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THE EFFECTS OF DOMESTIC VIOLENCE ON WOMEN'S PHYSICAL HEALTH:
A COMPREHENSIVE INVESTIGATION

By

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ABSTRACT

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Assessments of women's physical health and the relationship between physical health and experiences of domestic violence were examined in a sample of women who had utilized a shelter for women with abusive partners. Previous research had failed to examine women's physical health in a comprehensive manner, and had not made any attempts to examine the preliminary relationships between women's health and their experiences of domestic violence. The findings indicated that women who have experienced abusive relationships reported numerous physical health symptoms, frequent suicidal thoughts, the use of alcohol and drugs to relieve stress, and heavy utilization of health-related services. Additionally, moderate relationships were found between women's experiences of physical health symptoms and their experiences of psychological, physical, and sexual abuse. The implications of these findings as well as directions for future research are discussed.

Dedicated to the women who have fought to survive,
who have shared the intimate details of their lives,
and who provide me with the strength, courage, and
inspiration to continue in the fight to end
violence against women.

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Introduction

Domestic violence and its prevalence within contemporary society is increasingly becoming recognized. Historically, a man's violence toward a woman was justified as necessary in order to keep her in line (Bowker, 1983). Currently, male violence toward women is a widely practiced and accepted behavior within our society. Recent incidence figures indicate that every fifteen seconds a wife is battered (Michigan Coalition Against Domestic Violence [MCADV], 1986). Moreover, 3.3 million women receive severe beatings from their husbands each year (Valentine, 1986).

While these statistics were gathered from information about married couples, it is imperative to note that adult domestic violence can occur between any two persons involved in or previously involved in an intimate relationship. This includes unmarried heterosexual couples, homosexual couples, husband abuse, and elder abuse. Therefore, a strong probability exists that these figures are underestimates of the true incidence of domestic violence. Due to the fact that violence by men toward women has been estimated to comprise 95 percent of adult domestic violence (U.S. Dept. of Justice, 1983), this specific form of violence will be the focal point of this research.

It was not until the feminist movement of the early 1970's and its impact on traditional sex roles that the reality of male violence against intimate partners was recognized as a social problem (Schechter, 1982). However, very few persons conceptualize domestic violence as a public health problem as well, perhaps because the devastating health consequences are not widely recognized. For example, between 17 and 24 percent of the homicides reported each year in this country result from domestic violence (Bowen & Sedlak, 1985; Campbell, 1986; Straus, 1986).

This review was compiled from a thorough investigation of the literature in the fields of psychology, medicine, nursing, public health and women's studies. The literature included was both qualitative and quantitative in nature, applied and theoretical. Computer searches (MAGIC, Medline and Excerpta Medica systems at the Michigan State University Library), manual searches using psychological abstracts, and interviews with women currently working within this field were used to obtain the literature for this review.

The text of this paper is organized into several distinct sections. These sections include: the effects of battering on women's physical health; rape in intimate relationships and its potential health consequences; domestic violence and substance use; risk for suicide among women with abusive partners; and finally, defining domestic violence as a public health problem. The purpose of this literature review was to integrate the information gathered

from the psychological, medical, nursing, public health, and feminist literature into a single comprehensive review of the potential health effects of battering for women with abusive partners.

Effects of Battering on Women's Physical Health

Battering is likely to be the single most common source of serious injury to women, accounting for more injury than auto accidents, muggings, and rape combined (Stark & Flitcraft, 1987). Campbell and Humphreys (1987) reported that women with abusive partners experienced more physical symptoms than other groups of women for two reasons. First, their physical symptoms are a result of both old and new injuries related to the physical battering. Second, these symptoms frequently emerge as physical manifestations of the stress resulting from the battering.

Physical symptoms frequently reported by women with abusive partners include: high blood pressure, ulcers, chronic back pain, miscarriages, and menstruation problems (Rodriguez, 1989); soreness from bruises, cuts, and bone fractures (usually in the upper body area), insomnia, fatigue, anemia, allergies, arthritis, and physical sensations (Kerouac, Taggart, Lescop, & Fortin, 1986); headaches, choking sensations, hyperventilation, asthma, chest pain, gastrointestinal symptoms, pelvic pain, back pain, allergic phenomena, inability to relax or sleep, and nightmares (Hilberman & Munson, 1977); tension headaches, flank pain, general pain and dizziness, abdominal and chest

pains, heart pounding, and somatic problems (Stark & Flitcraft, 1982); epilepsy due to head injuries and chronic physical illness (Gayford, 1975); headaches, cold sweats, and feelings of intense stress or nervousness (Straus & Gelles, 1987); and finally, pain and discomfort in the area of body assaulted, inability to eat, inability to sleep, nightmares, and development of phobias (Sandelowski, 1981).

While the above studies demonstrated some overlap of health symptoms, it is clear that there is much variance in the type of health symptoms reported by battered women. A portion of this variance can be explained due to the differing methodologies of the studies. For instance, Stark and Flitcraft (1982) reviewed past medical records and recorded the symptoms that were reported. Although their review yielded unbiased information regarding the symptoms women presented, no information pertaining to the accuracy and thoroughness of the medical records was available. Straus and Gelles (1987) utilized a small checklist asking about the frequency of symptoms of psychological distress that their participants endorsed, severely limiting the potential number of health symptoms identified. Rodriguez (1989) used open-ended questions and summarized the most frequently reported medical symptoms. This method allowed a more diverse group of symptoms to be reported, however, descriptive information regarding less frequently reported symptoms was not reported. Therefore, it is clear how the

methodologies employed in these studies would affect the number and variety of physical health symptoms reported.

Another explanation for the variance in the type of health symptoms reported is the premise that the stress of battering affects women differently, and therefore the physical symptoms that manifest themselves would naturally be indicative of these differing responses. The effects of stress and its relationship to physical illness were primarily documented by Hans Selye, whose research promoted the concept of stress as a non-specific response caused by stressors in the environment (Selye, 1982). In a 1975 review of the stress literature, Mason discussed his model of stress that proposed stress as an emotionally mediated response acting on an organism that has the potential to produce disease. In the case of battered women, the emotional toll of living in constant fear of assault and physical harm certainly has the potential to create significant amounts of stress that could result in a variety of symptoms among women.

Yet another model of stress and physical illness pertinent to this discussion is the one developed by Lazarus. In this view, cognitive variables affecting the interpretation of stressful events are more important than the actual events. The perception of the psychological situation includes potential harms and threats, as well as one's perceived ability to cope with them (Lazarus & Folkman, 1984). For women with abusive partners, this

theory is particularly relevant. For women who have been severely abused and/or who have incurred serious injury, threats of seemingly "milder" abuse may be perceived as extremely threatening. Additionally, if women have made efforts to seek help that were unsuccessful in protecting them from further abuse in the past, coping with ongoing abuse and consequent feelings of isolation may become increasingly difficult.

Finally, it may be that relationships exist between women's health symptoms and the type, severity, and frequency of the abuse. One could speculate that increased levels of abuse would lead to increased physical injuries from the abuse, as well as increased levels of stress resulting from the battering. It is an investigation of the relationships among physical health symptoms and experiences of abuse that is absent from the current literature.

Especially relevant to the investigation of health concerns for victims of domestic violence is the observation that many of these women are afflicted with gynecological problems. Noted above was the finding by Rodriguez (1989) that battered women disproportionately experience miscarriages, hysterectomies, and menstruation problems. These types of problems necessitate a separate analysis because of the unique relationship between violence and pregnancy.

Gynecological problems. Results concerning the relationship between violence and pregnancy are tenuous at

best. While some research would suggest that pregnant women are at higher risk for abuse during the period they are pregnant (Campbell & Humphreys, 1987; Flitcraft, 1978), other research has indicated that although pregnant women were found to experience minor, severe, and overall abuse at higher rates than non-pregnant women, that relationship was spurious when age was controlled (Gelles, 1988). Amaro, Fried, Cabral and Zuckerman (1990) proposed that the existence of violence three months prior to pregnancy is a strong predictor of violence during pregnancy. Despite the incongruity of the above results, it is clear that patterns of violence can change during pregnancy (Hilberman & Munson, 1977). Being pregnant does not protect a woman from further physical abuse, and may even increase the likelihood of assault.

Violent assaults during pregnancy can have severe health consequences for women and fetuses. In a 1986 study by Helton, women reported blows to the abdomen, breasts, and genitals throughout the duration of their pregnancy. Spontaneous abortions, stillbirths, and miscarriages are increasingly likely when such violent physical assaults occur (Helton, McFarlene, & Anderson, 1987). Flitcraft's 1978 study of hospital records revealed that one in four battered women had experienced at least one miscarriage, while only one in fifteen non-battered women reported ever having had a miscarriage. Campbell and Humphreys (1987) also pointed out that women who are battered are at risk for

pregnancy complications and premature labor as well as miscarriages.

It is apparent that women with abusive partners suffer numerous physical symptoms subsequent to the onset of abuse. While the general population is exposed to many of these ailments as well, the appearance and continuation of the above symptoms is drastically higher for victims of violence. In other words, battered women seem to be "at-risk" for having a preponderance of negative health consequences directly related to the battering. In addition to these physical symptoms and problems, other health issues which may be related to the violence have also emerged. A thorough discussion of each of these other potential health dangers will now be pursued.

Rape in Intimate Relationships and its Potential Health Consequences

There is considerable overlap between the act of rape and nonsexual domestic violence. Although sexual abuse is not necessarily always a part of a battering relationship, it is certainly one of several potential forms of domestic violence. Campbell and Humphreys (1987) reported that sexual abuse occurs in 40 percent of all cases of battering. Russell's 1980 study assessed the prevalence of marital rape experiences and found that sexual assaults by husbands were reported more than twice as frequently as sexual assaults by a stranger. Finkelhor and Yllo (1985) report that 10 percent of the women in their study had been sexually

assaulted by their husbands, whereas only 3 percent had been similarly assaulted by a stranger. Yet another researcher stated that women with abusive partners experience rape eight times as often as women who are not abused (Flitcraft, 1978).

Shields and Hanneke (1983) conducted a study which scrutinized battered women's reactions to marital rape. They conducted interviews with 92 wives of violent men. Of their sample, 41 percent of the women reported experiences of rape as well as alternate forms of violence, while 48 percent reported experiences of nonsexual violence only. It was concluded that sexual violence in a relationship is rarely an isolated incident, and that the severity of a woman's reaction to the marital rape was directly related to the number of incidents of marital rape. In addition, marital rape seemed to co-occur with other severe forms of nonsexual violence. These results are harmonious with the findings of Stark and Flitcraft (1982) which reported that more than one-third of the reported rapes in their study occurred in the context of ongoing abuse.

Clearly, a substantial proportion of domestic violence victims are victims of rape as well. It is therefore reasonable to explore the impact of rape on women's health. A 1989 study by Campbell and Alford investigated the impact of marital rape on women's health among 115 women who resided in shelters for women with abusive partners and had disclosed they had been sexually abused. The two most

frequently reported health concerns were painful intercourse (72%) and vaginal pain (63%). In addition, the women attributed numerous physical health symptoms to sexual abuse such as bladder infections, vaginal bleeding, anal or vaginal stretching, missed menstrual periods, anal bleeding, leaking of urine, and miscarriages and stillbirths.

Burgess and Holmstrom are among the most prominent researchers on the issue of rape. In 1974 they surveyed 92 rape victims in a hospital emergency ward and identified what they have named the "rape trauma syndrome". Since the present study is focused primarily on the implications of such findings for women's health, rape trauma syndrome will be discussed in this context.

Rape trauma syndrome is a two phase reaction to rape. The first phase, the acute phase, results in a multitude of somatic reactions. There is the soreness and bruising which result from the initial physical trauma. Physical symptoms not resulting from the actual assault which appear include but are not limited to the following: skeletal muscle tension, tension headaches, fatigue, sleep disturbances, gastrointestinal irritability, changes in appetite, nausea, genitourinary disturbances including discharge, itching, burning sensations, generalized pain, and vaginal infections. The long-term phase, or phase two, results in the development of phobias related to the trauma and nightmares. In a 1973 article Burgess and Holmstrom

reported a serious finding not yet discussed: a major concern for victims of rape was the possibility that they had contracted a venereal disease.

A final concern about the impact of rape on women's health is that research has indicated that recovery can be an extremely slow process, thereby having a significant long-term effect on health. In a validation study of the Rape Aftermath Symptom Test [RAST], results demonstrated that the instrument could distinguish the symptoms of rape victims from those of nonvictims at postrape intervals up to 3 years after the rape had occurred (Kilpatrick, 1988).

Waigandt and Miller's 1986 survey gave preliminary information about the potential long-term effects of rape. When asked about current illness symptoms, victims who were considered to be recovered reported having 12 percent of the symptoms presented, while the group defined as not recovered reported having 28 percent of the symptoms. Likewise, the non-recovered group reported twice the number of reproductive symptoms and engaged in twice as many negative health behaviors (i.e. alcohol use, smoking) as the recovered group. Thus, it is apparent that rape has profound consequences for women's physical health, and must be included as part of any comprehensive analysis considering its high potential for occurrence in a violent relationship.

Domestic Violence and Substance Use

The use and abuse of alcohol and drugs by women with abusive partners has only recently begun to be explored in domestic violence literature. Assessments of the impact of violence on women's health have revealed that victims of assault are more likely than nonvictims to be diagnosed as alcohol or drug dependent, even when assessed years after the attack (Koss, 1990). The relationship between domestic violence and substance abuse is such that 16 and 10 percent of battered women go on to abuse alcohol and drugs respectively, and that 45 percent of the women in alcohol treatment programs were victims of domestic violence who subsequently became alcohol dependent (Randall, 1990).

Numerous researchers give accounts that are demonstrative of the reality that women who have experienced or are experiencing domestic violence are also misusing drugs and alcohol. Stark, Flitcraft, and Frazier (1979), in their examination of the medical records of 481 women seeking aid for injuries in a major urban emergency room, discovered that one in seven battered women reported abusing alcohol and one in ten battered women reported abusing drugs. Furthermore, Stark and Flitcraft (1981) reported that the rate of alcoholism and drug abuse among battered women was significantly greater than among nonbattered women (16 percent versus 1 percent and 7 percent versus 1 percent respectively). A study by Campbell, Poland, Waller, and Ager (in press) found that 28 percent of the women who had

experienced physical violence in their sample had used illicit street drugs during pregnancy. Additional research has implied that women with abusive partners have high rates of alcohol and drug abuse (Appleton, 1980; Gayford, 1975; Kerouac, 1986).

There is some disagreement, however, as to the causal relationship between the use of alcohol and drugs by women with abusive partners and the onset of the abuse within their relationships. Allan and Cooke (1985) maintained that the hypothesis that stressful life events (which includes an assessment of marital disharmony, and therefore indirectly domestic violence), cause excessive drinking in women has not been empirically demonstrated. Nevertheless, there are indicators that abused women may self-medicate with alcohol, illicit drugs, and prescription medication in order to cope with the violence (Amaro et al., 1990; Hilberman et al., 1977; King, 1981; Stark et al. 1981).

In an attempt to document the relationship between abuse and the use of alcohol and drugs, a comparison between the recorded onset of alcoholism and of abusive injury among battered and nonbattered women indicated that 74 percent of the alcohol cases emerged post-abuse (Stark et al., 1981). This would suggest that the abuse preceded alcoholism for these women, and not the opposite. Moreover, in a preliminary report of these findings, it was stated that the utilization of drugs among this population commenced after the first physical assault (Flitcraft, 1979).

There appears to be yet further evidence for the hypothesis that the abusive episodes precede the abuse of substances when one attends to the abuse of prescription drugs. The medical profession's lack of proficiency in recognizing and acknowledging cases of domestic violence has previously been discussed. Unfortunately, one result of this lack of vision and subsequent misdiagnosis, is that battered women are more likely than non-battered women to leave an emergency ward with a prescription for pain medication or tranquilizers (Flitcraft, 1978). Stark et al. (1979) determined that one in four battered women leave an emergency ward with a prescription for sleeping medications, tranquilizers, or anti-depressants and a "label" indicating a psychiatric problem, as compared to one in fifty non-battered women. Gayford's 1975 study of a population of 100 women with abusive partners revealed that 71 percent of them were taking anti-depressants or tranquilizers. Since victims of domestic violence are often misdiagnosed and over-medicated (King, 1981), and their ensuing drug dependency often involves an addiction or abuse of a prescription given to them by a physician following an abusive episode, there is some support for the contention that abusive episodes precede substance abuse problems.

The medical risks of substance abuse are substantial for women. Although the medical risks and consequences will vary greatly depending upon the woman's drug of choice, two of the greatest concerns include exposure to sexually

transmitted diseases (STDs) and the Acquired Immune Deficiency Syndrome (AIDS) virus. Tollett (1990) asserted that the use of drugs, particularly crack cocaine, is associated with the current increase in sexually transmitted diseases. Congenital syphilis and penicillin-resistant gonorrhea are two examples of STDs whose incidences are on the rise, in part due to the grave reality that addicted women frequently exchange sex for drugs (Tollett, 1990). Moreover, the risk of contracting the AIDS virus is increased for the drug abuser who shares needles with other intravenous drug users (Tollett, 1990). In an examination of perceptions of battered women's health needs, Rodriguez (1989) found that women repeatedly cited exposure to the AIDS virus when asked about their immediate health concerns.

A convincing case can be made that women with abusive partners seem to be at higher risk for chemical dependency to alcohol and illicit or prescription drugs than women whose intimate relationships are free of abuse. It is also painfully clear that alcohol and drug dependency have adverse consequences for these women, not the least of which is the potential exposure to STDs and the AIDS virus. This further confirms the adverse effects of domestic violence on women's physical health. The final health risk domestic violence imposes that will be discussed is the relationship between battered women and their increased risk for suicide.

Risk for Suicide Among Women with Abusive Partners

It is estimated that 26 percent of the women who attempt suicide are victims of domestic violence (Randall, 1990). In an examination of 100 women in a battered women's shelter, Gayford (1975) established that fully one half of the participants had tried to commit suicide at least once. Attempts to commit suicide and suicidal thoughts are consistently reported among a substantial percentage of this population (Amaro et al., 1990; Hilberman & Munson, 1977; King, 1981; Koss, 1990; Mills, Rieker, & Carmen, 1984; Stark & Flitcraft, 1987; Stark & Flitcraft, 1982; Straus, 1987).

Domestic Violence as a Public Health Problem

One of the many ways domestic violence is able to be construed as a public health problem is in the cost that it incurs upon society. Results from a national crime survey indicated that the annual medical costs due to domestic violence are 44 million dollars each year (Randall, 1990). Not included in this amount are the indirect costs of 175,000 days missed from paid work. Additionally, domestic violence is responsible for an estimated 1,234,000 office visits to a physician, 2,141,000 emergency room visits, and 254,000 hospital admissions lasting at least one day each year (Straus, 1986).

Furthermore, it is evident that additional costs are incurred when one examines the heavy utilization of medical facilities by this population. Randall (1990) reported that 22 to 35 percent of the women visiting emergency departments

are there for symptoms related to ongoing abuse, while Stark and Flitcraft (1982) estimated that battering accounts for almost one in five visits by women to emergency services and for almost half of all injury episodes.

A study by Appleton (1980) conducted in a hospital emergency room discovered that, of the women who consented to participate (N=620), thirty-five percent (N=219) reported being struck by a partner with intent to harm. Moreover, women who admitted on the questionnaire that they were struck had an incidence of psychiatric hospitalization nearly three times as high as the women who had not reported physical violence. Of the women whose current visit in the emergency room was for direct sequelae of a battering experience, 60 percent reported some contact with the psychiatric system.

Yet another illustration of the medical service utilization by this population is evidenced in a study by Rounsaville (1977). In a one month period, 37 women with abusive partners were identified, representing 7.5 percent of the women presenting themselves to the hospital emergency room. It is thought that this number represented an underestimate of the true incidence since not all physicians cooperated with the study and some women, even when directly questioned, were reluctant to discuss the issue. Another survey from a general hospital emergency department found that of 492 male and female patients who participated, 22 percent (38 men and 62 women) identified themselves as

domestic violence victims (Goldberg & Tomlanovich, 1984). Gayford (1975) reported that among the 100 cases he studied, 18 of the women indicated a chronic physical illness, and that the majority frequently visited their medical practitioner. In a twelve-month period, Hilberman and Munson (1977) found that one half of all the women (N=30) referred by the medical staff of a rural health clinic for psychiatric evaluation were victims of abusive men. Yet, a history of woman battering was known to the physician in only 4 of the 60 cases.

Clearly, the contention that domestic violence is a public health problem requiring attention is strongly supported. Unfortunately, it would appear that the medical profession is not responding appropriately or effectively to this problem. Stark and Flitcraft (1979; 1982) criticized the current medical intervention with victims of domestic violence. They purported that initially the physical trauma is medicated symptomatically, without identification or acknowledgement of the abuse. However, the prescribed "cure" fails, and within a short period of time the women return with persistent medical problems. Due to the incongruity between the women's problems and available medical explanations, the issue is resolved by essentially labeling the women, not the abuse, as the problem. Secondary problems emerge, such as depression, suicidal behavior, or substance abuse, and these problems are then viewed as the primary problems. At the final stage, women

are referred to the appropriate psychiatric service or social service agency for further treatment.

Other researchers have cited the misdiagnosis of abuse as a major problem as well (Goldberg & Tomlanovich, 1984; Goodwin, 1985; King, 1981; Lear, 1978; Sheridan, 1987). Often, physicians will prescribe an abundance of medications, such as mild tranquilizers, anti-depressants, or sleeping pills, which only serve to compound the dilemmas for these women, by making them less able to protect themselves or to think clearly, not to mention doing nothing about their abusive situations (Dobash, Dobash, & Cavanaugh, 1985; Flitcraft, 1978; King, 1981; Randall, 1990; Rounsaville & Weissman, 1977; Stark, Flitcraft, & Frazier, 1979).

Medical responses to domestic violence that are limited to treating wounds, prescribing medications, and giving referrals to psychiatrists are not only ineffective and victim-blaming, but additionally exemplify the way in which domestic violence remains invisible to the medical profession (Dobash et al., 1985). Campbell (1988) provided an analysis of this victim-blaming approach when she argued that if battering is seen as a medical diagnosis, then the implication is that battered women are sick. Continuing this line of logic, she argued that if these women are sick, then they need medical intervention which includes psychiatric care, thus officially labeling them as "mentally ill". It is suggested that the real problem, the

invisibility of the ongoing domestic violence, may be a result of the patriarchal structure of the medical practice as well as the inadequate training of health and mental health professionals (King, 1981). Recently, requests have been made that physicians acknowledge domestic violence when there is reasonable suspicion, and that they conduct a safety assessment for women returning home (Randall, 1990).

The unfortunate result of the medical profession remaining blind to the issue of domestic violence is that while the source of the problem is being ignored, problems for the victims of domestic violence are compounded. The utilization of services increases dramatically, particularly as these women receive an increasing number of referrals, thereby substantially increasing the costs to society. Straus and Gelles (1987) commented that these costs to society are made even more tragic by the fact that these are preventable costs. Furthermore, when the domestic violence is not acknowledged, let alone treated, the negative health risks for women rise dramatically.

Summary

This literature review has briefly summarized the evidence that supports the contention that domestic violence presents a profound crisis to women's physical health. Not only are there physical symptoms from the actual assault, but various other physical complications arise from the stress of ongoing violence

within the lives of battered women. Gynecological problems are abundant, especially given the relationship between violence and pregnancy, and there exist elevated rates of still-births, miscarriages, and pregnancy complications among women who have been abused. It has been demonstrated that the correlation between rape and domestic violence is significant, and that a host of additional physical symptoms are associated with the occurrence of rape. Exposure to sexually transmitted diseases and HIV/ AIDS become further health concerns for these women due to the potential for both rape and substance use. The chemical dependency fostered by the predisposition of many physicians to prescribe numerous drugs for battered women, along with other substance dependencies that may have developed, are also incurred health risks. Finally, the increased risk for suicidal behavior that has been documented among women with abusive partners necessitates that domestic violence be defined as a national public health crisis.

While all of these conclusions can be derived from an integrated overview of the existing literature, it is relevant to note that not one of the studies mentioned in the preceding text examined all of the variables that have been cited in this paper as health threats for women with abusive partners. It is possible that certain health symptoms are more likely to occur in the presence or absence of other health symptoms. These potential relationships will continue to go undetected unless a thorough examination

of all of these variables is performed. Therefore, this study proposes to comprehensively assess all of the aforementioned physical health threats.

In addition, most of the previous research examined women's physical health threats in the context of the presence of domestic violence. Now that a foundation has been laid which demonstrates that the incidence of domestic violence is related to various detrimental health consequences for battered women, it is reasonable to begin a preliminary investigation of the existing relationships between the type, severity, and frequency of abuse and the physical health variables reviewed in this proposal. In order to commence a preliminary investigation of these relationships, various types of abuse in the present study were measured and scaled into six dimensions. These six dimensions were: 1) frequency of psychological abuse; 2) presence or absence of physical abuse; 3) frequency of physical abuse; 4) severity of physical abuse; 5) presence or absence of injuries from abuse; and 6) presence or absence of sexual violence.

Moreover, it may be that the severity and the frequency of the violence impacts the number and nature of the physical health symptoms. In order to determine the number and nature of the physical health symptoms, a measure that simply indicates the presence or absence of various physical health symptoms may not be sufficient. For this reason, physical health symptoms were measured according to

frequency and severity and then scaled into four different dimensions. These dimensions included: 1) presence or absence of physical health symptoms; 2) frequency of physical health symptoms; 3) severity of physical health symptoms; and 4) frequency weighted by severity of physical health symptoms.

Preliminary relationships that had not yet been examined included: the relationship between the severity of abuse and the number, frequency, and severity of physical health symptoms; the relationship between the frequency of abuse and the number, frequency, and severity of physical health symptoms; the relationship between sexual violence and the presence of gynecological symptoms; the effect of being separated versus not separated from an assailant on the number and severity of physical health symptoms; and the relationship between the number, frequency, and severity of physical health symptoms and the other variables discussed, such as substance use and risk for suicide. This information is important because it may provide further support for the need for early identification of battered women, as well as subsequent intervention in order to prevent further negative consequences to battered women's physical health.

As was mentioned above, none of the studies described provide a complete investigation of the physical health variables. Most of the studies focus only on one or a few of the eight variables. Table 1 presents a breakdown of the

contents of the studies. The content of each study was categorized as follows: 1) assessment of the presence of abuse; 2) assessment of the type, severity, and frequency of abuse; 3) issues surrounding pregnancy; 4) physical symptoms; 5) substance use/abuse broken down into alcohol, drug, and prescription drug; 6) suicide; 7) rape; and 8) risk for an STD or the AIDS virus.

As demonstrated in the preceeding table, none of the studies sought to examine how the type, severity, or frequency of abuse might have been related to the various measures of the physical health variables, although most of them cited the occurrence of abuse. Eleven of the thirty-two studies discussed the relationship between violence and pregnancy, while ten of the studies examined the relationship between rape and physical abuse. Approximately one-half of the studies noted the potential relationship between abuse and some type of substance use, including alcohol, prescription drugs, or other drug use. Approximately one in three studies described specific physical health symptoms their participants were experiencing or had experienced. Suicide was included as a potential threat to physical health in twelve of the studies, whereas risk for contracting STDs or the AIDS virus was only considered in two of the studies reviewed.

Table 1
An Examination of Past Research According to Content Area

Authors	Presence/ Absence of Abuse	Frequency or Type of Abuse	Violence & Frequency	Physical Health Symptoms	Alcohol/Drug/Prescription Use or Abuse	Suicide	Rape	STD/AIDS
Adams (1985)	X		X					
Adams, Gohal, and McIntyre (1987)	X				X	X		X
Apleton (1980)	X	X			X			
Burgess and Holstrom (1974)								X
Campbell and Alford (1989)	X							X
Campbell and Humphreys (1987)	X			X				X
Campbell, Poland, Waller, and Ader (in press)	X		X		X	X		
Coleman and Straus (1983)	X				X			
Coleman, Straus, and Cassidy (1985)	X				X			
Cavanaugh (1985)	X							
Ellis, Atkeson, and Galhoun (1981)					X	X		X
Finkelhor and Yllo (1985)	X							X
Flitcraft (1978)	X		X	X	X	X		X
Gayford (1975)	X			X				X
Gelles (1983)	X		X					
Gelinas and Tomlanovich (1984)	X							
Gelinas and Tomlanovich (1984)	X				X			
Heiton, Merariene, and Anderson, (1987)	X		X					
Hilberman and Munson (1978)	X			X	X	X		X
Kerouac, Taggart, Lescop, and Fortin (1986)	X	X		X	X			
King (1981)	X		X		X	X		X
Koss (1990)	X				X	X		X
Koss, Frazier, and Garmen (1984)	X				X	X		X
Koss, Frazier, and Garmen (1984)	X		X	X	X	X		X
Koss (1990)	X		X		X	X		X
Koss, Frazier, and Garmen (1984)	X		X		X	X		X
Rodrigues (1989)	X		X		X			
Rounsville and Weissman (1977)	X			X	X			
Russell (1982)	X							X
Stark and Flitcraft (1982)	X			X	X	X		X
Stark and Flitcraft (1987)	X			X	X	X		X
Stark, Flitcraft, and Frazier (1979)	X			X	X	X		X
Straus and Gelles (1987)	X			X				
Tollett (1990)			X		X			X
Weinandt and Miller (1986)				X	X			X

The Present Study

The purpose of the present study was twofold. First, it provided a comprehensive assessment of the physical health of women with abusive partners who had resided in a battered women's shelter. Second, it afforded a preliminary investigation of the relationships among the type, severity, and frequency of abuse and the incidence, frequency, and severity of physical health symptoms for these women. The sample consisted of women currently involved in a longitudinal study designed to assist women who have resided at a battered women's shelter.

Descriptive information included:

- 1) Type of abuse experienced
- 2) Physical health symptoms including sleep problems, nightmares, weight change, back pain, dizziness, faintness, headaches, constant fatigue, nausea, diarrhea, stomach pain, ulcers, etc.
- 3) Current use of alcohol and drugs (both prescription and non-prescription)
- 4) Extent to which exposure to STDs and the AIDS virus were immediate health concerns for these women
- 5) Number of suicide threats and attempts
- 6) Utilization of health-related services

This information was then used to predict existing relationships between abuse variables and women's physical health. Specifically, the hypothesized relationships were:

- 1) As the severity of abuse increases, the number, frequency, and severity of physical health symptoms will increase.
- 2) The more frequent women's experiences of abuse, the greater the number, frequency, and severity of physical health symptoms.
- 3) Experiences of sexual violence will be accompanied by greater numbers of gynecological symptoms.

Additional relationships examined were:

- 4) The effect that being separated versus not separated from an assailant might have on the number and severity of physical health symptoms.
- 5) The relationship between the number, frequency, and severity of physical health symptoms and the other variables discussed, such as use of alcohol or drugs, presence of at-risk behaviors for STDs or the AIDS virus, and past suicide threats and/or attempts.
- 6) The relationships among the different measures of abuse and the other variables discussed, such as use of alcohol or drugs, presence of at-risk behaviors for STDs or the AIDS virus, and past suicide threats and/or attempts.

Method

Setting

The current research was conducted in the Greater Lansing Area of Michigan. This research was an addition to a larger, ongoing, federally-funded program, The Community Advocacy Project. The Community Advocacy Project is a longitudinal research investigation at Michigan State University that is examining the effects of an advocacy intervention on women's ability to end the violence against them. Examining the potential effects of the advocacy intervention on women's physical health was beyond the scope of the present research, so no further discussion of the advocacy intervention follows.

Research Participants

The participants for this study were women currently involved in the Community Advocacy Project [CAP]. All of the women in the CAP were recruited from the local battered women's shelter. The Council Against Domestic Assault [CADA] is a safe house for women and their children who are seeking refuge from abusive partners. CADA provides housing for approximately 30 women and their children for a one-month period, after which time the women are expected to have found more permanent, stable housing.

The participants in this study were the first 110 women who were scheduled for regular project interviews beginning January 15th, 1992. Women were asked at the beginning of their interviews if they would be willing to answer

questions about their physical health. All of the women who were interviewed agreed to complete the health section of the interview. A planned sample size of 96 was determined to be the minimum N, using a power analysis for correlations, with a correlation of .30 and a power criterion of .85, $P < .05$. Fourteen additional interviews were conducted and included in the sample to yield the final N of 110. Of these 110 women, 80 women had been involved with the project for at least eighteen months prior to their interview. These women completed the health section of the CAP interview at either their eighteen month follow up interview (the fourth of five follow up interviews after their shelter exit), or at their twenty-four month follow up interview (the last of five interviews following their shelter exit) with the project. Of these 80 women, 46 were interviewed at the eighteen month follow up interview and 34 were interviewed at the twenty four month follow up interview. The other 30 women had only recently become involved with the CAP, and these women completed the health section at the pre-interview time period.

Demographic Characteristics

Relevant demographic information regarding the research participants is presented in Table 2. Ages ranged from 17 to 61 years of age, with a mean age of 28 years and a mode of 21 years. Nearly half of the participants were White

Table 2

Demographics of Research Participants

	N	(%)
AGE		
17-19 Years	14	12.7
20-24 Years	28	25.5
25-29 Years	28	25.4
30-34 Years	20	18.2
35-39 Years	9	8.2
Over 40 Years	11	10.0
RACE		
Black	46	41.8
White	54	49.1
Hispanic	6	5.5
Native American	4	3.6
BEEN EMPLOYED IN LAST 6 MONTHS	45	40.9
Clerical	5	4.5
Domestic/Childcare	3	2.7
Sales/Waitress	14	12.7
Managerial	2	1.8
Factory	3	2.7
Human Services	17	15.5
Other	1	.9
CURRENTLY A STUDENT	19	17.3
EDUCATION LEVEL		
Less than high school	45	40.9
High school graduate/ GED	24	21.8
Some college	26	23.6
College graduate	8	7.3
Trade school	6	5.5
Professional degree	1	.9
RECEIVING GOVERNMENTAL AID	78	70.9
NUMBER OF CHILDREN LIVING WITH HER		
None	34	30.9
One	18	16.4
Two	23	22.7
Three	20	18.2
Four	9	8.2
Five or Six	4	3.6

Table 2 (cont'd)

	N	(%)
LENGTH OF RELATIONSHIP WITH ASSAILANT		
One Year or Less	19	17.3
> One Year to Three Years	32	29.1
> Three Years to Five Years	25	22.7
> Five Years to Ten Years	20	18.2
> Ten Years	14	12.7
RELATIONSHIP TO ASSAILANT		
Married, Living Together	12	10.9
Married, Separated	12	10.9
Divorced	13	11.8
Girl/Boyfriend, Living Together	24	21.8
Girl/Boyfriend, Not Living Together	4	3.6
Ex-girl/boyfriend	42	38.2
Dating, but not Girl/Boyfriend	1	.9
Other	2	1.8
NUMBER OF PREVIOUS SEPARATIONS		
None	25	22.7
One or Two	20	18.2
Three to Five	34	30.9
Six to Ten	16	14.6
More than Ten	15	13.6
CURRENTLY IN RELATIONSHIP W/ASSAILANT	23	20.9

(49.1%), slightly less than that were Black (41.8%), a small percentage of the women were Hispanic (5.5%), and the remaining women were Native American (3.6%). The majority of the women were currently unemployed (70.0%), and 70.9% of the women received some form of governmental assistance. A small percentage (17.3%) of the women were currently students, and their educational levels varied. Forty five women had not completed high school (40.9%), while nearly equal numbers of women had received their high school diploma or GED (21.8%) or had some amount of college education (23.6%).

Many of the women had children currently living with them (69.1%), and the average number of children living with the women was two (mode=2). Seventy-nine percent of the women reported that they had ended or were ending their relationship with their assailant. The average length of their relationship with their assailant at the time they began their involvement with the CAP was 5.5 years, and the average number of previous separations from their assailant was 7.8. Only 22.7 percent of the women had never had a previous separation from their assailant. The participants are representative of women who utilize battered women's shelters, in that they were demographically similar to the participants of CAP and of other studies (Finn, 1985; Gondolf, 1988; Mitchell & Hodson, 1983; Okun, 1986; Pagelow, 1981; Sullivan, Tan, Basta, Rumptz, & Davidson; 1992).

Design

This study utilized a cross-sectional design in its investigation of women's physical health after involvement in an abusive relationship. This exploratory study obtained descriptive information about the population under investigation and examined and interpreted the preliminary relationships among the proposed variables.

Procedure

Interviewer Training

Face-to-face interviews were conducted by the principal investigator and trained interviewers. Undergraduate students at Michigan State University are recruited on an ongoing basis to conduct project interviews after a term of rigorous interview training. The project employs a graduate assistant who is responsible for training all of the project's interviewers, in addition to ensuring that all of the interviews are administered on their scheduled dates.

The introduction to training began with written material, films, and discussions about the nature and dynamics of woman abuse. The interviewers learned appropriate interview protocol through a written interviewer's handbook, class discussion, and role playing interviews. Interviewers continued to practice and role play the various project interviews during weekly classes. Interrater agreement on the health interview items, assessed by calculating % agreement, was quite high by the end of training, ranging from 89% to 100%.

After the completion of training, interviewers continued to meet with their instructor once a week to review techniques, discuss the progress of the previous week's interviews, and answer any questions that may have surfaced about the interview itself, or the coding of the interview. The health questionnaire was introduced to a class of current interviewers, as well as to a group of interviewers-in-training by the interview instructor as an additional aspect of the project.

Data Collection

The instrument was pilot tested on twelve participants. The interviews were revised based upon feedback from the women, the interviewers, and the interviewer instructor. These interviews were included in the total sample due to the fact that most of the revisions were semantic, with few changes in interview content.

Of the 110 interviews, 80 of the interviews were conducted by the trained interviewers. These interviews consisted of the 18 month and the 24 month follow-up interviews. At the follow-up interviews, interviewers were instructed to explain the purpose of the interview and answer questions that a woman might ask. Additionally, the interviewers explained that the project was trying to create a new section for the interview that involved finding out how women's experiences of abuse affected their physical health. As previously mentioned, all women agreed to complete the additional health section of the interview. At

the interview, they were asked to sign a revised consent form that included the topic of physical health, and specified that the health section included questions regarding physical health symptoms, current use of alcohol and drugs, as well as questions concerning their sexual activities. All of the interviews were recorded for verification purposes with the participant's consent. Women were paid for their ongoing participation in the project, \$90.00 for their 18 month interview and \$100.00 for their 24 month interview.

The other 30 interviews were conducted by the principal investigator of this study. Interrater agreement between the principal investigator and the trained interviewers was .99, assessed by calculating % agreement across all the health items. These interviews were conducted with women who had only recently begun their involvement with the project. These women had just exited the shelter when the project's pre-interviews were conducted. The interviewing procedure for the pre-interview was similar to that described above with the exception that the initial consent form presented to these women included the health information. Thus, women who were interviewed at this time period simply thought the health information was a regular part of the project interview. At the end of this interview women were randomly assigned to either the treatment or control condition. Women were paid \$10.00 for their

participation and told the approximate date and dollar amount of their next interview.

Measures

The interview (Appendices A through E) was developed based on information gathered from the literature, and suggestions and input from committee members as well as from persons with an extended background within the field of domestic violence. These persons included investigators who were currently conducting research within the field as well as persons who were involved in the provision of health-related services to women with abusive partners. A listing and description of the variables that were investigated follows.

While detailed information regarding scale development is presented as appropriate, a brief summary on the scaling decision rules is warranted. First, for items within a scale, item standard deviations were examined and items with low variability were dropped from subsequent scale development. Low variability was defined as item standard deviations of less than .80 for four-item scales, and item standard deviations of less than 1.00 for six-item scales. Reliabilities analyses were then conducted to generate and examine the corrected item-total correlations. Corrected item-total correlations were examined to insure the difference between the largest and the smallest correlations was never greater than $r=.35$, items not meeting this criterion were additionally dropped.

Psychological Abuse History

Psychological abuse was measured using a psychological abuse scale previously developed for use on the Community Advocacy Project. This 33-item scale was used to measure the frequency of psychological abuse. Women were asked to rate how often their assailant engaged in behaviors that served to hurt or annoy them in the past six months on a 4-point scale ranging from "never" to "often". A reliabilities analysis led to the deletion of 5 items whose corrected item-total correlations were substantially lower than those for the remaining 28 items. The five items that were dropped include: 1) abused or threatened to abuse pets, 2) punished or deprived the kids when angry, 3) threatened to take the kids if she left, 4) left her somewhere with no way to get home, and 5) threatened to commit suicide when angry with her. An internal consistency of .97 was established for this 28-item scale and the corrected item-total correlations ranged from .58 to .87. Table 3 lists the items that comprise the psychological abuse scale and provides the scale and item means, scale and item standard deviations, the internal consistency estimate, and the corrected item-total correlations.

Table 3

Psychometric Properties of Psychological Abuse Scale

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. assailant refused to talk to her	2.23	1.22	.69
2. accused her of having sex with others	2.34	1.28	.67
3. told her of his sex exploits	1.74	1.09	.58
4. refused to do things with her	2.34	1.24	.75
5. forbid her to go out without him	2.10	1.28	.62
6. controlled her money	2.25	1.33	.68
7. controlled her activities	2.55	1.27	.87
8. withheld approval, appreciation, or affection as punishment	2.11	1.20	.81
9. lied to her or deliberately misled her	2.45	1.22	.79
10. made contradictory demands of her	2.42	1.33	.79
11. called her names	2.41	1.24	.84
12. tried to humiliate her	2.29	1.25	.87
13. ignored or made light of her anger	2.60	1.23	.77
14. ignored or made light of her other feelings	2.63	1.21	.87
15. ridiculed or criticized her in public	1.90	1.06	.74
16. ridiculed or insulted her valued beliefs	2.23	1.21	.79
17. ridiculed her religion, race, heritage, or class	1.75	1.15	.62
18. ridiculed or insulted women as a group	2.21	1.21	.58

Table 3 (cont'd)

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
19. criticized her strengths	2.15	1.30	.83
20. criticized her intelligence	2.22	1.27	.81
21. criticized her physical appearance or sexual attractiveness	1.96	1.17	.68
22. criticized her family or friends	2.55	1.22	.78
23. harassed her family or friends	1.60	.90	.55
24. discouraged her contact with family or friends	2.13	1.26	.75
25. threatened to hurt family or friends	1.45	.90	.58
26. broke or destroyed something important	1.75	1.10	.61
27. threatened to end the relationship if she did not do what he wanted	1.96	1.25	.71
28. forced her to leave her home	1.78	1.14	.58
29. abused/threatened to abuse pets **	1.15	.61	.30
30. punished/deprived the children when he was angry **	1.49	.98	.42
31. threatened to take the kids if she left him**	1.57	1.01	.42
32. left her with no way to get home **	1.42	.91	.43
33. threatened to commit suicide when angry **	1.52	.94	.47

** denotes items deleted from the final scale

Alpha = .97

Scale $\bar{X}$ = 60.08

Scale SD = 25.11

Physical Abuse History

Physical abuse was measured using a modified version of the 14-item violence subscale of the Conflict Tactics Scale (CTS) for husband to wife data as developed by Straus (1979). The project's modified version of the CTS (16-items) was used to measure the frequency and the severity of the abuse, which had previously been found to have an internal consistency of .90. Women were asked to rate these items on a 6-point scale ranging from "never" to "more than four times a week". The items measured how often their assailant engaged in different acts of violence, such as pushing, shoving, choking, and using a gun or knife in the last six months. The physical abuse scale was coded in three different ways (i.e. occurrence, frequency, and severity) to examine whether the type of measurement of physical abuse impacted the findings of the research in any significant way. Women interviewed at either of the follow up time periods were asked to complete the physical abuse section if they had seen their assailant in the past six months, and if they were currently involved in a new relationship. Therefore, some women completed the physical abuse section twice, with regard to two different relationships. In these cases, the worse of the two scores was used because the research was ultimately interested in the impact of the experience of abuse on women's physical health. To summarize, some of the physical abuse was perpetrated by their original assailants, while some of the

women were in new relationships in which physically abusive acts had occurred.

To determine whether or not the method of weighting physical abuse impacted the results, three different weighting methods were utilized. The three weighting methods were: 1) an incidence-based index of abuse; 2) a frequency-based scale of abuse; and 3) a severity-based scale of abuse.

The Presence or Absence of Physical Abuse. Each of the 16 items of the modified CTS were recoded as dichotomous items to construct an abuse scale that would reflect the number of violent acts that had been perpetrated against a woman by her assailant. For example, if a woman had been slapped, the item was coded "1", whereas if a woman had not been slapped, the item was coded "0". This yielded a scale measuring the presence or absence of abuse. Three items were dropped after performing a reliabilities analysis, due to their low corrected item-total correlations. The final scale consisted of 13 items, with potential scale scores ranging from 0 to 13.

Table 4 presents the scale and item means, the scale and item standard deviations, the internal consistency estimate, as well as the corrected item-total correlations for this scale. As the Table demonstrates, the alpha for this 13-item scale was .90, and the item-total correlations

Table 4

**Psychometric Properties of Physical Abuse Scale:
Presence or Absence of Abuse**

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. tore her clothes or broke her glasses	.19	.40	.49
2. pushed/shoved her	.52	.50	.64
3. grabbed her	.49	.50	.62
4. slapped her with an open hand	.27	.45	.69
5. hit with a fist	.23	.43	.72
6. kicked her	.19	.39	.60
7. threw something at her	.33	.47	.57
8. hit her with an object	.16	.36	.61
9. attempted to hit her with an object	.27	.45	.66
10. choked her	.20	.41	.63
11. tied her up or physically restrained her	.19	.40	.56
12. forced sexual activity	.19	.39	.48
13. threatened her with a gun/knife	.15	.36	.48
14. assailant drove recklessly **	.22	.42	.32
15. burned her **	.05	.22	.33
16. used a gun/knife against her **	.03	.17	.22

** denotes items deleted from the final scale

Alpha = .90

Scale

$\bar{X} = 3.37$

Scale SD = 3.68

ranged from .48 to .72. The 13 items on this scale include: 1) having her clothes torn or glasses broken, 2) being pushed or shoved, 3) being grabbed, 4) being slapped with an open hand, 5) being hit with a fist, 6) being kicked, 7) having something thrown at her, 8) being hit with an object, 9) almost getting hit with an object, 10) being choked, 11) being tied up or physically restrained in some way, 12) being forced into sexual activity, and 13) being threatened with a gun or knife. The three items that were dropped were being burned, her assailant driving recklessly, and having a gun or knife used against her.

Frequency-based Physical Abuse. Of the 16 items, 12 items were combined to compute the frequency based physical abuse scale. Lack of variance contributed to the omission of three of the items, with only 4.5% of the women reporting being burned by their assailants and only 2.7% of the women having had a gun or knife used against them. While 18.1% of the women reported having their clothes torn or glasses broken, the standard deviation for this item was very low compared to the other items on this scale. A reliability analysis was then performed on the scale and its items to generate corrected item-total correlations. One of the items, her assailant driving recklessly, was dropped because its item-total correlation was too low when compared to the correlations for the remaining scale items.

Table 5 presents the corrected item-total correlations for the remaining twelve items, along with the scale and

item means, scale and item standard deviations, and the internal consistency estimate for the frequency-based physical abuse scale. As indicated, the alpha for the 12-item scale was .93. The corrected item-total correlations ranged from .54 to .83, suggesting that there is a degree of shared variance among the scale items.

Severity-based Physical Abuse. A severity-based physical abuse scale was constructed through a modification of Straus' severity index. According to Straus, a severe abusive incident is a violent act which carries risk of serious injury (Straus, 1979). Six items from the project's CTS fell into Straus's "severe" category. They were as follows: 1) being hit with a fist, 2) being kicked, 3) being hit with an object, 4) almost being hit with an object, 5) being threatened with a gun or knife, and 6) having a gun or knife used against her.

Six items on CAP's modified version of the CTS were not a part of Straus's original scale. Therefore, five of the project staff were asked to independently rate the remaining violent acts as either "mild" or "severe", according to Straus's definition. The six items included: 1) having her clothes torn or her glasses broken, 2) her assailant driving recklessly, 3) being choked, 4) being burned, 5) being tied up or physically restrained in some way, and 6) having

Table 5

**Psychometric Properties of Physical Abuse Scale:
Frequency of Abuse**

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. pushed/shoved her	1.96	1.30	.83
2. grabbed her	1.99	1.38	.80
3. slapped her with an open hand	1.59	1.23	.73
4. threw something at her	1.52	.91	.54
5. hit with a fist	1.49	1.05	.73
6. kicked her	1.31	.77	.70
7. hit her with an object	1.23	.68	.71
8. attempted to hit her with an object	1.48	.96	.69
9. choked her	1.30	.73	.68
10. tied her up or physically restrained her	1.38	.96	.67
11. forced sexual activity	1.49	1.22	.68
12. threatened her with a gun/knife	1.30	.88	.61
13. assailant drove recklessly **	1.43	1.04	.37

** denotes items deleted from the final scale

Alpha = .92 Scale $\bar{X}$ = 19.47 Scale SD = 9.59

forced sexual activity. A consensus decision by the project staff led to the inclusion of three more items to the "severity" scale. These items were: being choked, being burned, and being raped.

Therefore, a nine item severity-based physical abuse scale was constructed. Two of these items, being burned and having a gun or knife used against them, were subsequently dropped due to a lack of variance. The remaining 7 items were dichotomously coded and then multiplied by their frequency in the final scale. Table 6 presents the corrected item-total correlations for the 7 items, the scale means, the scale and item standard deviations, and the internal consistency estimate for the severity-based physical abuse scale. The alpha for this 7-item scale was .89 and the item-total correlations ranged from .56 to .78.

Injuries from Physical Abuse. If the women had been harmed at all, as measured by the presence of at least one violent act against her, they were also asked about the injuries they had sustained. Ten dichotomously coded items were used to measure injury from abuse, ranging from "cuts/scrapes/bruises" to "knife or gunshot wound". Six of the items were dropped because of low variance. The dropped items were: 1) loose or broken teeth, 2) broken bones or fractures, 3) internal injuries, 4) dislocated joints, 5) pregnancy complications or miscarriage, and 6) knife or gunshot wound. A reliabilities analysis was conducted on

Table 6

**Psychometric Properties of Physical Abuse Scale:
Severity of Abuse**

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. hit with a fist	1.49	1.05	.72
2. kicked her	1.31	.77	.65
3. hit her with an object	1.23	.68	.78
4. attempted to hit her with an object	1.48	.96	.74
5. choked her	1.30	.73	.56
6. forced sexual activity	1.49	1.22	.71
7. threatened her with a gun/knife	1.30	.88	.69

Alpha = .89

Scale

 $\bar{X} = 9.59$

Scale SD = 4.93

the remaining four items, and yielded an alpha of .80. Item-total correlations for this scale ranged from .42 to .87. The remaining four items are listed in conjunction with the psychometric properties of the injuries scale in Table 7.

Presence of Sexual Violence

The presence of sexual violence in the past six months was measured by three dichotomously scored items. One of these items, "being forced into sexual activity", was taken from the modified version of the CTS. The other two items have been used in previous research on this topic, (e.g. Shields and Hanneke, 1983). These items inquired into whether or not their partners had used threats in an attempt to have sex with them in addition to asking whether or not their partner had used physical force to have sex with them.

The sexual violence scale and the items that comprise it, along with the scale and item means, scale and item standard deviations, corrected item-total correlations, and the internal consistency estimate are presented in Table 8. As shown in the table, the alpha for this 3-item scale was .81, and the corrected item-total correlations ranged from .54 to .79.

Table 9 provides the inter-scale correlation matrix for all six of the abuse history scales. The high correlations among these scales indicates a low degree of independence. Thus, the scales are measuring similar constructs and/or a

Table 7

**Psychometric Properties of Physical Abuse Scale:
Injuries Resulting from Abuse**

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. sustained cuts, scrapes, or bruises	.31	.46	.67
2. sustained soreness without bruises	.36	.48	.87
3. sustained burns, includes rug burns	.20	.40	.56
4. sustained strains or sprains	.13	.34	.42
Alpha = .80	Scale	$\bar{X} = 1.00$	Scale SD = 1.35

Table 8

Psychometric Properties of Sexual Violence Scale

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. forced sexual activity	.20	.40	.64
2. partner used threats to have sex with her	.22	.42	.54
3. partner used force to have sex with her	.21	.41	.79
Alpha = .81	Scale	$\bar{X} = 0.63$	Scale SD = 1.04

Table 9

Inter-scale Correlation Matrix for Abuse History Scales

	2	3	4	5	6
1 Occurrence Physical Abuse	.84**	.98**	.92**	.98**	.78**
2 Psychological Abuse	----	.74**	.71**	.64**	.74**
3 Frequency of Physical Abuse		----	1.00**	.86**	.86**
4 Severity of Physical Abuse			----	.79**	.87**
5 Occurrence Injuries				----	.63**
6 Occurrence Sexual Abuse					----

** P < .01

variety of abusive incidents occur together, such as the presence of sexual violence in a physically abusive relationship.

Physical Health Symptoms

Physical health symptoms were measured using an adaptation of the 35-item Cohen-Hoberman Inventory of Physical Symptoms [CHIPS] (1983). While the scale was constructed to deliberately exclude symptoms of a psychological nature, it did include items that are traditionally viewed as psychosomatic. Women were asked to indicate which physical health symptoms had bothered them in the past six months. Cronbach's alpha for the CHIPS was reported at .88, as measured in their study sample (Cohen & Hoberman, 1983). The original scale was modified to include the physical symptoms that have been predominant in populations of women with abusive partners, such as high blood pressure, ulcers, and menstrual problems (Rodriguez, 1989). Also included were various gynecological symptoms that can arise as a result of experiencing sexual violence, such as pelvic pain and painful intercourse (Campbell, 1991). As discussed in the introduction, the physical health symptoms were then coded four different ways to produce four different physical health symptoms scales based on occurrence, frequency, severity, and frequency by severity. This was done to examine the effects of utilizing different measurements of physical health symptoms.

Frequency of Physical Health Symptoms. The modified CHIPS scale (55-items) was administered to each of the participants. Women were asked to rate on a 6-point scale, ranging from "never" to "more than four times per week", how often they had been bothered by each of the physical health symptoms. (See Appendix B or D for a complete list of all of the physical health symptoms.) Of the 55 items, 16 items were dropped due to lack of variance. A reliability analysis was performed on the remaining 39 items and led to the deletion of an additional 10 items. These 10 items were deleted due to low corrected item-total correlations when compared to the correlations for the remaining scale items.

These revisions led to a final health frequency scale that consisted of 29 items. Table 10 provides a summary of the scale's psychometric properties. As shown in the table, the internal consistency estimate for this scale was .95 and the corrected item-total correlations ranged from .43 to .73.

Presence or Absence of Physical Health Symptoms. Each of the 29 items on the revised scale were dichotomously coded to create a scale that would measure the presence or absence of various physical health symptoms. Similar to the abuse scale, if a woman had experienced a physical health symptom, that symptom was coded "1". If a woman had not experienced the symptom, the item was coded "0". In this

Table 10

**Psychometric Properties of Physical Health Symptoms Scale:
Frequency of Health Symptoms**

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. sleep problems	3.42	1.82	.73
2. nightmares	2.42	1.57	.57
3. back pain	2.69	1.82	.55
4. dizziness	2.30	1.46	.62
5. faintness	1.84	1.31	.64
6. constant fatigue	3.21	1.94	.61
7. migraine headaches	2.52	1.71	.43
8. headaches	3.01	1.65	.51
9. nausea and/or vomiting	1.86	1.30	.61
10. constipation	2.00	1.38	.50
11. acid stomach or indigestion	2.47	1.66	.61
12. stomach pain	2.31	1.65	.59
13. hot or cold spells	1.88	1.33	.67
14. hands trembling	2.29	1.61	.69
15. heart pounding or racing	2.31	1.58	.72
16. poor appetite	2.64	1.74	.65
17. shortness of breath when not exercising or working hard	2.30	1.73	.69
18. numbness/tingling in her body	2.16	1.55	.65
19. feeling weak all over	2.45	1.65	.73
20. pains in her heart or chest	2.06	1.47	.65
21. feeling low in energy	3.66	1.63	.70
22. blurred vision	2.10	1.60	.46
23. muscle tension or soreness	3.01	1.76	.72
24. muscle cramps	2.21	1.55	.70
25. severe aches or pains	2.35	1.71	.66
26. weight change of more than 10 lbs.	2.15	1.28	.44
27. diarrhea	1.67	1.11	.45
28. ringing in ears	1.95	1.42	.57
29. pelvic pain	1.69	1.16	.51

Table 10 (cont'd)

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
30. allergies **	1.86	1.51	.23
31. asthma **	1.45	1.23	.20
32. teeth or gum problems **	1.84	1.44	.19
33. acne **	1.93	1.45	.26
34. anemia **	1.98	1.75	.10
35. high blood pressure **	1.60	1.40	.33
36. bruises **	2.06	1.44	.41
37. stuffy nose or head **	2.75	1.64	.35
38. arthritis **	1.76	1.52	.35
39. pulled or strained muscles/ligaments **	1.66	1.16	.38

** denotes items deleted from the final scale

Alpha = .95

Scale $\bar{X}$ = 68.90

Scale SD = 29.09

way, a scale that measured the occurrence of physical health symptoms was created and the scale score range was 0-29.

Table 11 presents the scale and item means, the scale and item standard deviations, the internal consistency estimate, as well as the corrected item-total correlations for this scale. As the Table demonstrates, the alpha for this 29-item scale was .92, and the item-total correlations ranged from .32 to .71.

Severity of Physical Health Symptoms. If a "frequency" item was endorsed, women were asked to rate how much of a problem it was to have experienced this particular health symptom. A 4-point scale ranging from "not a problem at all" to "very much a problem" was used. Due to the fact that varying items were endorsed by participants and the sample size varied, creating a meaningful scale score required several modifications. Additive methods could not be used to create a scale score due to the fact that varying numbers of items were endorsed. Therefore, a scale score was computed by taking the mean of the severity ratings for only the items that were endorsed. Health severity scores consequently ranged from 1-4.

Due to the fact that severity ratings were only collected if participants had previously endorsed frequency ratings, missing data was inevitable for various health severity items for each participant. Calculation of coefficient alpha required recoding the 4-item scale to a 5-

Table 11

**Psychometric Properties of Physical Health Symptoms Scale:
Presence or Absence of Health Symptoms**

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. sleep problems	.77	.42	.58
2. nightmares	.62	.49	.48
3. back pain	.63	.49	.49
4. dizziness	.61	.49	.58
5. faintness	.40	.49	.61
6. constant fatigue	.68	.47	.57
7. migraine headaches	.60	.49	.32
8. headaches	.77	.42	.38
9. nausea and/or vomiting	.44	.50	.56
10. constipation	.46	.50	.48
11. acid stomach or indigestion	.60	.49	.57
12. stomach pain	.57	.50	.65
13. hot or cold spells	.43	.50	.56
14. hands trembling	.53	.50	.60
15. heart pounding or racing	.55	.50	.59
16. poor appetite	.61	.49	.46
17. shortness of breath when not exercising or working hard	.48	.50	.55
18. numbness/tingling in her body	.51	.50	.54
19. feeling weak all over	.59	.49	.71
20. pains in her heart or chest	.49	.50	.47
21. feeling low in energy	.88	.32	.46
22. blurred vision	.46	.50	.45
23. muscle tension or soreness	.73	.45	.58
24. muscle cramps	.54	.50	.51
25. severe aches or pains	.51	.50	.57
26. weight change of more than 10 lbs.	.67	.47	.47
27. diarrhea	.39	.49	.41
28. ringing in ears	.44	.50	.44
29. pelvic pain	.38	.49	.56
Alpha = .92	Scale	$\bar{X} = 16.33$	Scale SD = 7.92

item scale. Under the revised scoring method a "1" indicated that the symptom had never occurred, while the scores ranging from "2" to "5" indicated that the symptom had been endorsed and rated how much of a problem it was to experience the health symptom. This method utilized 110 cases and yielded an internal consistency estimate of .94. Corrected item-total correlations utilizing the second method ranged from .36 to .73. Table 12 presents the psychometric properties for this 29-item severity-based physical health symptom scale.

Frequency by Severity Health Symptom Scale. A frequency by severity weighted physical health symptom scale was then created. A scale score was computed by multiplying the frequency and severity ratings for each of the health items. These products were summed, and the sums of products were used in an attempt to increase variance for the scale. This was possible because a "1" on the frequency scale indicated having never experienced the health symptom, as did a "1" on the severity scale after the items were recoded. Thus, the range for the 29-item frequency by severity physical health symptom scale was 29-870.

The corrected item-total correlations, scale and item means, scale and item standard deviations, and the internal consistency estimate for this scale are displayed in Table 13. Alpha for this 29-item scale was found to be .95, and the item-total correlations ranged from .39 to .78.

Table 12

**Psychometric Properties of Physical Health Symptoms Scale:
Severity of Health Symptoms**

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. sleep problems	3.16	1.44	.70
2. nightmares	2.42	1.36	.46
3. back pain	2.76	1.57	.54
4. dizziness	2.31	1.25	.60
5. faintness	1.87	1.23	.63
6. constant fatigue	3.00	1.54	.57
7. migraine headaches	2.61	1.52	.46
8. headaches	2.93	1.33	.45
9. nausea and/or vomiting	2.01	1.32	.58
10. constipation	1.96	1.25	.52
11. acid stomach or indigestion	2.38	1.37	.57
12. stomach pain	2.37	1.39	.60
13. hot or cold spells	1.93	1.25	.55
14. hands trembling	2.15	1.29	.63
15. heart pounding or racing	2.31	1.39	.61
16. poor appetite	2.46	1.45	.46
17. shortness of breath when not exercising or working hard	2.26	1.45	.61
18. numbness/tingling in her body	2.16	1.37	.64
19. feeling weak all over	2.56	1.52	.73
20. pains in her heart or chest	2.26	1.44	.58
21. feeling low in energy	3.60	1.29	.61
22. blurred vision	2.10	1.39	.36
23. muscle tension or soreness	2.78	1.44	.61
24. muscle cramps	2.26	1.37	.61
25. severe aches or pains	2.34	1.50	.59
26. weight change of more than 10 lbs.	2.69	1.48	.46
27. diarrhea	1.76	1.10	.37
28. ringing in her ears	1.89	1.19	.55
29. pelvic pain	1.88	1.24	.54

Alpha = .94

Scale $\bar{X}$ = 69.19

Scale SD = 23.75

Table 13

**Psychometric Properties of Physical Health Symptoms Scale:
Frequency by Severity of Health Symptoms**

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. sleep problems	13.06	10.05	.73
2. nightmares	7.56	7.86	.51
3. back pain	9.95	10.37	.54
4. dizziness	6.76	7.12	.68
5. faintness	4.81	6.42	.68
6. constant fatigue	12.10	10.26	.62
7. migraine headaches	8.65	8.84	.48
8. headaches	10.42	8.20	.52
9. nausea and/or vomiting	5.13	6.46	.61
10. constipation	5.43	6.90	.48
11. acid stomach or indigestion	7.77	8.40	.57
12. stomach pain	7.36	8.55	.59
13. hot or cold spells	5.04	6.66	.66
14. hands trembling	6.62	7.60	.71
15. heart pounding or racing	7.20	8.02	.72
16. poor appetite	8.46	8.75	.61
17. shortness of breath when not exercising or working hard	7.21	8.47	.72
18. numbness or tingling in her body	6.42	7.90	.69
19. feeling weak all over	8.16	8.58	.78
20. pains in her heart or chest	6.36	7.75	.70
21. feeling low in energy	14.65	9.09	.71
22. blurred vision	6.16	7.89	.39
23. muscle tension or soreness	10.50	9.44	.72
24. muscle cramps	6.73	7.78	.72
25. severe aches or pains	7.64	8.78	.64
26. weight change:gain of more than 10 lbs.	7.02	6.91	.41
27. diarrhea	3.88	4.94	.43
28. ringing in ears	4.96	6.70	.63
29. pelvic pain	4.29	5.52	.51

Alpha = .95

Scale $\bar{X}$ = 220.27

Scale SD = 149.43

Table 14 provides the inter-scale correlation matrix for all four of the physical health symptom scales. The high correlations among these scales indicates a low degree of independence and suggests the scales are measuring similar constructs.

Alcohol and Drug Use

The alcohol and drug use section from the 27-item Addiction Severity Index [ASI] (1990) was used to measure the extent of women's substance use. Although there were no reliability or validity studies of this instrument among the population of women with abusive partners, it elicited alcohol and drug information in an efficient manner and had been used extensively by researchers in the area of substance abuse.

Composite scores for the variables of alcohol use and drug use were tabulated based on a formula which combines items that are capable of showing change and that offer the most internally consistent estimate of problem status (Fureman, Parikh, Bragg, & McLellan, 1990). Six of the items not required for the computation of the composite score were eliminated because they presumed that respondents had a substance abuse problem and were inappropriate for this study (i.e. major substance problem, drug of choice). In addition, items designed to gain information about women's use of prescription drugs were added due to the fact

Table 14

Inter-scale Correlation Matrix for
Physical Health Symptom Scales

	2	3	4
1 Occurrence Physical Health Symptoms	.88**	.99**	.85**
2 Frequency Physical Health Symptoms	----	.99**	1.00**
3 Severity Physical Health Symptoms		----	.99**
4 Frequency X Severity Physical Health Symptoms			----

** P < .01

that prescription drug use appears to be a significant concern for this population.

The total composite score for the alcohol section involved a computational procedure that allowed for equal weighting of each of five variables. These items were: 1) days of alcohol use in the past 30 days, 2) days of alcohol use to intoxication in the past 30 days, 3) days bothered by alcohol problems in the past 30 days, 4) how much troubled by alcohol problems in the past 30 days, and 5) how important treatment was to her for these alcohol problems. The item asking how much money she had spent on alcohol in the past 30 days was also eliminated because the overwhelming majority of the participants in this study were on some type of government assistance (70.9%) and the question was thought to be difficult to interpret.

The total composite score for the drugs section used an identical procedure to create a scale score based on an equal weighting of eight variables. These variables included: 1) days of opiate or analgesic use (pain killers) in the past 30 days, 2) days of sedative or tranquilizer use in the past 30 days, 3) days of marijuana use in the past 30 days, 4) days of "other" substance use in the past 30 days, 5) days of using "more than one substance per day" in the past 30 days, 6) days bothered by drug problems in the past 30 days, 7) how much women were troubled by drug problems in the past 30 days, and 8) how important treatment was to her

for these drug problems. Items involving the use of drugs such as heroin, methadone, barbituates, anti-depressants, amphetamines, hallucinogens, inhalants, and cocaine derived drugs in the past 30 days were dropped from the scale due to little or no variance.

Further modifications were made for the ASI-alcohol section. Two additional items were dropped due to low corrected item-total correlations. These items were, how troubled she was by her alcohol problems in the past 30 days and how important treatment was to her for these alcohol problems. The item-total correlations for the final 3-item ASI-alcohol section ranged from .55 to .75, and the internal consistency estimate was .78. Despite the modifications made to the ASI-drug scale, the results were not promising. A reliability analysis was not possible for the ASI-drug section due to missing data. Table 15 presents the psychometric properties of the ASI-alcohol scale.

Risk for STDs and the AIDS virus

Risk for contracting STDs and the AIDS virus was assessed using a modified version of the 17-item Risk Assessment Questionnaire currently employed by the Ingham County Health Department. This questionnaire is used as an assessment tool by the Adult Health Clinic in Ingham County when a person comes in for either a STD or an AIDS screen. The questionnaire included items relating to the number of sex partners in the last year, use of alcohol or drugs

Table 15

**Psychometric Properties of The Addiction Severity Index:
Section on Alcohol Use**

Scale Items	Item Means	Item SDs	Corrected Item-Total Correlations
1. alcohol use in the past 30 days	9.90	10.49	.65
2. alcohol use to intoxication in the past 30 days	5.84	8.82	.75
3. number of days experienced alcohol problems in the past 30 days	14.53	12.29	.55

Alpha = .78

Scale $\bar{X}$ = 10.33

Scale SD = 18.19

during sex, and use of condoms and foam during sexual activity. Women were also asked about their knowledge of their partners' drug use.

The individual items were designed to assess whether or not a person had been engaging in behaviors that would put them "at-risk" for contracting a STD or the AIDS virus. Responding positively to any one of the risk behaviors suggests that women could be "at-risk" for contracting a STD or the AIDS virus. Therefore, risk for contracting STDs and the AIDS virus were scored item by item. Given the sensitive nature of these items, women were given the option of completing this section as part of the written interview, as opposed to being verbally interviewed.

Suicide-Related Behaviors

In this section, women were asked about different suicide- related behaviors. Information was gathered regarding how often each woman had thought about committing suicide in the past six months, whether or not she had told anyone she wanted to commit suicide, and whether or not she had ever attempted suicide. For the latter two items, frequencies were also measured to discover how often the women may have told someone else or attempted suicide.

Utilization of Health Services

Health services utilization was investigated through a set of questions created by the author. Women were asked questions about their utilization of each of the following

health services in the past six months: an emergency ward in a hospital, a medical doctor for an emergency, a medical doctor for a routine check-up or appointment, and a psychologist, therapist or psychiatrist. In addition, women were asked whether or not they were prescribed any medication during any of their visits to these health professionals. Frequencies were gathered for each of these variables. Finally, the absence or presence of medical insurance was assessed. For the purpose of clarification, Table 16 provides a complete listing of all the measures used in this research investigation and a summary of how each one was scored.

Table 16

Listing and Summary of Scoring Methods for Measures

<u>Measure</u>	<u>Type of Scoring Method</u>
Psychological Abuse	Summed frequency ratings
Physical Abuse:	
Presence/Absence	Summed occurrence (0/1) ratings
Frequency	Summed frequency ratings
Severity	Summed frequency ratings for items rated "severe"
Presence of Injury	Summed occurrence (0/1) ratings
Sexual Abuse	Summed occurrence (0/1) ratings
Physical Health Symptoms:	
Presence/Absence	Summed occurrence (0/1) ratings
Frequency	Summed frequency ratings
Severity	Mean of endorsed severity ratings
Frequency X Severity	Summed products of frequency by severity ratings
Alcohol Use	Computational formula allowing for equal weighting of each of the scale variables and yielding a composite score
Drug Use	Same as above
Risk for STDs/AIDS	Individual item by item
Suicide Related Behaviors	Individual item by item
Utilization of Health Services	Individual item by item

Results

Descriptive Analyses

Type of Abuse Experienced

Psychological abuse. For the eighty-three women currently in a relationship with their original assailants or someone new, nearly all of the women had experienced some form of psychological abuse (88.0%). Table 17 reports the percentages of women who experienced the differing types of psychological abuse in the past six months. Scale scores for psychological abuse began at 28 and ended at 107, out of a possible range of 28-112. The scale mean for the sample was 60.08, with a standard deviation of 25.11.

Physical abuse. The majority of women in the total sample had experienced at least one incident of physical abuse in the past six months (62.7%). Violent acts against these women ranged from being pushed or shoved (48.1%) to being raped (17.2%) and/or being threatened with a gun or knife (13.6%). Almost one-half of the sample reported experiencing acts of violence in the past six months that fell within the category of severe abuse (44.5%). Injuries resulting from women's experiences of physical abuse were reported by 40 percent of the women.

Table 18 lists the means, standard deviations, and ranges for the physical abuse scales based on the presence or absence of abuse, frequency of abuse, severity of the abuse, and the presence or absence of injuries for all of

Table 17

**Percentage of Women Who Experienced Different Incidents of
Psychological Abuse in the Past Six Months**

<u>Psychological Abuse Item</u>	<u>Percent (N=83)</u>
Current relationship refused to talk to her	57.8
Accused her of having sex with others	59.0
Told her of his sexual exploits	36.1
Refused to do things with her	62.7
Forbid her to go out without him	45.8
Controlled her money	51.8
Controlled her activities	66.3
Withheld approval, affection, or appreciation as punishment	51.8
Lied to her or deliberately misled her	67.5
Made contradictory demands of her	59.0
Called her names	63.9
Tried to humiliate her	60.2
Ignored or made light of her anger	71.1
Ignored or diminished her other feelings	72.3
Ridiculed or criticized her in public	51.8
Ridiculed or insulted her beliefs	57.8
Ridiculed her religion, race, heritage, or class	33.7
Ridiculed or insulted women as a group	57.8

Table 17 (cont'd)

<u>Psychological Abuse Item</u>	<u>Percent</u> (N=83)
Criticized strengths she is proud of	48.2
Criticized her intelligence	53.0
Criticized her physical appearance/sexual attractiveness	45.8
Criticized her family/friends	68.7
Harassed her family/friends	37.3
Discouraged her contact with family/friends	50.6
Threatened to hurt her family/friends	22.9
Broke or destroyed something important to her	36.1
Threatened to end the relationship if she did not do what he wanted	41.0
Forced her to leave her home	37.3
Abused or threatened to abuse pets **	6.0
Punished or deprived the kids when angry with her **	24.1
Threatened to take the kids if she left **	27.7
Left her somewhere with no way home **	20.5
Threatened to commit suicide when angry with her **	27.7

** denotes items deleted from the final scale

Table 18

**Descriptive Statistics for the Physical Abuse Scales:
Physical Abuse Weighted by Occurrence, Frequency, and
Severity, and the Presence or Absence of Injury**

	$\bar{X}$	SD	Range
Physical Abuse - Presence/Absence (Range 0-13)			
Total Sample (N=103)	3.37	3.68	0-13
Frequency of Abuse (Range 12-72)			
Total Sample (N=103)	18.04	9.17	12-60
Severity of Abuse (Range 7-42)			
Total Sample (N=103)	9.59	4.93	7-35
Presence / Absence of Injury (Range 0-4)			
Total Sample (N=103)	1.00	1.35	0-4

the participants. Table 19 presents the percentages of participants experiencing various degrees of abuse during the past six months. Table 20 presents the percentages of women who sustained injuries as a result of their abuse in the past six months.

Sexual abuse. Approximately one-fourth of the women interviewed had experienced at least one type of sexual abuse in the past six months (25.5%). Scores for the sexual abuse scale spanned the entire range from 0-3, with a scale mean of .52 (SD=.96).

Physical Health Symptoms

The vast majority of women reported experiencing at least one physical health symptom in the six months prior to their interview (99.1%). Physical health symptoms reported most frequently were sleep problems and headaches (both at 77.3%), while the physical health symptom reported the least frequently was pelvic pain (38.2%). Table 21 presents the percentages of women who experienced various physical health symptoms.

In addition to reporting the frequency of their physical health symptoms, women were also asked to rate the severity of their symptoms according to a four point rating scale ranging from "not a problem at all" to "very much a problem". The physical health symptoms perceived to be the most severe included: sleep problems ($\bar{X}=2.80$), constant fatigue ($\bar{X}=2.93$), and feeling low in energy ($\bar{X}=2.95$).

Table 19

**Percentage of Women Who Experienced Various Types of
Physical Abuse in the Past Six Months**

<u>Type of Violence</u>	<u>Percent</u> (N=110)
Clothes Torn or Glasses Broken	18.1
Pushed or Shoved	48.1
Grabbed	45.4
Slapped with Open Hand	25.4
Hit with a Fist	21.8
Kicked	17.2
Something Thrown at Her	30.9
Hit with Object	14.5
Almost Hit with Object	25.4
Assailant Drove Recklessly	20.9
Choked	19.1
Burned	4.5
Physically Restrained Her in Some Way	18.1
Forced Sexual Activity	17.2
Threatened with a Gun or Knife	13.6
Used Gun or Knife Against Her	2.7

Table 20

Percentage of Women Who Sustained Injuries as a Result
of the Abuse in the Past Six Months

<u>Type of Injury</u>	<u>Percent</u> (N=103)
Cuts/scrapes/bruises	30.9
Soreness without bruises	36.4
Burns, includes rug burns	20.0
Strains or sprains	12.7
Loose or broken teeth **	1.8
Broken bones or fractures **	6.4
Internal injuries **	3.6
Dislocated joints **	5.5
Pregnancy complications or miscarriage **	3.6
Knife or gunshot wound **	.9

** denotes items deleted from final scale

Table 21

**Percentages of Women Who Experienced Various Physical Health
Symptoms in the Past Six Months**

<u>Physical Health Symptom</u>	<u>N</u>	<u>Percent</u>
Sleep problems (can't fall asleep, wake up in the middle of night or early in the morning)	85	77.3
Nightmares	68	61.8
Weight change (gain or loss of more than 10 lbs.)	74	67.3
Back pain	70	62.7
Constipation	50	46.4
Dizziness	68	60.9
Diarrhea	42	39.1
Faintness	44	40.0
Constant fatigue	75	68.2
Migraine headaches	66	60.0
Headaches	85	77.3
Nausea and/or vomiting	48	43.6
Acid stomach or indigestion	66	60.0
Stomach pain	63	57.3
Hot or cold spells	47	42.7
Hands trembling	58	52.7
Heart pounding or racing	60	54.5
Poor appetite	67	60.9
Shortness of breath when not exercising or working hard	53	48.2
Numbness or tingling in parts of the body	56	50.9

Table 21 (cont'd)

<u>Physical Health Symptom</u>	<u>N</u>	<u>Percent</u>
Felt weak all over	65	59.1
Pains in her heart or chest	54	49.1
Feeling low in energy	97	88.2
Blurred vision	51	45.5
Muscle tension or soreness	80	72.7
Muscle cramps	59	53.6
Severe aches and pains	56	50.9
Ringing in her ears	48	43.6
Pelvic pain	43	38.2

Symptoms perceived to be of lesser severity included:

diarrhea ($\bar{X}=2.00$), ringing in her ears ($\bar{X}=2.06$),
constipation ($\bar{X}=2.12$), and dizziness ($\bar{X}=2.12$).

Finally, women were asked to indicate whether they believed that their physical health symptoms were a result of the abuse they had experienced. For the majority of health symptoms endorsed, at least one-half or more of the women felt that the abuse had contributed to their experiencing a particular health symptom. Table 22 presents the number of women experiencing each of the physical health symptoms, the mean and standard deviation for each of the health symptoms based on the original health severity index (range 1-4), as well as the percentage of respondents who felt that their symptoms were a consequence of their abuse. Due to the fact that the health severity index was recoded to a 5-point scale for the correlational analyses, the means and standard deviations for each of the health symptoms based on the revised health severity index (range 1-5) are presented in Table 23.

Thus far, all of the information provided has been based on the revised physical health symptom scale. Items were deleted that had low standard deviations or that did not fit the criteria utilizing corrected item-total correlations. However, in order not to lose any of the information that was collected for this thesis, Table 24 presents the percentage of women experiencing each of the

Table 22

Number of Women Experiencing Physical Health Symptoms,
Descriptive Statistics for the Health Severity Index,
and the Percentage of Women Who Rated the Symptom
as a Result of the Abuse they Experienced
(Original Scale: Range 1-4)

<u>Health Symptom</u>	<u>Health Severity Index</u>			<u>Result of Abuse</u>
	N	$\bar{X}$	SD	(%)
Sleep problems	85	2.80	.95	72.9
Nightmares	68	2.29	.98	66.2
Weight change	74	2.51	1.08	64.9
Back pain	70	2.77	1.04	62.3
Constipation	50	2.12	.98	39.2
Dizziness	68	2.12	.89	52.2
Diarrhea	42	2.00	.83	51.2
Faintness	44	2.18	.95	56.8
Constant fatigue	75	2.93	.84	65.3
Migraine headaches	66	2.68	.96	69.7
Headaches	85	2.51	.92	70.6
Nausea and/or vomiting	48	2.31	.97	50.0
Acid stomach/indigestion	56	2.30	.99	51.5
Stomach pain	63	2.40	.96	55.6
Hot or cold spells	47	2.17	.96	40.4
Hands trembling	58	2.17	.96	63.8
Heart pounding or racing	60	2.40	.94	71.7
Poor appetite	67	2.39	1.10	68.7
Shortness of breath when when not exercising or working hard	53	2.60	.91	52.8

Table 22 (cont'd)

<u>Physical Health Symptom</u>	<u>Health Severity Index</u>			<u>Result of Abuse</u>
	N	$\bar{X}$	SD	(%)
Numbness or tingling in parts of the body	56	2.29	1.06	42.9
Felt weak all over	65	2.65	1.02	61.5
Pains in heart/chest	54	2.57	.92	72.2
Feeling low in energy	97	2.95	.92	56.7
Blurred vision	51	2.37	1.06	52.9
Muscle tension/soreness	80	2.45	1.09	61.2
Muscle cramps	59	2.36	.96	42.4
Severe aches & pains	56	2.63	1.02	60.7
Ringling in her ears	48	2.06	1.00	43.8
Pelvic pain	43	2.26	.90	35.7

Table 23

Descriptive Statistics for the Health Severity Index
(Revised Scale: Range 1-5)

<u>Physical Health Symptom</u>	<u>Health Severity Index</u>	
	$\bar{X}$	SD
Sleep problems	3.16	1.44
Nightmares	2.42	1.36
Weight change	2.69	1.48
Back pain	2.76	1.57
Constipation	1.96	1.25
Dizziness	2.31	1.25
Diarrhea	1.76	1.10
Faintness	1.87	1.23
Constant fatigue	3.00	1.54
Migraine headaches	2.61	1.52
Headaches	2.94	1.33
Nausea and/or vomiting	2.01	1.32
Acid stomach/indigestion	2.38	1.37
Stomach pain	2.37	1.39
Hot or cold spells	1.93	1.25
Hands trembling	2.15	1.29
Heart pounding or racing	2.31	1.39
Poor appetite	2.46	1.45
Shortness of breath when when not exercising or working hard	2.26	1.45

Table 23 (cont'd)

<u>Physical Health Symptom</u>	<u>Health Severity Index</u>	
	$\bar{X}$	SD
Numbness or tingling in parts of the body	2.16	1.37
Felt weak all over	2.56	1.52
Pains in heart/chest	2.26	1.44
Feeling low in energy	3.60	1.29
Blurred vision	2.10	1.39
Muscle tension/soreness	2.78	1.44
Muscle cramps	2.26	1.37
Severe aches & pains	2.34	1.50
Ringling in her ears	1.86	1.16
Pelvic pain	1.88	1.24

Table 24

Percentage of Women Experiencing Physical Health Symptoms
for Items not Included in the Revised Physical Health Scale,
and the Percentage of Women Who Rated the Symptom as a
Result of the Abuse they Experienced

<u>Physical Health Symptom</u>	<u>N</u>	<u>Percent</u>	<u>Result of Abuse (%)</u>
Ulcers	14	12.7	85.7
Seizures	5	4.5	20.0
Choking sensations	16	14.5	62.5
Blacking/passing out	14	12.7	71.4
Anemia	35	31.8	31.4
High blood pressure	24	21.8	70.8
Stuffy nose/head	84	76.4	15.5
Acne	47	42.7	34.0
Bruises	56	50.9	55.4
Nosebleeds	19	17.3	47.4
Pulled/strained muscles	41	37.3	48.8
Arthritis	29	26.4	27.6
Teeth/gum problems	45	40.9	24.4
Ear aches	33	30.0	33.3
Asthma	18	15.5	38.9
Allergies	37	33.6	16.2
Vaginal bleeding/discharge	24	21.8	29.2
Missed menstrual periods	27	24.5	33.3
Unwanted pregnancy	7	6.4	28.6
Painful intercourse	23	20.9	52.2
Infertility	5	4.6	40.0

Table 24 (cont'd)

<u>Physical Health Symptom</u>	<u>N</u>	<u>Percent</u>	<u>Result of Abuse (%)</u>
Rectal bleeding	6	5.5	16.7
Bladder infection	27	24.5	37.0
Painful urination	17	15.5	29.4
Colds/flu	77	70.0	15.6
Viruses	31	28.2	12.9

physical health symptoms as well as the percentage of women who felt that their symptoms were a consequence of their abuse for the items that were discarded in subsequent analyses. Descriptive statistics for each of the physical health symptom scales are indicated in Table 25. This includes the Symptom Scale, indicating the presence or absence of the physical health symptoms; the Frequency of Health Symptom Scale, indicating the frequency with which health symptoms are experienced; the Health Severity Index, indicating a severity rating based on the physical health symptoms; and the Frequency X Severity Health Scale, yielding a multiplicative score based on both frequency and severity.

Women's Experiences of Suicide-Related Variables

A substantial percentage of the women interviewed reported having suicidal thoughts in the past six months ($n=39$, 35.5%). Of the total sample ($N=110$), twenty-eight women reported thinking about suicide "once a month or less" in the past six months (25.5%), seven women reported thinking about suicide "2 or 3 times a month" in the past six months (6.4%), two women stated that they thought about suicide "3 or 4 times a week" in the past six months (1.8%), and two women reported that they thought about suicide "more than 4 times a week" in the past six months (1.8%). Many of the women who had thought about committing suicide had also told someone else they wanted to kill themselves ($N=27$,

Table 25

Descriptive Statistics for each of the Physical Health Scales: the Symptom Scale, the Frequency of Health Symptoms Scale, the Health Severity Index, and the Frequency X Severity Health Scale

Total Sample (N=110)	<u>X̄</u>	<u>SD</u>	<u>Range</u>
<u>Symptom Scale</u> Range (0-29)	16.33	7.92	0-28
<u>Frequency of Health Symptoms Scale</u> Range (29-174)	68.89	29.09	29-152
<u>Health Severity Index</u> Range (1.0-5.0)	2.37	.55	1.0-3.7
<u>Frequency X Severity Health Scale</u> Range (29-870)	220.27	149.43	29-724

71.1%). Nine of the women interviewed disclosed they had attempted to commit suicide in the past (8.2%).

Current Utilization of Alcohol and Drugs

Alcohol was the most commonly used substance among the participants. Most of the women interviewed reported that they had used alcohol at some time in their lives (91.8%), and one half of the women indicated that they had used alcohol in the past 30 days (50.9%). Examination of reported abuse of alcohol within the sample showed that approximately three quarters of the women admitted to having used "alcohol to intoxication" at some time in their lives (72.7%), while nearly one third of the women reported using "alcohol to intoxication" in the past 30 days (30.9%).

The use of drugs among the women who were interviewed was not as common. The drug that had been used the most often was marijuana. Almost three fourths of the women had used marijuana at some point in their lives (73.6%), and one fifth of the women had used marijuana in the past 30 days (20.9%). The Addiction Severity Index (ASI) mandates the utilization of a complete listing of drugs that may have been used in the past, or currently, by study participants. Drugs that were not used by any of our participants in the past 30 days included heroin, methadone, hallucinogens/acid, and inhalants. Drugs that were currently being used, i.e. past 30 day use, tended to be drugs such as opiates and analgesics (pain killers), sedatives and tranquilizers, and drugs which fell into the "other" category. These were

typically legal over-the-counter drugs such as tylenol and motrin, with many women mentioning nicotine as well. The category that examined the use of more than one substance per day most often was a result of combining the aforementioned drugs with the use of alcohol. Table 26 summarizes the percentage of women who may have ever used a particular substance at any point during their lives, as well as the percentage of women who had used that substance within the past 30 days.

Women were additionally requested to respond to whether or not they had used alcohol or drugs as a way of relieving stress. Over one half of the women who were asked if they had ever used alcohol to relieve stress responded "yes" (52.5%), whereas just under one half of the women who were asked if they had used alcohol to relieve stress in the past six months reported that they had (45.9%). Women were also asked these same questions regarding their use of prescription drugs and non-prescribed drugs.

Interesting is the finding that while approximately one half of the women reported the use of alcohol to relieve stress, when asked if they perceived themselves to have a problem with alcohol only 10 percent felt that they were a "heavy/problem drinker" or an "alcoholic". Table 27 indicates the percentage of respondents who reported using alcohol, prescribed drugs, and/or non-prescribed drugs to

Table 26

Percentage of Women Who have Ever Used Alcohol or Drugs
during their Lives and the Percentage of Women
Who have Used Alcohol or Drugs within the Past 30 Days

<u>Substance</u>	<u>Ever Used?</u> (N=110) (%)	<u>Past 30 Days?</u> (N=110) (%)
Alcohol: any use at all	91.8	50.9
Alcohol: to intoxication	72.7	30.9
Heroin	6.4	0.0
Methadone	0.9	0.0
Other opiates/analgesics	42.7	11.8
Barbituates	8.2	0.9
Other sedatives/hypnotics or tranquilizers	34.6	10.9
Anti-depressants	20.9	4.5
Amphetamines/uppers	30.0	3.6
Marijuana	73.6	20.9
Hallucinogens	19.1	0.0
Inhalants	5.5	0.0
Cocaine or crack	36.4	5.5
"Other" category	19.1	14.6
Using more than one substance per day	51.8	21.8

Table 27

Percentage of Women who have Used Alcohol, Prescription
Drugs and/or Non-Prescribed Drugs to Relieve Stress
and the Self-Ratings of Women in Response to
Perceiving Themselves as having a Problem with
Alcohol or Drugs

<u>Substance</u>	<u>Ever Used to Relieve Stress</u>		<u>Used to Relieve Stress in Past 6 Mos</u>	
	N=40	(%)	N=98	(%)
Alcohol	21	52.5	45	45.9
Prescribed Drugs	11	27.5	18	18.4
Non-prescribed Drugs	15	37.5	25	25.5
<u>Self-Rating Category</u>	Total N=109		(%)	
No problems with alcohol	82		75.2	
Recovering alcoholic	16		14.7	
Heavy or problem drinker	2		1.8	
Alcoholic	9		8.3	
No problems with drugs	86		78.9	
Recovering addict	13		11.9	
Heavy or problem drug user	6		5.5	
Addict	4		3.7	

relieve stress ever in their lives or in the past 6 months. It also indicates the self-ratings of respondents with regard to whether they perceived themselves to have a problem with alcohol and/or drugs, and the percentage of respondents within each category.

Further probing regarding respondents' possible histories of alcohol and drug abuse revealed that only three women had ever been treated in an inpatient setting for alcohol abuse (2.8%), three women had been treated in an outpatient setting for alcohol abuse (2.8%), and 17 women had participated in an Alcoholics Anonymous program (15.6%). Identical questions concerning drug abuse revealed that six women had been treated in an inpatient setting for drug abuse (5.5%), five women had been treated in an outpatient setting for drug abuse (4.6%), and eleven women had participated in a Narcotics Anonymous program (10.1%).

While the overall majority of the women did not feel they were experiencing problems with regard to alcohol or drug use, approximately one fifth of the women interviewed reported experiencing alcohol and drug problems within the past 30 days. Problems with alcohol and drugs were defined as cravings, withdrawal symptoms, disturbing effects of intoxication, and/or wanting to stop and being unable to do so. If women reported that they had experienced alcohol or drug problems in the past 30 days, they were subsequently asked to rate how troubled they were by these problems and the importance of treatment for these problems. Table 28

reports the mean and standard deviation for each of these items and the percentage of women in each of the rated categories.

As previously mentioned, the alcohol and drug subscales of the Addiction Severity Index (ASI) were revised to create a more meaningful scale score based on this sample. The mean scale score for the alcohol section of the ASI was .106, with a standard deviation of .21 and a range from .00 to .91. The mean scale score for the drugs section of the ASI was .09, with a standard deviation of .16 and a range from .00 to .63.

Potential Exposure to STDs and the AIDS virus

In addition to the oral interviews conducted, a written section of the interview was administered in an effort to assess the extent to which exposure to STDs and the AIDS virus were immediate health concerns for these women. Table 29 summarizes the results of the written interview. It provides the percentages of women engaging in each of the behaviors considered to increase one's risk for being exposed to STDs or the AIDS virus. This includes the women's drug-related behaviors, engaging in sex with multiple casual partners and/or one time anonymous sex partners, the use of condoms and spermicides while having sex, and her partner's drug-related behaviors.

Table 28

**Descriptive Statistics for Items Measuring Women's
Experiences of Alcohol and Drugs Problems in the past 30
days and the Percentage of Women in Each of the
Rating Categories**

Women Who Experienced Alcohol Problems

N	(%)	$\bar{X}$ (# of days)	SD	Range
22	20.2	2.84	7.91	0-30

Troubled by Alcohol Problems

	N	(%)
Not at all	6	27.3
Slightly	9	40.9
Moderately	1	4.5
Considerably	1	4.5
Extremely	5	22.7

($\bar{X}$ =2.55) (SD=1.55)

Importance of Treatment

	N(%)
Not at all	50.0
Slightly	29.1
Moderately	14.5
Considerably	00.0
Extremely	86.4

($\bar{X}$ =2.66) (SD=1.89)

Women Who Experienced Drug Problems

N	(%)	$\bar{X}$ (# of days)	SD	Range
19	17.4	2.44	7.12	0-30

Troubled by Drug Problems

	N	(%)
Not at all	3	15.8
Slightly	6	31.6
Moderately	0	0.0
Considerably	4	21.1
Extremely	6	31.6

($\bar{X}$ =3.21) (SD=1.58)

Importance of Treatment

	N(%)
Not at all	21.1
Slightly	15.3
Moderately	20.5
Considerably	20.5
Extremely	22.6

($\bar{X}$ =3.68) (SD=1.67)

Table 29

**Percentage of Women Engaging in Behaviors Considered to
Increase Risk of Exposure to STDs or the AIDS virus**

<u>Behavior</u>	<u>N</u>	<u>(%)</u>
Sharing needles to shoot drugs:		
<u>since 1978</u> (N=40)	2	5.0
<u>past 6 months</u> (N=72)	3	4.2
Using dirty needles:		
<u>since 1978</u> (N=40)	1	2.5
<u>past 6 months</u> (N=71)	3	4.2
Engaging in high-risk behavior with someone who is HIV-positive:		
<u>ever in life</u> (N=35)	1	2.9
<u>past 6 months</u> (N=68)	0	0.0
Engaging in sex with multiple casual partners:		
<u>since 1978</u> (N=40)	12	30.0
<u>past 6 months</u> (N=84)	9	10.7
Engaging in sex with one-time anonymous partners:		
<u>since 1978</u> (N=40)	7	17.5
<u>past 6 months</u> (N=84)	3	3.6
Paying/receiving money for sex:		
<u>since 1978</u> (N=40)	3	7.5
<u>past 6 months</u> (N=59)	4	6.8
Had sexual partners who shot drugs:		
<u>since 1978</u> (N=34)	6	17.6
<u>past 6 months</u> (N=61)	2	3.3
Had sexual partners who lived in a big city, i.e. Detroit, Chicago:		
<u>since 1978</u> (N=40)	17	42.5
<u>past 6 months</u> (N=72)	14	19.4
Has she or her partner received blood transfusion/hemophilia treatments <u>between 1978 and 1985</u> : (N=110)	3	2.7
Engaging in sex and using condoms and spermicides "seldom" or "never":		
<u>since 1978</u> (N=40)	18	45.0
<u>past 6 months</u> (N=84)	52	61.9

While the majority of women did not engage in drug-related behavior that would increase their chances of being exposed to the AIDS virus, other behaviors did emerge that could pose a risk for women who were interviewed. The threat of a sexual assault is quite high for women with abusive partners, even when a woman is separated from her assailant. Most notable was the lack of use of condoms and spermicides during sexual intercourse in the past six months (61.9%). This finding may also be influenced by women's experiences of sexual violence. Most of the women interviewed, however, reported not having any sexual partners (23.6%), or having only one or two partners in the past six months (73.6%). Nevertheless, if women are only in short term relationships and changing partners relatively frequently, their lack of use of protection may pose a substantial risk to being exposed to STDs and/or the AIDS virus.

A final variable of interest was whether or not the women had been tested for HIV. Just over half of the women who were asked if they had ever been tested for HIV reported that they had been tested (53.8%). Similarly, approximately half of the women who were asked if they had been tested for HIV in the past six months responded affirmatively (52.2%).

Utilization of Health-Related Services

Women tended to access health-related services quite often given the "past six months" time frame. More women utilized medical doctors for routine check-ups than any

other health-related service (60.9%). Medical emergency rooms and some form of therapy, asked as visits to psychologists, therapists, or psychiatrists, were utilized equally by the women (both at 31.8%). Table 30 presents the percentages of women accessing the different types of health-related services and the percentage of women with medical insurance. Additionally, Table 30 indicates the mean number of visits made to each of the previously mentioned health services. Finally, it presents the percentage of women who were given prescriptions at any of their visits in the past six months as well as the mean number of prescriptions given.

In summary, the women in this study had experienced numerous physical health symptoms in the past six months, ranging from sleep problems and headaches to pelvic pain and diarrhea. Many of the participants felt that the abuse that they had endured, psychological, physical, and sexual, contributed to their experiences of these health symptoms. Ulcers, sleep problems, and chest pains were the physical health symptoms most often thought to be related to past abusive experiences. Over one-third of the participants reported suicidal thoughts in the past six months, however,

Table 30

Percentage of Women Accessing Various Health-Related Services and Mean Number of Visits, Percentage of Women with Medical Insurance, Percentage of Women Given Prescriptions, and Mean Number of Prescriptions Given

<u>Health Service</u>	N	(%)	$\bar{X}$	SD	Range
Visited an Emergency Ward in a Hospital	45	40.9			
# of Times			3.09	4.17	1-24
Visited a Medical Doctor for an Emergency	35	31.8			
# of Times			2.77	3.31	1-14
Visited a Medical Doctor for a Routine Check-up	67	60.9			
# of Times			3.60	4.32	1-24
Visited a Psychologist, Therapist, or Psychiatrist	35	31.8			
# of Times			11.9	9.54	1-24
Women with/Prescriptions	56	50.9			
# of Prescriptions Given			3.84	6.14	1-40
Private Insurance	19	17.3			
Medicare/Medicaid	68	61.8			
No Medical Insurance	23	20.9			

reported instances of actual suicide attempts was much lower. Women reported the use of alcohol and drugs, both prescribed and non-prescribed, to relieve stress, but were reluctant to express any concerns with their alcohol or drug use. Over one-half of the women had engaged in unprotected sexual intercourse in the past six months, but no other major risk factors for contracting an STD or the AIDS virus emerged. Finally, the utilization rates of health-related services were quite high. At least one in three women had visited an emergency ward in a hospital, visited a medical doctor for an emergency, visited a medical doctor for a routine check-up, and/or visited a psychologist, therapist, or psychiatrist in the past six months.

Correlational Analyses

Physical Health Symptoms and Abuse History

As previously discussed, both abuse history and physical health symptoms were organized into several different scales. This was done to determine whether the method of weighting the scale had an impact on the type of results found. The physical health symptoms were weighted in four separate ways. First, the presence or absence of a symptom was summed to form the Occurrence of Health Symptoms scale; second, the frequency of each of physical health symptoms was recorded and summed to form the Frequency of Health Symptoms scale; next, a severity rating for each item endorsed was recorded and a mean score tabulated to form the Severity of Health Symptoms scale; and lastly, a

multiplicative scale was generated to give a rating based on both frequency and severity, the Frequency weighted by Severity of Health Symptoms scale.

The various ways in which abuse history was weighted were: 1) in terms of an incidence based scale that summed the presence or absence of physically abusive incidents, the Occurrence of Physical Abuse scale; 2) in terms of a frequency based psychological abuse scale that summed how often women experienced each of the psychologically abusive acts, the Frequency of Psychological Abuse scale; 3) in terms of a frequency based physical abuse scale which summed how often each of the physically abusive incidents occurred, the Frequency of Physical Abuse scale; 4) in terms of a severity based index that summed how often each of the physically abusive incidents that presented great risk for bodily injury occurred, the Severity of Abuse scale; 5) in terms of an incidence based injury scale that summed the number of injuries sustained, the Occurrence of Injury scale; and 6) an incidence based sexual abuse scale that summed the presence or absence of sexually abusive incidents, the Occurrence of Sexual Abuse scale.

The relationships among each of the physical health symptom scales and the abuse history scales were examined with Pearson Correlations between each of these variables. As Table 31 demonstrates, there were moderate correlations

Table 31

Pearson Correlation Between Physical Health Symptom Scales
and Abuse Scales (N=110)

	Symptom	Hlthfreq	Hlthsev	Hfreqsev
Abuse	.43**	.52**	.49**	.50**
Phyabus	.35**	.50**	.46**	.50**
Sevabus	.37**	.53**	.48**	.52**
Injury	.35**	.39**	.37**	.37**
Psyabus	.45**	.53**	.55**	.54**
Sexabus	.42**	.58**	.53**	.58**

** P < .01

Abuse: Presence / absence of physical abuse

Phyabus: Frequency of physical abuse

Sevabus: Frequency of violent acts that present greater
risk of serious injury to women

Injury: Presence / absence of injuries

Psyabus: Frequency of psychological abuse

Sexabus: Presence / absence of sexual abuse

Symptom: Presence / absence of physical health symptoms

Hlthfreq: Frequency of physical health symptoms

Hlthsev: Severity of physical health symptoms

Hfreqsev: Frequency X Severity of physical health symptoms

between all of these variables which ranged from $r=.35$ to $r=.58$, ($P<.05$). These results indicated that the women's experiences of abuse were indeed related to their experiencing various health symptoms, and that as the abuse increased, the number, frequency, and severity of physical health symptoms increased as well.

Notable is the finding that all of the abuse history scales were moderately correlated with all of the physical health symptom scales without exception. This suggests that independent of the manner in which physical abuse was weighted, identical findings emerged. Therefore, an examination of the presence/absence of abuse, versus the frequency of abuse, versus the severity of abuse suggests these are not distinctly different constructs, at least for the purposes of examining women's physical health.

Sexual Violence and Gynecological Symptoms

The relationships between experiences of sexual violence and the presence of various gynecological symptoms in the past six months were also examined using Pearson Correlations. The gynecological variables that were examined included: pelvic pain, vaginal bleeding or discharge other than periods, missed menstrual periods, unwanted pregnancies, painful intercourse, infertility, rectal bleeding, and miscarriages.

The gynecological variables of rectal bleeding and miscarriages showed moderate correlations with the experience of sexual violence in the past six months, $r=.21$

and $r=.26$, respectively. Both of these correlations were significant at the $P<.05$ level. Positive correlations were found between the experience of sexual violence and pelvic pain ($r=.27$), vaginal bleeding or discharge ($r=.37$), and painful intercourse ($r=.47$). All of these correlations were significant at the $P<.05$ level. No significant correlations were found between the experience of sexual violence and missed menstrual periods, unwanted pregnancies, and infertility.

Physical Health Symptoms and Relationship to Assailant

Another research question dealt with the effect of being separated versus not separated from an assailant on the presence, frequency, and severity of physical health symptoms. Pearson Correlations were performed between assailant relationship status and the four physical health symptom scales. No significant relationships were found between assailant relationship status and the presence of physical health symptoms, nor between relationship status and the frequency, severity, or frequency by severity scales of physical health symptoms.

Physical Health Symptoms and Other Health Variables

Suicide Related Variables. Pearson Correlations were used to examine the relationships between the physical health symptom scales and the following suicide related variables: frequency of suicidal thoughts in the past six months, telling someone about her suicidal thoughts, and suicide attempts. No significant correlations were found

between the physical health symptom scales and telling someone about her suicidal thoughts, nor between the health symptom scales and suicide attempts. Frequency of suicidal thoughts in the past six months, however, was correlated with the physical health symptom scales. Experiences of suicidal thoughts were associated with more frequent health symptoms ($r=.60$, $P<.05$), the severity of health symptoms ($r=.51$, $P<.05$), and more frequent and severe health symptoms ($r=.59$, $P<.05$). Experiences of suicidal thoughts were moderately related to the presence of physical health symptoms ($r=.41$, $P<.05$).

Utilization of Alcohol and/or Drugs. The following variables related to alcohol and drug use were examined: the computed score for the ASI regarding alcohol use; the computed score for the ASI regarding drug use; past thirty day use of alcohol, any use at all; past thirty day use of sedatives, hypnotics, or tranquilizers; past thirty day use of "other" substances; and the past six months use of alcohol, prescription drugs, and non-prescribed to relieve stress. Alcohol use to intoxication and the drug related variables not mentioned above did not have enough respondents endorsing the past 30 day use of these drugs to utilize them in correlational analyses.

Pearson correlations were used to examine the potential relationships between each of the above variables and the physical health symptom scales. No significant correlations were found between the computed ASI scores for alcohol or

drugs and the physical health symptom scales. Similarly, no significant correlations were noted between the physical health scales and the past thirty day use of alcohol or any of the drugs. Finally, Pearson Correlations performed between past six months use of alcohol, prescription drugs, and non-prescribed drugs to relieve stress with the four physical health symptom scales did not produce any significant results.

Presence of At-Risk Behaviors for STDs and the AIDS virus. Although it was originally intended that the potential relationships between the variables representing potential risk for STDs and the AIDS virus and the physical health symptoms be examined, these analyses could not be performed. Variables which measured the presence of at-risk behaviors for STDs and the AIDS virus were not endorsed in large enough numbers for the performance of subsequent analyses.

Utilization of Health Services. The relationship between the physical health symptom scales and the utilization of health services was examined. The variables used in this analysis were: utilizing an emergency ward in a hospital, visiting a medical doctor for an emergency, visiting a medical doctor for a routine check-up or appointment, visiting a psychologist, therapist, or psychiatrist, and whether or not the woman was given any prescriptions at the time of any of her visits.

No significant correlations were found between any of the physical health symptom scales and utilizing an emergency ward in a hospital, visiting a medical doctor for a routine check-up or appointment, or visiting a psychologist, therapist, or psychiatrist.

However, there were moderate correlations between having prescriptions written during her visits to health professionals and the presence of physical health symptoms ($r=.36$), having prescriptions written and the frequency of physical health symptoms ($r=.33$), having prescriptions written and the severity of physical health symptoms ($r=.33$), as well as having prescriptions written and the frequency by severity scale for physical health symptoms ($r=.32$). Thus, these correlations indicate that the greater number of physical health symptoms that exist, the more frequent the physical health symptoms, and the more severe the health symptoms become, the more likely a woman was to receive a prescription at the time of her visit to a health professional. All of the above correlations were significant at the $P<.05$ level.

Additionally, visiting a medical doctor for an emergency did exhibit moderate correlations with the presence of physical health symptoms ($r=.22$), with the frequency of physical health symptoms ($r=.24$), with the severity of physical health symptoms ($r=.22$), and with the frequency by severity scale of physical health symptoms ($r=.23$). All of these correlations are significant at the

$P < .05$ level. The correlations found here indicate that the greater number of physical health symptoms experienced, the more often the health symptoms are experienced, and the more severe the health symptoms are perceived to be, the more likely a woman was to visit a medical doctor for an emergency.

Abuse History and Other Health Related Variables

Pearson Correlations were performed between each of the abuse scales and the variables relating to suicide, current utilization of alcohol and drugs, and the utilization of health related services.

Only one moderately strong correlation emerged that was significant at the $P < .05$ level. This was the correlation between experiencing injuries and the use of non-prescribed drugs to relieve stress in the past six months ($r = .54$). This correlation suggests that the more injuries a woman experienced, the more likely she was to have used non-prescribed drugs to relieve stress in the past six months.

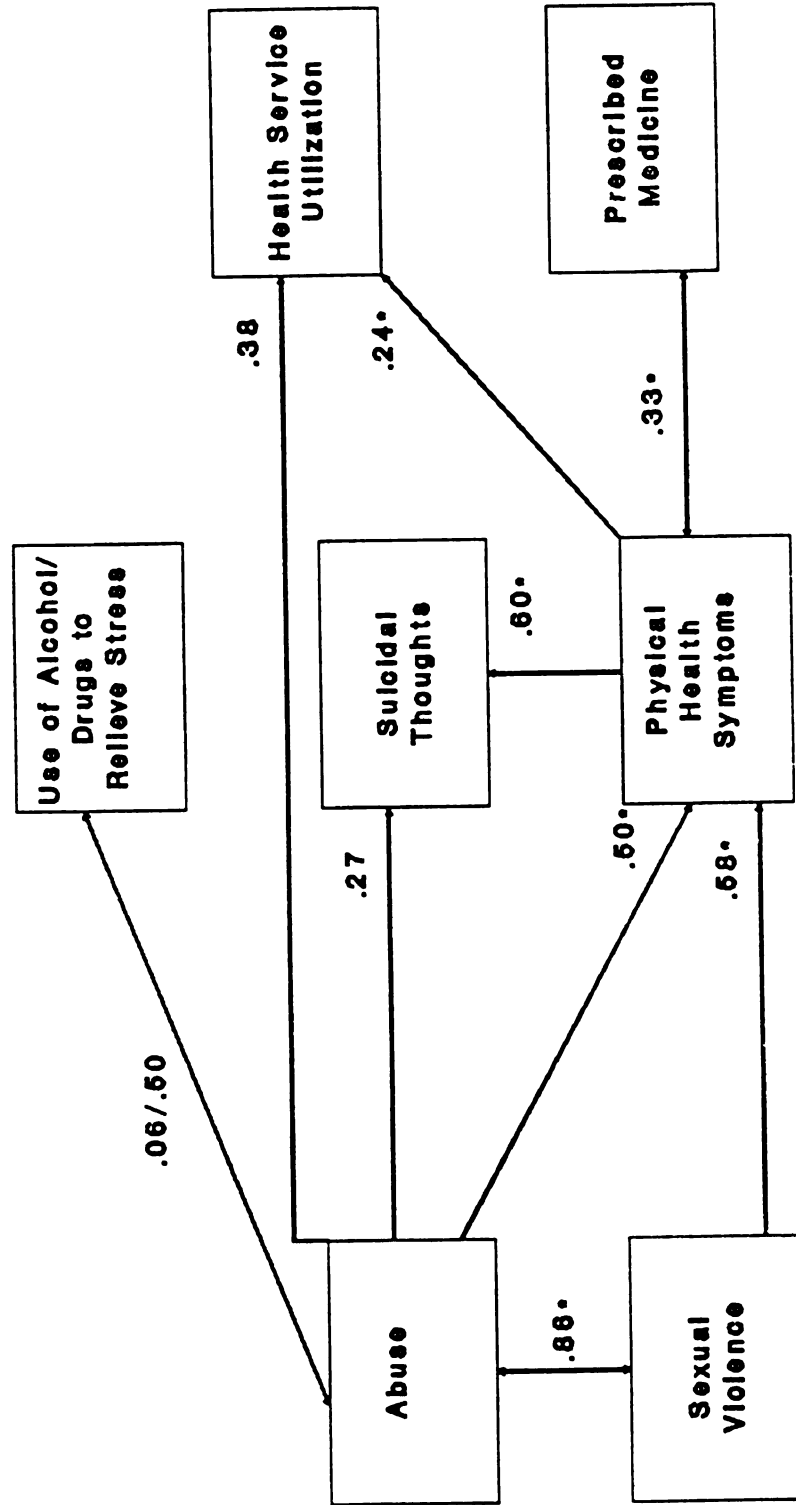
No significant correlations emerged between any of the abuse history scales and the suicide related variables. Nor were any significant correlations found between any of the abuse variables and any of the other variables related to current utilization of alcohol or drugs. Finally, no significant relationships were found between any of the abuse variables and any of the variables related to the use of health services.

In summary, there appears to be a moderate relationship between abuse history and physical health symptoms. This relationship appeared regardless of the manner in which abuse history and physical health symptoms was weighted and scored. Specific gynecological symptoms such as pelvic pain, vaginal bleeding or discharge, and painful intercourse were related to experiences of sexual violence. Additionally, the physical health symptom scales demonstrated relationships with frequency of suicidal thoughts in the past six months, visiting a medical doctor for an emergency, and having a prescription written during a visit to a health professional. No relationships were found between the physical health symptom scales and any of the alcohol or drug-related variables, the presence of at-risk behaviors for contracting a STD or the AIDS virus, or her relationship to her assailant, i.e. separated or not separated. Moreover, no relationships were found between any of the abuse history scales and the variables relating to suicide, current utilization of alcohol and drugs, and the utilization of health-related services, with one exception. The exception was a relationship between experiencing injuries and the use of non-prescribed drugs to relieve stress in the past six months.

In an attempt to further clarify the findings of this research, Figure 1 presents an exploratory path model for the variables that were measured. While no causal relationships were tested within the present research,

relationships among the different variables were detected. The numbers displayed on the pathways are the correlations between the variables, and an asterisk next to a correlation indicates significance at the $p < .05$ level. In this figure, the correlations presented for abuse and physical health symptoms are based on the frequency scales for each of these variables. Health service utilization was not measured as a single variable, therefore, in Figure 1 health service utilization indicates visiting a medical doctor for an emergency.

Figure 1

Path Model of the Effects of Domestic Violence* - $p < .05$

Discussion

Introduction

Woman-battering continues to be a widespread social problem in our country and around the world. Increasingly, advocates of the women's movement and researchers are calling attention to the multiple needs of women with abusive partners. Included in this list are the physical health needs of these women. Medical leaders have recently called upon doctors to recognize domestic violence as a new medical priority. This section examines the preliminary results of a study intended to assess the impact of an abusive relationship on women's physical health. Limitations of this study as well as the implications of this research are discussed.

Major Descriptive Findings

Women's Experiences of Abuse

Psychological abuse was experienced in nearly all of the relationships examined. Behaviors that are dominating and controlling are frequently cited as typical of assailants. Therefore, it is not surprising that all of the women who had recently left the shelter reported incidents of psychological abuse. However, only one-fourth (23.7%) of the women interviewed at the follow-up time periods were continuing their relationship with their original assailants. The high prevalence of psychological abuse indicates that even in the absence of physically abusive

relationships many of these women were not free from relationships that are psychologically abusive.

Nearly two thirds of the total sample had experienced at least one incident of physical abuse in the past six months. While a portion of the women had recently left a crisis situation, i.e. residing at the shelter, this is still a significant number of women given the majority of the sample were interviewed at follow-up time periods.

One out of four women had experienced at least one form of sexual violence in the past six months, corroborating the findings of other research that marital rape co-occurs with other severe forms of nonsexual violence (Campbell & Alford, 1989; Shields & Hanneke, 1983; Stark & Flitcraft, 1982). It is imperative to note, however, that the women were only asked to report on the past six months. Since violence within intimate relationships is ongoing and not an isolated event, thinking in terms of "recent experiences of abuse", instead of simply "experiences of abuse" is more appropriate.

Health Problems for Women with Abusive Partners

Perhaps most startling were the results from the questions regarding the physical health symptom scale. Not only did 99 percent of the women endorse at least one symptom, but the mean number of health symptoms for the entire sample was 16.33, on a scale with a range from 0 to 29. Therefore, while there is evidence of a strong direct relationship between current abuse and physical health

symptoms, there may also be long-term consequences on women's physical health for women who have experienced abuse in their relationships. It is imperative to note this scale asked women only to think about the last six months. The physical symptoms reported by women, such as sleep problems, nightmares, chest pains, heart pounding, back pain, pelvic pain, headaches, migraines, feeling low in energy, and constant fatigue, support findings by other researchers that women with abusive partners are often bothered by these health problems (Rodriguez, 1989; Kerouac et al., 1986; Hilberman & Munson, 1977; Stark & Flitcraft, 1982; Straus & Gelles, 1987; Sandelowski, 1981).

For 23 of the 29 items on the final physical health symptom scale, over one-half of the women believed that the symptom was a result of the abuse they had experienced. While it is impossible to determine the validity of these findings, this means that for approximately five of every six health symptoms, the majority of women pointed toward their abuse as the significant contributing factor. Physical health symptoms most frequently thought to be a result of their abuse included sleep problems, headaches, heart pounding or racing, and pains in her heart or chest. Although not included on the final scale, ulcers, blacking out or passing out, and high blood pressure topped the list of symptoms that women felt were a consequence of the abuse they had experienced.

Suicide - Related Variables

Approximately one out of three women reported having suicidal thoughts in the past six months. This finding is in accordance with other studies that have established the prevalence of suicidal thoughts to be exceptionally high among battered women (Amaro et al., 1990; Koss, 1990; Mills et al., 1984; Stark & Flitcraft, 1987). The majority of the women who were having these thoughts reported they told someone else they wanted to kill themselves.

The actual number of women who reported ever attempting suicide, however, was much lower than the figure reported in Gayford's 1975 study. While Gayford found that 50 percent of the women staying at a battered women's shelter had tried to commit suicide at least once, only 8.2 percent of the women in this study reported that they had ever attempted suicide. It is impossible to determine whether differing methodologies account for the discrepancy found between the Gayford's study and the present research. Nearly 17 years later, perhaps services and protections for women with abusive partners have improved enough so that women feel they have more choices now than before.

Women's Use of Alcohol and Drugs

A significant portion of women in this sample were abusing either alcohol or drugs. Nearly one out of two women reported the use of alcohol to relieve stress in the past six months. With regard to drugs, one in five women reported using prescription drugs to relieve stress and one

in four women admitted to using non-prescribed drugs to relieve stress in the past six months. Women were much more comfortable conceding they had used a substance to relieve stress than they were in acknowledging a problem with a particular substance. It is possible they feel that using a substance to relieve stress is not an indication of a problem with alcohol or drugs.

Approximately one half of the women reported using alcohol in the past 30 days, with one in three women reporting the misuse of alcohol in the past 30 days, defined as the use of alcohol "to intoxication", or in order "to feel the effects" of the alcohol. These estimates are slightly higher than the estimated rates for non-battered women. The 1990 National Household Survey on Drug Abuse found that 44 percent of women have used alcohol in the past thirty days, and 12.6 percent of women had used alcohol once a week or more (National Institute on Drug Abuse [NIDA], 1990). Nearly half of the women also reported having used alcohol "to relieve stress" in the past six months, another common misuse of alcohol. However, only 10 percent of the women labeled themselves as "heavy or problem drinkers" or "alcoholics", while 20 percent of the women reported experiencing alcohol problems in the past 30 days. This difference may be due to the fact that an additional 15 percent of the women reported their status as a recovering alcoholic, and they may still experience problems with alcohol such as cravings. Thus, depending on one's

definition of alcohol abuse, using to intoxication, using to relieve stress, or self-reported problems with drinking, the percentage of women in this sample abusing alcohol would vary between 10 and 50 percent.

Similar findings were found with regard to women's drug use. Over 10 percent of the women had used pain killers (opiates or analgesics) in the past 30 days, over 10 percent of the women had used other sedatives or tranquilizers in the past 30 days, and 20 percent of the women had used marijuana in the past 30 days. The NIDA survey reports much lower rates of use for the above substances than were found in the present study. The estimated rate of analgesic use (past 30 days) for women is 0.7 percent, of sedatives and tranquilizers (past 30 days) is 0.3 percent, and of marijuana (past 30 days) is 3.9 percent (NIDA, 1990). These numbers indicate the women in this study have extremely high rates of use of the above substances. Moreover, one in five women reported the use of prescription drugs to relieve stress in the past six months, and one in four women reported the use of non-prescribed drugs to relieve stress in the past six months. Just over one in five women believed themselves to be a recovering addict, a problem drug user, or an addict, and one in six women reported experiencing problems with drugs in the past 30 days. Therefore, depending on the definition of drug abuse, either drug use in the past 30 days, using drugs to relieve stress,

or self-reported problems with drugs, an estimate of drug abuse among these women would range from 10 to 25 percent.

The findings that a substantial portion of the women are experiencing problems with alcohol and/or drugs corroborate other studies in the literature. For example, Randall (1990) reported that it is estimated that 16 percent of domestic violence victims go on to abuse alcohol and that 10 percent go on to abuse drugs. The fact that so many of the women in this study reported using alcohol and drugs to relieve stress illustrates that some women may indeed self-medicate with substances in order to cope with the violence, as suggested by previous research (Amaro et al., 1990; Hilberman & Munson, 1977; King, 1981; and Stark et al., 1981).

Risk for Contracting STDs and the AIDS virus

Overall, the risk behavior that emerged most frequently among these women was the lack of use of condoms and spermicides while engaging in sexual intercourse. In the past six months, nearly two-thirds of the women who had had sex did not use condoms or spermicides for protection from sexually transmitted diseases or the AIDS virus. Therefore, if women move through a series of short-term relationships, then their risk for contracting an STD or the AIDS virus may substantially increase. This certainly seems probable given that 63.6 percent of the women are under the age of 30, and only a third of the women are married or living with their partners (and this assumes a monogamous relationship).

Aside from the lack of use of protection during sexual intercourse, the women in this sample did not appear to be engaging in behavior that would elevate their risk for contracting STDs or the AIDS virus. A factor that would certainly influence their risk but was not measured thoroughly was their partner's behaviors. Only 2 women reported having sexual partners who injected drugs in the past six months. However, information concerning their partner's sexual habits is absent. Since one out of every four women had experienced at least one form of sexual violence in the past six months, it is possible that their partners' behavior would elevate their risk. Furthermore, being with an abusive partner may elevate their risk if their partners refuse to wear condoms or threaten the women if they try to force the issue. In sum, although the assessment of women's risk behavior could have been more thorough, a preliminary investigation suggests the primary risk for these women is not using condoms and spermicides.

Utilization of Health-Related Services

Women's use of health-related services was extraordinarily high. Four out of ten women interviewed had visited an emergency ward in a hospital in the past six months, supporting the research that implies heavy utilization of emergency room services by women with abusive partners (Appleton, 1980; Randall, 1990; Stark & Flitcraft, 1982). Moreover, the average number of emergency room visits was just over three.

Women also reported visiting medical doctors frequently outside of the emergency ward. Nearly one in three women had visited a medical doctor for an emergency in the past six months, and nearly two in three women had visited a medical doctor for a routine check up or appointment in the past six months. This is similar to Gayford's 1975 findings that the majority of the women in his sample frequently visited their medical practitioner. Approximately one-third of the women had also visited a psychologist, therapist, or psychiatrist in the past six months.

Finally, one-half of the women indicated they had been written a prescription during their visits to health professionals in the past six months. This finding might be indicative of the medical profession's tendency to medicate symptomatically. Stark and Flitcraft (1979; 1982) discuss this tendency and suggest that the lack of identification of abuse leads to further visits to health professionals due to persistent medical problems. The findings of this research suggest that a substantial percentage of these women are accessing health services, and that there is an average of three visits to each of these health professionals in the past six months. Perhaps this high rate of utilization is evidence of Stark and Flitcraft's original assertion. One might hypothesize the women who had recently left the shelter account for the high rates of health service utilization, due to the fact they were in a crisis period. However, utilization rates for each of the differing health

related services are comparable for both groups of women, those who had recently left CADA and those who were interviewed at the 18 and 24-month follow up interviews.

A final finding that may be related to the quality of care women receive is their medical insurance status. As might have been expected due to the high proportion of women on government assistance, and the fact that most women with economic resources do not utilize a battered women's shelter, the majority of women are either receiving medicaid or medicare, or have no medical insurance. Of the 82.7 percent of the women who fall into this category, their options for medical care include public health departments and emergency rooms of public hospitals. Therefore, it may be that to receive continuing care and advisement for a particular health problem that women need to make frequent visits to these health care facilities due to the extensive waiting periods.

Correlational Analyses

Physical Health Symptoms and Abuse History

All of the abuse history scales were strongly associated with the physical health symptom scales. These results indicated that there is a significant relationship between the presence or absence, frequency, and severity of abuse and the presence or absence, frequency, and severity of physical health symptoms. Further, regardless of the manner in which abuse history and physical health symptoms were weighted and scored, i.e. presence or absence,

frequency, or severity, significant relationships emerged between each of these scales.

One explanation for this finding is that the scales were extremely intercorrelated. The correlations among the abuse history scales ranged from .63 to 1.00, and the correlations between the physical health symptom scales ranged from .85 to 1.00. Due to the magnitude of these correlations, the individual correlations between the abuse history and physical health symptom scales would appear to be redundant and representative of a single relationship.

These scale intercorrelations also bring into question the use of one scale over another. For example, because the frequency weighted health symptom scale was correlated 1.00 with the frequency by severity weighted health symptom scale, no new information is gained through the use of weighting the frequency scale by severity and one could convincingly argue that this scale be dropped from subsequent analyses.

Also interesting is the finding that psychological abuse was strongly related to the physical health symptom scales. Moderate to high correlations were found between psychological abuse and each of the physical abuse scales. These correlations ranged from $r=.64$ to $r=.74$, which could account for at least part of this finding. However, these results indicate some support for the hypothesis that there is a significant relationship between increased levels of psychological abuse and an increase in the number,

frequency, and severity of physical health symptoms. Future research examining the effects of psychological abuse on physical health symptoms for women not involved in physically abusive relationships is necessary to discover the true nature of this relationship.

While these analyses do not determine causation, it is reasonable to hypothesize that women's experiences of physical and psychological abuse lead to an increase in the number and frequency of physical health symptoms that women experience, given the strength of the relationships shown here. Although there are certainly issues of validity at question, when women were asked to provide a self-rating whether they thought a symptom was a result of their abuse, the majority of women indicated that they thought the stress of their abuse had contributed to their experience of a particular physical health symptom, for the majority of health symptoms surveyed.

Sexual Violence and Gynecological Symptoms

While the sexual violence scale was significantly correlated with the overall physical health symptom scales, the sexual violence scale was significantly correlated with only some of the gynecological symptoms. The strongest relationships were found between sexual violence and pelvic pain, vaginal bleeding or discharge, and painful intercourse. These results support Campbell and Alford's (1989) research in which marital rape victims reported extreme problems with painful intercourse and vaginal pain.

Moderate relationships were found between the presence of sexual violence and rectal bleeding. Caution should be used in interpreting this finding due to the low number of women who endorsed this item. Only six women reported experiencing rectal bleeding, and only one of those women reported that she felt it was a result of the abuse that she had experienced. It is difficult to assess the reliability of these figures given such a low endorsement rate.

It should be noted that during the course of conducting the interviews, items emerged which women appeared to be more reluctant to endorse. Rectal bleeding was one such item. Social desirability bias may have been working against capturing reality for a portion of the health symptoms. Women were often emphatic in denying that they had ever experienced this health symptom, and it is impossible to assess whether this is an accurate statistic.

Physical Health Symptoms and Relationship to Assailant

Noteworthy was the absence of significant relationships between any of the physical health symptom scales and a woman's involvement with her assailant. One explanation for this may be that even after the abuse has ended, physical health symptoms related to the stress of separation may persist. Alternatively, previous research has demonstrated that often times the abuse escalates when a woman separates, or attempts to separate, from her partner (Walker, 1984). Due to the fact that the abuse may continue even though the women are no longer involved with their assailants, and

because such a strong relationship exists between the abuse scales and the physical health symptom scales, the lack of a relationship between these two variables may not be viewed as surprising. Future research that tracks women longitudinally would be able to investigate whether or not physical health symptoms persist once a woman has successfully remained free of abuse.

Physical Health Symptoms and Other Health Variables

Suicide Related Variables. A strong significant relationship was found between frequency of suicidal thoughts in the past six months and the physical health symptom scales. One possible explanation for this finding is that these women physically feel bad, and that when one's physical health is poor one's emotional health suffers as well. The relationship between physical and emotional health has been explored with other populations, but never with a sample of women with abusive partners. While this research did not investigate other variables related to emotional and mental health, future research that includes additional measures of emotional and mental health is needed to explore the potential relationship between physical and emotional well-being for battered women.

Utilization of Alcohol and/or Drugs. No significant relationships were discovered between any of the physical health symptom scales and the use of alcohol or drugs. It is possible that method bias partially provides an explanation. Women may have been reluctant to be completely

honest about their substance use, and perhaps their actual use of alcohol or drugs is higher than reported here. In any case, while women did report the use of various substances, these findings did not confirm previous research's contentions that women with abusive partners are often prescribed tranquilizers or other medications when they present themselves to medical professionals (Dobash et al., 1985; Flitcraft, 1978; King, 1981; Randall, 1990; Rounsaville & Weissman, 1977; Stark et al., 1979).

Utilization of Health Services. Results of this study clearly indicated a relationship between each of the four physical health symptom scales and receiving a prescription from a visit to a health professional during the past six months. Thus, the greater number of physical health symptoms that exist, the more frequent the physical health symptoms, and the more severe the physical health symptoms, the more likely a woman was to receive a prescription at the time of her medical visit. Unfortunately, this study did not ask the women what medication the prescription contained. Previous results suggesting a relationship between physical health symptoms and sedatives or tranquilizers indicate that sedatives or tranquilizers could potentially account for a portion of the received prescriptions.

The only significant relationship found between the physical health symptom scales and the utilization of actual health services was visiting a medical doctor for an

emergency. Therefore, the greater number of health symptoms experienced, the more frequent the health symptoms, and the more severe the health symptoms, the more likely a woman was to visit a medical doctor for an emergency.

One possible explanation for these results is that women have their own medical doctors with whom they feel comfortable, and who they feel knows them personally. Therefore, if a woman is experiencing physical health symptoms it would be reasonable for her to visit this particular person, not as a regularly scheduled visit, but for an emergency. Assuming that the women have medical doctors whom they regularly visit, it also makes sense they would visit that person when health symptoms occur, as opposed to going to an emergency ward in a hospital.

Given the high utilization of both the emergency ward and visiting a medical doctor for a routine check up or appointment in the past six months (40.9% and 60.9%, respectively), it is unfortunate women were not asked to what their visits pertained. Certainly, prenatal visits account for a portion of the regularly scheduled medical visits for the sample, although it is unclear for what proportion of the visits they account. More crucial, however, would be information regarding why the women are visiting the emergency wards in hospitals. Future research should investigate the nature and causes of women's visits to each of these health services.

Abuse History and Other Health Related Variables

Perhaps most puzzling is the lack of relationships between the abuse history scales and any of the health related variables outside of the physical health symptom scales, particularly given the strong positive relationships between the abuse history scales and the physical health symptom scales. The only significant relationship to emerge was the relationship between experiencing injuries and the use of non-prescribed drugs to relieve stress in the past six months. Hence, the more injuries a woman experienced, the more likely she was to have used non-prescribed drugs to relieve stress in the past six months.

An explanation for this finding may be that the more injuries a woman experienced, the greater pain she experienced, and therefore she used the drugs to relieve stress and pain. However, a significant relationship did not emerge with regard to past 30 day use of any of the alcohol or drug categories and the injuries scale.

Another possible explanation is that the more injuries a woman experienced, the more severe the abuse was that she experienced. Using non-prescribed drugs to relieve stress might be a result of an attempt to relieve the stress of a situation in which she is severely abused. Again though, no significant relationships were indicated between the severity or frequency of abuse scales and the use of drugs or alcohol, at all.

A third explanation might be that there are relationships between these variables, but that using an oral interview format precluded the discovery of any of these relationships. Future research that asks questions of such a sensitive nature should consider an anonymous questionnaire to discover relationships between abuse history and other health related variables this study was unable to detect.

Methodological Limitations

There are several potential limitations to this research. This research was conducted among participants who were selected because they had utilized a shelter for women with abusive partners. Conclusions from this study are not intended to generalize to all women who have experienced domestic violence, only to those who have utilized the services of a battered women's shelter.

The limitations of using self-report to gather participant information is another concern, although it is also viewed as a strength. The community psychology ethic of using research participants as experts informing the researcher is present within this study; however, many of the questions the women were asked surrounded very sensitive issues, and the potential for response bias was elevated.

Another threat to validity stemming from the use of self-report data is common-method bias. Using records from other sources, such as hospital emergency wards to verify the number of visits women reported, would have aided in the

reduction of this potential bias. However, many of the questions requested information that is difficult to verify. For instance, women are often times alone when their assailants engage in abusive incidents towards them and there is no feasible way of collecting this information other than self-report.

Yet another limitation to this study was its cross-sectional design. This type of design severely limits the ability to make causal statements. A research study that is longitudinal in nature is desperately needed to examine changes in battered women's health status over time as their experiences of abuse increase or decrease.

A limitation to making causal inferences is further presented simply on the basis of selecting women for the research. Because most of the women who arrive at the shelter have already experienced abuse that has escalated in its severity and its frequency, and also are experiencing multiple health problems, it is impossible to determine at this point exactly how the abuse a woman has experienced has affected her health. Unfortunately, finding women with abusive partners other than via shelter proves to be a perpetual challenge for researchers in this field, not to mention gathering a sample of women who have not yet experienced abuse.

Additionally, the participants tended to come from lower-middle and lower socioeconomic backgrounds. It is therefore difficult to separate out the effects of poverty

on women's health status versus the effects of poverty compounded by abuse. A study that identifies women of similar socioeconomic backgrounds but who have not experienced abuse from a partner would be an ideal control group to utilize to investigate that question.

Implications for Future Research

The present study was among one of the first to attempt to link women's experiences of abuse, whether physical, psychological, and/or sexual, to their physical health status. The results of this research indicate that women's physical health has indeed been an overlooked topic within the domestic violence/woman abuse literature. Strong relationships were found between women's experiences of abuse and the number, frequency, and severity of physical health symptoms they experience.

These results emphasize the necessity of paying more attention to the physical health needs of women with abusive partners. Research needs to be conducted that continues a comprehensive assessment of women's physical health status. The current study demonstrated that not only did women exhibit multiple physical health symptoms, but they had had multiple suicidal thoughts in the past six months. Moreover, although they were not identifying themselves as having substance abuse problems it was not uncommon to use substances to relieve stress, and women are frequenting health related services at extremely high rates.

Samples from other locations are needed, to determine the generalizability of the findings from this research. It is important to use larger sample sizes of women so all possible relationships can be detected. It is necessary to investigate in further detail battered women's utilization of health related services. The identification of the most prevalent health problems could lead to increased intervention and prevention specifically targeted to these areas.

Research designed to further identify the relationships among women's different experiences of abuse and their physical health status is vital. Other than the identification of injuries as a direct result of the abuse, the potential relationships between abuse experience and physical health has largely been ignored. More research designed to examine these critical relationships is essential. In particular, longitudinal research that tracks changes in experiences of abuse over time as well as changes in physical health over time would be necessary to more thoroughly investigate the nature of this relationship.

Finally, there is the question of how to intervene on behalf of women with abusive partners. One solution is to educate the health care professionals who are treating women about the nature and dynamics of domestic violence. Earlier in this study the medical profession was criticized for not being responsive to the needs of women with abusive partners. Conducting workshops and/or inservices for the

medical health professionals to educate them about domestic violence, and to provide information regarding warning signs and cues to look for in identifying women with abusive partners is a start. However, training medical professionals with regard to the appropriate way to intervene would also be critical so that women are not approached with victim-blaming attitudes.

Another intervention might occur within the shelter that is more targeted at the women specifically. Already evening meetings are conducted to provide women with support and information specific to different situations that they may encounter, such as legal workshops, support groups, and parenting groups. It would be possible to structure a similar group encompassing women's health issues. The effects of the abuse on women's health would be included, as well as other issues of importance such as suicide, substance use, and birth control. Shelter workers may also receive this information, so they could be more effective advocates for women with physical health issues.

Each of the above strategies would provide information regarding the effects of abusive experiences on women's physical health. However, the targeted outcomes are very different for the described interventions. It will be necessary to focus on changing the attitudes of health care professionals so the victim-blaming approaches to treating women with abusive partners will cease. Requiring health

care professionals to participate in an informative workshop is a policy-oriented, administrative change.

An intervention with the women, while empowering them with information that can be viewed as affirming, is still an individual level approach. The provision of information alone is not going to be sufficient in helping women remain free of abuse. Accessing resources, including the acquisition of resources related to obtaining quality health care, is a critical component for women in remaining free of abuse. Even more critical is the need to intervene with the men who are abusing their partners. Stopping men's violence against women should be viewed as the ultimate prevention.

In conclusion, a vision of the future includes multiple interventions, targeted at both women and health care professionals, so that a comprehensive plan of action is undertaken. Combined with additional research pertaining to the relationship between women's experiences of abuse and their physical health, this long-ignored crisis to women's health can begin to be adequately addressed as the public health problem it represents.

APPENDICES

Appendix A: Demographic and Abuse History Information

A _____ Interviewer ID# _____
B _____ Respondent ID# _____
C _____ Time Interview Started _____

Pre-Interview

First, I'd like to ask you some general questions so that we can get an idea of what type of women are interested in this program.

1. What is your race or ethnic background?

BLACK/AFRICAN-AMERICAN.....1
WHITE/CAUCASIAN.....2
HISPANIC/CHICANA.....3
ASIAN-PACIFIC.....4
OTHER (_____)....5

2. What is your date of birth? ____/____/____

3. How many children do you have? _____

3a. What are their names and ages? (INDICATE NUMBER IN EACH AGE RANGE)

_____ UNDER FIVE YEARS OLD
_____ 5 TO 12 YEARS OLD
_____ 13 TO 18 YEARS OLD
_____ OVER 18 YEARS OLD

3b. What type of custody do you currently have of your children?

FULL.....1
(IN COURT PROCESS) TEMPORARY.....2
(DIVORCED; EQUAL CUSTODY) JOINT.....3
(NO CUSTODY) NONE.....4
(CHILDREN ARE GROWN).....5
OTHER(_____)....6
(No children).....8

Respondent ID# _____

3c. How many of your children are currently living with you? _____
 (She has no children).....88

(IF LESS THAN ALL CHILDREN) What are their ages?
 (PUT 88 IN EACH ONLY IF SHE HAS NO CHILDREN)

_____ UNDER FIVE YEARS OLD

_____ 5 TO 12 YEARS OLD

_____ 13 TO 18 YEARS OLD

_____ OVER 18 YEARS OLD

4. Are you receiving any governmental assistance, such as ADC, GA, SSI or food stamps?

YES.....1

NO.....2

5. In the last six months, have you been employed?

(GO TO #5a) YES.....1

(GO TO #6) NO.....2

(IF YES) 5a. Are you employed right now?

YES.....1

NO.....2

(Not applicable).....8

5b. What type of work do/did you do? (IF EMPLOYED IN LAST SIX MONTHS)

CLERICAL.....1

DOMESTIC/CHILDCARE.....2

SALES/WAITRESS.....3

MANAGERIAL.....4

FACTORY.....5

HUMAN SERVICES.....6

SELF EMPLOYED.....7

OTHER (_____).....0

(Not applicable).....8

Respondent ID# _ _ _ _ _

5c. Do/did you work part-time, full-time, or sporadically (off and on, temporary)? (FULLTIME = 35 HOURS PER WEEK OR MORE)

PART-TIME.....1
 FULL-TIME.....2
 SPORADICALLY.....3
 (Not Applicable).....8

6. Are you currently a student?

(GO TO #6a)

YES.....1

(GO TO #7)

NO.....2

6a. Part-time or full-time?

PART TIME.....1
 FULL TIME.....2
 (Not Applicable).....8

7. What's your educational level?

LESS THAN HIGH SCHOOL.....1
 HIGH SCHOOL GRAD/GED.....2
 SOME COLLEGE.....3
 COLLEGE GRADUATE.....4
 TRADE SCHOOL.....5
 PROFESSIONAL DEGREE.....6

Respondent ID# _____

Now if you don't mind I'd like to ask you some questions about your relationship with the man who abused you. (IF YOU DON'T KNOW HIS NAME) Would you mind telling me his name so that I can refer to him by that? (GET FIRST AND LAST) NAME: _____ If you don't want to answer any of these questions just let me know or if you want to stop at any time, just let me know.

47. What was your relationship with _____ just before you went to the shelter?

MARRIED, LIVING TOGETHER.....1

MARRIED, SEPARATED.....2

DIVORCED.....3

GIRL/BOYFRIEND, LIVING TOGETHER.....4

GIRL/BOYFRIEND, NOT LIVING TOGETHER...5

EX-GIRLFRIEND, EX-BOYFRIEND.....6

DATING, BUT NOT GIRL/BOYFRIEND.....7

OTHER (_____).....8

48. How long have you known _____?

(WRITE EXACT NUMBER OF MONTHS) _____

49. How long were you/have you been in a relationship with _____?

(WRITE EXACT NUMBER OF MONTHS) _____

50. How many previous separations have you had from _____?

(ACTUAL NUMBER).....

50a. How long did your last separation last?

(ACTUAL NUMBER OF DAYS).....

(NO PREVIOUS SEPARATIONS.....- 00000)

55. How long after you became involved with _____ did he first physically assault you?

(ACTUAL NUMBER OF DAYS).....

Respondent ID# _____

56. Have you ever become pregnant since knowing _____?
- YES.....1
NO.....2
- 56a. (IF YES) Did he ever physically assault you when you were pregnant?
- YES.....1
NO.....2
(NEVER BEEN PREGNANT).....8
57. Now I have a list of some things some men do to annoy or hurt their partners and ex-partners. These are more of the emotional things. Using this card (SHOW YELLOW CARD #2) could you tell me, to the best of your recollection, how many times in the last 6 months before you went to CADA _____ did any of these things to annoy or hurt you? (IF SHE WAS NOT INVOLVED WITH ASSAILANT IN LAST 6 MONTHS, SKIP THE ITEMS MARKED WITH ** AND MARK 8)

- 1 - NEVER
2 - RARELY
3 - SOMETIMES
4 - OFTEN
8 - not applicable (i.e. no children)
9 - (refused to answer)

How often has he refused to talk to you.....

How often has he accused you of having or wanting other sexual relationship(s).....

Told you about other sexual relationships he wanted or was having in order to hurt you.....

**Refused to do things with you that you wanted to do.....

**Forbid you to go out without him.....

Tried to control your money.....

Tried to control your activities.....

**Withheld approval, appreciation or affection as punishment.....

Lied to you or deliberately misled you.....

Made contradictory demands or requests of you...

Called you names.....

Tried to humiliate you.....

Ignored or made light of your anger.....

Ignored or made light of your other feelings....

Respondent ID# _____

- 1 - NEVER
- 2 - RARELY
- 3 - SOMETIMES
- 4 - OFTEN
- 8 - NOT APPLICABLE (I.E. NO CHILDREN)
- 9 - (REFUSED TO ANSWER)

Ridiculed or criticized you in public....._____

Ridiculed or insulted your most valued beliefs.._____

Ridiculed or insulted your religion, race,
heritage, or class....._____

Ridiculed or insulted women as a group....._____

Criticized your strengths, or those parts of yourself
which you are or once were proud of....._____

Criticized your intelligence....._____

Criticized your physical appearance and/or
sexual attractiveness....._____

Criticized your family or friends to you....._____

Harassed your family or friends in some way....._____

**Discouraged your contact with family or friends._____

Threatened to hurt your family or friends....._____

Broken or destroyed something important to you.._____

Abused or threatened to abuse pets to hurt you.._____

(NO PETS - 8)

Punished or deprived the children when he was
angry at you....._____

(NO CHILDREN - 8)

Threatened to take the children away from you..._____

(NO CHILDREN - 8)

**Left you somewhere with no way to get home....._____

**Threatened to end the relationship if you
didn't do what he wanted....._____

Tried to force you to leave your home....._____

Threatened to commit suicide when he was
angry at you....._____

Respondent ID# _____

58. (SHOW PINK CARD) How many times in the last six months before you went to CADA did _____ threaten you in any way?

1 - NEVER
 2 - ONCE A MONTH OR LESS
 3 - 2 OR 3 TIMES A MONTH
 4 - ONCE OR TWICE A WEEK
 5 - 3 OR 4 TIMES A WEEK
 6 - MORE THAN 4 TIMES A WEEK
 9 - (REFUSED TO ANSWER)

59. Now I have a list of different types of violence that women have experienced from their partners and ex-partners. I wonder if you could tell me, to the best of your recollection, how many times in the 6 months before you went to CADA _____ did any of the following things to you:
 (USING PINK CARD #3)

1 - NEVER
 2 - ONCE A MONTH OR LESS
 3 - 2 OR 3 TIMES A MONTH
 4 - ONCE OR TWICE A WEEK
 5 - 3 OR 4 TIMES A WEEK
 6 - MORE THAN 4 TIMES A WEEK
 8 - doesn't apply
 9 - (refused to answer)

How often did he break your glasses or
 tear your clothing....._____

Pushed or shoved you....._____

Grabbed you....._____

Slapped you with an open hand....._____

Hit you with a fist....._____

Kicked you....._____

Threw something at you....._____

Aside from throwing, how often did he
 hit you with an object....._____

Tried to hit you with an object....._____

Drove recklessly, so that you felt scared or
 endangered....._____

Choked you....._____

Burned you....._____

Respondent ID# _____

- 1 - NEVER
- 2 - ONCE A MONTH OR LESS
- 3 - 2 OR 3 TIMES A MONTH
- 4 - ONCE OR TWICE A WEEK
- 5 - 3 OR 4 TIMES A WEEK
- 6 - MORE THAN 4 TIMES A WEEK
- 9 - (REFUSED TO ANSWER)

Tied you up or physically restrained you
in some way.....

Beat you up.....

Forced sexual activity.....

Threatened you with a gun or a knife.....

Used a gun or knife.....

59a. (IF SHE HAS BEEN HARMED AT ALL) Now I'm going to go through a list of injuries and ask you yes or no if you sustained these injuries in the last 6 months:

	YES	NO	N/A
Did you sustain cuts, scrapes or bruises.....	1.....	2.....	8
Soreness without bruises.....	1.....	2.....	8
Burns, including rug burns.....	1.....	2.....	8
Loose or broken teeth.....	1.....	2.....	8
Broken bones or fractures.....	1.....	2.....	8
Internal injuries.....	1.....	2.....	8
Strains or sprains.....	1.....	2.....	8
Dislocated joints.....	1.....	2.....	8
(NO PREGNANCY - 8) Pregnancy complications or miscarriage....	1.....	2.....	8
Knife or gunshot wound.....	1.....	2.....	8
Permanent scarring.....	1.....	2.....	8
Any other injuries I haven't mentioned. (Specify _____)	1.....	2.....	8

Appendix B: Oral Health Pre-Interview

Respondent ID# _____

These questions are meant to discover how women's experiences of domestic violence affect their physical health. There is some evidence that there are many health-related concerns for women who have been abused by their partners. This project would like to find out more about the type of health concerns that you may have, as well as how often you may experience health problems, if at all. I'd like to ask you these questions so that people who provide services to women like yourself will better understand the health concerns that you may have.

73. Now, I have a list of symptoms and would like you to answer how much you have been bothered in the last six months, or since about _____, by the following:

(MARK ALL OF THE RESPONSES IN COLUMN A)

(HAND PARTICIPANT PINK CARD #3 AND EXPLAIN)

- 1 - NEVER
- 2 - ONCE A MONTH OR LESS
- 3 - 2 OR 3 TIMES A MONTH
- 4 - ONCE OR TWICE A WEEK
- 5 - 3 OR 4 TIMES A WEEK
- 6 - MORE THAN 4 TIMES A WEEK
- 8 - not applicable
- 9 - no answer (explain why!)

FOR COLUMN B:

- 1 - NOT A PROBLEM AT ALL
- 2 - A LITTLE BIT OF A PROBLEM
- 3 - SOMEWHAT OF A PROBLEM
- 4 - VERY MUCH A PROBLEM
- 8 - not applicable

FOR COLUMN C:

- 1 - YES
- 2 - NO
- 8 - not applicable

A B C

Sleep problems (can't fall asleep, wake up in the middle of night or early in morning).....	_____	_____	_____
Nightmares.....	_____	_____	_____
Weight change (gain or loss of 10 lbs. or more).....	_____	_____	_____
Back pain.....	_____	_____	_____
Constipation.....	_____	_____	_____
Dizziness.....	_____	_____	_____
Diarrhea.....	_____	_____	_____
Faintness.....	_____	_____	_____
Constant fatigue.....	_____	_____	_____
Migraine headache.....	_____	_____	_____
Headache.....	_____	_____	_____
Nausea and/or vomiting.....	_____	_____	_____
Acid stomach or indigestion.....	_____	_____	_____
Stomach pain.....	_____	_____	_____

Respondent ID# _____

- 1 - NEVER
- 2 - ONCE A MONTH OR LESS
- 3 - 2 OR 3 TIMES A MONTH
- 4 - ONCE OR TWICE A WEEK
- 5 - 3 OR 4 TIMES A WEEK
- 6 - MORE THAN 4 TIMES A WEEK
- 8 - not applicable
- 9 - no answer (explain why!)

FOR COLUMN B:

- 1 - NOT A PROBLEM AT ALL
- 2 - A LITTLE BIT OF A PROBLEM
- 3 - SOMEWHAT OF A PROBLEM
- 4 - VERY MUCH A PROBLEM
- 8 - not applicable

FOR COLUMN C:

- 1 - YES
- 2 - NO
- 8 - not applicable

A B C

Ulcers..... / /
 Hot or cold spells..... / /
 Hands trembling..... / /
 Heart pounding or racing..... / /
 Poor appetite..... / /
 Shortness of breath when not
 exercising or working hard..... / /
 Numbness or tingling in parts
 of your body..... / /
 Seizures..... / /
 Choking sensations..... / /
 Felt weak all over..... / /
 Blacking out or passing out..... / /
 Anemia..... / /
 High blood pressure..... / /
 Pains in your heart or chest..... / /
 Feeling low in energy..... / /
 Stuffy nose or head..... / /
 Blurred vision..... / /
 Muscle tension or soreness..... / /
 Muscle cramps..... / /
 Severe aches and pains..... / /
 Acne..... / /
 Bruises..... / /

Respondent ID# _____

- 1 - NEVER
- 2 - ONCE A MONTH OR LESS
- 3 - 2 OR 3 TIMES A MONTH
- 4 - ONCE OR TWICE A WEEK
- 5 - 3 OR 4 TIMES A WEEK
- 6 - MORE THAN 4 TIMES A WEEK
- 8 - not applicable
- 9 - no answer (explain why!)

FOR COLUMN B:

- 1 - NOT A PROBLEM AT ALL
- 2 - A LITTLE BIT OF A PROBLEM
- 3 - SOMEWHAT OF A PROBLEM
- 4 - VERY MUCH A PROBLEM
- 8 - not applicable

FOR COLUMN C:

- 1 - YES
- 2 - NO
- 8 - not applicable

	A	B	C
Nosebleeds.....	___/___/___		
Pulled (strained) muscles or ligaments.....	___/___/___		
Arthritis.....	___/___/___		
Teeth/gum problems.....	___/___/___		
Ear aches.....	___/___/___		
Ringing in your ears.....	___/___/___		
Asthma.....	___/___/___		
Allergies.....	___/___/___		
Pelvic pain.....	___/___/___		
Vaginal bleeding/discharge (other than period).....	___/___/___		
Missed menstrual periods.....	___/___/___		
Unwanted pregnancies.....	___/___/___		
Painful intercourse.....	___/___/___		
Infertility (difficulty getting pregnant).....	___/___/___		
Rectal bleeding.....	___/___/___		
Bladder infection.....	___/___/___		
Painful urination (passing water).....	___/___/___		
Cold/flu.....	___/___/___		
Viruses.....	___/___/___		

Respondent ID# _ _ _ _ _

74. Okay, thank you. Now for each of the health symptoms that you said have bothered you in the last six months, or since about _____, I want to ask you how much of a problem, if any, each has been for you. (USE ORANGE CARD #5. YOU WILL BE ASKING ABOUT ANY ITEM CODED 2-6 IN COLUMN A) I'd like you to use the following scale:

- 1 - NOT A PROBLEM AT ALL
- 2 - A LITTLE BIT OF A PROBLEM
- 3 - SOMEWHAT OF A PROBLEM
- 4 - VERY MUCH A PROBLEM
- 8 - not applicable (COLUMN A - 1)

(GO BACK TO THE BEGINNING OF THE HEALTH QUESTIONS. FOR EACH ITEM THAT SHE REPORTED BOTHERED HER AT ALL, ASK HER HOW MUCH OF A PROBLEM, IF ANY, THIS HAS BEEN FOR HER. MARK ALL OF THESE ANSWERS IN COLUMN B. IF SHE HAS NOT BEEN BOTHERED AT ALL BY A SYMPTOM, MARK "8" IN COLUMN B.)

75. Now, I'd like to ask you about how you think the abuse you've experienced has affected your health. This is still an issue that we don't know very much about, and you can help us by telling us how you think your health has been affected. I'm going to ask you which of the physical health problems you've had in the past six months, or since about _____, you think are a result of your abuse. You can simply say "YES" or "NO".

(GO BACK TO THE BEGINNING OF THE HEALTH QUESTIONS. FOR EACH ITEM SHE REPORTED WAS A PROBLEM FOR HER, ASK HER IF SHE FEELS IT WAS A RESULT OF THE ABUSE SHE EXPERIENCED. IF SHE REPORTS "YES", MARK "1" IN COLUMN C, IF SHE SAYS "NO", MARK A "2" IN COLUMN C. MARK "8" IF THE ITEM IS NOT APPLICABLE.)

- 1 - YES
- 2 - NO
- 8 - not applicable (COLUMN A - 1)

76. Gynecological problems can result from experiencing different types of abuse. Can you tell me whether or not you have ever had a miscarriage?

YES.....1 ----> HOW MANY? _____
 NO.....2 (88 IF NO)

77. Have you ever had to terminate a pregnancy?

YES.....1 ----> HOW MANY? _____
 NO.....2 (88 IF NO)

- 77a. (IF ANSWER TO 77 WAS YES) Would you say that this decision was...

ASK EACH

MOSTLY YOURS.....1
 MOSTLY YOUR PARTNERS.....2
 EQUALLY YOURS AND YOUR PARTNERS.....3
 (not applicable).....8

78. Have you had a hysterectomy?

YES.....1
 NO.....2

Respondent ID# _____

79. Some people think about suicide when life becomes very difficult for them.
How often have you thought about committing suicide in the past six months?
(USE PINK CARD #3)

NEVER.....1 (IF "NEVER", GO TO #80)
ONCE A MONTH OR LESS.....2
2 OR 3 TIMES A MONTH.....3
ONCE OR TWICE A WEEK.....4
THREE OR FOUR TIMES A WEEK.....5
MORE THAN FOUR TIMES A WEEK.....6

- 79a. Have you ever told someone else you wanted to kill yourself?

YES.....1 HOW MANY TIMES? _____
NO.....2 (888 IF NO)
not applicable.....8

- 79b. Have you ever tried to kill yourself?

YES.....1 HOW MANY TIMES? _____
NO.....2 (888 IF NO)
not applicable.....8

80. In this next set of questions I will ask you about your use of drugs and alcohol, including prescription drugs. It is not uncommon for people to use alcohol or drugs as a way of coping when situations become very stressful. Please remember that all of your answers will be kept strictly confidential and answer as truthfully as possible.

(TO THE INTERVIEWER: TELL HER THAT YOU NEED TO GO THROUGH THE ENTIRE LIST, FROM TOP TO BOTTOM, FOR EVERYONE. FIRST ASK HER IF SHE HAS EVER USED ALCOHOL, ANY USE AT ALL, IN HER ENTIRE LIFE. YOU WILL NEED TO ASK HER "HOW OFTEN?" SHE USES ALCOHOL. THEN PROCEED WITH THE NEXT COLUMN. YOU NEED TO ASK HOW MANY DAYS IN THE PAST 30 DAYS SHE HAS USED THIS SUBSTANCE. THEN PROCEED WITH THE LAST COLUMN. ASK HER THE NUMBER OF YEARS OF HER LIFE THAT SHE HAS USED THIS SUBSTANCE. WHEN YOU HAVE FINISHED WITH THE FIRST CATEGORY, GO TO THE NEXT LINE. IN THIS CASE, IT WOULD BE ALCOHOL USE TO INTOXICATION OR TO FEEL THE EFFECTS OF THE ALCOHOL. IF HER RESPONSE IS "NEVER", MARK AN "88" IN THE NEXT TWO COLUMNS AND SKIP TO THE NEXT LINE. CONTINUE UNTIL ENTIRE GRID IS COMPLETED. FOR THE LAST BOX, YOU WANT TO ASK HER "HAVE YOU EVER USED MORE THAN ONE SUBSTANCE PER DAY?" THEN PROCEED AS WITH ANY OTHER CATEGORY.)

Substance	Street Name (THESE EXAMPLES SHOULD ONLY BE USED IF A WOMAN NEEDS AN EXAMPLE-OR AS A REFERENCE FOR YOU.)	#D	How often? 0=never 1=once 2=>once	Past 30 days? (# of days)	Life- use? (# of yrs.)
Alcohol-any use at all	Beer, Wine, Liquor	01			
Alcohol- to intoxication	Beer, Wine, Liquor- to feel the effects of the alcohol, i.e. buzz	02			
Heroin		03			
Methadone	Methadone, Dolophine, LAAM	04			

Substance	Street Name (THESE EXAMPLES SHOULD ONLY BE USED IF A WOMAN NEEDS AN EXAMPLE-OR AS A REFERENCE FOR YOU.)	#D	How often? 0=never 1=once 2=>once	Past 30 days? (# of days)	Life- use? (# of yrs.)
Other opiates/ analgesics	Pain killers: Morphine, Dilaudid, Demoral, Percodan, Dia-Quel, Codeine, Syrups (Robitussin, Actifed-C)	05			
Barbituates	Mebutal, Seconal, Tuinol, Amytal, Pentobarbital, Secobarbital, Doriden, Phenobarbital, Placidyl, Fiorinol	06			
Other sedative/ hypnotics/ tranquillizer	Benzodiazepines: Valium, Librium, Ativan, Serax, Tranxene, Dalmane, Malcyn, Xanax Phenothiazines: Thorazine, Stelazine, Maldol, Navane, Sereniti, Mellaril, Prolixin, Compazine Other: Chloral Hydrate (Noctec), Tofranil, Quaaludes	07			
Anti-depressants	Prozac, Doxepin (Sinequan), Pamelor (Aventyl), Amitriptyline, Desyrel (Trazadone), Desipramine	08			
Amphetamines (uppers)	Monster, Crank, Benzedrine, Dexedrine, Ritalin, Preludin, Methamphetamine, Speed, Ice ("Crystal")	09			
Marijuana	Weed, Pot, Doobie, Hashish	10			
Hallucinogen	LSD, Mescaline, Mushrooms or "shrooms", Peyote, Green, PCP (Phencyclidine), Angel dust	11			
Inhalants	Nitrous Oxide, Amyl Nitrate (whippets, poppers), glue, solvents	12			
Cocaine or crack	Cocaine crystal, free-base cocaine or "crack", "rock cocaine"	13			
Any other substances not mentioned yet?	(PLEASE SPECIFY WHICH SUBSTANCE HERE)	15			
More than one substance per day	(WRITE HERE WHICH SUBSTANCES SHE IS USING TOGETHER)	14			

81. Okay, this question is a little different. Some people turn to different types of substances when situations become very stressful for them. Have you ever used any of the following substances to relieve stress?

- | | |
|-----------------------------|-----------|
| a. Alcohol? | YES.....1 |
| | NO.....2 |
| b. Prescription
Drugs? | YES.....1 |
| | NO.....2 |
| c. Non-Prescribed
Drugs? | YES.....1 |
| | NO.....2 |

Respondent ID# _____

82. Have you used any of the following substances to relieve stress in the past six months?

a. Alcohol?	YES.....1
	NO.....2
b. Prescription Drugs?	YES.....1
	NO.....2
c. Non-Prescribed Drugs?	YES.....1
	NO.....2

83. Would you consider yourself to be a(n):

ASK EACH

ALCOHOLIC.....4
HEAVY / PROBLEM DRINKER.....3
RECOVERING ALCOHOLIC.....2
NO PROBLEMS WITH ALCOHOL.....1

84. Have you ever been treated in an inpatient setting for alcohol abuse?

YES.....1	----> HOW MANY TIMES? _____
NO.....2	(88 IF NO)

85. Have you ever been treated in an outpatient setting (not including AA) for alcohol abuse?

YES.....1	----> HOW MANY TIMES? _____
NO.....2	(88 IF NO)

86. Have you ever participated in an Alcoholics Anonymous [AA] program?

(GO TO 86a)	YES.....1	----> HOW MANY TIMES? _____
(GO TO 87)	NO.....2	(INDICATE # OF <u>STARTS</u>)
		(88 IF NO)

86a. Are you currently involved in an Alcoholics Anonymous [AA] program?

YES.....1
NO.....2
not applicable....8

87. In the past 30 days, how many days have you experienced alcohol problems? This would include craving for alcohol, withdrawal symptoms, disturbing effects of alcohol intoxication, or wanting to stop and being unable to do so.

EXACT NUMBER OF DAYS.....	_____
	(IF 0, GO TO 88)

Respondent ID# _____

87a. How troubled or bothered have you been by these alcohol problems in the past 30 days?

ASK EACH

NOT AT ALL.....1
 SLIGHTLY.....2
 MODERATELY.....3
 CONSIDERABLY.....4
 EXTREMELY.....5
 not applicable.....8

87b. How important to you now is treatment for these alcohol problems?

ASK EACH

NOT AT ALL.....1
 SLIGHTLY.....2
 MODERATELY.....3
 CONSIDERABLY.....4
 EXTREMELY.....5
 not applicable.....8

88. Would you consider yourself to be a(n):

ASK EACH

ADDICT.....4
 PROBLEM/HEAVY DRUG USER.....3
 RECOVERING ADDICT.....2
 NO PROBLEMS WITH DRUGS.....1

89. Have you ever been treated in an inpatient setting for drug abuse?

YES.....1 ----> HOW MANY TIMES? _____
 NO.....2 (88 IF NO)

90. Have you ever been treated in an outpatient setting (not including NA) for drug abuse?

YES.....1 ----> HOW MANY TIMES? _____
 NO.....2 (88 IF NO)

91. Have you ever participated in a Narcotics Anonymous [NA] program?

(GO TO 91a) YES.....1 ----> HOW MANY TIMES? _____
 (GO TO 92) NO.....2 (INDICATE # OF STARTS)
 (88 IF NO)

91a. Are you currently involved in a Narcotics Anonymous [NA] program?

YES.....1
 NO.....2
 not applicable.....8

92. In the past 30 days, how many days have you experienced drug problems? This would include craving for drugs, withdrawal symptoms, disturbing effects of drug intoxication, or wanting to stop and being unable to do so.

EXACT NUMBER OF DAYS.....
 (IF 0, GO TO 93)

Respondent ID# _____

92a. How troubled or bothered have you been by these drug problems in the past 30 days?

ASK EACH

NOT AT ALL.....1
SLIGHTLY.....2
MODERATELY.....3
CONSIDERABLY.....4
EXTREMELY.....5
not applicable.....8

92b. How important to you now is treatment for these drug problems?

ASK EACH

NOT AT ALL.....1
SLIGHTLY.....2
MODERATELY.....3
CONSIDERABLY.....4
EXTREMELY.....5
not applicable.....8

93. How much money would you say you spent for yourself during the past thirty days on...

ALCOHOL.....\$_____

DRUGS.....\$_____

Thank you for answering all of those questions and sharing that information with me. I know that it is not easy to discuss some of these concerns. Next, I would like to ask you some questions about how often you receive medical care.

94. Have you visited an emergency ward in a hospital in the past six months?

YES.....1 HOW MANY TIMES?_____
NO.....2 (88 IF NO)

95. Have you visited a medical doctor for an emergency in the past six months?

YES.....1 HOW MANY TIMES?_____
NO.....2 (88 IF NO)

96. Have you visited a medical doctor for a routine check-up or appointment in the past six months?

YES.....1 HOW MANY TIMES?_____
NO.....2 (88 IF NO)

97. Have you visited a psychologist, therapist, or psychiatrist in the past six months?

(GO TO #97a) YES.....1 HOW MANY TIMES?_____
(GO TO #98) NO.....2 (88 IF NO)

YOURSELF.....	1
FRIEND/FAMILY.....	2
SHELTER WORKER.....	3
MEDICAL DOCTOR.....	4
EMERGENCY WARD DOCTOR.....	5
COURT ORDER (JUDGE).....	6
OTHER(_____).....	7
not applicable.....	8

YES.....1 HOW MANY? _____
NO.....2 (88 IF NO)
not applicable...8

PRIVATE INSURANCE.....	1
MEDICAID/MEDICARE.....	2
NONE.....	3

Appendix C: Written Health Pre-Interview

Respondent ID# _ _ _ _ _

Health Questionnaire

In this section we'd like to find out some information that may be more difficult to answer. We understand that some of the questions may not be easy to answer, but in order to understand all of the health risks that women with abusive partners and ex-partners may face, please try to answer them as truthfully as possible.

1. Have you ever shared needles to shoot drugs into your veins since 1978?
 - (GO TO 1a) YES.....1
 - (GO TO 2) NO.....2
 - 1a. Have you shared needles to shoot drugs into your veins in the past six months?
 - YES.....1
 - NO.....2
2. Have you ever used dirty needles since 1978?
 - (GO TO 2a) YES.....1
 - (GO TO 3) NO.....2
 - 2a. Have you used dirty needles in the past six months?
 - YES.....1
 - NO.....2
3. Have you ever engaged in high-risk behaviors (such as sexual intercourse, oral sex, and/or sharing needles) with a person who is HIV-positive or has the AIDS virus?
 - (GO TO 3a) YES.....1
 - (GO TO 4) NO.....2
 - DON'T KNOW.....7
 - 3a. Have you engaged in high-risk behaviors (such as sexual intercourse, oral sex, and/or sharing needles) with a person who is HIV-positive or has the AIDS virus in the past six months?
 - YES.....1
 - NO.....2
 - DON'T KNOW.....7
 - not applicable.....8
4. Have you ever been tested for the HIV-virus?
 - (GO TO 4a) YES.....1
 - (GO TO 5) NO.....2
 - 4a. Have you been tested for the HIV-virus in the past six months?
 - YES.....1
 - NO.....2
 - not applicable.....8

Respondent ID# _ _ _ _ _

5. Which of the following sexual partner experiences best describes you?

SEX WITH MEN ONLY.....1
 SEX WITH WOMEN ONLY.....2
 SEX WITH BOTH MEN AND WOMEN.....3
 NEVER ENGAGED IN SEX.....8

6. Who is included in your list of sexual partners since 1978? (Please circle all that apply.)

	YES	NO
SEX WITH MY LOVER/SPOUSE.....1.....2		
MULTIPLE CASUAL SEX PARTNERS.....1.....2		
ONE TIME ANONYMOUS SEX PARTNERS.....1.....2		

7. Have you ever paid money or received money for sex since 1978?

YES.....1
 NO.....2

8. To the best of your knowledge, how often have you used condoms and spermicides when you were having sex since 1978?

ALL OF THE TIME.....1
 MOST OF THE TIME.....2
 OCCASIONALLY.....3
 SELDOM.....4
 NEVER.....5

9. Have you ever used alcohol or drugs when you were having sex?

ALL OF THE TIME.....1
 MOST OF THE TIME.....2
 OCCASIONALLY.....3
 SELDOM.....4
 NEVER.....5

10. Have any of your partner(s) since 1978 ever used alcohol or drugs when you were having sex?

ALL OF THE TIME.....1
 MOST OF THE TIME.....2
 OCCASIONALLY.....3
 SELDOM.....4
 NEVER.....5
 DON'T KNOW.....7

11. How often have any of your partner(s) ever used threats to try and have sex with you?

NEVER.....1
 ONCE.....2
 TWICE.....3
 3-10 TIMES.....4
 11-20 TIMES.....5
 MORE THAN 20 TIMES.....6

Respondent ID# _____

12. How often have any of your partner(s) ever used physical force to have sex with you?

NEVER.....1
 ONCE.....2
 TWICE.....3
 3-10 TIMES.....4
 11-20 TIMES.....5
 MORE THAN 20 TIMES.....6

13. Have any of your sexual partners ever shot drugs into their veins since 1978?

YES.....1
 NO.....2
 DON'T KNOW.....7

14. Have any of your sexual partners ever lived in a big city since 1978, such as Detroit or Chicago?

YES.....1
 NO.....2

15. Have you or any of your sexual partner(s) ever received a blood transfusion or hemophilia treatments between 1978 and 1985?

YES.....1
 NO.....2
 DON'T KNOW.....7

16. How many sexual partners, including your current partner and any others, have you had in the last six months?

IF YOU ANSWERED Q, THEN STOP HERE!

0.....1
 1 TO 2.....2
 3 TO 5.....3
 6 OR MORE.....4

17. Who is included in your list of sexual partners in the past six months? (Please circle all that apply.)

	YES	NO
SEX WITH MY LOVER/SPOUSE.....1.....	1	2
MULTIPLE CASUAL SEX PARTNERS.....1.....	1	2
ONE TIME ANONYMOUS SEX PARTNERS.....1.....	1	2
not applicable.....	8	

18. Have you paid money or received money for sex in the past six months?

YES.....1
 NO.....2
 not applicable.....8

Respondent ID# _ _ _ _ _

19. How often did you use condoms and spermicides when you were having sex in the past six months?

ALL OF THE TIME.....1
 MOST OF THE TIME.....2
 OCCASIONALLY.....3
 SELDOM.....4
 NEVER.....5
 not applicable.....8

20. Have you used alcohol or drugs when you were having sex in the past six months?

ALL OF THE TIME.....1
 MOST OF THE TIME.....2
 OCCASIONALLY.....3
 SELDOM.....4
 NEVER.....5
 not applicable.....8

21. Have any of your partner(s) in the past six months used alcohol or drugs when you were having sex?

ALL OF THE TIME.....1
 MOST OF THE TIME.....2
 OCCASIONALLY.....3
 SELDOM.....4
 NEVER.....5
 DON'T KNOW.....7
 not applicable.....8

22. How often have any of your partner(s) used threats to try and have sex with you in the past six months?

NEVER.....1
 ONCE.....2
 TWICE.....3
 3-10 TIMES.....4
 11-20 TIMES.....5
 MORE THAN 20 TIMES.....6
 not applicable.....8

23. How often have any of your partner(s) used physical force to have sex with you in the past six months?

NEVER.....1
 ONCE.....2
 TWICE.....3
 3-10 TIMES.....4
 11-20 TIMES.....5
 MORE THAN 20 TIMES.....6
 not applicable.....8

24. Have any of your sexual partners shot drugs into their veins in the past six months?

YES.....1
 NO.....2
 DON'T KNOW.....7
 not applicable.....8

Respondent ID# _ _ _ _ _

25. Have any of your sexual partners in the past six months lived in a big city, such as Detroit or Chicago?

YES.....1
NO.....2
not applicable.....8

26. Have you or any of your sexual partner(s) in the past six months received a blood transfusion or hemophilia treatments between 1978 and 1985?

YES.....1
NO.....2
DON'T KNOW.....7
not applicable.....8

Thank you very much for answering all of those questions. If you have any further questions, please feel free to contact us.

Appendix D: Oral Health Follow-up Interview

Respondent ID# _____

HEALTH QUESTIONNAIRE

These questions are meant to discover how women's experiences of domestic violence affect their physical health. There is some evidence that there are many health-related concerns for women who have been abused by their partners. This project would like to find out more about the type of health concerns that you may have, as well as how often you may experience health problems, if at all. I'd like to ask you these questions so that people who provide services to women like yourself will better understand the health concerns that you may have.

1. Now, I have a list of symptoms and would like you to answer how much you have been bothered in the last six months, or since about _____, by the following:

(MARK ALL OF THE RESPONSES IN COLUMN A)

(HAND PARTICIPANT PINK CARD #3 AND EXPLAIN)

- 1 - NEVER
- 2 - ONCE A MONTH OR LESS
- 3 - 2 OR 3 TIMES A MONTH
- 4 - ONCE OR TWICE A WEEK
- 5 - 3 OR 4 TIMES A WEEK
- 6 - MORE THAN 4 TIMES A WEEK
- 8 - not applicable
- 9 - no answer(explain why!)

FOR COLUMN B:

- 1 - NOT A PROBLEM AT ALL
- 2 - A LITTLE BIT OF A PROBLEM
- 3 - SOMEWHAT OF A PROBLEM
- 4 - VERY MUCH A PROBLEM
- 8 - not applicable

FOR COLUMN C:

- 1 - YES
- 2 - NO
- 8 - not applicable

A B C

Sleep problems (can't fall asleep, wake up in the middle of night or early in morning).....	_____	_____	_____
Nightmares.....	_____	_____	_____
Weight change (gain or loss of 10 lbs. or more).....	_____	_____	_____
Back pain.....	_____	_____	_____
Constipation.....	_____	_____	_____
Dizziness.....	_____	_____	_____
Diarrhea.....	_____	_____	_____
Faintness.....	_____	_____	_____
Constant fatigue.....	_____	_____	_____
Migraine headache.....	_____	_____	_____
Headache.....	_____	_____	_____
Nausea and/or vomiting.....	_____	_____	_____
Acid stomach or indigestion.....	_____	_____	_____
Stomach pain.....	_____	_____	_____

Respondent ID# _____

- 1 - NEVER
 2 - ONCE A MONTH OR LESS
 3 - 2 OR 3 TIMES A MONTH
 4 - ONCE OR TWICE A WEEK
 5 - 3 OR 4 TIMES A WEEK
 6 - MORE THAN 4 TIMES A WEEK
 8 - not applicable
 9 - no answer(explain why!)

FOR COLUMN B:

- 1 - NOT A PROBLEM AT ALL
 2 - A LITTLE BIT OF A PROBLEM
 3 - SOMEWHAT OF A PROBLEM
 4 - VERY MUCH A PROBLEM
 8 - not applicable

FOR COLUMN C:

- 1 - YES
 2 - NO
 8 - not applicable

	A	B	C
Ulcers.....	___/___/___		
Hot or cold spells.....	___/___/___		
Hands trembling.....	___/___/___		
Heart pounding or racing.....	___/___/___		
Poor appetite.....	___/___/___		
Shortness of breath when not exercising or working hard.....	___/___/___		
Numbness or tingling in parts of your body.....	___/___/___		
Seizures.....	___/___/___		
Choking sensations.....	___/___/___		
Felt weak all over.....	___/___/___		
Blacking out or passing out.....	___/___/___		
Anemia.....	___/___/___		
High blood pressure.....	___/___/___		
Pains in your heart or chest.....	___/___/___		
Feeling low in energy.....	___/___/___		
Stuffy nose or head.....	___/___/___		
Blurred vision.....	___/___/___		
Muscle tension or soreness.....	___/___/___		
Muscle cramps.....	___/___/___		
Severe aches and pains.....	___/___/___		
Acne.....	___/___/___		
Bruises.....	___/___/___		

Respondent ID# _____

- 1 - NEVER
 2 - ONCE A MONTH OR LESS
 3 - 2 OR 3 TIMES A MONTH
 4 - ONCE OR TWICE A WEEK
 5 - 3 OR 4 TIMES A WEEK
 6 - MORE THAN 4 TIMES A WEEK
 8 - not applicable
 9 - no answer(explain why!)

FOR COLUMN B:

- 1 - NOT A PROBLEM AT ALL
 2 - A LITTLE BIT OF A PROBLEM
 3 - SOMEWHAT OF A PROBLEM
 4 - VERY MUCH A PROBLEM
 8 - not applicable

FOR COLUMN C:

- 1 - YES
 2 - NO
 8 - not applicable

	A	B	C
Nosebleeds.....	_____	_____	_____
Pulled (strained) muscles or ligaments.....	_____	_____	_____
Arthritis.....	_____	_____	_____
Teeth/gum problems.....	_____	_____	_____
Ear aches.....	_____	_____	_____
Ringing in your ears.....	_____	_____	_____
Asthma.....	_____	_____	_____
Allergies.....	_____	_____	_____
Pelvic pain.....	_____	_____	_____
Vaginal bleeding/discharge (other than period).....	_____	_____	_____
Missed menstrual periods.....	_____	_____	_____
Unwanted pregnancies.....	_____	_____	_____
Painful intercourse.....	_____	_____	_____
Infertility (difficulty getting pregnant).....	_____	_____	_____
Rectal bleeding.....	_____	_____	_____
Bladder infection.....	_____	_____	_____
Painful urination (passing water).....	_____	_____	_____
Cold/flu.....	_____	_____	_____
Viruses.....	_____	_____	_____

Respondent ID# _ _ _ _ _

2. Okay, thank you. Now for each of the health symptoms that you said have bothered you in the last six months, or since about _____, I want to ask you how much of a problem, if any, each has been for you. (USE ORANGE CARD #5. YOU WILL BE ASKING ABOUT ANY ITEM CODED 2-6 IN COLUMN A) I'd like you to use the following scale:

- 1 - NOT A PROBLEM AT ALL
 2 - A LITTLE BIT OF A PROBLEM
 3 - SOMEWHAT OF A PROBLEM
 4 - VERY MUCH A PROBLEM
 8 - not applicable (COLUMN A - 1)

(GO BACK TO THE BEGINNING OF THE HEALTH QUESTIONS. FOR EACH ITEM THAT SHE REPORTED BOTHERED HER AT ALL, ASK HER HOW MUCH OF A PROBLEM, IF ANY, THIS HAS BEEN FOR HER. MARK ALL OF THESE ANSWERS IN COLUMN B. IF SHE HAS NOT BEEN BOTHERED AT ALL BY A SYMPTOM, MARK "8" IN COLUMN B.)

3. Now, I'd like to ask you about how you think the abuse you've experienced has affected your health. This is still an issue that we don't know very much about, and you can help us by telling us how you think your health has been affected. I'm going to ask you which of the physical health problems you've had in the last six months, or since about _____, you think are a result of your abuse. You can simply say "YES" or "NO".

(GO BACK TO THE BEGINNING OF THE HEALTH QUESTIONS. FOR EACH ITEM SHE REPORTED WAS A PROBLEM FOR HER, ASK HER IF SHE FEELS IT WAS A RESULT OF THE ABUSE SHE EXPERIENCED. IF SHE REPORTS "YES", MARK "1" IN COLUMN C. IF SHE SAYS "NO", MARK A "2" IN COLUMN C. MARK "8" IF THE ITEM IS NOT APPLICABLE.)

- 1 - YES
 2 - NO
 8 - not applicable (COLUMN A - 1)

4. Gynecological problems can result from experiencing different types of abuse. Can you tell me whether or not you have had a miscarriage in the past six months?

YES.....1 ----> HOW MANY? _____
 NO.....2 (88 IF NO)

5. Have you had to terminate a pregnancy in the past six months?

YES.....1 ----> HOW MANY? _____
 NO.....2 (88 IF NO)

- 5a. (IF ANSWER TO 5 WAS YES) Would you say that this decision was...

ASK EACH

MOSTLY YOURS.....1
 MOSTLY YOUR PARTNERS.....2
 EQUALLY YOURS AND YOUR PARTNERS.....3
 not applicable.....8

6. Have you had a hysterectomy?

YES.....1
 NO.....2

Respondent ID# _____

7. Some people think about suicide when life becomes very difficult for them. How often have you thought about committing suicide in the past six months? (USE PINK CARD #3)

NEVER.....1 (IF "NEVER", GO TO #8)
 ONCE A MONTH OR LESS.....2
 2 OR 3 TIMES A MONTH.....3
 ONCE OR TWICE A WEEK.....4
 THREE OR FOUR TIMES A WEEK.....5
 MORE THAN FOUR TIMES A WEEK.....6

- 7a. Have you told someone else you wanted to kill yourself in the past six months?

YES.....1 HOW MANY TIMES? _____
 NO.....2 (888 IF NO)
 not applicable.....8

- 7b. Have you tried to kill yourself in the past six months?

YES.....1 HOW MANY TIMES? _____
 NO.....2 (888 IF NO)
 not applicable.....8

8. In this next set of questions I will ask you about your use of alcohol and drugs, including prescription drugs. It is not uncommon for people to use alcohol or drugs as a way of coping when situations become very stressful. Please remember that all of your answers will be kept strictly confidential and answer as truthfully as possible.

(TO THE INTERVIEWER: TELL HER THAT YOU NEED TO GO THROUGH THE ENTIRE LIST, FROM TOP TO BOTTOM, FOR EVERYONE. FIRST ASK HER IF SHE HAS EVER USED ALCOHOL, ANY USE AT ALL, IN HER ENTIRE LIFE. YOU WILL NEED TO ASK HER "HOW OFTEN?" SHE USES ALCOHOL. THEN PROCEED WITH THE NEXT COLUMN. YOU NEED TO ASK HOW MANY DAYS IN THE PAST 30 DAYS SHE HAS USED THIS SUBSTANCE. THEN PROCEED WITH THE LAST COLUMN. ASK HER THE NUMBER OF YEARS OF HER LIFE THAT SHE HAS USED THIS SUBSTANCE. WHEN YOU HAVE FINISHED WITH THE FIRST CATEGORY, GO TO THE NEXT LINE. IN THIS CASE, IT WOULD BE ALCOHOL USE TO INTOXICATION OR TO FEEL THE EFFECTS OF THE ALCOHOL. IF HER RESPONSE IS "NEVER", MARK AN "88" IN THE NEXT TWO COLUMNS AND SKIP TO THE NEXT LINE. CONTINUE UNTIL ENTIRE GRID IS COMPLETED. FOR THE LAST BOX, YOU WANT TO ASK HER "HAVE YOU EVER USED MORE THAN ONE SUBSTANCE PER DAY?" THEN PROCEED AS WITH ANY OTHER CATEGORY.)

Substance	Street Name (THESE EXAMPLES SHOULD ONLY BE USED IF A WOMAN NEEDS AN EXAMPLE-OR AS A REFERENCE FOR YOU.)	#D	How often? 0=never 1=once 2=>once	Past 30 days? (# of days)	Life- use? (# of yrs.)
Alcohol-any use at all	Beer, Wine, Liquor	01			
Alcohol- to intoxication	Beer, Wine, Liquor- to feel the effects of the alcohol, i.e. buzz	02			
Heroin		03			
Methadone	Methadone, Dolophine, LAAM	04			

Substance	Street Name (THESE EXAMPLES SHOULD ONLY BE USED IF A WOMAN NEEDS AN EXAMPLE OR AS A REFERENCE FOR YOU.)	#D	How often? 0=never 1=once 2=>once	Past 30 days? (# of days)	Life- use? (# of yrs.)
Other opiates/ analgesics	Pain killers: Morphine, Dilaudid, Demoral, Percodan, Dia-Quel, Codeine, Syrups (Rohitussin, Actifed-C)	05			
Barbituates	Mebutal, Seconal, Tuinol, Amytal, Pentobarbital, Secobarbital, Doriden, Phenobarbital, Placidyl, Fiorinol	06			
Other sedative/ hypnotics/ tranquillizer	<u>Benzodiazepines</u> : Valium, Librium, Ativan, Serax, Tranxene, Dalmane, Halcyon, Xanax <u>Phenothiazines</u> : Thorazine, Stelazine, Maldol, Navane, Sereniti, Mellaril, Prolixin, Compazine <u>Other</u> : Chloral Hydrate (Noctec), Tofranil, Quaaludes	07			
Anti-depressants	Prozac, Doxepin (Sinequan), Pamelor (Aventyl), Amitriptyline, Desyrel (Trazedone), Desipramine	08			
Amphetamines (uppers)	Monster, Crank, Benzedrine, Dexedrine, Ritalin, Preludin, Methamphetamine, Speed, Ice ("Crystal")	09			
Marijuana	Weed, Pot, Doobie, Hashish	10			
Hallucinogen	LSD, Mescaline, Mushrooms or "shrooms", Peyote, Green, PCP (Phencyclidine), Angel dust	11			
Inhalants	Nitrous Oxide, Amyl Nitrate (whippets, poppers), glue, solvents	12			
Cocaine or crack	Cocaine crystal, free-base cocaine or "crack", "rock cocaine"	13			
Any other substances not mentioned yet?	(PLEASE SPECIFY WHICH SUBSTANCE HERE)	15			
More than one substance per day	(WRITE HERE WHICH SUBSTANCES SHE IS USING TOGETHER)	14			

9. Okay, this question is a little different. Some people turn to different types of substances when situations become very stressful for them. Have you used any of the following substances to relieve stress in the past six months?

a. Alcohol?	YES.....1
	NO.....2
b. Prescription Drugs?	YES.....1
	NO.....2
c. Non-Prescribed Drugs?	YES.....1
	NO.....2

Respondent ID# _____

10. Would
- you
- consider yourself to be a(n):

ASK EACH

ALCOHOLIC.....4
 HEAVY / PROBLEM DRINKER.....3
 RECOVERING ALCOHOLIC.....2
 NO PROBLEMS WITH ALCOHOL.....1

11. Have you been treated in an inpatient setting for alcohol abuse in the past six months?

YES.....1 ----> HOW MANY TIMES? _____
 NO.....2 (88 IF NO)

12. Have you been treated in an outpatient setting (not including AA) for alcohol abuse in the past six months?

YES.....1 ----> HOW MANY TIMES? _____
 NO.....2 (88 IF NO)

13. Have you participated in an Alcoholics Anonymous [AA] program in the past six months?

(GO TO 13a) YES.....1 ----> HOW MANY TIMES? _____
 (GO TO 14) NO.....2 (INDICATE # OF STARTS)
 (88 IF NO)

- 13a. Are you currently involved in an Alcoholics Anonymous [AA] program?

YES.....1
 NO.....2
 not applicable....8

14. In the past 30 days, how many days have you experienced alcohol problems? This would include craving for alcohol, withdrawal symptoms, disturbing effects of alcohol intoxication, or wanting to stop and being unable to do so.

EXACT NUMBER OF DAYS.....
 (IF 0, GO TO 15)

- 14a. How troubled or bothered have you been by these alcohol problems in the past 30 days?

ASK EACH

NOT AT ALL.....1
 SLIGHTLY.....2
 MODERATELY.....3
 CONSIDERABLY.....4
 EXTREMELY.....5
 not applicable.....8

- 14b. How important to you now is treatment for these alcohol problems?

ASK EACH

NOT AT ALL.....1
 SLIGHTLY.....2
 MODERATELY.....3
 CONSIDERABLY.....4
 EXTREMELY.....5
 not applicable.....8

Respondent ID# _____

15. Would you consider yourself to be a(n):

ASK EACH

ADDICT.....4
 PROBLEM/HEAVY DRUG USER.....3
 RECOVERING ADDICT.....2
 NO PROBLEMS WITH DRUGS.....1

16. Have you been treated in an inpatient setting for drug abuse in the past six months?

YES.....1 ----> HOW MANY TIMES? _____
 NO.....2 (88 IF NO)

17. Have you been treated in an outpatient setting (not including NA) for drug abuse in the past six months?

YES.....1 ----> HOW MANY TIMES? _____
 NO.....2 (88 IF NO)

18. Have you participated in a Narcotics Anonymous [NA] program in the past six months?

(GO TO 18a) YES.....1 ----> HOW MANY TIMES? _____
 (GO TO 19) NO.....2 (INDICATE # OF STARTS)
 (88 IF NO)

18a. Are you currently involved in a Narcotics Anonymous [NA] program?

YES.....1
 NO.....2
 not applicable....8

19. In the past 30 days, how many days have you experienced drug problems? This would include craving for drugs, withdrawal symptoms, disturbing effects of drug intoxication, or wanting to stop and being unable to do so.

EXACT NUMBER OF DAYS.....
 (IF 0, GO TO 20)

19a. How troubled or bothered have you been by these drug problems in the past 30 days?

ASK EACH

NOT AT ALL.....1
 SLIGHTLY.....2
 MODERATELY.....3
 CONSIDERABLY.....4
 EXTREMELY.....5
 not applicable.....8

19b. How important to you now is treatment for these drug problems?

ASK EACH

NOT AT ALL.....1
 SLIGHTLY.....2
 MODERATELY.....3
 CONSIDERABLY.....4
 EXTREMELY.....5
 not applicable.....8

20. How much money would you say you spent for yourself during the past thirty days on...

ALCOHOL.....\$ _____
 DRUGS.....\$ _____

Respondent ID# _ _ _ _ _

Thank you for answering all of those questions and sharing that information with me. I know that it is not easy to discuss some of these concerns. Next, I would like to ask you some questions about how often you receive medical care.

21. Have you visited an emergency ward in a hospital in the past six months?

YES.....1 HOW MANY TIMES? _____
NO.....2 (88 IF NO)

22. Have you visited a medical doctor for an emergency in the past six months?

YES.....1 HOW MANY TIMES? _____
NO.....2 (88 IF NO)

23. Have you visited a medical doctor for a routine check-up or appointment in the past six months?

YES.....1 HOW MANY TIMES? _____
NO.....2 (88 IF NO)

24. Have you visited a psychologist, therapist, or psychiatrist in the past six months?

(GO TO #24a) YES.....1 HOW MANY TIMES? _____
(GO TO #25) NO.....2 (88 IF NO)

24a. Who referred you to this person?

YOURSELF.....1
FRIEND/FAMILY.....2
SHELTER WORKER.....3
MEDICAL DOCTOR.....4
EMERGENCY WARD DOCTOR.....5
COURT ORDER (JUDGE).....6
OTHER(_____).....7
not applicable.....8

25. Were you given any prescriptions for any physical problems at the time of any of these visits?

YES.....1 HOW MANY? _____
NO.....2 (88 IF NO)
not applicable...8

26. What type of medical insurance do you currently have?

PRIVATE INSURANCE.....1
MEDICAID/MEDICARE.....2
NONE.....3

Appendix E: Written Health Follow-up Interview

Respondent ID# _____

Health Questionnaire

In this section we'd like to find out some information that may be more difficult to answer. We understand that some of the questions may not be easy to answer, but in order to understand all of the health risks that women with abusive partners and ex-partners may face, please try to answer them as truthfully as possible.

1. Have you shared needles to shoot drugs into your veins in the past six months, or since about _____?

YES.....1
NO.....2

2. Have you used dirty needles in the past six months, or since about _____?

YES.....1
NO.....2

3. Have you engaged in high-risk behaviors (such as sexual intercourse, oral sex, and/or sharing needles) with a person who is HIV-positive or has the AIDS virus in the past six months?

YES.....1
NO.....2
DON'T KNOW.....7

4. Have you been tested for the HIV-virus in the past six months?

YES.....1
NO.....2

5. Which of the following sexual partner experiences best describes you?

SEX WITH MEN ONLY.....1
SEX WITH WOMEN ONLY.....2
SEX WITH BOTH MEN AND WOMEN.....3
NEVER ENGAGED IN SEX.....8

6. How many sexual partners, including your current partner and any others, have you had in the last six months?

IF YOU ANSWERED Q,
THEN STOP HERE!

0.....1
1 TO 2.....2
3 TO 5.....3
6 OR MORE.....4

7. Who is included in your list of sexual partners in the past six months? (Please circle all that apply.)

	YES	NO
SEX WITH MY LOVER/SPOUSE.....1.....	2	
MULTIPLE CASUAL SEX PARTNERS.....1.....	2	
ONE TIME ANONYMOUS SEX PARTNERS.....1.....	2	
not applicable.....	8	

Respondent ID# _ _ _ _ _

8. Have you paid money or received money for sex in the past six months?

YES.....1
 NO.....2
 not applicable.....8

9. How often did you use condoms and spermicides when you were having sex in the past six months?

ALL OF THE TIME.....1
 MOST OF THE TIME.....2
 OCCASIONALLY.....3
 SELDOM.....4
 NEVER.....5
 not applicable.....8

10. Have you used alcohol or drugs when you were having sex in the past six months?

ALL OF THE TIME.....1
 MOST OF THE TIME.....2
 OCCASIONALLY.....3
 SELDOM.....4
 NEVER.....5
 not applicable.....8

11. Have any of your partner(s) in the past six months used alcohol or drugs when you were having sex?

ALL OF THE TIME.....1
 MOST OF THE TIME.....2
 OCCASIONALLY.....3
 SELDOM.....4
 NEVER.....5
 DON'T KNOW.....7
 not applicable.....8

12. How often have any of your partner(s) ever used threats to try and have sex with you in the past six months?

NEVER.....1
 ONCE.....2
 TWICE.....3
 3-10 TIMES.....4
 11-20 TIMES.....5
 MORE THAN 20 TIMES.....6
 not applicable.....8

13. How often have any of your partner(s) used physical force to have sex with you in the past six months?

NEVER.....1
 ONCE.....2
 TWICE.....3
 3-10 TIMES.....4
 11-20 TIMES.....5
 MORE THAN 20 TIMES.....6
 not applicable.....8

Respondent ID# _ _ _ _ _

14. Have any of your sexual partners shot drugs into their veins in the past six months?

YES.....1
NO.....2
DON'T KNOW.....7
not applicable.....8

15. Have any of your sexual partners in the past six months lived in a big city, such as Detroit or Chicago?

YES.....1
NO.....2
not applicable.....8

16. Have you or any of the sexual partner(s) you have had in the past six months received a blood transfusion or hemophilia treatments between 1978 and 1985?

YES.....1
NO.....2
DON'T KNOW.....7
not applicable.....8

Thank you very much for answering all of those questions. If you have any further questions, please feel free to contact us.

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