer the negative impact of abuse on women's psychological well-being. This result is inconsistent with the previous findings on the role of social support as a buffer against stress (Cassel, 1976; Cobb, 1976; Cohen & Syme, 1985; Cohen & Wills, 1985; Hays, et al., 1993; Sarason & Sarason, 1985; Schmitz & Crystal, 2001; Spikes, 2000). The possible explanation is that at the early stage of abusive relationships the women are not yet socially isolated, nor is the situation yet severe. Therefore, consistently with other findings, social support serves as a general buffer against negative events, rather than uniquely buffering against abuse.

Defense mechanisms also significantly predicted depression and self-esteem, which was consistent with previous research (Katz, 1970; Weinberger, 1998; Weinberger, Schwartz & Davidson, 1979; Vaillant, 1971). The present study differentiated between mature and immature defense mechanisms and investigated their relations with psychological distress. It was found that the correlations with psychological distress were significant, but only for the immature defenses.

Whereas the immature defense mechanisms were significantly correlated with depression and low self-esteem, ASD and PTSD symptoms of mental distress were not

significantly associated with defense mechanisms. Once again, this may be due to the low levels of PTSD symptoms experienced by participants in the present study and therefore, immature defenses were unnecessary to serve as adaptive mechanisms. In the studies with clinical samples, where individuals have greater symptoms of ASD/PTSD, the correlations between the disorders and defense mechanisms may be significant.

As with the other coping variables, defense mechanisms did not moderate the effects of abuse on women's psychological distress. These results are inconsistent with research finding that defense mechanisms played major role influencing the way the childhood sexual abuse influenced later development of psychological problems (Romans, Martin, Morris, & Herbison, 1999). However, the immature defense mechanisms examined in the Romans et al. study were not independent moderating variables, but were likely outcomes of the abuse itself. However, there has been very little research conducted on the moderating role of defense mechanisms on psychological well-being in general and among abused individuals specifically.

Cortisol

Neither psychological nor physical abuse had a main effect on women's basal cortisol levels. These results are inconsistent with the studies investigating the impact of on the release of pituitary and adrenal hormones and immune functioning among maritally distressed subjects (Kiecolt-Glaser, Newton, Cacioppo, MacCallum, Glaser & Malarkey, 1996; Oleshansky & Meyerhoff, 1992) or among women experiencing childhood physical and sexual abuse (Heim, Newport & Heit, 2000). One possible explanation that abuse may involve an adaptation to the constant stress, resulting in

decreased levels of cortisol, which looks similar with non-abused women's levels of cortisol.

Analyses of the moderating effects of coping suggest that the effects of abuse on cortisol levels depended on women's coping styles. Emotional expression was found to moderate the effect of psychological abuse on cortisol, in that, as abuse increased in severity, greater use of emotional expression was associated with higher levels of basal cortisol. The negative effect of such emotion-focused coping is consistent with past research (e.g., Niccoli, 2001). There is also evidence that emotional numbing, shame and self-blame emotional containment coping strategies among combat veterans were associated with lower levels of cortisol (Mason, Wang, Yehuda & Riney, 2001). These findings can be explained by the concept of differentiating between emotional arousal state of engagement (associated with higher cortisol levels) and antiarousal disengagement (associated with lower cortisol levels) (Mason et. al., 2001). In the present study, women's use of emotional expression may reflect greater engagement and arousal in response to the abusive situation, and hence result in higher cortisol levels.

While the other buffering factors (social support and defense mechanisms) did not moderate the effects of abuse on cortisol, social support from partner was significantly associated with awakening cortisol level, in that higher support was associated with higher levels of cortisol. This result is contradictory to expectations. This may reflect the nature of a dating relationship, in that high quality dating relationships with partner can be associated with higher arousal and result in higher level of cortisol than in long marital relationships. This hypothesis is consistent with the earlier argument

that emotional arousal reflects a state of engagement associated with higher cortisol levels (Mason et. al., 2001).

It was hypothesized in the present study that women who experienced abuse and exhibit symptoms of ASD/ PTSD would have lower basal salivary cortisol than women who were not abused or those who were abused but do not suffer ASD/PTSD symptoms. However, this hypothesis was not confirmed by the results of the present study. These results contradict the results obtained in the majority of the recent studies, which, examining the relationship between PTSD symptoms and the level of cortisol, found that high levels of PTSD are associated with reduced cortisol levels (Anisman, Griffiths, Matheson, Ravindran & Merali, in press; Gurvits, Gilbertson, Lasko, Tarhan, Simeon, Macklin, Orr & Pitman, 2000; Heim, Ehlers & Hanker, 1998). The possible explanation once again can be the low number of women with high levels of abuse as well as ASD/ PTSD symptomatology. It is possible that in the clinical samples among subjects with higher levels of abuse and ASD/ PTSD, the interactions between the variables would be significant as in the other previous studies mentioned above.

Conclusion

The present study finds clear evidence of an association between women's psychological well-being and the presence of abuse, in particular psychological abuse in their dating relationships. This may suggest that violence can play a significant role in the very early stage of a relationship, and that these factors result in symptoms of depression, acute and post-traumatic stress disorders, and low self-esteem. However, this study was correlational, making causal conclusions highly tentative. It is also possible that women who already have signs of psychological pathology stemming from other

factors select partners that are abusive, or bring difficulties to their intimate relationships that result in interactions that appear abusive. There was little evidence of physical abuse in the relationships studied in the present study. While psychological abuse was more pervasive, there was no assessment of the interactive dynamics of the relationship, to assess the possibility that women had apriori difficulties that may have contributed to a negative interactive style between the partners. Indeed, while psychological abuse was associated with higher cortisol levels when women were more likely to use emotional expression, this pattern might also support the idea that the abusive aspects of these women's relationships might have been reciprocal. Clearly the dynamics of the interactions between partners when examining reports of psychological abuse need to be considered

While perceived social support, the use of coping strategies and defense mechanisms individual differences did not moderate the effects of abuse, they were associated with women's psychological well-being. Therefore, the social organizations and psychologists working with this target group should consider these factors. Helping the clients to develop more effective coping, such as cognitive problem-solving, working on mature defense mechanisms and the ways to receive social support may promote psychological health in response to stress. However, it should also be noted that different coping strategies may be more effective in some situations than others (Lazarus & Folkman, 1984), and some stages of a problem than others (Underwood, 2000).

The results suggest that society and social organizations need to recognize that abuse in their personal relationships plays a role in women's lives, long before they establish interdependencies that serve to increase their inability to leave (e.g., finances,

children). Such dependence is established through the deterioration of their psychological well-being very early in the process. Clearly the prevention of such dysfunctional relationships, and the encouragement of healthier patterns of interaction need to be considered in very early stages of men and women developing intimate relationships.

References

- Ader, R., Felten, D. & Cohen, N. (1991). Psychoneuroimmunology (2nd ed.). San Diego, CA: Academic Press.
- Aguilar, R. & Nightingale, N. (1994). The impact of specific battering experiences on the self-esteem of abused women. Journal of Family Violence, 9, 35-45.
- Aiken, L.S. & West, S.G. (1991). Multiple Regression: Testing and Interpreting Interactions. Thousand Oaks, CA, US: Sage Publications, Inc.
- Alferi, S., Carver, C.S., Antoni, M.H., Weiss, S. & Duran, R.E. (2001). An exploratory study of social support, distress, and life disruption among low-income Hispanic women under treatment for early stage breast cancer. Health Psychology, 20, 41-46.
- American Psychiatric Association (1994). Diagnostic and statistical manual of mental disorders (4th ed.), Washington DC: American Psychiatric Association.
- Andrews, G., Tennant, C., Hewson, D.M. & Vaillant, G.E. (1978). Life event stress, social support, coping style, and risk of psychological impairment. Journal of Nervous and Mental Disease, 166, 307-316.
- Andrews, G., Pollock, C. Stewart, G. (1989). The determination of defense style by questionnaire. Archives of General Psychiatry, 46, 455-462.
- Anisman, H., Griffiths, G., Ravindran, A.V., Matheson, K. & Merali, Z. (1999). Posttraumatic stress symptoms following a severe ice-storm: Salivary cortisol and behavioral correlates. American Journal of Psychiatry, submitted.

- Anisman, H., Zaharia, M.D., Meaney, M.J. & Merali, Z. (1998). Do early-life events permanently alter behavioural and hormonal responses to stressors? International Journal of Developmental Neuroscience, 16, 149-164.
- Arias, I. & Pape, K. (1999). Psychological abuse: implications for adjustment and commitment to leave violent partners. Violence and Victims, 14, 55-65.
- Arias, I., Samios, M. & O'Leary, K.D. (1987). Prevalence and correlates of physical aggression during courtship. Journal of Interpersonal Violence, 2, 82-90.
- Astin, M.C., Lawrence, K.J. & Foy, D.W. (1993). Posttraumatic stress disorder among battered women: risk and resiliency factors. Violence and Victims, 8, 17-27.
- Astin, M.C., Ogland-Hand, S.M., Coleman, E.M. & Foy, D.W. (1995). Posttraumatic stress disorder and childhood abuse in battered women: comparisons with maritally distressed women. Journal of Consulting and Clinical Psychology, 63, 308-312.
- Baider, L. & Denour, A.K. (1999). Psychological distress of cancer couples: A leveling effect. New trends in Experimental and Clinical Psychiatry, 15, 197-203.
- Baker, D.G., West, S.A., Nicholson, W.E., Ekhtor, N.N., Kasckow, J.W., Hill, K.K., Bruce, A.B., Orth, D.N. & Geraciotti, T.D. (1999). Serial CSF corticotropin-releasing hormone levels and adrenocortical activity in combat veterans with posttraumatic stress disorder. American Journal of Psychiatry, 156, 585-588.
- Barnett, O.W., Martinez, T.E. & Keyson, M. (1996). The relationship between violence, social support, and self-blame in battered women. Journal of Interpersonal Violence, 11, 221-233.
- Beck, A.T. & Beck, R.W. (1972). Screening depressed patients in family practice: A rapid technique. Postgraduate Medicine, 2, 81-85.

Beckham, E. & Adams, R. (1984). Coping behaviour in depression: report on a new scale. Behavioural Research and Therapy, 22, 71-75.

Billings, A.G. & Moos, R.H. (1981). The role of coping responses and social resources in attenuating the stress of life events. Journal of Behavioural Medicine, 4, 139-157.

Bohnen, Nicolson, Sulon & Jolles (1991). Coping style, trait anxiety, and cortisol reactivity during mental stress. Journal of Psychosomatic Research, 35, 141-147.

Boscarino, J.A., (1996). Posttraumatic stress disorder, exposure to combat, and lower plasma cortisol among Vietnam veterans: findings and clinical implications. Journal of Consulting and Clinical Psychology, 64, 191-201.

Bowker, L. (1983). Beating wife beating. Lexington, MA: Health.

Bradbury, T. & Lawrence, E. (1999). Physical aggression and the longitudinal course of newlywed marriage. In Arriaga, X.B. & Oskamp, S. (Eds). Violence in Intimate Relationships, pp. 181-202. Thousand Oaks, CA: Sage.

Bremner, J.D., Licinio, J., Darnell, A., Krystal, J.H., Owens, M.J., Southwick, S.M., Nemeroff, C.B. & Charney, D.S. (1997). Elevated CSF corticotropin-releasing factor concentrations in posttraumatic stress disorder. American Journal of Psychiatry, 154, 624-629.

Brewin, C.R., Andrews, B., Rose, S. & Kirk, M. (1999). Acute stress disorder and posttraumatic stress disorder in victims of violent crime. Psychiatry, 156, 360-366.

Brewin, C.R., Andrews, B. & Valentine, J.D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. Journal of Consulting and Clinical Psychology, 68, 748-766.

Brown, L.L., Tomarken, A.J., Orth, D.N. & Loosen, P.T., Kalin, N.H. & Davidson, R.J. (1996). Individual differences in repressive-defensiveness predict basal salivary cortisol levels. Journal of Personality and Social Psychology, 70, 362-371.

Browne, A. (1993). Violence against women by male partners. American Psychologist, 48, 1077-1087.

Browne, A. & Williams, K.R. (1993). Gender, intimacy, and lethal violence: Trends from 1976 through 1987. Gender and Society, 7, 78-98.

Bryant, R.A., Moulds, M.L. & Guthrie, R.M. (2000). Acute stress disorder scale: A self-report measure of acute stress disorder. Psychological Assessment, 12, 61-68.

Bryant, R.A., Marosszeky, J.E., Crooks, J., Bagukey, I. & Gurka, J. (2000). Coping style and post-traumatic stress disorder following severe traumatic brain injury. Brain-Injury, 14, 175-180.

Campbell, J.C., Kub, J. & Rose, L. (1996). Depression in battered women. Journal of the American Women's Association, 51, 106-110.

Campbell, J.C. & Soeken, K.L. (1999). Women's responses to battering over time. Journal of Interpersonal Violence, 14, 21-40.

Campbell, R., Sullivan, C.M. & Davidson, W.S. (1995). Women who use domestic violence shelters: Changes in depression over time. Psychology of Women Quarterly, 19, 237-255.

Cascardi, M. & O'Leary, K.D. (1992). Depressive symptomatology, self-esteem, and self-blame in battered women. Journal of Family Violence, 7, 249-259.

Cassel, S. (1976). The effects of community evaluation and treatment on the sentencing and postsentence adjustment of offenders. Dissertation Abstracts International, 36, 5250.

Castillo, L. G. (2000). Examining income, acculturation, gender-role conflict, and support as predictors of distress in Chicana college students. Dissertation Abstracts International: Section B: The Sciences and Engineering, 60, 4880.

Chu, J. & Dill, D. (1990). Dissociative symptoms in relation to childhood physical and sexual abuse. American Journal of Psychiatry, 147, 882-892.

Claerhout, S., Elder, J. & Janes, C. (1982). Problem-solving skills of rural battered women. American Journal of Community Psychology, 10, 605-612.

Cobb, S. (1976). Social support as a moderator of life stress. Psychosomatic Medicine, 38, 300-314.

Cohen, S. & Syme, S.L. (1985). Issues in the study and application of social support. In Cohen, S. and Syme, S.L. (Eds.), Social support and health, (pp. 3-22). Toronto: Academic Press.

Cohen, S. & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. Psychological Bulletin, 98, 310-357.

Cox, J.W. & Stoltenberg, C.D. (1991). Evaluation of a treatment program for battered wives. Journal of Family Violence, 6, 395-413.

Coyne, J.C., Aldwin, C. & Lazarus, R.S. (1981). Journal of Abnormal Psychology, 90, 439-447.

Coyne, J. & Downey, G. (1991). Social factors and psychopathology: stress, social support, and coping processes. Annual Review of Psychology, 42, 401-425.

Cramer, P. (2000). Defense mechanisms in psychology today. American Psychologist, 55, 637-646.

Cutrona, C. (1989). Ratings of social support by adolescents and adult informants: degree of correspondence and prediction of depressive symptoms. Journal of Personality and Social Psychology, 57, 723-730.

Cutrona, C. & Russell, D. (1987). The provisions of social relationships and adaptation to stress. Advances in Personal Relationships, 1, 37-67.

Davis, A.J. (1997). Expert testimony in cases of battered women defendants: influence of defendant characterization, testimony explicitness and juror gender on individual juror and group juror decisions. Master Thesis, Carleton University, Ottawa, Canada.

DeKeseredy, W.S. (1988). Woman Abuse in Dating Relationships. Toronto: Canadian Scholars Press.

DeKeseredy, W.S. & Schwartz, M.D. (1998). Woman Abuse on Campus. Thousand Oaks London New Delhi: Sage.

Doerfler, L.A. & Richards, C.S. (1981). Self-initiated attempts to cope with depression. Cognitive Therapy and Research, 5, 367-371.

Donato, K.M. & Bowker, L.H. (1984). Understanding the help-seeking behaviour of battered women: a comparison of traditional service agencies and women's groups. International Journal of Women's Studies, 7, 99-109

Dorn, L.D., Susman, E.J. & Petersen, A.C. (1993). Cortisol reactivity and anxiety and depression in pregnant adolescents: A longitudinal prospective. Psychoneuroendocrinology, 18, 219-239.

Duncan-Jones, P. (1982). Models of the natural history of neurosis. In Proceedings of the Third European Symposium on social psychiatry, Helsinki, pp. 167-180.

Dutton, M.A. (1992). Empowering and healing the battered woman: a model for assessment and intervention. New York: Springer.

Dutton, M.A. (1992). Assessment and treatment of PTSD among battered women. In Foy (Ed.), Treating PTSD: procedure for combat veterans, battered women, adult and child sexual assaults. NY Guilford Press.

Dutton, M.A., Goodman, L. & Bennet, L. (1999). Court-involved battered women's responses to violence: the role of psychological, physical, and sexual abuse. Violence and Victims, 14, 89-102.

Eby, K.K., Campbell, J.C., Sullivan, C.M. & Davidson, W.S. (1995). Health effects of experiences of sexual violence for women with abusive partners. Health Care for Women International, 16, 563-576.

Field, T.M., McCabe P.M. & Schneiderman, N. (1985). Stress and Coping. New Jersey: Lawrence Erlbaum.

Fleury, R.E., Sallivan, C.M., Bybee, D.I. & Davidson, W.S. (1998). Why don't they just call the cops? Reasons for differential police contact among women with abusive partners. Violence and Victims, 13, 333-343.

Folkman, S. & Lazarus, R.S. (1980). An analysis of coping in a middle-aged community sample. Journal of Health and Social Behavior, 21, 219-239.

Follingstad D.R., Rutledge, L.L., Polek, D.S. & McNeil-Haekins, K. (1988). Factors associated with patterns of dating violence toward college women. Journal of Family Violence, 3, 169-182.

Follingstad, D.R. (1990). Methodological issues and new directions for research on violence in relationships. Journal of Family Violence, 5, 107-120.

Follingstad, D.R., Brennan, A.F., Hause, E.S., Polek, D.S. & Rutlaedge, L.L. (1991). Factors mediating physical and psychological symptoms of battered women. Journal of Family Violence, 6, 309-320.

Freud, S. (1920). A general introduction to psychoanalysis. New York: Boni & Liveright.

Freud, S. (1966). Psychopathology of everyday life. New York, Norton, W.W. Inc.

Funabiki, D., Bologna, N.C., Pepping, M. & Fitzgerald, K.C. (1980). Revisiting sex differences in the expression of depression. Journal of Abnormal Psychology, 89, 194-202.

Geary, S.L. (1999). Community violence, social support, and psychological distress in African-American from low income neighborhoods. Dissertation Abstracts International: Section B: The Sciences and Engineering, 60, 1301.

Gelles, R.J. & Harrop, J.W. (1989). Violence, battering, and psychological distress among women. Journal of Interpersonal Violence, 4, 400-420.

Gelles, R.J. & Straus, M.A. (1990). Intimate violence: The definitive study of the causes and consequences of abuse in the American family. Simon and Schuster: New York.

Goenjian, A.K., Yehuda, R., Pynoos, R.S., Steinberg, A.M., Tashjian, M., Yang, R.K., Najarian, L.M. & Fairbanks, L.A., (1996). Basal cortisol, dexamethasone suppression of cortisol, and MHPG in adolescents after the 1988 earthquake in Armenia. American Journal of Psychiatry, 153, 929-934.

Goldberg, W.G., & Tomlanovich, M.C. (1984). Domestic violence victims in the emergency department. Journal of the American Medical Association, 251, 3259-3264.

Golding, J.M. (1999). Intimate partner violence as a risk factor for mental disorders: A meta-analysis. Journal of Family Violence, 14, 99-131.

Gondolf, E.W. (1988). The effect of batterer counseling on shelter outcome. Journal of Interpersonal Violence, 3, 275-289.

Gondolf, E.W. (1988). Who are those guys? Toward a behavioral typology of batterers. Violence and Victims, 3, 187-203.

Gondolf, E.W. & Fisher, E.R. (1988). Battered women as survivors: An alternative to treating learned helplessness. Lexington, MA, US: Lexington Books/D. C. Heath and Company.

Goodman, L.A., Koss, M.P., Fitzgerald, L.F., Russo, N.F. & Keita, G.P. (1993). Male violence against women. American Psychologist, 48, 1054-1058.

Gortner, E.T., Golan, J.K. & Jacobson, N.S. (1997). Psychological aspects of perpetrators of domestic violence and their relationships with their victims. Psychiatric Clinics of North America, 20, 337-352.

Grassi, L., Rasconi, G. Pedriali, A., Corridoni, A., Bevilacqua, M. & Ferrara, SIMG, Group (2000). Social support and psychological distress in primary care attenders. Psychotherapy and Psychosomatics, 68, 95-100.

Green, B.L., Wilson, J. & Lindy, J.D. (1985). Conceptualizing post-traumatic stress disorder: A psychological framework. In Figley, C. (Ed.), Trauma and its wake: The study and treatment of posttraumatic stress disorder (pp.53-69). New York: Brunner/Mazel.

Griffiths, J. Ravindran, A.V. Merali, Z. & Anisman, H. (2000). Dysthymia: Neurochemical and behavioral perspectives. Molecular Psychiatry, 5, 242-261.

Gurvits, T.V., Gilbertson, M.W., Lasko, N.B., Tarhan, A.S., Simeon, D., Macklin, M.L., Orr, S.P. & Pitman, R.K. (2000). Neurologic soft signs in chronic posttraumatic stress disorder. Archives of General Psychiatry, 57, 181-186.

Hagedoorn, M., Kuijer, R. G., Buunk, B. P., DeJong, G. M., Wobbes, T. & Sanderman, R. (2000). Marital satisfaction in patients with cancer: Does support from intimate partners benefit those who need it most? Health Psychology, 19, 274-282.

Harvey, A.G. & Bryant, R.A. (1999). The relationship between acute stress disorder and posttraumatic stress disorder: a 2-year prospective evaluation. Journal of Consulting and Clinical Psychology, 67, 985-988.

Hays, R., Turner, H. & Coates, T. (1993). Social support, AIDS-related symptoms, and depression among gay men. Journal of Consulting and Clinical Psychology, 60, 463-469.

Heatherton, T. & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. Journal of Personality and Social Psychology, 60, 895-910.

Heim, C., Ehler, U., Hanker, J. & Hellhammer, D. (1998). Abuse-related posttraumatic stress disorder and alterations of the hypothalamic-pituitary-adrenal axis in women with chronic pelvic pain. Psychosomatic Medicine, 60, 309-318.

Heim, C., Newport, D.J. & Heit, S. (2000). Pituitary-adrenal and autonomic responses to stress in women after sexual and physical abuse in childhood. JAMA: Journal of American Medical Association, 284, 592-597.

Hobfoll, S.E. (1986). Stress, social support, and women. Washington New York London: Harper & Row.

Hoglend, P. Perry, C. (1998). Defensive functioning predicts improvement in major depressive episodes. Journal of Nervous and Mental Disease, 186, 238-243.

Holen, A. (1993). The North Sea oil rig disaster. In Wilson, J.P. & Raphael, B. (Eds.), International handbook of traumatic stress syndromes. New York: Plenum Press.

Holiman, M. & Schilit, R. (1991). Aftercare for battered women: How to encourage the maintenance of change. Psychotherapy, 28, 345-353.

Hotaling, G. & Sugarman, D. (1990). A risk marker analysis of assaulted wives. Journal of Family Violence, 5, 1-13.

House, J.S., Landis, K.R. & Umberson, D. (1988). Social relationships and health. Science, 241, 540-545.

Housekamp, B. & Foy, D. (1991). The assessment of posttraumatic stress disorder in battered women. Journal of Interpersonal Violence, 6, 367-375.

Hyden, M. (1999). The world of the fearful: Battered women's narratives of leaving abusive husbands. Feminism and Psychology, 9, 449-469.

Hyden, M. (1995). Verbal aggression as prehistory of woman battering. Journal of Family Violence, 10, 55-70.

Jacobson, N., Gottman, J., Gortner, E., Berns, S. & Shortt, J. (1996). Psychological factors in the longitudinal course of battering: When do the couples split up? When does the abuse decrease? Violence and Victims, 11, 371-392.

Jacobson, N., Gottman, J., Waltz, J., Rushe, R., Bobcock, J. & Holtzworth-Monroe, A. (1994). Affect, verbal content, and psychophysiology in the arguments of couples with a violent husband. Journal of Consulting and Clinical Psychology, 62, 982-988.

Jaffe, P., Wolfe, D.A. & Zak, L. (1986). Emotional and physical health problems of battered women. Canadian Journal of Psychiatry, 31, 625-629.

Jenkins, S. (1997). Coping, routine activities, and recovery from acute distress among emergency medical personnel after a mass shooting incident. Current Psychology: Developmental, Learning, Personality, Social, 16, 3-19.

Kantor, G.K. & Jasinski, J.L. (1998). Dynamics and risks factors in partner violence. In Jasinski & Williams (Eds.), Partner violence. London.

Katz, J.L., Weiner, H., Gallagher, T.F., & Hellman, L. (1970). Psychoendocrine response to impending breast tumor biopsy. Archives of General Psychiatry, 23, 131-142.

Keller, L.E. (1996). Invisible victims: battered women in psychiatric and medical emergency rooms. Bulletin of the Menninger Clinic, 60, 1-19.

Keller S.M. (1999). Social support and psychological distress in women with systemic lupus erythematosus. Dissertation Abstracts International: Section B: The Sciences and Engineering, 60, 1329-1332.

Kellner, M., Baker, D.G., Yehuda, R., (1997). Salivary cortisol and PTSD symptoms in Persian Gulf War combatants. Annual NY Academic Science, 821, 442-443.

Kemp, A., Green, B.L., Hovanitz, C. & Rawlings, E.I. (1995). Incidence and correlates of posttraumatic stress disorder in battered women. Journal of Interpersonal Violence, 10, 43-55.

Kemp, A., Rawlings, E.I. & Green, B.L. (1991). Posttraumatic stress disorder in battered women: a shelter sample. Journal of Traumatic Stress, 4, 137-149.

Kiecolt-Glaser, J., Newton, T., Cacioppo, J., MacCallum, Glaser & Malarkey (1996). Marital conflict and endocrine function: are men really more physiologically affected than women? Journal of Consulting and Clinical Psychology, 64, 324-332.

Koopman, C., Classen, C., Cardena, E. & Spiegel, D. (1995). When disaster strikes, acute stress disorder may follow. Journal of Trauma Stress, 8, 29-46.

Koopman, C., Classen, C. & Spiegel, D. (1994). Predictors of posttraumatic stress symptoms among survivors of the Oakland/ Berkeley, California, firestorm. American Journal of Psychiatry, 151, 888-894.

Koss, M.P., Goodman, L.A., Browne, A., Fitzgerald, L.F., Keita, G.P. & Russo, N.F. (1994). No safe haven: Male violence against women at home, at work, and in the community. Washington, DC: American Psychological Association.

Lane, K.E. & Gwartney-Gibbs, P.A. (1985). Violence in the context of dating and sex. Journal of Family Issues, 6, 45-69.

Laner, M. & Thomson, J. (1982). Abuse and aggression in courting couples. Deviant Behaviour, 6, 145-168.

Lazarus, R. (1984). The trivialization of distress. In Hammonds, B. & Scheirer, C. (Eds.), Psychology and health. Washington, DC, US: American Psychological Association.

Lazarus, R.S. (1961). Adjustment and Personality. New York Toronto London: McGraw-Hill.

Lazarus, R.S. & DeLongis, A. (1983). Psychological stress and coping in aging.

American Psychologist, 38, 245-254.

Lazarus, R.S. & Folkman, S. (1984). Stress, Appraisal, and Coping. New York: Springer.

Lefrancois, R., Leclerc, G., Hamel S & Gaulin, P. (2000). Archives of Gerontology and Geriatrics, 31, 243-255.

Lemieux, A.M. (1998). Abuse related post-traumatic stress disorder: Challenge to the norepinephrine-to-cortisol hypothesis. Dissertation Abstracts International: Section B: The Sciences and Engineering, 59, 0908.

Lemieux, A.M. & Coe, C.L. (1995). Abuse related post-traumatic stress disorder: Evidence for chronic neuroendocrine activation in women. Psychosomatic Medicine, 57, 105-115.

Levine, M. & Perkins, D.V. (1980). Social setting interventions and primary prevention: Comments on the report of the Task Panel on prevention to the President's commission on mental health. American Journal of Community Psychology, 8, 147-157.

Lloyd, S.A. (1991). The darkside of courtship. Family Relations, 40, 14-20.

Lloyd, S.A. & Emery, B.C. (2000). The Dark Side of Courtship. Sage Publications, Inc. Thousand Oaks, London, New Delhi.

Lloyd, S.A. & Emery, B.C. (1994). Physically aggressive conflict in romantic relationships. In Cahn, D. (Ed.), Conflict in personal relationships (pp.27-46). Mahwah, NJ: Lawrence Erlbaum.

Makepeace, J. (1987). Social factor and victim-offender differences in courtships violence. Family Relations, 30, 87-91.

Makepeace, J. (1983). Life events stress and courtships violence. Family Relations, 32, 101-109.

Makepeace, J. (1981). Courtship violence among college students. Family Relations, 30, 97-102.

Marmar, C.R., Weiss, D.S. & Metzler T. (1998). Peritraumatic dissociation and posttraumatic stress disorder. In Bremner, J. D. & Marmar, C.R. (Eds.), Trauma, memory, and dissociation. Washington, DC, US: American Psychiatric Press, Inc.

Marshall, L. (1996). Psychological abuse of women: Six distinct clusters. Journal of Family Violence, 11, 379-409.

Marshall, L. (1994). Physical and psychological abuse. In Cupach, W.R., Spitzberg, B.H. (Eds.), The dark side of interpersonal communication (pp. 281-311). Hillsdale, NJ: Lawrence Erlbaum Associates.

Marshall, L. (1999). Effects of men's subtle and overt psychological abuse on low-income women. Violence and Victims, 14, 69-85.

Mason, J.W., Wang, S., Yehuda, R., Riney, S., Charney, D.S. & Southwick, S.M. (2001). Psychogenic lowering of urinary cortisol levels linked to increased emotional numbing and a shame-depressive syndrome in combat-related post-traumatic stress disorder. Psychosomatic Medicine, 63, 387-401.

McCauley, J., Kern, D., Kolodner, K., Dill, L., Schroeder, A., DeChant, H., Ryden, J., Bass, E. & Derogatis, L. (1995). The "battering syndrome": Prevalence and clinical characteristics of domestic violence in primary care internal medicine practices. Annual International Medicine, 123, 737-746.

McEwen, B.S., (1998). Stress, adaptation, and disease: Allostasis and allostatic load. Annual NY Academic Science, 840, 33-44.

Meichenbaum, D. (1983). Coping with stress. Toronto: Wiley & Sons.

Mitchell, R.E. & Hodson, C.A. (1983). Coping with domestic violence: Social support and psychological health among battered women. American Journal of Community Psychology, 11, 629-654.

Monroe, S.M. & Depue, R.A. (1991). Life stress and depression. Becker, J. & Kleinman, A. (Eds), Psychosocial aspects of depression, (pp. 101-130). Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.

Moss, H.B., Vanyukov, M., Yao, J.K. & Kirillova, G.P. (1999). Salivary cortisol responses in prepubertal boys: The effects of parental substance abuse and association with drug use behaviour during adolescence. Biological Psychiatry, 45, 1293-1299.

Murphy, B.E. (1991). Steroids and depression. Journal of Steroid Biochemistry and Molecular Biology, 38, 537- 559.

Nemeroff, R.K. (1999). Stress, social support, and psychological distress in late life: The moderating effects of perceived control and attachment. Dissertation Abstracts International: Section B: The Sciences and Engineering, 60, 2356-2361.

Niccoli, C.A. (2001). Experiences, emotionality, and resources: An ecological study of individual differences in ovarian and adrenal hormones. Dissertation Abstracts International: Section B: The Sciences and Engineering, 61, 3892-3898.

Noyes, R. & Kletti, R. (1977). Comprehensive Psychiatry, 18, 375-384.

O'Keefe, M. (1998). Factors mediating the link between witnessing interparental violence and dating violence. Journal of Family Violence, 13, 39-57.

O'Keefe, M. (1997). Predictors of dating violence among high school students. Journal of Interpersonal Violence, 12, 546-568.

O'Leary, K.D. (1999). Psychological abuse: A variable deserving critical attention in domestic violence. Violence and Victims, 14, 3-21.

Oleshansky, M. & Meyerhoff, J. (1992). Acute catecholaminergic responses to mental and physical stressors in man. Stress medicine, 8, 175-179.

Plichta, S.B. (1996). Violence and abuse: Implications for women's health. In Falik, M. & Collins, K. (Eds.), Women's health: The commonwealth survey (pp. 237-272). Baltimore: Johns Hopkins University Press.

Randall, S. & Dusek, J.B. (1990). Adolescent adjustment and coping strategies. Journal of Personality, 58, 503-513.

Ridley, M & Amy L. (1999). The psychological adjustment of urban adolescents exposed to community violence: The role of social support. Dissertation Abstracts International: Section B: Humanities and Social Sciences, 60, 1014-1019.

Romans, S.E., Martin, J.L., Morris, E. & Herbison, G. (1999). Psychological defense styles in women who report childhood sexual abuse: A controlled community study. American Journal of Psychiatry, 156, 1080-1085.

Russell, D. (1996). UCLA Loneliness scale (version 3): Reliability, validity, and factor structure. Journal of Personality Assessment, 66, 20-40.

Sackett, L.A. & Saunders, D.G. (1999). The impact of different forms of psychological abuse on battered women. Violence and Victims, 14, 105-115.

Santilli, M. B. (2000). Social support deterioration in the context of relationship hostility. Dissertation Abstracts International: Section B: The Sciences and Engineering, 61, 590-596.

Sapolsky R.M., Romero L.M. & Munck A.U. (2000). How do glucocorticoids influence stress responses? Integrating permissive, suppressive, stimulatory, and preparative actions. Endocrine Review, 21, 55-89.

Sarason, I.G. & Sarason, B.R. (1985). Life change, social support, coping, and health. In Kaplan, R.M. & Ciriqli, M.H. (Eds), Behavioral epidemiology and disease prevention, (pp. 219-236). New York, NY, US: Plenum Press.

Saunders, D.G. (1994). Posttraumatic stress symptom profiles of battered women: a comparison of survivors in two settings. Violence and Victims, 9, 31-43.

Schwartz, M.D. & DeKeseredy, W.S. (1997). Sexual assault on the college campus: The role of male peer support. Thousand Oaks, CA: Sage.

Shmitz, M.F. & Crystal, S. (2000). Social relations, coping, and psychological distress among persons with HIV/AIDS. Journal of Applied Social Psychology, 30, 665-683.

Sigelman, C.K., Berry, C.J. & Wiles, K.A. (1984). Violence in college students' dating relationships. Journal of Applied Social Psychology, 14, 530-548. PB: US: Bellwether

Smith, T. & Christensen, A. (1992). Cardiovascular reactivity and interpersonal relations: psychosomatic processes in social context. Journal of Social and Clinical Psychology, 11, 179-301.

Smith, M.A., Davidson, J., Ritchie, J.C., Kudler, H., Lipper, S., Chappell, P. & Nemeroff, C.B., (1989). The corticotropin-releasing hormone test in patients with posttraumatic stress disorder. Biological Psychiatry, 26, 349-355.

Solomon, S.D. & Smith, E.M. (1994). Social support and perceived control as moderators of responses to dioxin and flood exposure. In Ursano, R.J. & McCaughey, B.G. (Eds), Individual and community responses to trauma and disaster: The structure of human chaos, (pp. 179-200). New York, NY, US: Cambridge University Press.

Spikes, P.S.Jr (2000). African American men living with HIV/AIDS in Detroit, Michigan: The impact of age, secrecy, health, and support resources on psychological distress. Dissertation Abstracts International Section A: Humanities and Social Sciences, 61, 772-776.

Stark, E. & Flitcraft, A. (1995). Killing the beast within: Woman battering and female suicidality. International Journal of Health Services, 25, 43-64.

Stein, M.B., Yehuda, R., Koverola, C., Hanna, C., (1997). Enhanced dexamethasone suppression of plasma cortisol in adult women traumatized by childhood sexual abuse. Biological Psychiatry, 42, 680-686.

Steinmetz, S.K. & Straus, M.A. (1974). Violence in the family. NY, Dodd, Mead.

Stets, J.E. & Pirog-Good, M.A. (1990). Interpersonal control and courtship aggression. Journal of Social and Personal Relationships, 7, 371-394.

Straus M.A., Gelles, R.J. & Steinmetz, S. (1979). Behind Closed Doors: Violence in the American Family. New York: Basic Books.

Straus, M.A., Hamby, S., McCoy, S. & Sugarman, D. (1996). The revised conflict tactics scales (CTS2). Journal of Family Issues, 17, 283-316.

Straus, M.A. & Yodanis, C.L., (1996). Corporal punishment in adolescence and physical assaults on spouses in later life: what accounts for the link? Journal of Marriage and the family, 58, 825-841.

Strube, M.J. & Barbour, L.S. (1983). The decision to leave an abusive relationship: Economic dependence and psychological commitment. Journal of Marriage and the Family, 45, 785-793.

Sue, C.C. (1999). The exploration of network response and measurement of psychological distress of Taiwanese battered women: A pilot study. Dissertation Abstracts International: Section B: Humanities and Social Sciences, 59, 3213.

Sugarman, D. & Hotaling, G. (1997). Intimate Violence and Social Desirability. Journal of Interpersonal Violence, 12, 275-290.

Thompson, M. P., Kaslow, N.J., Kingree, J.B., Rashid, A., Puett, R., Jacobs, D. & Matthews, A. (2000). Partner violence, social support, and distress among inner-city African American women. American Journal of Community Psychology, 28, 127-143.

Tolman, R.M. (1989) The development and validation of a non-physical abuse scale. Violence and Victims, 4, 159-177.

Trimpey, M.L. (1989). Self-esteem and anxiety: Key issues in an abused women's support group. Issues in Mental Health Nursing, 10, 297-308.

Trinke, S.J. (2000). But names will never hurt me: Perceived social support, psychological aggression in intimate relationships, and distress. Dissertation Abstracts International: Section B: The Sciences and Engineering, 60, 3023.

Turner, C., Sephton, S.E., Koopman, C., Blake, M.J. & Spiegel, D. (2000). Social support and salivary cortisol in women with metastatic breast cancer. Psychosomatic Medicine, 62, 337-245.

Tutty, L.M. Bidgood & Rothery, M.A. (1993). Support groups for battered women: research on the efficacy. Journal of Family Violence, 8, 325-343.

Tutty, L.M., Bidgood, B.A. & Rothery, M.A. (1996). Evaluating the effect of group process and client variables in support groups for battered women. Research on Social Work Practice, 6, 308-324.

Underwod, M.M. & Dunne, M.K. (2000). Responding to traumatic death in the school: The New Jersey Model. In Moser, R.S. & Frantz, C.E. (Eds), Shocking violence: Youth perpetrators and victims - a multidisciplinary perspective, (pp.154-171). Springfield, IL, US: Charles C Thomas, Publisher.

Vaillant, G. (1986). Empirical Studies of Ego Mechanisms of Defense. Washington, DC: American Psychiatric Press.

Vaillant, G. (1994). Ego mechanisms of defense and personality psychopathology. Journal of Abnormal Psychology, 103, 44-50.

Von Dras, D.D. & Siegler, I.C. (1997). Stability in extraversion and aspects of social support at midlife. Journal of Personality and Social Psychology, 72, 233-241.

Walker, L.E. (1979). The battered woman. New York: Harper and Row.

Walker, L.E. (1977). Battered women and learned helplessness. Victimology, 2, 525-534.

Walker, L.E. (1984). The battered woman syndrome. New York: Springer.

Weaver, T.L. & Clum, G.A. (1995). Psychological distress associated with interpersonal violence: A meta-analysis. Clinical Psychology Review, 15, 115-140.

Weinberger, D.A. (1998). Defenses, personality structure, and development: Integrating psychodynamic theory into a typological approach to personality. Journal of Personality, 66, 1061-1080.

Weinberger, D.A., Schwartz, G.E. & Davidson, R.J. (1979). Low-anxious, high-anxious, and repressive coping styles: Psychometric patterns and behavioral and physiological responses to stress. Journal of Abnormal Psychology, 88, 369-380.

Weiss D. & Marmar C. (1995). The impact of event scale. In Wilson, J. & Keane, T. (Eds.). Assessing psychological trauma and PTSD. New York, London: The Guilford Press.

White, J.W. & Koss, M.P. (1991). Courtship violence: Incidence in a national sample of higher education students. Violence and Victims, 6, 247-256.

Yankeelov, P.A., Barbee, A.P., Cunningham, M.R. & Druen, P.B. (1995). The influence of negative medical diagnoses and verbal and nonverbal support activation strategies on the interactive coping process. Journal of Nonverbal Behavior, 19, 243-260.

Yehuda, R., (1999). Linking the neuroendocrinology of post-traumatic stress disorder with recent neuroanatomic findings. Seminars in Clinical Neuropsychiatry, 4, 256-265.

Yehuda, R., Boisoineau, D., Lowy, M.T. & Giller, E.L., (1995). Dose-response changes in plasma cortisol and lymphocyte glucocorticoid receptors following dexamethasone administration in combat veterans with and without posttraumatic stress disorder. Archives of General Psychiatry, 52, 583-593.

Yehuda, R., Giller, E.L. & Mason, J.W., (1993). Psychoneuroendocrine assessment of posttraumatic stress disorder: current progress and new directions. Progressive Neuropsychopharmacological and Biological Psychiatry, 17, 541-550.

Yehuda, R., Levengood, R.A., Schmeidler, J., Wilson, S., Guo, L.S. & Gerber, D., (1996). Increased pituitary activation following metyrapone administration in post-traumatic stress disorder. Psychoneuroendocrinology, 21, 1-16.

Yehuda R, Resnick HS, Schmeidler J, Yang RK, Pitman RK (1998). Predictors of cortisol and 3-methoxy-4-hydroxyphenylglycol responses in the acute aftermath of rape. Biological Psychiatry, 43, 855-859.

Yllo, K. & Straus, M. (1981). Interpersonal violence among marries and cohabiting couples. Family Relations, 30, 339-347.

Appendix A**Pre-Selection Questions**

How long have you been in your current relationship? _____ years
OR _____ months

In your current relationship, has this person ever been physically aggressive toward you?

0	1	2	3	4
Never	Only once	A few times	Several times	Frequently

In your current relationship, has this person ever ridiculed, insulted or humiliated you without reason?

0	1	2	3	4
Never	Only once	A few times	Several times	Frequently

In your current relationship, have you ever felt afraid of this person?

0	1	2	3	4
Never	Only once	A few times	Several times	Frequently

Appendix B

Telephone Contact

Hi, my name is _____. I'm with a team of researchers at Carleton University. In your first year seminar, you completed a questionnaire for a study on students' first year experiences. We would like to ask you to take part in a next phase of this study that concerns the role of having an intimate relationship and the quality of that relationship and its effect on who you are, how you feel and do, and your quality of life. If you take part in this part of the study, you'll be eligible for a lottery to win your second year's tuition. Would you like to find out more about this?

If no, Thanks and good-bye.

If yes,

This part of the study involves 3 sessions. On each of these occasions, you'll be asked to come in to complete several measures related to your relationships with other people, as well as characteristics about yourself and your circumstances. These sessions will take place now, in early January and in early April. The session we're trying to book now is the longest, and may take up to an hour. The remaining two sessions are short, taking about 1½n hour. To be eligible for the lottery, we ask that you complete all three. We will make every effort to arrange times for you to come in that fit with your schedule. Do you think you would be able to do this?

If no, Thanks and good-bye.

If yes,

Arrange time.

Appendix C

Consent Form

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent must provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study.

Study Title: Women's relationships and quality of life.

Study Personnel: Alla Skomorovsky (Researcher, 520-2600 ext 2683)
 Irina Goldenberg (Researcher, 520-2600 ext 2683)
 Alia Offman (Researcher, 520-2600 ext 2683)
 Dr. Kim Matheson (Faculty Investigator, 520-2648)
 Dr. Hymie Anisman (Faculty Investigator, 520-2699)

If you have any ethical concerns about this study please contact Dr. M. Senechal, Chair of Dept. of Psychology Ethics Committee, 520-2600 ext 1155.

Purpose and Task Requirements: The purpose of this study is to assess how your relationship with your present partner impacts on your physical and psychological health, quality of life, and academic performance. We are asking you to fill out a number of questionnaires regarding your personal characteristics (such as how you feel about yourself, what you're like), as well as more detailed information about your relationship with your partner and other people. In addition, we will be measuring several hormones that are present in your saliva, which may also give us clues about your stress levels and general health. This study will include 2 sessions including today's. We will be collecting similar information in each session, although the first session asks for more detailed information and hence it longer (about 1 hour) than the second (January) session (about 30 minutes). All sessions will be arranged at a time that is mutually convenient for you and the researcher, and will be conducted on campus.

Potential Risk and Discomfort: There are no physical risks in this study. There may be some discomfort when thinking about your relationships and the effects on you.

Anonymity/ Confidentiality: The data collected and kept in separate and secured file by one of the research investigators who will keep this information confidential. It will be associated with a code, and only this code will identify your questionnaire so that we can keep match up your responses from each session.

Right to Withdraw: Your participation in this study is entirely voluntary. At any point during the study you have the right to not complete certain questions or to withdraw with no penalty whatsoever.

I have read the above description of the study concerning my intimate relationship and how it may influence my well-being. The data collected will be used in research publications and/ or teaching purposes. My signature indicates that I agree to participate in the study, and this in no way constitutes a waiver of my rights.

Full Name (please print): _____

Participant Signature: _____

Date: _____

Researcher Signature: _____

Date: _____

Appendix D

Questionnaires

Conflict Tactics Scale

No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have fights because they are in a bad mood, tired, or for some other reason. Couples also have many different ways of trying to settle their differences. Below is a list of things that might have been done to you by your partner. For each statement, please indicate how often your partner has behaved this way toward you in the past month by writing a number in the space to the right of each statement using the following rating scale:

0	1	2	3	4	5
Never	Once	Twice	3 – 5 times	6 - 10 times	More than 10 times

1. My partner showed care for me even though we disagreed. _____
2. My partner explained his side of a disagreement to me. _____
3. My partner insulted or swore at me. _____
4. My partner threw something at me that could hurt. _____
5. My partner twisted my arm or pulled my hair. _____
6. I had a sprain, bruise, or small cut because of a fight with my partner. _____
7. My partner showed respect for my feelings about an issue. _____
8. My partner made me have sex without a condom. _____
9. My partner pushed or shoved me. _____
10. My partner used force (like hitting, holding down, or using a weapon) to make me have oral or anal sex. _____
11. My partner used a knife or gun on me. _____
12. I passed out from being hit on the head by my partner in a fight. _____
13. My partner called me fat or ugly. _____
14. My partner punched or hit me. _____
15. My partner destroyed something belonging to me. _____
16. I went to a doctor because of a fight with my partner. _____
17. My partner choked me. _____
18. My partner shouted or yelled at me. _____
19. My partner me against a wall. _____

How many times in the past month?

	0 Never	1 Once	2 Twice	3 3 – 5 times	4 6 - 10 times	5 More than 10 times
20. My partner was sure we could work things out						_____
21. I needed to see a doctor because of a fight with my partner, but I didn't.						_____
22. My partner beat me up.						_____
23. My partner grabbed me.						_____
24. My partner used force (like hitting, holding down, or using a weapon) to make me have sex.						_____
25. My partner stomped out of the room or house during the disagreement.						_____
26. My partner insisted on sex when I didn't want to (but didn't use physical force).						_____
27. My partner slapped me.						_____
28. I had a broken bone from a fight with my partner.						_____
29. My partner used threats to make me have oral or anal sex.						_____
30. My partner suggested a compromise to a disagreement.						_____
31. My partner burned or scalded me on purpose.						_____
32. My partner insisted I have oral or anal sex (but didn't use physical force).						_____
33. My partner accused me of being a lousy lover.						_____
34. My partner did something to spite me.						_____
35. My partner threatened to hit or throw something at me.						_____
36. I felt physical pain that still hurt the next day because of a fight with my partner.						_____
37. My partner kicked me.						_____
38. My partner used threats to make me have sex.						_____
39. My partner agreed to try a solution to a disagreement I suggested.						_____

Now we would like to ask you about some of the methods YOU have used to settle disputes in your relationship. For each statement, please indicate how often you have behaved this way toward your partner in the past month by writing a number in the space to the right of each statement using the following rating scale:

	0 Never	1 Once	2 Twice	3 3 – 5 times	4 6 - 10 times	5 More than 10 times
1. I showed my partner I cared even though we disagreed.						_____
2. I explained my side of a disagreement to my partner.						_____
3. I insulted or swore at my partner.						_____
4. I threw something at my partner that could hurt.						_____
5. I twisted my partner's arm or hair.						_____
6. I showed respect for my partner's feelings about an issue.						_____
7. I pushed or shoved my partner.						_____
8. I used a knife or gun on my partner.						_____
9. I called my partner fat or ugly.						_____
10. I punched or hit my partner.						_____
11. I destroyed something belonging to my partner.						_____
12. I choked my partner.						_____
13. I shouted or yelled at my partner.						_____
14. I slammed my partner against a wall.						_____
15. I said I was sure we could work out a problem.						_____
16. I beat up my partner.						_____
17. I grabbed my partner.						_____
18. I stomped out of the room, house, or yard during the disagreement.						_____
19. I slapped my partner.						_____
20. I suggested a compromise to a disagreement.						_____
21. I burned or scalded my partner on purpose.						_____
22. I accused my partner of being a lousy lover.						_____

How many times in the past month?

0 Never	1 Once	2 Twice	3 3 – 5 times	4 6 – 10 times	5 More than 10 times
23. I did something to spite my partner.					_____
24. I threatened to hit or throw something at my partner.					_____
25. I kicked my partner.					_____
26. I agreed to try a solution to a disagreement my partner suggested.					_____

When you and your partner have fights, what percentage of the time is any verbal (what is said) aggression started by (circle the number that best represents your perceptions)

Your partner?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

You?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

When you and your partner have fights, what percentage of the time is any physical aggression started by

Your partner?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

You?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

When you and your partner have fights, what percentage of the time do you refuse to have sex because you're upset with him?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

When you and your partner have fights, what percentage of the time do you initiate sex to try to resolve the bad feelings?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

When you and your partner have fights, what percentage of the time does he refuse to have sex because he's upset with you?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

When you and your partner have fights, what percentage of the time does he initiate sex to try to resolve the bad feelings?

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Personal Treatment

Sometimes in any relationship, partners don't always make each other feel good about themselves. Sometimes things are said or done without intending to hurt the other person, but sometimes they are. The following statements describe how couples sometimes behave. For each statement, please indicate how often your partner has behaved this way **in the past month** by writing a number in the space to the right of each statement using the following rating scale:

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

1. Tried to get you to say you were wrong even if you think you were right. _____
2. Told you something he did was your fault. _____
3. Reminded you of times he was right and you were wrong. _____
4. Tried to get you to apologize for something that wasn't your fault. _____
5. Used an offensive or hurtful tone. _____
6. Got angry or hurt if you talked about him or your relationship. _____
7. Made you feel like nothing you say will have an effect. _____
8. Made you feel like you can't keep up with changes in what he wants. _____
9. Acted like you don't matter. _____
10. Ignored you. _____
11. Used money you need or kept money from you when you needed it. _____
12. Avoided you. _____
13. Checked to see if you're doing what you said you would be doing. _____
14. Checked up on you. _____
15. Acted like he doesn't believe you. _____
16. Tried to keep you from seeing friends or family. _____

17. Told others you have emotional problems or are crazy. _____
18. Told you your friends or family don't care about you. _____
19. Told you what he likes about you then gets upset about the same thing. _____
20. Told others things that make you look bad. _____
21. Made you worry about your physical health and well being. _____
22. Made you worry about whether you could take care of yourself. _____
23. Made you worry about your emotional health and well being. _____
24. Made you feel ashamed of yourself. _____
25. Got you to question yourself, making you feel insecure and less confident. _____
26. Made you feel guilty about something you have or haven't done. _____
27. Said his hurtful actions were good for you or will make you a better person. _____
28. Acted secretive or try to keep things from you. _____
29. Did things that make you feel small, less than you were. _____
30. Discouraged you from interests he is not a part of. _____
31. Did or said something that harms your self-respect or pride in yourself. _____
32. Acted like you can do what you want then became upset if you did. _____
33. Acted like there is something wrong with you mentally/ emotionally. _____
34. Discouraged you from talking to his family, friends, or people he knows. _____
35. Made it difficult to go somewhere or talk to someone. _____
36. Pointed out he is the only one who really understands you. _____
37. Discouraged you from having your own friends. _____
38. Kept you from having time for yourself. _____
39. Tried to keep you from showing your feelings. _____

Coping Strategies Scale

The purpose of this questionnaire is to find out how people deal with their problems or the stresses in their lives. On the following pages are activities that you may have done. After each activity, please indicate whether you ordinarily use this as a way of dealing with problems or stresses in recent months.

Ordinarily, in recent months have you:

	YES	NO
1. talked with friends or relatives about your problem?	()	()
2. hid your feelings from others?	()	()
3. been very emotional compared to your usual self?	()	()
4. hated someone for causing your current problems?	()	()
5. taken steps to overcome your problems?	()	()
6. let one or more people know how irritated you are with them?	()	()
7. tried to get away from the things that remind you of your problem?	()	()
8. tried to do things which you typically enjoy?	()	()
9. expressed anger at your spouse or someone close to you?	()	()
10. drunk alcohol or used drugs to help reduce your feelings of tension or depression?	()	()
11. sought out information that would help you resolve your problems?	()	()
12. blamed others for your problems?	()	()
13. followed the advice of others to resolve your problems?	()	()
14. blamed yourself for your problems?	()	()
15. decided not to let others see how you are feeling?	()	()
16. exercised?	()	()

	YES	NO
17. gone for a drive?	()	()
18. found yourself often asking others for help?	()	()
19. gone over your problems in your mind over and over again?()	()	()
20. asked others for help?	()	()
21. thought about your problems a lot?	()	()
22. become involved in recreation or pleasure activities?	()	()
23. read self-help books?	()	()
24. bought some new things for yourself?	()	()
25. decided that your problems have been caused by other people?	()	()
26. talked to a friend about your problems?	()	()
27. worried about your problems a lot?	()	()
28. tried to keep your mind off things that are upsetting you?	()	()
29. tried to distract yourself from your troubles?	()	()
30. avoided thinking about your problems?	()	()
31. complained to friends or relatives about your problems?	()	()
32. made plans to overcome your problems?	()	()
33. done something creative or artistic?	()	()
34. thought about ways to overcome your problems?	()	()
35. reminded yourself that you have dealt with unpleasant situations before?	()	()
36. expressed anger that others were not making efforts to help you?	()	()
37. carefully weighed the pros and cons of different alternatives to solving your problem?	()	()

	YES	NO
38. told others that you were depressed or emotionally upset? ()	()	()
39. thought a lot about who is responsible for your problems (besides yourself)? ()	()	()
40. told yourself that other people have dealt with problems such as yours? ()	()	()
41. thought a lot about how you have brought your problems on yourself? ()	()	()
42. decided to wait and see how things turn out rather than making an effort to change them? ()	()	()
43. tried to look at your situation philosophically? ()	()	()
44. gone to movies? ()	()	()
45. decided that your current problems are a punishment for past actions? ()	()	()
46. masked your true feelings when with others? ()	()	()
47. sought sympathy from others? ()	()	()
48. gone shopping? ()	()	()
49. felt angry but held it in? ()	()	()
50. tried to focus on the good things in your life? ()	()	()
51. asserted yourself and taken positive action on problems that are getting you down? ()	()	()
52. sought reassurance and moral support from others? ()	()	()
53. talked with people who have had problems similar to yours?()	()	()
54. told jokes about your situation? ()	()	()
55. thought about your accomplishments, your strengths, and/or your abilities? ()	()	()
56. told yourself that some good can come out of your		

	YES	NO
misfortune?	()	()
57. taken steps to improve your problems?	()	()
58. resigned yourself to your problems?	()	()
59. thought about how your problems have been caused by other people?	()	()
60. let others tell you how to get better?	()	()
61. become more active than usual?	()	()
62. decided that there is a purpose behind your adversity?	()	()
63. avoided people that remind you of your problem?	()	()
64. read humorous articles, stories etc. to cheer yourself up?	()	()
65. decided that you can grow and learn through your suffering?()	()	()
66. made humorous comments or wise cracks?	()	()
67. told yourself that other people have problems like your own?()	()	()
68. looked for how you can learn something out of your bad situation?	()	()
69. avoided unpleasant situations?	()	()
70. let others see how bad you feel?	()	()
71. kept your feelings bottled up inside?	()	()
72. told yourself that it is normal to feel depressed or anxious sometimes?	()	()
73. eaten more than usual?	()	()
74. tried to act as if you were not upset?	()	()
75. cried in the presence of someone else?	()	()
76. tried to figure out why you feel depressed?	()	()

77. tried to keep busy with things to do?	()	()
78. cried when by yourself?	()	()
79. decided to wait and see if your problem will resolve itself?	()	()
80. done something constructive?	()	()
81. gone out?	()	()
82. engaged in active recreation (tennis, skiing, etc.)	()	()
83. held in your feelings?	()	()
84. told yourself that your problems will pass?	()	()
85. immersed yourself in your work?	()	()
86. tried to act as if you weren't feeling bad?	()	()
87. told yourself that your problems are only a small part of your life?	()	()

Social Provisions

In answering the next set of questions, please think about your current relationships with your **friends**. If you feel a question accurately describes your relationships with your friends, you would say "yes". If the question does not describe your relationship, you would say "no". If you cannot decide whether the question describes your relationships with your friends, you may say "not sure".

	No	Not sure	Yes
1. Are there friends you can depend on to help you, if you really need it?	1	2	3
2. Do you feel you could <u>not</u> turn to your friends for guidance in times of stress?	1	2	3
3. Are there friends who enjoy the same social activities that you do?	1	2	3
4. Do you feel personally responsible for the well-being of your friends?	1	2	3
5. Do you feel your friends do <u>not</u> respect your skills and abilities?	1	2	3
6. If something went wrong, do you feel that <u>none</u> of your friends would	1	2	3

come to your assistance?

7. Do your relationships with your friends provide you with a sense of emotional security and well being?	1	2	3
8. Do you feel your competence and skills are recognized by your friends?	1	2	3
9. Do you feel <u>none</u> of your friends share your interests and concerns?	1	2	3
10. Do you feel <u>none</u> of your friends really rely on you for their well-being?	1	2	3
11. Is there a trustworthy friend you could turn to for advise, if you were having problems?	1	2	3
12. Do you feel you <u>lack</u> emotional closeness with your friends?	1	2	3

In answering the next set of questions, please think about your current relationships with your **parents**.

	No	Not sure	Yes
1. Can you depend on your parents to help you, if you really need it?	1	2	3
2. Do you feel you could <u>not</u> turn to your parents for guidance in times of stress?	1	2	3
3. Do your parents enjoy the same social activities that you do?	1	2	3
4. Do you feel personally responsible for the well-being of your parents?	1	2	3
5. Do you feel your parents do <u>not</u> respect your skills and abilities?	1	2	3
6. If something went wrong, do you feel that your parents would <u>not</u> come to your assistance?	1	2	3
7. Does your relationship with your parents provide you with a sense of emotional security and well-being?	1	2	3
8. Do you feel your competence and skill are recognized by your parents?	1	2	3
9. Do you feel your parents do <u>not</u> share your interests and concerns?	1	2	3

10. Do you feel your parents do <u>not</u> really rely on you for their well-being?	1	2	3
11. Could you turn to your parents for advise, if you were having problems?	1	2	3
12. Do you feel you <u>lack</u> emotional closeness with your parents?	1	2	3

In answering the next set of questions, please think about your current relationships with your partner (husband/boyfriend).

	No	Not sure	Yes
1. Can you depend on your partner to help you, if you really need it?	1	2	3
2. Do you feel you could <u>not</u> turn to your partner for guidance in times of stress?	1	2	3
3. Does your partner enjoy the same social activities that you do?	1	2	3
4. Do you feel personally responsible for the well-being of your partner?	1	2	3
5. Do you feel your partner does <u>not</u> respect your skills and abilities?	1	2	3
6. If something went wrong, do you feel that your partner would <u>not</u> come to your assistance?	1	2	3
7. Does your relationship with your partner provide you with a sense of emotional security and well-being?	1	2	3
8. Do you feel your competence and skill are recognized by your partner?	1	2	3
9. Do you feel your partner does <u>not</u> share your interests and concerns?	1	2	3
10. Do you feel your partner does <u>not</u> really rely on you for his or her well-being?	1	2	3
11. Could your turn to your partner for advise, if you were having problems?	1	2	3
12. Do you feel you <u>lack</u> emotional closeness with your partner?	1	2	3

Inner State Questionnaire

The following statements describe how people sometimes feel. For each statement, please indicate how strongly you agree or disagree with way described by writing a number in the space to the right of each statement using the following rating scale:

Strongly disagree – 1 Disagree – 2 Neutral – 3 Agree – 4 Agree – 5

1. People often call me a sulker. _____
2. I'm able to keep a problem out of my mind until I have time to deal with it. _____
3. I'm always treated unfairly. _____
4. I work out my anxiety through doing something constructive and creative like painting or woodwork. _____
5. I keep getting into the same type of frustrating situations and I don't know why. _____
6. I'm able to laugh at myself pretty easily. _____
7. I act like a child when I'm frustrated. _____
8. People tend to mistreat me. _____
9. People say I'm like an ostrich with my head buried in the sand. In other words, I tend to ignore unpleasant facts as if they didn't exist. _____
10. Someone is robbing me emotionally of all I've got. _____
11. I pride myself on my ability to cut people down to size. _____
12. People tell me I have a persecution complex. _____
13. I get physically ill when things aren't going well for me. _____
14. I'm a very inhibited person. _____
15. My friends see me as a clown. _____
16. I work more things out in my daydreams than in my real life. _____
17. I'm very shy about approaching people. _____
18. I fear nothing. _____
19. I always feel that someone that I know is like a guardian angel. _____
20. As far as I'm concerned people are either good or bad. _____

21. Everyone is against me. _____
22. I can keep the lid on my feelings if it would interfere with what I'm doing if I were to let them out. _____
23. Some people are plotting to kill me. _____
24. I'm usually able to see the funny side of an otherwise painful predicament. _____
25. I get a headache when I have to do something I don't like. _____
26. There's no such thing as "finding a little good in everyone". If you're bad, you're all bad. _____
27. We should never get angry with people we don't like. _____
28. When I know that I'll have to face a difficult situation, like an exam or a job interview, I try to imagine what it will be like and plan to cope with it. _____
29. When somebody close to me dies, I don't feel upset. _____
30. After I fight for my rights, I tend to apologize for my assertiveness. _____
31. Hard work makes me feel better. _____
32. I have habits or rituals, which I feel compelled to do or else something terrible will happen. _____
33. If I can predict that I'm going to be sad ahead of time, I can cope better. _____
34. Often I find that I don't feel anything when the situation would seem to warrant strong emotions. _____
35. Sticking to the task at hand keeps me from feeling depressed or anxious. _____
36. If I have an aggressive thought, I feel the need to do something to compensate for it. _____

Beck Inventory

On this questionnaire are groups of statements. Please read the entire group of statements of each category. Then pick out ONE statement in that group which best describes the way you feel. Check off the number beside the statement you have chosen.

-
1. ___ 0 = I do not feel sad
 - ___ 1 = I feel sad or blue
 - ___ 2 = I am blue or sad all of the time and I can't snap out of it
 - ___ 3 = I am so sad or unhappy that I can't stand it

2. ☐ 0 = I am not particularly pessimistic or discouraged about the future
☐ 1 = I feel discouraged about the future
☐ 2 = I feel I have nothing to look forward to
☐ 3 = I feel that the future is hopeless and things cannot improve
3. ☐ 0 = I do not feel like a failure
☐ 1 = I feel I have failed more than the average person
☐ 2 = As I look back on my life, all I can see is a lot of failures
☐ 3 = I feel I am a complete failure as a person
4. ☐ 0 = I am not particularly dissatisfied
☐ 1 = I don't enjoy things the way I used to
☐ 2 = I don't get satisfaction out of anything anymore
☐ 3 = I feel as though I am very bad or worthless
5. ☐ 0 = I don't feel particularly guilty
☐ 1 = I feel bad or unworthy a good part of the time
☐ 2 = I feel quite guilty
☐ 3 = I feel as though I am very bad or worthless
6. ☐ 0 = I don't feel disappointed in myself
☐ 1 = I am disappointed in myself
☐ 2 = I am disgusted with myself
☐ 3 = I hate myself
7. ☐ 0 = I don't have thoughts of harming myself
☐ 1 = I feel I would be better off dead
☐ 2 = I have definite plans about committing suicide
☐ 3 = I would kill myself if I had the chance
8. ☐ 0 = I have not lost interest in other people
☐ 1 = I am less interested in other people than I used to be
☐ 2 = I have lost most of my interest in other people and I have little feeling for them
☐ 3 = I have lost all my interest in other people and don't care about them at all
9. ☐ 0 = I make decisions about as well as ever
☐ 1 = I try to put off making decisions
☐ 2 = I have great difficulty in making decisions
☐ 3 = I can't make decisions at all anymore
10. ☐ 0 = I don't feel I look any worse than I used to
☐ 1 = I am worried that I am looking old or unattractive
☐ 2 = I feel that there permanent changes in my appearance and they make me look unattractive
☐ 3 = I feel that I am ugly or repulsive looking

11. ___ 0 = I can work about as well as before
 ___ 1 = It takes extra effort to get started at doing something
 ___ 2 = I have to push myself very hard to do anything
 ___ 3 = I can't do any work at all
12. ___ 0 = I don't get anymore tired than usual
 ___ 1 = I get tired more easily than I used to
 ___ 2 = I get tired from doing anything
 ___ 3 = I get too tired to do anything
13. ___ 0 = My appetite is no worse than usual
 ___ 1 = My appetite is not as good as it used to be
 ___ 2 = My appetite is much worse now
 ___ 3 = I have no appetite at all any more

Impact of Event Scale – Revised

The following is a list of difficulties people sometimes have after stressful life events. We are particularly interested in knowing about your worst disagreement or fight with your partner. Please read each item and then indicate how distressing each difficulty has been for you **during the past seven days** as a result of, or any time you thought of your worst fight. How much were you distressed or bothered by these difficulties?

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Any reminder brought back feelings about it.	0	1	2	3	4
2. I had trouble staying asleep.	0	1	2	3	4
3. Other things kept making me think about it.	0	1	2	3	4
4. I felt irritable and angry.	0	1	2	3	4
5. I avoided letting myself get upset when I thought 4 about it or was reminded of it.	0	1	2	3	
6. I thought about it when I didn't mean to.	0	1	2	3	4
7. I felt as if it hadn't happened or wasn't real.	0	1	2	3	4

8. I stayed away from reminders about it.	0	1	2	3	4
9. Pictures about it popped into my mind.	0	1	2	3	4
10. I was jumpy and easily startled.	0	1	2	3	4
11. I tried not to think about it.	0	1	2	3	4
12. I was aware that I still had a lot of feelings about it but I didn't deal with them.	0 4	1	2	3	4
13. My feelings about it were kind of numb.	0	1	2	3	4
14. I found myself acting or feeling like I was back at this time.	0	1	2	3	4
15. I had trouble falling asleep.	0	1	2	3	4
16. I had waves of strong feelings about it.	0	1	2	3	4
17. I tried to remove it from my memory.	0	1	2	3	4
8. I had trouble concentrating.	0	1	2	3	4
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20. I had dreams about it.	0	1	2	3	4
21. I felt watchful and on guard.	0	1	2	3	4
22. I tried not to talk about it.	0	1	2	3	4

ASD Scale

Briefly describe your traumatic experience:

Did the experience frighten you? Yes or No

Please answer each of these questions about how you have felt since the event. Circle one number next to each question to indicate how you have felt.

1 2 3 4 5

Not at all Mildly Medium Quite a bit Very much

1. During or after the trauma, did you ever feel numb or distant from your emotions? _____
2. During or after the trauma, did you ever feel in a daze? _____
3. During or after the trauma, did things around you ever feel unreal or dreamlike? _____
4. During or after the trauma, did you ever feel distant from your normal self or like you were watching it happen from outside? _____
5. Have you been unable to recall important aspects of the trauma? _____
6. Have memories of the trauma kept entering your mind? _____
7. Have you had bad dreams or nightmares about the trauma? _____
8. Have you felt as if the trauma was about to happen again? _____
9. Do you feel very upset when you are reminded of the trauma? _____
10. Have you tried not to talk about the trauma? _____
11. Have you tried to avoid situations or people that remind you of the trauma? _____
12. Have you tried not to feel upset or distressed about the trauma? _____
13. Have you had trouble sleeping since the trauma? _____
14. Have you felt more irritable since the trauma? _____
15. Have you had difficulty concentrating since the trauma? _____
16. Have you become more alert to danger since the trauma? _____
17. Have you become jumpy since the trauma? _____
18. When you are reminded of the trauma, do you sweat or tremble or does your heart beat fast? _____

Self Perceptions

This questionnaire is designed to measure what you feel about yourself at this moment. There is, of course, no right answer for any statement. The best answer is what you feel is true of yourself at this moment. Be sure to answer all of the items, even if you are not certain of the best answer. To do so, please use the following rating scale:

	0	1	2	3	4
	Not at all true of me	A little bit true of me	Somewhat true of me	Very much true of me	Extremely true of me
1. I feel confident about my abilities.	0	1	2	3	4
2. I am worried about whether I am regarded as a success or failure.	0	1	2	3	4
3. I feel satisfied with the way my body looks right now.	0	1	2	3	4
4. I feel frustrated or rattled about my own competence.	0	1	2	3	4
5. I feel that I have trouble understanding things that I read.	0	1	2	3	4
6. I feel that others respect and admire me.	0	1	2	3	4
7. I am dissatisfied with my weight.	0	1	2	3	4
8. I feel self-conscious.	0	1	2	3	4
9. I feel as smart as others.	0	1	2	3	4
10. I feel displeased with myself.	0	1	2	3	4
11. I feel good about myself.	0	1	2	3	4
12. I am pleased with my appearance.	0	1	2	3	4
13. I am worried about what other people think of me.	0	1	2	3	4
14. I feel confident that I understand things.	0	1	2	3	4
15. I feel inferior to others.	0	1	2	3	4
16. I feel unattractive.	0	1	2	3	4
17. I feel concerned about the impression I am making.	0	1	2	3	4

18. I feel that I have less scholastic ability than others.	0	1	2	3	4
19. I feel like I'm not going to do well as a student.	0	1	2	3	4
20. I am worried about looking foolish.	0	1	2	3	4

Appendix E

Debriefing

Woman battering is not only a major source of fear, but also one of the largest causes of injury, mental disorders and death among women (Goodman, 1993). The recent Commonwealth Fund survey demonstrated that more than 4 million women are abused by their male partners every year, with half of them suffering from serious injury and 2,000-4,000 suffering death. (Plichta, 1996). Battered women live in constant threat of repeated and sometimes severe violence. Not surprisingly, a high incidence of mental disorders, cognitive dissociations, feelings of helplessness, fatigue, listlessness, self-imposed isolation, alcohol and drug abuse, disruption of interpersonal relationships, somatic complaints and suicide attempts (Astin & Foy, 1995; Astin & Lawrence, 1993; Browne, 1993; Weaver & Clum, 1995). There is evidence to suggest that this abuse is evident even at the point of women's early dating relationships. Indeed young women are regarded as being at greater risk for experiencing such violence than older. About 5% of women under the age of 25 reported at least one incident of violence in their current relationship within the past 12 months (compared to 1% of women 45 and older) (Statistics Canada, 1999).

While numerous researchers have examined the prevalence of psychological problems among battered women, these estimates vary substantially from study to study. In part the problem stems from the fact that much of this research is conducted following prolonged episodes of severe abuse among women in shelters or who are seeking counseling due to their abuse. Therefore, it is hard to identify where the problem started (e.g., are there early life experiences that make some women more vulnerable to abusive relationships), and what factors help women to deal with an abusive relationship in terms of maintaining their own psychological and physical health and well-being.

Therefore, this study examines the dating relationships of women to ascertain the frequency of abuse in their relationships, the nature of the abuse encountered, and the ramifications of this abuse in terms of women's functional (e.g., academic performance), psychological (e.g., developing depression or stress disorders) and physical well-being (e.g., physical health and symptoms). We also want to see how much of women's past experiences, coping styles, and social support may help them to deal with conflict and abuse in their relationships.

Contacts

The following people are involved in this research project and may be contacted at any time if you have any further questions about the project, what it means, or concerns about how it was conducted:

Dr. K. Matheson, Faculty Member, Dept. of Psychology, 520-2648
 Dr. H. Anisman, Faculty Member, Dept. of Psychology, 520-2699
 Alla Skomorovsky, Graduate Researcher, Department of Psychology, 520-2600 ext. 2683
 Irina Goldenberg, Graduate Researcher, Department of Psychology, 520-2600 ext. 2683
 Alia Offman, Graduate Researcher, Department of Psychology, 520-2600 ext. 2683

If you have any ethical concerns about how this study was conducted, please contact either of the following:

Dr. M. Senechal, Chair of Dept. of Psychology Ethics Committee, 520-2600 ext. 1155
 Dr. K. Matheson, Investigator and Chair, Dept. of Psychology, 520-2648

If you have any worries or concerns about your personal well-being, you can contact the following services:

Carleton University Health and Counseling Services 520-6674

Ottawa Rape Crisis Center. Crisis line: counselors available for anonymous crisis calls: 562-2333, 24 hours/ day.

Sexual Assault Support Center. Call 725-2160 to find out about support groups, and/ or Accompaniments to police, court, or hospital. Or 24 hour support line: 234-2266.

Community Resource Center. Have you been psychologically or physically abused? For Support and information, call 591-3686